<table>
<thead>
<tr>
<th>Product</th>
<th>Page Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Genisys™</td>
<td>2-13</td>
</tr>
<tr>
<td>Nemisys®</td>
<td>14</td>
</tr>
<tr>
<td>ABS Reader II</td>
<td>15</td>
</tr>
<tr>
<td>Scan Pro™</td>
<td>16</td>
</tr>
<tr>
<td>Code Scanner®</td>
<td>17</td>
</tr>
<tr>
<td>AutoCode™, Ready Scan™</td>
<td>18</td>
</tr>
<tr>
<td>Tech 2 Flash</td>
<td>20</td>
</tr>
<tr>
<td>Scan Tool Accessories &amp; Cables</td>
<td>21-23</td>
</tr>
<tr>
<td>Heavy-Duty Diagnostics</td>
<td>24-25</td>
</tr>
<tr>
<td>Solarity®</td>
<td>26-29</td>
</tr>
<tr>
<td>Auto Scope</td>
<td>30</td>
</tr>
<tr>
<td>Scope &amp; Meter Accessories</td>
<td>31</td>
</tr>
<tr>
<td>DAT &amp; Multimeters</td>
<td>32</td>
</tr>
<tr>
<td>Terminal Test Kits</td>
<td>34</td>
</tr>
<tr>
<td>Circuit Testers</td>
<td>35-37</td>
</tr>
<tr>
<td>TPMS Tire Pressure Monitor Tool</td>
<td>38-41</td>
</tr>
<tr>
<td>Breakout Boxes</td>
<td>42</td>
</tr>
<tr>
<td>Timing Lights</td>
<td>43</td>
</tr>
<tr>
<td>Digital Pressure &amp; Temp. Analyzer</td>
<td>44</td>
</tr>
<tr>
<td>Noid Lites</td>
<td>45</td>
</tr>
<tr>
<td>Oil Light Reset Tool</td>
<td>46</td>
</tr>
<tr>
<td>Fuel Injection Testers</td>
<td>48</td>
</tr>
<tr>
<td>Idle Tester</td>
<td>49</td>
</tr>
<tr>
<td>Electrical Terminal Tools</td>
<td>50</td>
</tr>
<tr>
<td>Air Bag/ABS Tools</td>
<td>51</td>
</tr>
<tr>
<td>Vision Premier</td>
<td>52</td>
</tr>
<tr>
<td>Gas Analyzers</td>
<td>54</td>
</tr>
<tr>
<td>Diesel Smoke Emission Tester</td>
<td>54</td>
</tr>
<tr>
<td>Sabre HP &amp; Heavy-Duty</td>
<td>56-57</td>
</tr>
<tr>
<td>Battery Test Tools</td>
<td>58-61</td>
</tr>
<tr>
<td>Alternator/Starter Test Bench</td>
<td>62-64</td>
</tr>
<tr>
<td>OneStep™ and The Judge</td>
<td></td>
</tr>
</tbody>
</table>
OTC's Family of Scan Tools

OTC Scan Tools are best in class...
best in diagnostic power...
best user features...
best vehicle coverage...
best investment value!

OTC Scan Tools are the choice of professional technicians who want to work faster, smarter and improve their shop's bottom line. For more than 80 years, OTC has been the One Tool Company professional technicians trust to meet their needs for specialty tools and diagnostic equipment.

Call 1-800-533-6127
www.otctools.com
BEST IN CLASS
Genisys is simply the best and fastest automotive aftermarket hand-held scan tool you can own. Why? In less time than it takes other scan tools to even boot up, Genisys can provide a comprehensive diagnostic evaluation—all at the push of a single button. That means you fix vehicles faster with fewer comebacks. That’s productivity. And feature for feature, Genisys can’t be beat on price either. That’s value. That’s the bottom line.

Productivity Begins with Coverage
As an aftermarket repair shop, you need to service the wide variety of vehicles that enter your service bays everyday. These vehicles can be USA domestic, Asian or European. They can even be your fleet customers’ tow truck, delivery van, or construction vehicle that require heavy-duty software to diagnose. It is a big challenge for any repair shop.

There are choices. One choice is to spend $100,000 or more buying all the OEM tools you would need and thousands more each year to update them. Then the challenge is to make a profit and stay in business. Another choice is to buy a competitively priced aftermarket tool—such as Genisys—to cover all your needs.

OEM Data Licenses
OTC scan diagnostics is built on OEM vehicle data. Our valued OEM partners include GM, Ford, Chrysler, Toyota, Honda, BMW, Volkswagen and many more. Using vehicle data direct from an OEM under license provides a larger amount of data at a higher quality. The information is not reverse engineered, a costly method usually passed on to the end user in higher tool and update pricing.

Coverage Additions to Older Vehicles
Probably the biggest misconception is that a Genisys model year update only includes new vehicle year coverage, like 2006. That can’t be further from the truth. It is not unusual for sub-system information, from our OEM partners, to arrive two or more years after vehicle release. At OTC we place this new information into the tool. This year is no exception. More information was received for this year’s domestic, Asian, and European updates than any year in OTC’s history. For a preview, go to www.genisysotc.com/literature.php and view the application coverage manuals.

Free Product Improvement Updates
Periodically, free software updates are released. These updates—delivered via the Internet using free Windows software provided in each kit—can be for any of the Genisys vehicle applications or system improvements. This concept is not available from most competitors.

Experience, Service and Leadership
Scan diagnostics is not new to OTC. It began in 1984 with the first Chrysler OEM scan tool. Today the Chrysler StarScan is still produced in the same factory as Genisys. With new scan manufacturers springing up domestically and off shore, who can you trust? You can count on OTC—with over 80 years in the automotive industry—to support you now and in the future. Genisys is backed by a global sales and service infrastructure. When spending your hard-earned money, go with the One Tool Company technicians trust—OTC.

Genisys System 2.0
System 2.0 is a new software application and a high-speed compact flash card containing Power Features that will improve the performance of all Genisys scan tools.

POWER FEATURES:
Fast Boot
– Approximately 10 seconds for the new Genisys
– Approximately 15 seconds for the Genisys Classic (3454 and earlier)

New User Interface – Provides Genisys with a new improved icon-based user interface. (Think MS DOS to Windows XP)

Code Reader Mode – Allows user to read or clear codes fast. Now Genisys can boot into a code reader mode FAST—approximately 5 seconds!

Personalization – A custom setup mode for user preferences.
– User configurable Function Keys – user selected applications at one button
– Interface Selection – New System 2.0 (icon based) or Genisys Classic
OBD II Smart Cable™

• Has the combined power of more than 50 System Smart Inserts.
• Eliminates the need for many current and future System Smart Inserts.
• Provides improved test capability and accuracy.

Bottom Line Benefits
• Improved technician satisfaction
• Faster diagnosis
• More convenient
• Higher technician productivity

IMPORTANT: OBD II Smart Cable is designed to work with any of the following applications: USA 2006 Domestic, USA 2006 Asian, USA 2005 European, 2004 ABS/Air Bag and Heavy-Duty Standard.

Automated System Test™

Now Available with USA 2006 Domestic, USA 2006 Asian, USA 2005 European and USA 2004 ABS/Air Bag Software Applications

• With one button press, Automated System Test performs a system “health check” of all available vehicle controllers.
• Any trouble codes found are reported along with other vital scan data.
• Repair-Trac™ pattern failures and available repair information are linked to trouble codes of the top known component failures.

Automated System Test™ is the default selection in Diagnostic Menu. One button press and it will perform the test and report the data in a fraction of the time it used to take using manual, step-by-step procedures.

A System Analysis Test Report summarizes the findings. The primary controller is that selected by the technician. The secondary controllers are any others found with a report on their DTC status.

Selecting the Detail Screen provides specifics on the primary and secondary controllers. Pressing Enter on any DTC provides the technician with any available code information for that specific vehicle.

See a sample of Test Vehicle on page 8
2001 Chevrolet Silverado 5.3L 4X4 (9 Systems available)
(2 codes engine system, 2 codes sub-system)
USA 2006 Domestic Software with Pathfinder

New Expanded Systems Coverage and Special Tests
- Ford bi-directional special tests.
- New vehicles, systems and approximately 200 NEW special tests are added for earlier year vehicles as well as 2006 models.
- Domestic 2006 provides coverage back to 1980 with focus on vehicles technicians see in their shops everyday.
- NEW Mode 6 Summary Screen sorts all failed Mode 6 tests to the top for easy identification.

New Code Library
- Fast access to OBD II Generic and OEM Enhanced DTC’s from the Repair Information Menu.
- Pathfinder Troubleshooting Code Information available from Code Library.

New USB Drive Expanded Recording
- Read the extended recordings on Genisys or the PC.
- Data recordings without a USB drive are extended to 1000 frames!

USA 2006 Domestic Software includes three powerful repair information databases!

Pathfinder Troubleshooting Information
Pathfinder troubleshooting information from 1992 to 2005 provides critical information at the technician’s fingertips. In addition to the Repair-Trac™ and Fast Fixes™ databases, repair information includes:
- Code information
- Symptoms
- Specifications
- Data/sensor information
- TSB references
- PCM connector information
- Component location

Repair-Trac™ Tech Tips
As the vehicle fleet ages more pattern-failure tech tips are available. Many Domestic, Asian, and European older vehicle tips added. Repair-Trac is the largest database of known vehicle-specific fixes available to the automotive aftermarket. Only the NGIS scan tool has the diagnostic power and the largest repair database to help you work smarter. Check it out:
- Coverage from 1969 through 2005 for USA domestic, USA Asian, and USA European vehicles.
- Aftermarket TSB’s based on information from over 2 million tech service calls.
- Access Repair-Trac from the Main Menu, Data Stream, or Trouble Code menus.

Fast Fixes™ Repair Information Database
Fast Fixes is a “sister” information database to Repair-Trac. No pattern failure listed for the vehicle’s symptom? No problem. Fast Fixes data provides a vehicle-specific checklist of the most likely and most overlooked causes.

Systems covered:
- Engine performance
- Brakes
- Starting
- Steering
- Charging
- Suspension
- HVAC
USA 2006 Asian Software with Pathfinder
Now with Honda OEM coverage and expanded bi-directional test!
Powerful Asian 2006 diagnostics includes more new system and bi-directional coverage than can be listed. The 2006 release now integrates Repair-Trac™ tech tips and Fast Fixes™ into Asian software.

New key features include:

• NEW—over 500 bi-directional special tests added to Asian 2006 software.
• NEW Honda licensed OEM data coverage includes engine, transmission, ABS, air bag, tire pressure monitor, and more body and chassis systems.
• NEW Hyundai and Kia enhanced engine coverage.
• Enhanced engine and transmission data stream and read codes for Nissan (1990–2006 DDL1 & DDL2 protocols), Mitsubishi and Mazda (1996–2006), and Toyota (through 2006).
• ABS and air bag support for Nissan, Mitsubishi (1996–2006), and Toyota (includes keyword protocols for 1998–2006).
• Expanded Toyota OBD I, 1995 and older coverage.

USA 2005 European Software with Pathfinder
A dedicated European scan tool is no longer required with the new Genisys European 2005 software package. More OEM coverage, more system coverage and more value than any other aftermarket scan tool!

Functionality includes:

• Diagnostic Trouble Codes
• Data Stream
• Actuator Tests (bi-directional tests)

System coverage includes:

• Engine
• Transmission
• ABS
• Air Bag
• Most Body System
• Most Chassis Systems

BMW Coverage
Genisys now includes licensed BMW OEM data. You would have to buy the BMW OEM tool to get more coverage!

BMW coverage includes:

• 1987 – 2005 Model Years

VW/Audi Coverage
Genisys now has best in class coverage for VW/Audi, comparable or exceeding any other aftermarket diagnostic tool. Functions include controller coding, throttle body alignment, oil light reset, and the ability to change convenience settings.

VW coverage includes:

• 1987 – 2005 Model Years

Audi coverage includes:

• 1986 – 2005 Model Years

Volvo Coverage
Volvo coverage started with the ABS and Air Bag coverage in our current ABS/Air Bag 2004 software and now has expanded to include most controllers.

Volvo coverage includes:

• 1993 – 2005 Model Years

Mercedes Coverage
Mercedes coverage has been expanded. You will find more system coverage than ever. Like the other OEM’s considerable functionality added to earlier model years.

Mercedes coverage includes:

• 1986 - 2005 Model Years

Note: Requires System 2.0. Smart cable 3421-88 may be required for BMW application coverage.
Heavy-Duty Standard

Featuring:
- Class 4 – Class 8 truck coverage.
- HD J1587 / J1708 and J1939 CAN, Engine, Transmission/ABS coverage and more!
- Live vehicle data such as:
  - Engine speed
  - Engine ECU temperature
  - Percent acceleration pedal position
  - Engine intercooler temperature
  - Engine coolant temperature
  - Battery volts
  - Alternator volts
  - Ambient air temperature
  - Air inlet temperature
- View and clear diagnostic trouble codes.
- Windows PC software.

Applications:
- Tow trucks, recreational vehicles, cement trucks, dump trucks, garbage trucks, buses, step vans, municipal vehicles, refrigerated trucks, and conventional trucks.

Supported Manufacturers Include:

Transmission and ABS Systems Include:
- Bendix, Detroit, Eaton, Meritor WABCO, Caterpillar, Cummins, Allison, etc.

InfoTech 2006 Software

- Domestic, Asian, and European vehicle coverage for vehicles on the road today.
- Engine, transmission, and ABS systems covered.
- Asian and European coverage added for component wiring, circuit descriptions, component and control module locations.
- Vehicle System Test (multiple charging, fuel, and ignition tests)
- Engine Specifications
- Functional Tests
- Circuit Description
- Component Locations
- Wiring Diagrams
- Connector Information
- Component Specifications
- Reference Waveforms
- Oil Light Reset Procedures
- Current Ramping Tests
- Transducer Tests

1) Select the cable connector icon that matches what is on the truck.
2) Select the protocol ONLY if the 9 pin Deutsch cable is used (the others go directly to #3).
3) Connect the appropriate cable to Genisys and the truck.
4) Press Enter to continue and Genisys automatically searches the system and displays all available controllers.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Domestic</th>
<th>Asian</th>
<th>European</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle System Tests</td>
<td>All</td>
<td>All</td>
<td>All</td>
</tr>
<tr>
<td>Transmission Pan ID Charts</td>
<td>1984–2004</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Indexed Information</td>
<td>All</td>
<td>All</td>
<td>All</td>
</tr>
<tr>
<td>Repair-Trac Quick Fixes</td>
<td>All</td>
<td>All</td>
<td>All</td>
</tr>
</tbody>
</table>

NOTE: Red text indicates updates from InfoTech 2005.
Genisys Scope with InfoTech 2006 Software

Genisys is a powerful 4-channel scope with the functionality required to analyze the most sophisticated vehicles. InfoTech software provides the key information to transform a driveability or component fault into a fast and accurate repair.

Genisys Scope Features and Benefits

- 4-channel full-function scope.
- 4 MHz sample rate on all channels.
- Adjustable glitch capture.
- Update via Compact Flash or PC.
- Smart Card security.
- Print via standard desktop color printer.
- Auto ranging function data.
- Copy files to and from USB.
- Custom enclosure—horizontally oriented and ergonomic.
- User selectable background color.
- Sunlight readable display.
- Modular design allows for future expansion capabilities.

Ignition Scope Capabilities:

- Primary/secondary
- Distributorless ignition
- Coil-on-plug
- Raster
- Parade
- Superimposed
- Single cylinder
- Record

4-Channel High-Speed Lab Scope Graphing and Digital Multimeter:

- Volts
- Ohms
- RPM
- Frequency
- Duty cycle

Productivity means saving you time and money. With the Genisys Scope, you can diagnose and repair vehicles faster and more accurately. The comparison below illustrates this dramatically. In less than 1-1/2 minutes, Automated System Test scanned the available systems on a 2001 Chevy Silverado and provided an information detailed report. During that 1-1/2 minutes the technician didn’t even have to participate—it’s all automatic. That test time can be used performing a visual inspection under the hood or any other required task. And don’t underestimate the button pushes. Only 10 were required using Automated System Test compared to 191 manually! Let Genisys do the work.

Test Vehicle

2001 Chevrolet Silverado 5.3L 4X4 (9 Systems available)
(2 codes engine system, 2 codes sub-systems)

<table>
<thead>
<tr>
<th>Engine System</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Automated System test</td>
</tr>
<tr>
<td>2. Read trouble codes (engine system) Current/History/Pending codes</td>
</tr>
<tr>
<td>3. Review freeze frame data (Mode 2)</td>
</tr>
<tr>
<td>4. See component tests that failed (Mode 6)</td>
</tr>
<tr>
<td>5. Review Oxygen Sensor Test (Mode 5)</td>
</tr>
<tr>
<td>6. Review Readiness monitors</td>
</tr>
<tr>
<td>7. Look at DataStream and review related data items.</td>
</tr>
<tr>
<td>8. Run tests - review repair data menu for DTC (start count with DTC highlighted)</td>
</tr>
<tr>
<td>a. Circuit Description</td>
</tr>
<tr>
<td>b. Possible Causes</td>
</tr>
<tr>
<td>c. Code Setting</td>
</tr>
<tr>
<td>d. Data Stream Items</td>
</tr>
<tr>
<td>e. Repair Trac</td>
</tr>
<tr>
<td>9. Read trouble codes (Global OBD II system) Current/History/Pending codes</td>
</tr>
<tr>
<td>10. Read trouble codes (ABS system) Current/History/Pending codes</td>
</tr>
<tr>
<td>11. Read trouble codes (Air bag system) Current/History/Pending codes</td>
</tr>
<tr>
<td>12. Read trouble codes (Body Controls system) Current/History/Pending codes</td>
</tr>
<tr>
<td>13. Read trouble codes (Instrument panel cluster system) Current/History/Pending codes</td>
</tr>
<tr>
<td>14. Read trouble codes (Elect. Vari. Orifice system) Current/History/Pending codes</td>
</tr>
<tr>
<td>15. Read trouble codes (RTD/EVO system) Current/History/Pending codes</td>
</tr>
<tr>
<td>16. Read trouble codes (Transfer Case system) Current/History/Pending codes</td>
</tr>
</tbody>
</table>

Total key presses and time to review information

All key presses referenced from the diagnostic function menu.
USA GM SPS Reprogramming

OTC is proud to present the All Modules Reprogramming Kit to allow your customers to reprogram and recalibrate all reprogrammable control modules in their 1993-2007 model year General Motors vehicles.

This software subscription includes 12 months of updates on CD for registered owners.

In addition OTC is offering renewal kits for both the engine and all module USA GM SPS Reprogramming kits. These renewal kits will continue your SPS subscription and delivery of update DVDs.

Genisys Requirements: USA 2006 Domestic software.

Your shop computer... must fulfill these minimum PC requirements for the GM SPS program:

<table>
<thead>
<tr>
<th></th>
<th>Minimum PC Spec.</th>
<th>Recommended PC Spec.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>Intel Pentium IV 1.3 GHz</td>
<td>Intel Pentium 4 3.0 GHz, 865G chip set, 800 MHz or greater front side bus, 1024 KB L2 cache</td>
</tr>
<tr>
<td>Hard Drive</td>
<td>20 GB ATA</td>
<td>40 GB Smart III Ultra ATA/100</td>
</tr>
<tr>
<td>RAM</td>
<td>256 MB SDRAM</td>
<td>512 MB RAM or greater</td>
</tr>
<tr>
<td>Video RAM</td>
<td>16 MB DRAM</td>
<td>Integrated AGP w/64 MB or greater</td>
</tr>
<tr>
<td>Optical Drive</td>
<td>40X/16X CD/DVD combo drive</td>
<td>40X/16X CD/DVD combo drive</td>
</tr>
<tr>
<td>Operating System</td>
<td>Microsoft Windows 2000 Pro (SP4 or XP Professional (SP2)</td>
<td>Microsoft Windows XP Professional SP2 with Internet Explorer 6.0</td>
</tr>
<tr>
<td>Anti-Virus Protection</td>
<td>Current version of commercially available virus protection</td>
<td>Current version of commercially available virus protection</td>
</tr>
<tr>
<td>Comm. Ports</td>
<td>1 Parallel, 1 Serial, 1 USB</td>
<td>1 Parallel, 1 Serial, 1 or more USB</td>
</tr>
</tbody>
</table>

Important: For the latest GM minimum PC specifications visit http://www.gmde.net/standards.cfm

Genisys Training

Use the Genisys itself, DVD, or our trainers.

Protect your investment by getting the most out of your scan tool. Genisys has a number of built-in training and demo features, and OTC provides additional training on an DVD, and through personal trainers.

The more you learn about the capabilities of Genisys, the better you will become at servicing your customers’ vehicles, and that’s good for the bottom line.

- **Quick-Start Tutorial**—Built into the Genisys, to get a new user working within minutes of turning on the scan tool, is a slide show that runs automatically, or you can control it similar to operating a VCR.

- **Demonstration Mode**—Exclusive to Genisys, the Demo Mode allows you to select ANY vehicle contained in the embedded software and review specific test functions. Great for practice while reviewing the manual or training DVD. Good for previewing specific diagnostic tests before a customer’s vehicle arrives at your shop.

- **On-site Personal Training**—For a nominal charge, OTC offers personal instruction at your shop by a qualified Genisys trainer. (Get up to four hours of personal training FREE with purchase of Genisys Master Kit No. 3681, or 3421-28 training purchase, U.S. only.)
Genisys Software Kits

Genisys Super Bundle Productivity Kit
This powerful kit maximizes technician productivity with the three most popular Genisys options — OBD II Smart Cable, USA 2006 Domestic software, and USA 2006 Asian software. Each software application includes the new Automated System Test feature.
No. 3421-90 – Genisys super bundle productivity kit.
IMPORTANT NOTE: System 2.0 required to install; see No. 3421-84.
No. 3421-88 – The new OBD II Smart Cable is essentially “plug and play.”

USA 2006 Domestic Software Update Kit
This OBD II Smart Cable compatible update kit includes expanded vehicle coverage, Pathfinder troubleshooting with Repair-Trac, Fast Fixes, Automated System Test, Smart Card, manual, ConnecTech Reader, and the NGIS Windows-based program CD for downloading software updates.
No. 3421-82 – USA 2006 Domestic software update kit.
IMPORTANT NOTE: System 2.0 required to install; see No. 3421-84.

InfoTech 2006 Driveability and Component Test Diagnostic Software
InfoTech 2006 software is available for all Genisys scan tools! No Genisys Scope is required.
• Genisys without Scope – InfoTech 2006 is available from the Repair Information menu and operates as a stand-alone electronic database. InfoTech data is also integrated into the new Automated System Test analysis.
  Have a scope already? No problem, now add repair info!
• Genisys with Scope – InfoTech 2006 not only provides the powerful repair information, but also sets up the Genisys scope for you!
The kit includes InfoTech 2006 Smart Card, manual, and the NGIS Windows-based program CD for downloading software updates.
No. 3421-83 – InfoTech 2006 software update kit.
IMPORTANT NOTE: System 2.0 required to install; see No. 3421-84.

USA 2006 Asian Software Update Kit
This OBD II Smart Cable compatible update kit is for Genisys owners who already have the Asian Import 2000 or 2003 starter kits and want to update software coverage to 2006. Asian 2006 includes the new Automated System Test feature. Kit includes the NGIS software CD, manual, and Smart Card.
No. 3421-85 – USA 2006 Asian software update kit.
IMPORTANT NOTE: System 2.0 required to install; see No. 3421-84.

USA 2006 Asian Software Starter Kit
This OBD II Smart Cable compatible starter kit is for Genisys owners who want to add coverage for Asian OBD I and OBD II software and cables through 2006. Asian 2006 includes the new Automated System Test feature. Kit includes the NGIS software CD, Asian 2006 Smart Card, Asian specific OBD I vehicle cables, and manual. What you need to start servicing Asian vehicles.
No. 3421-86 – USA 2006 Asian software starter kit.
IMPORTANT NOTE: System 2.0 required to install; see No. 3421-84.

USA 2006 Asian Cable Kit (cables only)
This cable kit is for Genisys owners who have the USA 2006 Asian software, but need the Asian-specific OBD I vehicle cables.
No. 3421-87 – USA Asian cable kit (cables only).

Genisys Heavy-Duty Starter Kit
Genisys Heavy-Duty Standard software includes J1587/1708 and J1939 CAN communications.
Kit includes 9-pin Deutsch cable, 6-pin Deutsch cable, heavy-duty System Smart Insert, Smart Card, and PC software CD.
No. 3421-79 – Genisys heavy-duty starter kit.
IMPORTANT NOTE: System 2.0 required to install; see No. 3421-84.
USA 2005 European Software Update Kit
This kit is for Genisys owners who already have European 2003 and want to update coverage to 2005. Kit includes European Smart Card, manual, and CD. (The new BMW cable and Mercedes 38-pin SSI must be purchased separately, see kit No. 3421-77.)
No. 3421-73 – USA 2003 European software update kit. Note: Requires System 2.0. Smart Cable 3421-88 is required for BMW application coverage.

USA 2005 European Starter Kit
Get European coverage in a single kit! This starter kit allows you to service select European manufacturers: Audi, BMW, Mercedes-Benz, Volvo, Volkswagen, and more. Kit includes software CD, Smart Card, Mercedes 38-pin cable, Mercedes 1-pin cable, Mercedes 38-pin SSI, BMW cable, and Volkswagen/Audi cable.
No. 3421-74 – USA 2005 European starter kit with cables. Note: Requires System 2.0. Smart Cable 3421-88 is required for BMW application coverage.

USA European Cable Kit
“For users that have European 2005 software and no European OBD I cables.” Kit includes Mercedes 38-pin cable, Mercedes 1-pin cable, Mercedes 38-pin SSI, BMW cable, and Volkswagen/Audi cable.
No. 3421-75 – USA European cable kit. Note: Smart Cable 3421-88 is required for application coverage.

USA European Cable Update Kit
These cables are for Genisys owners who already have European 2003 cables and want to update cables to 2005. Kit includes Mercedes 38-pin SSI and BMW cable.
No. 3421-77 – USA European cable update kit. Note: Smart Cable 3421-88 is required for application coverage.

Genisys DVD Training
Customized training – This full length video program is based solely on the Genisys.
Enhanced training – Takes you beyond the basics of the Genisys.
Train at your own pace – The TEAM AVI training format using chaptered DVDs allows you to start and stop.
Step-by-step instructions – On using the most powerful diagnostic functions.
How to use – Graphing, recording, and record playback for those “intermittent” problems.

USA 2004 ABS/Air Bag Software Starter Kit
Expanded coverage for domestic, USA European, and USA Asian through 2004 model year. This is the kit you need if you are a Genisys owner wanting to add data stream, bi-directional testing, fault codes, Pathfinder troubleshooting, and ABS-specific cables. Kit includes four System Smart Inserts, ABS-specific cables, software CD, Smart Card, and manual.
No. 3421-48 – USA 2004 ABS/Air Bag software starter kit.
No. 3421-47 – USA 2004 ABS/Air Bag update kit (software only).
No. 3421-54 – USA ABS/Air Bag cable kit. Includes four System Smart Inserts, ABS-specific cables.

ConnecTech™ PC Software Kit
Use your PC for more diagnostic functionality!
No. 3421-36 – Genisys ConnecTech PC software kit. Includes ConnecTech software CD, Smart Card, and 20’ cable to PC.

Forget the Cables... Go Wireless with Genisys PC Wireless Kit!
Coverage range up to 1,750 ft./533 m, depending upon multiple variables.
No. 3421-37 – Genisys ConnecTech PC wireless kit. Includes ConnecTech software CD, Smart Card, wireless LAN PC card, and USB wireless access point.
No. 3421-38 – Genisys to PC wireless kit. Includes wireless LAN PC card and USB wireless access point.
IMPORTANT NOTE: System 2.0 required to install; see No. 3421-84.

Genisys DVD Training
In-depth training – Goes beyond button pushing to showcase such important features as Pathfinder troubleshooting, graphing, and more.
Ease of use – Questions on the Genisys are covered in the training and can be reviewed quickly, even in the shop.
No. 3615 – Genisys DVD Training. Contains two full-length DVDs and an illustrated manual for shop use. Training is based on System 2.0 and 2005 software.
Genisys GM All Modules Reprogramming Starter Kit

This kit provides the ability to reprogram all reprogrammable modules on 1993 to 2005 General Motors vehicles. Includes the authentic GM application and data DVD’s (for Windows), PC hardware security lock, Smart Card, System Smart Insert, manuals, and a 12-month subscription to updates of GM AC Delco application and data DVD’s.

No. 3421-46 – Genisys GM all modules reprogramming starter kit.

IMPORTANT NOTE: USA 2006 Domestic required; see No. 3421-82.

Genisys Scope Module with InfoTech 2006 Driveability Software Kit

Includes the Genisys 4-channel lab scope module with four DMM leads, ground lead, kV conventional ignition lead, GM HEI ignition adapter, ignition sync lead, manual, InfoTech 2006 repair information software Smart Card, and carrying case.

No. 3688 – Genisys scope with InfoTech 2006 software kit.

IMPORTANT NOTE: Must be used with System 2.0; see No. 3421-84.

Genisys Performance 5-Gas Module


No. 3780 – Genisys Performance 5-gas Module.

IMPORTANT NOTE: System 2.0 required to install; see No. 3421-84.

Genisys Exchange Kit with System 2.0

Trade in your old Genisys for one with all the newest features and a 3-Year Warranty. This exchange kit includes a BRAND NEW Genisys scan tool, OBD II Smart Cable, carrying case, CD, manual, and return mailer. System 2.0, USA 2006 Domestic with Pathfinder, USA 2006 Asian with Pathfinder and USA 2004 ABS/Air Bag are pre-loaded. For those who already own a Gas Module and GM Reprogramming, Smart Cards are included.

No. 3687 – Genisys exchange kit with System 2.0.

NOTE: When you return your used Genisys tool to the factory, FREE InfoTech 2006 and ConneCtech PC software kits with Smart Cards will be shipped to you. (Allow 6 to 8 weeks for delivery.)

Genisys Heavy-Duty Standard Deluxe Kit

Includes Genisys scan tool, OBD II Smart Cable, Automated System Test, Heavy-Duty Standard software, USA 2006 Domestic with Pathfinder, Repair-Trac, Fast Fixes, USA 2006 Asian, InfoTech 2006, USA 2004 ABS/Air Bag software, manuals, adapters, and domestic OBD I vehicle cables (for GM, Ford, Chrysler, Jeep, Saturn), and carrying case.

No. 3669HD – Genisys Heavy-Duty Standard deluxe kit.

(USA Asian OBD I cables not included; see Kit No. 3421-87.)

(USA ABS/Air Bag cables not included; see Kit No. 3421-54.)
**Genisys USA 2006 Deluxe Kit**
Includes Genisys scan tool, OBD II Smart Cable, Automated System Test, USA 2006 Domestic software with Pathfinder, Repair-Trac, Fast Fixes, USA 2006 Asian, USA 2004 ABS/Air Bag software, InfoTech 2006 software, manuals, adapters, domestic OBD I vehicle cables (for GM, Ford, Chrysler, Jeep, Saturn), Smart Cards, and carrying case.

No. 3669 – Genisys USA 2006 deluxe kit.
(USA Asian OBD I cables not included; see Kit No. 3421-87.)
(USA ABS/Air Bag cables not included; see Kit No. 3421-54.)

---

**Genisys USA 2006 Deluxe Kit with ABS/Air Bag-Specific Cables**
Includes Genisys scan tool, OBD II Smart Cable, Automated System Test, USA 2006 Domestic software with Pathfinder, Repair-Trac, Fast Fixes, USA 2004 ABS/Air Bag software and vehicle-specific cables, USA 2006 Asian software, InfoTech 2006 software, manuals, adapters, domestic OBD I vehicle cables (for GM, Ford, Chrysler, Jeep, Saturn), Smart Cards, and carrying case.

No. 3670 – Genisys USA 2006 deluxe kit with ABS/air bag-specific cables.
(USA Asian OBD I cables not included; see Kit No. 3421-87.)

---

**Genisys USA 2006 Domestic Scan and Scope with InfoTech 2006 Software Kit**
Includes Genisys scan tool, OBD II Smart Cable, Automated System Test, USA 2006 Domestic software with Pathfinder, Repair-Trac, Fast Fixes, USA 2006 Asian software, InfoTech 2006 software, USA 2004 ABS/Air Bag software, manuals, adapters, domestic OBD I vehicle cables (for GM, Ford, Chrysler, Jeep, Saturn), 4-channel lab scope module with 4 DMM leads, ground lead, kV conventional ignition lead, GM HEI ignition adapter, ignition sync lead, manuals, Smart Cards, and carrying case.

No. 3671 – Genisys USA 2006 Domestic scan and scope with InfoTech 2006 software kit.
(USA Asian OBD I cables not included; see Kit No. 3421-87.)
(USA ABS/Air Bag cables not included; see Kit No. 3421-54.)

---

**Genisys USA 2006 Domestic Scan, Gas, and Scope with InfoTech 2006 Software**
Includes Genisys scan tool, OBD II Smart Cable, Automated System Test, USA 2006 Domestic software with Pathfinder, Repair-Trac, Fast Fixes, USA 2006 Asian software, InfoTech 2006 software, USA 2004 ABS/Air Bag software, manuals, adapters, domestic OBD I vehicle cables (for GM, Ford, Chrysler, Jeep, Saturn), 4-channel lab scope module with 4 DMM leads, ground lead, kV conventional ignition lead, GM HEI ignition adapter, ignition sync lead, manual, Smart Cards, Performance 5-Gas Analyzer Module with hose, probe, Gas M-P software, filters, and carrying case.

No. 3681 – Genisys USA 2006 Domestic scan, gas, and scope with InfoTech 2006 software.
(USA Asian OBD I cables not included; see Kit No. 3421-87.)
(USA ABS/Air Bag cables not included; see Kit No. 3421-54.)
Nemisys™ Scan Tool

Nemisys™ is an automotive scan tool designed in the new millennium and powered by OTC Genisys™ technology. Nemisys covers early OBD I systems and all OBD II protocols, including the newly released Controller Area Network (CAN) protocol. CAN protocol was introduced in 2003 model year vehicles and is the mandated protocol in all new vehicles by 2008.

Many Powerful Features

- 320 X 240 Monochrome Graphic Display
- Data Graphing
- USA Domestic OBD I & OBD II coverage (1984 thru 2006)
- Global OBD II Asian & European coverage (1996 thru 2006)
- Domestic Enhanced Data & DTCs
  - Engine, Transmission, ABS, Air Bag
- CAN Enabled—no adapters to buy
- OBD II Mode 6
- Domestic Repair Information
  - Typical Sensor / Data Specs
- Record / Playback
- ScanMate Lite PC Software
  - File Storage, File Playback, File Print

2006 Vehicle Coverage

European ’96–2006 (Global OBD II).

Improved ScanMate PC Software

Upload recordings, play back recordings, print reports, export captured data in spreadsheet format, get Internet updates, email and share data recordings, view data in line graph, bar graph, meter, digital, or superimposed format.

Nemisys USA 2006 Domestic Scan Kit

Includes Nemisys scan tool loaded with 2006 Domestic software; OBD II cable; Ford, GM, Chrysler OBD I cables; ScanMate Lite PC software; scan tool to PC cable; 12-volt power cable; Quick Start Guide included with CD-based manuals in Spanish, French, English; and a professional carrying case.

No. 3797 — Nemisys USA 2006 Domestic scan kit.
No. 3774-11 — Nemisys USA 2006 Domestic update kit (’84–’06).
No. 3774-12 — Nemisys USA 2006 Asian update kit includes ’96-2006 software with enhanced data on Toyota, Honda, Nissan, Mitsubishi, and Mazda.
No. 3774-13 — Nemisys USA 2006 combination update kit. Includes USA 2006 Domestic update (’84–’06) and USA 2006 Asian update (’96–’06).

Nemisys Cables

No. 3774-01 — DB25 to OBD II cable.
No. 3774-02 — DB25 to GM OBD I cable.
No. 3774-03 — DB25 to Ford OBD I cable.
No. 3774-04 — DB25 to Chrysler OBD I cable.
No. 3774-05 — Cigarette plug power cord.
ABS Reader II
The latest technology for servicing ABS and air bag systems. The new Genisys-based tool is loaded with Genisys ABS/Air Bag and Global OBD II software. The ABS software also includes system codes and data from Domestic and Asian 2005.

The ABS Reader II features:
• Graphic display
• Fast data retrieval
• Enhanced data and recording functions
• ScanMate ABS PC software for uploading recorded files, storage, and printing
• Internet/memory card update capability
• Protective rubber over–mold and 3-year warranty

ABS/Air Bag Software features and coverage:
• Diagnose ABS pattern failures with Repair-Trac™ Tech-Tips
• Expanded ABS Pathfinder™ troubleshooting
• Tests through 2004 for GM, Chrysler, and Jeep
  – Chrysler/Jeep: many systems added, including rear wheel ABS and brake bleed for some systems
  – GM: bi-directional tests updated
• Expanded Ford coverage through 2005
• Volvo coverage from 1993 through 2004
• Volkswagen supported from 1990 through 2004
• Audi supported from 1992 through 2003
• Asian ABS and air bag coverage: Toyota, Lexus, Honda, Acura, Mazda, Mitsubishi, Nissan, Infiniti, Isuzu
  – Toyota/Lexus ABS special tests added
  – Honda ABS data added
• Powerful scan functions
  – Read and erase fault codes on ABS and air bag systems
  – Provide accurate definitions of fault codes
  – Display data stream information on most vehicle systems
• Over 900 new advanced diagnostic bi-directional functions on Delco, Bosch, and Teves
  – GM “motor rehome”  – Manual and hydraulic control
  – Gear tension relief  – Enable relays
  – Brake bleeding tests  – Voltage and lamp test
  – Solenoid test

ABS Reader II 2005 Kit
Kit includes: ABS Reader II tool; System Smart Inserts; cables and adapters necessary to support Domestic, Asian and European coverage; ScanMate ABS PC software; operations manual, and carrying case.
No. 346 – ABS Reader II 2005 Kit.

ABS Reader II 2005 Exchange Kit
This exchange kit is intended for owners of the No. 3762 ABS Reader. It includes: ABS Reader II tool; System Smart Inserts; cables and adapters necessary to support Domestic, Asian and European coverage; ScanMate ABS PC software, and operations manual. Note: Owners will use existing No. 3762 case and some existing cables.
No. 346-01 – ABS Reader II 2005 Exchange Kit
(Owners of the No. 3761 who did not update with the No. 3763 ABS 2002 kit will require additional cable purchases.)
OTC OBD I and OBD II ScanPro™

OTC ScanPro is an ergonomically designed, full function OBD I and OBD II scan tool that provides enhanced powertrain coverage for GM, Ford, and Chrysler. All compliant manufacturers 1996 to 2006 are covered with Global OBD II including CAN-based vehicles.

Features:
- OBD II enhanced functionality - displays enhanced vehicle data from vehicle computer for 1996 and newer vehicles
- Graph data – 1996 and newer only (OBD II)
- Multilingual menu options - English, French, Spanish
- Read, record & playback live sensor data
- OBD I functionality – cables included for ’84-’95 Ford, ’84-’95 GM and ’89-’95 Chrysler vehicles
- USB cable included for product updates
- Updateable via the internet

Other Features:
- PC compatible with ability to print
- State OBD II check (emissions)
- Battery powered for review of data off vehicle
- OBD II code library built into tool
- Vehicle information (includes VIN number and calibration IDs)
- O2 monitor test
- Diagnostic monitor test
- Large, graphic backlit LCD
- Optional cables available: 3498-11 Chrysler LH cable 3498-10 Ford MECS cable

NEW FEATURES!
- Supports OBD I & OBD II enhanced functionality for GM, Ford & Chrysler
- Honda OEM enhanced DTC’s for OBD II
- Enhanced data stream

Scanning Suite C.D.
- Browse Manuals
- Update Tool
- Print Companion
- DTC Look-up

OTC ScanPro®
Includes CD with the new Scanning Suite software, manual, padded nylon storage case, 6 AAA batteries, USB cable, with vehicle cables to support OBD II, Ford OBD I MCU/EEC-IV, Chrysler OBD I SCI, and GM OBD I ALDL.
No. 3499 – OTC ScanPro®.
OTC OBD I and OBD II Code Scanner®

OTC Code Scanner is an ergonomically designed multi-function code scanner that retrieves GM, Ford and Chrysler OBD I and all generic OBD II diagnostic trouble codes for all 1996 to 2006 foreign and domestic OBD II compliant vehicles as well as display selected enhanced codes for GM, Ford, Chrysler and Toyota and certain manufacturer’s specific codes for Asian and European vehicles.

Functions:
- Read hard and pending codes and their definitions
- Erase codes and reset MIL
- View freeze frame data
- PC upload and printing capability
- Off vehicle data review

Features:
- OBD I functionality – cables included for '84-'95 Ford, '84-'95 GM and '89-'95 Chrysler vehicles
- Functions on all 1996 to current OBD II compliant vehicles
- CAN capability
- Internal library of trouble code definitions
- Fully upgradeable to support future vehicles and tool enhancements via flash programming
- Easy to use, menu driven software
- Large, 128 x 64 backlit graphic display with adjustable contrast
- Displays codes and descriptions on the same screen
- Padded ballistic nylon storage case
- Detachable cable
- 3-year warranty

NEW FEATURES!
- Supports OBD I & OBD II enhanced functionality for GM, Ford & Chrysler
- Honda OEM enhanced DTC’s for OBD II
- Scanning Suite C.D.
  - Browse Manuals
  - Print Companion
  - Update Tool
  - DTC Look-up

OTC Code Scanner®

Includes CD with the new Scanning Suite software, manual, padded nylon storage case, 6 AAA batteries, USB cable, with vehicle cables to support OBD II, Ford OBD I MCU/EEC-IV, Chrysler OBD I SCI, and GM OBD I ALDL.

No. 3498 – OTC Code Scanner®.
OTC AutoCode™
OTC AutoCode™ can easily retrieve diagnostic trouble codes (DTCs) from your vehicle’s computer, leading you to the problem area. Use on all OBD II and CAN compliant cars and light trucks sold in the U.S. from 1996 to current.

Features and Benefits
• Compatible with all 1996 and newer vehicles (including the new CAN protocol)
• Provides trouble code data telling you why the “Check Engine Light” is on
• Erases trouble code turning off the “Check Engine Light”
• View freeze frame data
• Code look up through internal library of definitions
• No vehicle manual required, trouble code data displayed on screen
• Provides pending code data notifying you of potential problems
• Helps you determine if you will pass emission test by reading I/M monitors
• Hot keys for quick read and erase DTC
• Large, menu-driven, easy to read LCD display
• Field upgradable

OTC Ready Scan™ Readiness Monitor Tool
A drive cycle is required after any emissions related repair. The 3358 OTC Ready Scan eliminates drive cycle guesswork by notifying any driver, or your customer, with color coded LEDs and built in speaker that the drive cycle has been completed and the vehicle is Ready.

Once the vehicle’s OBD II system is Ready, repair work is confirmed. If a state emission inspection is required, a retest can then be performed. The compact tool works on 1996 and newer OBD II and CAN compliant vehicles.

Features and Benefits:
• Easy to install and no set up required—Connects easily into the vehicle’s OBD II connector and is able to display status in 15 seconds.
• Bright color coded LED’s provide Readiness Status. Green LED- Vehicle is Ready.
• Built in speaker provides audible tone every 5 minutes when vehicle becomes Ready.
• Ready Scan is powered from the vehicle—no batteries required.
• Rugged Poly carbonate housing has molded grips and OTC logo.
• 1-year warranty.
• Assembled in USA.

No. 3494 – OTC AutoCode™
No. 3358 – OTC Ready Scan™ Readiness Monitor Tool.
# OTC Scan Tool Family Comparison Chart

<table>
<thead>
<tr>
<th>Scan Functionality</th>
<th>AutoCode™ 3494</th>
<th>Code Scanner® 3498</th>
<th>ScanPro™ 3499</th>
<th>Nemisys 3797</th>
<th>Genisys Works Kit</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAN Enabled Tool (no adapters to buy)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Global OBD II (Dom., Asian, Euro.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OBD II Generic DTCs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DTC Definitions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash Upgradeable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>State OBD Check</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacturer Specific DTCs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacturer Enhanced DTCs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Generic Data Stream</td>
<td></td>
<td></td>
<td>Single Data Item</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graph Data Stream</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enhanced Data Stream</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domestic OBD II Enhanced</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domestic OBD I (DTC only)</td>
<td></td>
<td></td>
<td>(DTC only)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domestic Non-Engine Coverage (Dom., Asian, Euro.)</td>
<td></td>
<td></td>
<td>(Abs, Airbag, Trans)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian OBD II Enhanced</td>
<td></td>
<td></td>
<td>Toy/Honda DTC's</td>
<td>Optional</td>
<td></td>
</tr>
<tr>
<td>Asian OBD I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian Non-Engine Coverage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>European OBD II Enhanced</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>European OBD I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>European Non-Engine Coverage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PC Software DTC Lookup</td>
<td>DTC Lookup</td>
<td>Scanning Suite</td>
<td>Scanning Suite</td>
<td>ScanMate</td>
<td>ConnecTech</td>
</tr>
<tr>
<td>Pathfinder Troubleshooting Diagnostics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repair-Trac® VIN Specific Tech Tips</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fast Fixes® VIN Specific Most Likely/Overlooked Causes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>InfoTech® Component Test S/W</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vehicle Repair Information</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Options</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GM All Models Reprogramming</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WiFi Wireless</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-Channel Scope</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-Gas Analyzer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hardware</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graphic LCD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Detachable Cable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Battery Power</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Authentic GM software puts you in the driver’s seat to fix GM vehicles right the first time.

- Graphic screen displays both test and graphics, and is capable of showing nine sensors at once.
- Snapshot graphing shows you any failures or glitches at a glance.
- The authentic GM software will provide full bi-directional control when performing powertrain, chassis, and body diagnostics.

GM’s Service Programming System merges your Tech 2 Flash, a required PC*, and GM’s SPS CD-ROM, and lets you reprogram controllers on ’93 and newer GM/reprogrammable controllers.

**CANdi Module**
Includes the CAN diagnostic interface module and instruction sheet. IMPORTANT: For the CANdi module to work, you must have a 32 MB PCMCIA card with at least software version 24.001 in your Tech 2 Flash.

**No. 3625-20** — CANdi module. Wt., 1 lb. 4 oz.

**Tech 2 Flash Basic Kit**
Includes the OTC Tech 2 Flash, vehicle power cables, vehicle adapters, and 32 MB ’92—’07 GM PC diagnostic card. Packed in a heavy-duty storage case.

**No. 3628** — Tech 2 Flash basic kit. Wt., 17 lbs. 4 oz.

*Note: Candi module is not included with this kit.*

**Tech 2 Flash Deluxe Kit**
Includes the OTC Tech 2 Flash, vehicle power cables, CANdi module, vehicle adapters, and 32 MB ’92—’07 GM PC diagnostic card. Packed in a heavy-duty storage case.

**No. 3646** — Tech 2 Flash deluxe kit. Wt., 17 lbs. 4 oz.

**GM ACDelco TIS Starter Kit.**
This kit provides you with the ability to reprogram 1993-2007 GM powertrain, body, and chassis controllers. In addition, this option contains software that allows you to use your PC to update the software on your Tech 2 Flash’s PCMCIA card as the updates become available. The PC-based software also gives you the ability to play back and analyze snapshots taken with your Tech 2 Flash. Kit includes a 12-month subscription to the authentic GM aftermarket ACDelco TIS software on CD-ROM disks, which will keep you updated.

**No. 3625-17** — GM ACDelco TIS starter kit.* Wt., 2 lbs. 13 oz.

**Authentic GM Software Update Kit**
This includes a 32 MB PCMCIA memory card loaded with authentic GM software covering ’92—’07. Includes a one-year subscription.

**No. 3625-14** — Authentic GM software update kit. Wt., 1 lb. 2 oz.

* Your shop computer must conform to the GM SPS minimum requirements listed on page 9. For the latest GM minimum PC specifications visit HTTP: service.gm.com (select techline).

---

**Note:** GM will be moving to a new Web based Software Delivery Process in the near future. This will replace DVD’s.
## GENERAL APPLICATIONS

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>212541</td>
<td>&quot;Y&quot; battery connector. Used for splitting the power supply from the cigarette lighter or 12-volt power supply to the Monitor, printer, or other accessories. Wt., 4 oz.</td>
<td></td>
</tr>
<tr>
<td>212536</td>
<td>6-ft. vehicle extension cable for Monitor 4000E or 2000 only. Wt., 5 oz.</td>
<td></td>
</tr>
<tr>
<td>212638</td>
<td>Battery adapter for Monitor or Genisys. Used for under-hood access to 12-volt power supply. Wt., 4 oz.</td>
<td></td>
</tr>
<tr>
<td>212641</td>
<td>12-volt power supply. Use when battery power is unavailable and you need to review data from the Monitor. Wt., 1 lb. 4 oz.</td>
<td></td>
</tr>
<tr>
<td>3305-72</td>
<td>DB-25 to 8-pin DIN extension cable. Use with Enhanced Monitor 4000 only, to connect 8-pin vehicle adapter cables. Wt., 12 oz.</td>
<td></td>
</tr>
<tr>
<td>3421-04</td>
<td>AC/DC power adapter for Genisys. Wt., 1 lb. 7 oz.</td>
<td></td>
</tr>
<tr>
<td>3421-08</td>
<td>6 pin to scan tool cable, DB-9 to RJ-45. Wt., 4 oz.</td>
<td></td>
</tr>
<tr>
<td>3421-44</td>
<td>20 pin to scan tool cable, DB-9 to RJ-45. Wt., 8 oz.</td>
<td></td>
</tr>
<tr>
<td>239180</td>
<td>9.8V Genisys battery. Wt., 7 oz.</td>
<td></td>
</tr>
</tbody>
</table>

## SYSTEM SMART CABLES AND INSERTS

<table>
<thead>
<tr>
<th>SSI 25-Pin</th>
<th>Number</th>
<th>Description</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>3421-88</td>
<td></td>
<td>OBD II Smart Cable Requires 2006 software (Genisys only) with all system smart inserts</td>
<td>Replaces 3305-73 cable and all system smart inserts</td>
</tr>
<tr>
<td>3305-73</td>
<td></td>
<td>System Smart Insert OBD II 25-pin cable Wt., 13 oz.</td>
<td></td>
</tr>
<tr>
<td>3306-05</td>
<td></td>
<td>Chrysler System Smart Insert Wt., 2 oz.</td>
<td>Chrysler Neon '95–'96 and OEM Enhanced '96–'06</td>
</tr>
<tr>
<td>3306-11</td>
<td></td>
<td>GM ABS Smart Insert Wt., 2 oz.</td>
<td>Kelsey-Hayes</td>
</tr>
<tr>
<td>3306-12</td>
<td></td>
<td>GM SPS Reprogramming Smart Insert Wt., 2 oz.</td>
<td>SPS and all Modules Reprogramming</td>
</tr>
<tr>
<td>3306-13</td>
<td></td>
<td>Saturn Smart Insert Wt., 2 oz.</td>
<td>Saturn air bag only '04</td>
</tr>
<tr>
<td>3306-14</td>
<td></td>
<td>Dodge/Cummins Engine and Transmissions Wt., 2 oz.</td>
<td>24-valve Cummins engine and '98 and up transmissions</td>
</tr>
<tr>
<td>3306-15</td>
<td></td>
<td>GM Smart Insert Wt., 2 oz.</td>
<td>Grand Prix ABS '98–2002</td>
</tr>
<tr>
<td>3306-16</td>
<td></td>
<td>Mercedes-Benz Smart Insert Wt., 2 oz.</td>
<td>Transmission only. Use 3306-22 to access engine '04</td>
</tr>
<tr>
<td>3306-17</td>
<td></td>
<td>Mercedes-Benz Smart Insert Wt., 2 oz.</td>
<td>All engine configurations and V12 right bank. '04</td>
</tr>
<tr>
<td>3306-18</td>
<td></td>
<td>Mercedes-Benz Smart Insert Wt., 2 oz.</td>
<td>Transmission data access '04</td>
</tr>
<tr>
<td>3306-19</td>
<td></td>
<td>Mercedes-Benz Smart Insert Wt., 2 oz.</td>
<td>V12 engine configurations. Left bank only '04</td>
</tr>
<tr>
<td>3306-20</td>
<td></td>
<td>Nissan Smart Insert Wt., 2 oz.</td>
<td>Use with 2003 &amp; 2005 Asian Import Software '04</td>
</tr>
<tr>
<td>3306-21</td>
<td></td>
<td>Chrysler Smart Insert Wt., 2 oz.</td>
<td>Chrysler OEM Enhanced '04</td>
</tr>
<tr>
<td>3306-22</td>
<td></td>
<td>CAN/OBD II Smart Insert Wt., 2 oz.</td>
<td>Control Area Network plus all other OBD II protocols. '04</td>
</tr>
<tr>
<td>3306-23</td>
<td></td>
<td>Mercedes-Benz Smart Insert Wt., 2 oz.</td>
<td>MB diagnostic module '04</td>
</tr>
<tr>
<td>3306-24</td>
<td></td>
<td>Dodge Smart Insert Wt., 2 oz.</td>
<td>Dodge diesel SCl '04</td>
</tr>
<tr>
<td>3306-26</td>
<td></td>
<td>Ford Smart Insert Wt., 2 oz.</td>
<td>Ford UBP #1 protocol systems '04</td>
</tr>
<tr>
<td>3306-27</td>
<td></td>
<td>Ford Smart Insert Wt., 2 oz.</td>
<td>Mid Speed (MD) CAN-protocol systems '04</td>
</tr>
</tbody>
</table>

## DOMESTIC APPLICATION

<table>
<thead>
<tr>
<th>GM</th>
<th>Number</th>
<th>Description</th>
<th>Model</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>212550</td>
<td></td>
<td>Adapter block (gray) Wt., 3 oz.</td>
<td></td>
<td>81–82</td>
</tr>
<tr>
<td>212633</td>
<td></td>
<td>GM 14&quot; vehicle adapter cable Wt., 3 oz.</td>
<td></td>
<td>82–95</td>
</tr>
<tr>
<td>212653</td>
<td></td>
<td>Tuned port inj. adapter cable (gray). Wt., 4 oz.</td>
<td></td>
<td>86–89</td>
</tr>
<tr>
<td>213486</td>
<td></td>
<td>UNIV B 12&quot; adapter cable Wt., 4 oz.</td>
<td></td>
<td>88–94</td>
</tr>
<tr>
<td>213487</td>
<td></td>
<td>CARB/UNIV A 12&quot; adapter cable Wt., 4 oz.</td>
<td></td>
<td>89–95</td>
</tr>
<tr>
<td>3305-17</td>
<td></td>
<td>Geo/Isuzu adapter cable. Wt., 6 oz.</td>
<td></td>
<td>87–97</td>
</tr>
<tr>
<td>3305-18</td>
<td></td>
<td>UNIV 80 adapter cable. Wt., 3 oz.</td>
<td></td>
<td>87–97</td>
</tr>
<tr>
<td>238464</td>
<td></td>
<td>GM ABS cable. Wt., 3 oz.</td>
<td></td>
<td>89–95</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ford</th>
<th>Number</th>
<th>Description</th>
<th>Model</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>3305-27</td>
<td></td>
<td>Ford ABS cable Wt., 3 oz.</td>
<td></td>
<td>95</td>
</tr>
<tr>
<td>3305-58</td>
<td></td>
<td>Ford II 14&quot; adapter cable (gray). Wt., 6 oz.</td>
<td></td>
<td>91–96</td>
</tr>
<tr>
<td>3305-84</td>
<td></td>
<td>Ford II, 25-pin, 18&quot; cable (red) with 4&quot; power lead. Wt., 10 oz.</td>
<td></td>
<td>83–94</td>
</tr>
<tr>
<td>213487</td>
<td></td>
<td>CARB/UNIV A 12&quot; adapter cable. Wt., 4 oz.</td>
<td></td>
<td>79–83</td>
</tr>
<tr>
<td>3305-74</td>
<td></td>
<td>Universal &quot;C&quot;, 8-pin, 12&quot; cable. Wt., 4 oz.</td>
<td></td>
<td>93–94</td>
</tr>
<tr>
<td>213960</td>
<td></td>
<td>MECS 6&quot; adapter cable. Wt., 4 oz.</td>
<td></td>
<td>88–95</td>
</tr>
<tr>
<td>3305-14</td>
<td></td>
<td>MET adapter cable. Wt., 6 oz.</td>
<td></td>
<td>91–95</td>
</tr>
<tr>
<td>3305-19</td>
<td></td>
<td>MECS ABS adapter cable. Wt., 2 oz.</td>
<td></td>
<td>89–93</td>
</tr>
</tbody>
</table>
## DOMESTIC APPLICATION

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
<th>Model</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>212653</td>
<td>Standard 12&quot; adapter cable</td>
<td>Chrysler</td>
<td>'84–'95</td>
</tr>
<tr>
<td>3305-65</td>
<td>Chrysler III 25-pin, 18&quot; cable</td>
<td>LH Chrysler CCD</td>
<td>'93–'95</td>
</tr>
<tr>
<td>3305-22</td>
<td>Chrysler CCD 14&quot; adapter cable</td>
<td>Chrysler CCD with 4000E</td>
<td>'88–'95</td>
</tr>
<tr>
<td>213487</td>
<td>CAR/B/UNIV A 12&quot; adapter cable</td>
<td>Chrysler Import/ Non Enhanced</td>
<td>'85–'94</td>
</tr>
<tr>
<td>216094</td>
<td>Universal test leads</td>
<td>Chrysler/Mitsubishi</td>
<td>'85, '96</td>
</tr>
<tr>
<td>3305-20</td>
<td>Chrysler/Hyundai cable</td>
<td>Most</td>
<td>'95–'02</td>
</tr>
<tr>
<td>3305-92</td>
<td>Chrysler OBD II &quot;Y&quot; adapter</td>
<td>Use on Talon, Avenger, &amp; Sebring</td>
<td>'95–'02</td>
</tr>
<tr>
<td>3305-93</td>
<td>Chrysler OBD II to 6 pin adapter</td>
<td>Use for accessing CCD systems at the J1562 connector</td>
<td>'95–'96</td>
</tr>
</tbody>
</table>

## ASIAN APPLICATIONS

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
<th>Model</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>212653</td>
<td>GM 14&quot; adapter cable</td>
<td>Isuzu</td>
<td>'91–'95</td>
</tr>
<tr>
<td>3305-3</td>
<td>Toyota/Lexus adapter cable</td>
<td>Toyota/Lexus</td>
<td>'90–'93</td>
</tr>
<tr>
<td>3305-7</td>
<td>Geo/Isuzu adapter cable</td>
<td>Geo/Isuzu</td>
<td>'95, '96</td>
</tr>
<tr>
<td>3305-4</td>
<td>MET adapter cable</td>
<td>Mazda</td>
<td>'90–'95</td>
</tr>
<tr>
<td>3305-14</td>
<td>Nissan 12&quot; adapter cable</td>
<td>Nissan</td>
<td>'87–'95</td>
</tr>
<tr>
<td>213096</td>
<td>MECS 6&quot; adapter cable</td>
<td>Mazda</td>
<td>'83–'95</td>
</tr>
<tr>
<td>3305-68</td>
<td>Honda/Acura Jumper</td>
<td>Honda/Acura</td>
<td>'89–'95</td>
</tr>
<tr>
<td>213096</td>
<td>MECS 6&quot; adapter cable</td>
<td>Mazda</td>
<td>'83–'95</td>
</tr>
<tr>
<td>3305-14</td>
<td>MET adapter cable</td>
<td>Mazda</td>
<td>'90–'95</td>
</tr>
<tr>
<td>216044</td>
<td>Nissan 12&quot; adapter cable</td>
<td>Nissan</td>
<td>'87–'95</td>
</tr>
<tr>
<td>216094</td>
<td>Universal test leads</td>
<td>Hyundai</td>
<td>'89–'92</td>
</tr>
</tbody>
</table>

## ASIAN APPLICATIONS

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
<th>Model</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>3305-13</td>
<td>Toyota/Lexus adapter cable, includes auxiliary probe and power adapter</td>
<td>Toyota/Lexus</td>
<td>'90–'93</td>
</tr>
<tr>
<td>3305-15</td>
<td>Subaru adapter cable</td>
<td>Subaru</td>
<td>'90–'93</td>
</tr>
<tr>
<td>3305-16</td>
<td>Toyota adapter cable</td>
<td>Toyota</td>
<td>'92–'93</td>
</tr>
<tr>
<td>3305-17</td>
<td>Geo/Isuzu adapter cable</td>
<td>Geo/Isuzu</td>
<td>'92–'93</td>
</tr>
<tr>
<td>3305-19</td>
<td>MECS ABS Cable</td>
<td>Mazda</td>
<td>'92–'93</td>
</tr>
<tr>
<td>3305-48</td>
<td>Mitsubishi/DS adapter cable</td>
<td>Mitsubishi</td>
<td>'92–'93</td>
</tr>
<tr>
<td>3305-48</td>
<td>Mitsubishi/DS/Mitsubishi adapter cable</td>
<td>Stealth</td>
<td>'92–'93</td>
</tr>
<tr>
<td>3305-48</td>
<td>Mitsubishi/DS/Mitsubishi adapter cable</td>
<td>Sonata</td>
<td>'92–'93</td>
</tr>
<tr>
<td>3305-48</td>
<td>Mitsubishi/DS/Mitsubishi adapter cable</td>
<td>Scoupe</td>
<td>'91–'92</td>
</tr>
<tr>
<td>3305-48</td>
<td>Mitsubishi/DS/Mitsubishi adapter cable</td>
<td>Excel (MPI only)</td>
<td>'90–'92</td>
</tr>
<tr>
<td>3305-124</td>
<td>Accord adapter cable</td>
<td>Accord</td>
<td>'92–'95</td>
</tr>
<tr>
<td>3305-141</td>
<td>Nissan OBD I and II</td>
<td>Nissan</td>
<td>'92–'96</td>
</tr>
</tbody>
</table>
### Nemisys Cables

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3774-01</td>
<td>DB25 to OBD II cable</td>
</tr>
<tr>
<td>3774-02</td>
<td>DB25 to GM OBD I cable</td>
</tr>
<tr>
<td>3774-03</td>
<td>DB25 to Ford OBD I cable</td>
</tr>
<tr>
<td>3774-04</td>
<td>DB25 to Chrysler OBD I cable</td>
</tr>
<tr>
<td>3774-05</td>
<td>Cigarette plug power cord</td>
</tr>
</tbody>
</table>

### EUROPEAN

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
<th>Model</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>3306-47</td>
<td>38 Pin SSI Wt., 8 oz.</td>
<td>Mercedes</td>
<td>96–05</td>
</tr>
<tr>
<td>3421-41</td>
<td>38 Pin adapter cable Wt., 8 oz.</td>
<td>Mercedes</td>
<td>86–05</td>
</tr>
<tr>
<td>3421-42</td>
<td>1 Pin adapter cable Wt., 8 oz.</td>
<td>Mercedes</td>
<td>86–95</td>
</tr>
<tr>
<td>3421-43</td>
<td>VW 4 pin adapter cable Wt., 8 oz.</td>
<td>Volkswagen</td>
<td>86–94</td>
</tr>
<tr>
<td>3421-76</td>
<td>BMW adapter cable Wt., 8 oz.</td>
<td>BMW</td>
<td>87–05</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
<th>Model Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>342-4</td>
<td>38 Pin adapter cable Wt., 8 oz.</td>
<td>Mercedes '86–'05</td>
</tr>
<tr>
<td>342-42</td>
<td>1 Pin adapter cable Wt., 8 oz.</td>
<td>Mercedes '86–95</td>
</tr>
<tr>
<td>342-43</td>
<td>VW 4 pin adapter cable Wt., 8 oz.</td>
<td>Volkswagen '86–'94</td>
</tr>
<tr>
<td>342-76</td>
<td>BMW adapter cable Wt., 8 oz.</td>
<td>BMW '87–05</td>
</tr>
</tbody>
</table>

### TECH 2 FLASH

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3000095</td>
<td>DLC cable use with 'Tech 2 Flash adapter, 10'. Wt., 1 lb., 8 oz.</td>
</tr>
<tr>
<td>3000096</td>
<td>Cigarette lighter power cable Wt., 4 oz.</td>
</tr>
<tr>
<td>3000097</td>
<td>Battery adapter power cable Wt., 10 oz.</td>
</tr>
<tr>
<td>3000098</td>
<td>OBD II 16-pin DLC adapter, '95 to current OBD II. Wt., 4 oz.</td>
</tr>
<tr>
<td>3000099</td>
<td>GM 12-pin NAO DLC adapter '82–'95 GM applications. Wt., 4 oz.</td>
</tr>
<tr>
<td>3000109</td>
<td>DLC loopback adapter for 'Tech 2 Flash troubleshooting. Wt., 4 oz.</td>
</tr>
<tr>
<td>3000115</td>
<td>110 volt to 12-volt converter. Wt., 1 lb., 8 oz.</td>
</tr>
</tbody>
</table>
### Pro-Link® GRAPHIQ

Heavy-duty standard kit. The heavy-duty standard application provides the functions necessary to diagnose most SAE/TMC J1708/J1587 OBD electronic control system/engine, transmission, brakes, and instruments.

**Pro-Link GRAPHIQ applications**

- Allison diagnostic WTEC II & III
- Bendix application
- D.D. Mercedes-Benz MBE 900/4000 engine
- Allison reprogramming
- Detroit dsl. III/IV engine
- Detroit diesel DDEC V
- Dana/Eaton RoadRanger
- Heavy-duty standard
- Mack - V-Mac III
- Meritor WABCO ABS
- ZF Meritor transmission
- Navistar NAVPAK

**No. 3104** – Heavy-duty standard kit. Includes: Pro-Link® GRAPHIQ with multi-protocol cartridge, HDS software, PCMCIA card, 6-pin and 9-pin Deutsch cable, data and power cable, manual, carrying case. * Applications are sold separately.

### Multi-Protocol Cartridge (MPC)

**No. 3101-11** – Multi-Protocol cartridge.

### Light- and Medium-Duty Truck


* Compatible with Pro-Link GRAPHIQ only.

### Heavy-Duty MPC Software*

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3101-61</td>
<td>Allison Diagnostic WTEC II &amp; III</td>
</tr>
<tr>
<td>3101-16</td>
<td>Bendix Application</td>
</tr>
<tr>
<td>3101-72</td>
<td>D.D. Mercedes Benz MBE 900/4000 Engine</td>
</tr>
<tr>
<td>3101-65</td>
<td>Detroit Dsl. III/IV Engine</td>
</tr>
<tr>
<td>3101-77</td>
<td>Detroit Diesel DDEC V</td>
</tr>
<tr>
<td>3101-15</td>
<td>Dana/Eaton RoadRanger</td>
</tr>
<tr>
<td>3101-17</td>
<td>Heavy-Duty Standard</td>
</tr>
<tr>
<td>3101-45</td>
<td>Mack - V-Mac III</td>
</tr>
<tr>
<td>3101-14</td>
<td>Meritor WABCO ABS</td>
</tr>
<tr>
<td>3101-69</td>
<td>ZF Meritor Transmission</td>
</tr>
<tr>
<td>3101-63</td>
<td>Navistar NAVPAK</td>
</tr>
<tr>
<td>3101-79</td>
<td>Heavy-duty fault code manual</td>
</tr>
</tbody>
</table>

* No. 3101-11 Multimeter-Protocol cartridge (MPC) required.

### Heavy-Duty Vehicle Cartridge

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3101-52</td>
<td>Caterpillar V 1.11</td>
</tr>
<tr>
<td>3101-46</td>
<td>Eaton Vorad</td>
</tr>
<tr>
<td>3101-47</td>
<td>Detroit Diesel I &amp; II V 4.1</td>
</tr>
<tr>
<td>3101-70</td>
<td>Kelsey-Hayes ABS/ATC</td>
</tr>
<tr>
<td>3101-49</td>
<td>Detroit Diesel II &amp; III V 5.2</td>
</tr>
<tr>
<td>3101-56</td>
<td>Navistar MRD</td>
</tr>
<tr>
<td>3101-57</td>
<td>Hino Injection Pump</td>
</tr>
<tr>
<td>3101-71</td>
<td>Navistar IPC</td>
</tr>
<tr>
<td>3101-41</td>
<td>Mack V-MAC I V 3.1</td>
</tr>
<tr>
<td>3101-62</td>
<td>Volvo VED 12 V 2.1</td>
</tr>
<tr>
<td>3101-44</td>
<td>Mack V-MAC II V 2.1</td>
</tr>
</tbody>
</table>
Brake-Link™ Hand-Held Diagnostic Trailer Brake Tool

Brake-Link™ ABS Coverage:
- Bendix EC-17, EC-30, and EC-30T (tractor and trailer).
- Meritor WABCO Easy-Stop and Enhanced Easy-Stop (trailer only).
- Wabash National MBS-1P and MBS-2.
- Eaton GEN4 and GEN5.
- Haldex PLC, PLC Plus, and PLC Select (trailer only).

No. 3106 – Brake-Link™ hand-held diagnostic trailer brake tool.

ABS Power Line Carrier (PLC) Converter for Pro-Link®

- Detects the ABS warning lamp message coming from the trailer ECU.
- Tests SAE MID 10 and 11 ABS messages.
- Tests the in-dash trailer ABS warning lamp.
- Supports all tractor/trailer ABS brake controllers equipped with the Power Line Carrier (PLC) network.
- Interfaces with the trailer via J560 cable set or standard Deutsch connection for communication to the trailer or tractor.
- Utilizes SAE J2497 communication protocol.

No. 3101-04 – ABS power line carrier (PLC) converter for Pro-Link®. Includes 6" data cables, 6’ DB-15 cables, J560 PLC set.

MagiKey® PDM

The MagiKey® Parallel Port Data Module (PDM) connects your PC through a standard IEEE-1284 port to any heavy-duty truck. The MagiKey® is compatible with the latest vehicle standards, including SAE J1708/J1939. It is the primary module for heavy-duty vehicle service compatible with OEM PC applications.

No. 3102 – MagiKey® PDM

MagiKey® PDM USB Adapter for PC-to-Heavy-Duty Vehicle Connectivity

The USB port adapter converts the MagiKey® PDM parallel port connector into a USB connector.

No. 3102-05 – The complete USB connectivity kit for new users includes: Magikey PDM, USB cable, USB to PDM adapter.

No. 3102-01 – For existing NEXIQ MagiKey PDM customers includes: USB cable, USB to PDM adapter.

USB Link

- Single interface box used for all RP1210A compatible OEM PC applications.
- Easy USB connectivity
- Flexible configuration supports wired or wireless connectivity via Bluetooth.
- Supports Windows 2000 and XP.
- CE compliant.

No. 3101-78 – USB link

Heavy-duty standard Lite™ Adapter

Includes heavy-duty standard Lite Link™ adapter, 15’ null modem cable*, driver installation CD and guide, RP1210A API single-use license (for use with PC or PDA applications), 6-pin Deutsch adapter.

No. 3103 – Heavy-duty standard Lite Link™ adapter.
Solarity™ with InfoTech 2006 Software

Solarity is a powerful 4-channel scope with the functionality required to analyze the most sophisticated vehicles. InfoTech software provides the key information to transform a driveability or component fault into a fast and accurate repair.

**Solarity Scope Features and Benefits**

- 4-channel full function scope.
- 4 MHz sample rate on all channels.
- Adjustable glitch capture.
- Update via Compact Flash or PC.
- Smart Card security.
- Print via standard desktop color printer.
- Custom enclosure—horizontally oriented and ergonomic.
- Sunlight readable display.
- Modular design allows for future expansion capabilities.

**Ignition Scope Capabilities:**

- Primary/secondary
- Distributorless ignition
- Coil-on-plug
- Raster
- Parade
- Superimposed
- Single cylinder
- Record

**4-Channel High Speed Lab Scope**

**Graphing and Digital Multimeter:**

- Volts
- Ohms
- RPM
- Frequency
- Duty cycle

**InfoTech 2006 Software Coverage**

- Domestic, Asian, and European vehicle coverage for vehicles on the road today.
- Engine, transmission, and ABS systems covered.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Domestic</th>
<th>Asian</th>
<th>European</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle System Tests</td>
<td>All</td>
<td>All</td>
<td>All</td>
</tr>
<tr>
<td>Transmission Pan ID Charts</td>
<td>1984–2004</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Indexed Information</td>
<td>All</td>
<td>All</td>
<td>All</td>
</tr>
<tr>
<td>Repair-Trac Quick Fixes</td>
<td>All</td>
<td>All</td>
<td>All</td>
</tr>
</tbody>
</table>

NOTE: Red text indicates updates from InfoTech 2005.
Vehicle Specific Component Tests and Information

For each vehicle specific component, the following information is available:

- **Functional Tests** – walks user through complete test procedure.
- **Circuit Description** – gives user description about how the circuit functions.
- **Component Locations** – provides on-vehicle location of sensor.
- **Circuit Diagrams** – shows component wiring diagrams including wiring colors and names.
- **Connector Diagram** – displays connector pinout providing correct hookup to circuit.
- **Component Specifications** – lists the correct sensor operating values for specific operating conditions.
- **Reference Waveforms** – displays exactly what the user should, and should not, see when connected to circuit.

Vehicle System Tests

Complete test procedure and circuit connection diagrams are provided for key driveability systems:

- EGR system tests.
- Canister purge system.
- Fuel control including injectors, M/C solenoid, and O₂ sensor.
- Fuel delivery, including fuel pressure, fuel volume, pressure regulator, fuel pump voltage, and current.
- Charging system including alternator voltage, current, and diode.
- Starter cranking tests and voltage drop.
- Ignition system including coil, module, wires, and plugs.
- OBD system including idle controls, out-of-range, and no-signal tests.
- No-start including ignition, fuel, and compression.
- Transmission pressure, solenoid, and TCC tests.
- Back pressure.

Additional InfoTech Features

- **Repair-Trac** – known fixes and fast repairs for today’s high-tech vehicles.
- **Domestic Transmission Pan ID** – transmission pan identification graphics.
- **Torque Specs** – cylinder head and intake manifold torque sequence pictures, including torque and torque angle specifications.
- **Tune-up Specification** – includes fuel and ignition systems specifications.
- **Oil Light Reset Procedures** – includes the manual reset procedures for oil service lights.
- **Indexed Information** – helpful information including definitions and how-to procedures for scope and automotive terminology.
Solarity Performance Gas

The Solarity Performance Gas is the most advanced stand-alone gas analyzer available. The Gas M-P software features advanced diagnostics providing the ability to troubleshoot emission related or mechanical system failures. The Performance Gas module meets the latest BAR accuracy requirements, while providing automated functions to simplify use and operation.

Live Data Display

Gas M-P software offers complete 5-gas functionality with hot links directly into vehicle diagnostics.

• Vehicle entry information. Entering pertinent vehicle information provides tailored diagnostic information.
• Comparison values displayed in conjunction with live data provide typical operating range values based off current operating conditions, and quick identification of out-of-range readings.
• Adjustable limits show out-of-range data in red.
• Possible causes available directly from the live display automatically detect which readings are out of range.

Mechanical System Diagnosis

Gas M-P software, combined with the Genisys built-in diagnostic software, provides the ability to perform automated mechanical system tests such as:

• Leaking head gaskets
• Cylinder balance
• Leaking intake manifold gaskets

Emission Related Diagnosis

The vehicle diagnostics menu provides the user with a complete emissions manual, plus interactive testing.

• On-board diagnostics provide possible causes of excessive emissions and describes the vehicle system that is likely to be causing the condition.
• Component tests allow for automated testing of components suspected of causing excessive emissions.
• Diagnostic tests instruct the user how to perform the test and automatically collect data throughout the procedure to provide a summary.
• Drive cycle explains the correct vehicle operating conditions to best test emission systems.
• The Repair Effectiveness feature utilizes average mass calculation and baseline/verification strategy to provide a highly accurate and repeatable test process for validating emission repairs.

Features and Functions

• Automatic water purge eliminates the need to disassemble the water trap or manually drain water.
• Fluid overload protection keeps liquids from entering the system.
• Automatic Zero mode eliminates the need to remove the sample probe from the tailpipe.
• Heavy-duty pump has extended life expectancy compared to other portable analyzers.
• Heavy-duty filtration has two–ten times longer life compared to competitive analyzers, which dramatically reduces operating costs.
Features and Functions continued
• Heavy-duty pump and filtration, along with the O₂ and NOₓ sensors are user serviceable.
• Meets or exceeds the following accuracy standards: BAR 97, OIML Class 0.
• Average Mass feature allows you to convert recorded data to grams-per-mile; then you can compare pre-repair to post-repair data to verify emission improvement after repairs are made.
• Software can be configured to 3-, 4-, or 5-gas.
• System configuration lets you choose reading gasses from gas, propane, methane, or variable fuel vehicles.
• Contains recommended maintenance schedule and gas analyzer status.

No. 3851 – Solarity platform with InfoTech and 5-Gas software–does not include scope or gas module.
No. 3850-02 – 12-volt power adapter, isolated ground.
No. 3850-05 – High capacity battery and high output wall changer.

Solarity Performance 5-Gas
The Solarity emissions repair solution. Kit includes Solarity with plug-in 5-Gas Analyzer Module, hoses, exhaust probe, power cable and battery adapter, RS232 cable, AC power supply, Smart Card, Gas M-P software CD, filters, manual, and carrying case.
No. 3855 – Solarity performance 5-gas.

Performance Gas Module Kit
Kit includes the plug-in 5-Gas Analyzer Module, hoses, exhaust probe, Smart Card, Gas M-P software CD, filters, manual, and carrying case.
No. 3780 – Performance gas module kit.

Performance Gas Accessories and Replacement Parts

| No. 3780-02 | NOₓ sensor replacement |
| No. 3780-03 | O₂ sensor replacement |
| No. 3700-25 | Calibration gas |
| No. 3780-01 | Filter kit (4 primary, 4 secondary) |
| No. 3780-09 | Sample hose replacement |
| No. 3780-08 | Exhaust probe replacement |
| No. 3780-05 | Regulator |
| No. 3780-04 | Pump replacement |

Solarity 4-Channel Scope Kit
Includes Solarity with plug-in 4-channel scope module, 4 scope/DMM leads with 5-way alligator clips, ground lead, kV ignition lead, ignition sync lead, HEI adapter, manual, InfoTech Smart Card, CD, and carrying case.
No. 3852 – Solarity 4-channel scope kit.

Solarity 4-Channel Scope Master Kit
Includes Solarity with plug-in 4-channel scope module, 4 Scope/DMM leads, ground lead, kV ignition lead, ignition sync lead, HEI adapter, low amp probe 0–60A, pressure/vacuum adapter, temperature adapter, COP adapter (5 OEMs), COP adapter cable, 14-piece terminal adapters, BNC/banana adapter cable, 3 test probes, 3 back probes, manual, InfoTech Smart Card, CD, and carrying case.
No. 3852M – Solarity 4-channel scope master kit.
No. 3852MT – Includes 3850M with a 4-hour training coupon. (Note: Coupon valid in U.S.A. only.)
Automotive Scope

**Features and Benefits**
- 2-channel lab scope.
- A 25 MHz sample rate per channel for rapid data updates.
- True RMS GMM (Graphing Multimeter) measurements and graphs.
- A unique “Glitch Capture” feature captures, displays, and optionally saves abnormal signal patterns in the Scope mode for component testing.
- Real-time comparison between actual waveforms and reference waveforms on the same screen for component testing.
- Preset tests enable the user to check the majority of automotive sensors, actuators, and systems easily and quickly.
- Powerful built-in reference information for each preset test includes a test procedure, a normal reference signal pattern, theory of operation, and troubleshooting tips.
- The extremely powerful Help Menu lets you find answers fast.
- The secondary ignition single function displays the waveform along with the spark voltage, RPM, burn time, and burn voltage at the same time.
- USB interface supports update for code and data over the internet.
- Over-molded case technology disperses shock over more of the case than a conventional rubber boot design.

**No. 3840** – Automotive scope kit. Includes red and yellow test leads, black ground lead, 3- and 5-way alligator clips, 3 test probes, 3 back probes, ignition probes, inductive pickup, lead extensions, AC adapter, update cable/software, soft carrying case, and user manual.

**Replacement Accessories**
- No. 3840-01 – Red and yellow test leads.
- No. 3840-06 – Ignition probe.
- No. 3843-07 – Inductive pickup.

**Scope and Meter Accessories (Amp Clamps)**

**No. 3820-13** – Low-range amp probe with display – use alone or connected to scope. Long, small jaws combined with superior performance are ideal for:
- Ignition coils
- Fuel injectors • Fuel pumps • Relays • Electric motors
- Parasitic draw
- 0–60A range, measure to 90A, 100mV/A
- High accuracy, and low noise interference
- Non-intrusive AC/DC current measurement
- Resolution: 10mA
- Average responding, RMS calibrated
- Auto ranging, auto zero, data hold, low battery indicator

**No. 3820-06** – Low-range amp probe.
Measures current in two ranges: 0–60 amps AC/DC
- Ignition coils • Fuel injectors • Relays • Electric motors • Parasitic draw
- Non-intrusive AC/DC current measurement

**No. 3500-01A** – Mid-range amp probe.
Measures current in a range of 2–600 amps AC/DC.

**No. 3500-01** – Mid- and high-range amp probe.
Amp probe measures current in two ranges: 2–200 amps AC/DC and 2–2000 amps AC/DC.

3-year warranty

CE-certified
### Scope and Meter Accessories (Amp Clamps)

**No. 3850-01** – Coil-on-plug master kit. Includes BNC style universal lead, Chrysler, Ford, Honda, Isuzu, BMW, VW, Audi, Volvo coil-on-plug adapters with No. 3421-09 universal coil-on-plug lead.

**No. 3421-09** – Universal coil-on-plug lead with BNC connector. For single-cylinder testing only.

**No. 3820-09** – Universal coil-on-plug lead with banana jacks. (covers 1 cylinder)

**No. 3947-03** – Chrysler coil-on-plug adapter for use with No. 3421-09 or No. 3820-09 universal coil-on-plug lead.

**No. 3947-04** – Ford coil-on-plug adapter for use with No. 3421-09 or No. 3820-09 universal coil-on-plug lead.

**No. 3947-05** – Honda/Isuzu/BMW coil-on-plug adapter for use with No. 3421-09 or No. 3820-09 universal coil-on-plug lead.

**No. 3947-06** – VW/Audi coil-on-plug adapter for use with No. 3421-09 or No. 3820-09 universal coil-on-plug lead.

**No. 3947-07** – Volvo coil-on-plug adapter for use with No. 3421-09 or No. 3820-09 universal coil-on-plug lead.

**No. 3500-03** – Surface temp probe - Measures surface temp of hoses, engine blocks, catalytic converters, and tire temp. K-type connector.

**No. 3500-04** – Air temp probe - Measures air temp when servicing HVAC systems. K-type connector.

**No. 3500-05** – Bead-type temperature probe - Measures air temp when servicing HVAC systems. K-type connector.

**No. 3500-06** – Immersion temp probe - Wire type measures liquid temp of coolant, oil, transmission fluid, fuel, etc. K-type connector.

**No. 3820-12** – BNC to banana adapter cable. Required to use the temperature or pressure adapter with scope.

**No. 3840-04** – Test probes. Three pieces: red, yellow, black.

**No. 3500-15** – Jaw clip insulated mini-plunger - Plug-on adapter includes jaws that securely grip thick wire and cable; ground leads and rails eliminate interference from cable during testing.

**No. 3500-17** – Large alligator clips - Plug-on red and black large alligator clips with insulated jaws.

**No. 3500-26** – Ignition DAT test lead kit - Includes 5 ft. red and black leads with retractable shroud, red and black probe adapters, red and black large alligator clips with insulated jaws.

**No. 3840-05** – Back probes. Three pieces: red, yellow, black.

**No. 3500-28** – 5-way alligator clip - plug-on multiple-use clip includes: bed of nails, piercing tip, alligator clip, spade and square lug connectivity.

**No. 3840-03** – 3-piece, 5-way alligator clip - Plug-on multiple-use clip includes: bed of nails, piercing tip, alligator clip, spade and square lug connectivity.

**No. 3840-02** – Banana lead extension includes two 4 ft. leads.

**No. 3500-36** – Blue lead - 5 ft. lead with retractable shroud.

**No. 3500-37** – Electrical DAT test lead kit - Includes 5 ft. red and black leads with retractable shroud, red and black probe adapters.

**No. 3800-25** – E-Z hook.
OTC’s Digital Automotive Tester (DAT) is much more than a standard multimeter. It would take several tools to match the functions and features found in the DAT’s electronic toolbox.

- Full Function Multimeter
- Sensor Tester
- Fuel Injector Tester
- Pressure Tester*
- Battery Drain Tester
- Ground Tester
- Charging System Tester
- Noid Lights

* Auto set-up on DAT, optional adapter required.

The DAT automatically sets up the test for the circuit being tested. Simply turn the dual action selector wheel, and/or press a function button to select the function desired. The DAT is ready to go, no additional set up required!

No. 3545 — Ignition DAT complete kit. All features are included: volts, ohms, amps, batt, elect, sen, fuel, and ign. See chart for kit contents.

No. 3535 — Electrical DAT kit. Features volts, ohms, amps, battery drain test, and electrical system test functions. See chart for kit contents.

Accessories exclusive to the DAT:

No. 3500-30 — Ignition secondary/RPM probe.
No. 3500-40 — Case - blow-molded.
No. 3500-42 — DAT replacement fuse.
No. 3500-43 — Coil-on-plug adapter.
No. 16543 — Battery.

Autoranging Multimeter

This high quality, low cost multimeter has features you’d expect to find only on more expensive meters:

- Analog display with a 34 segment bar graph for checking TPS and other readings.
- Diode test for checking alternators, relays, solenoids, and A/C clutch compressor diodes.
- Continuity check for quick “Go–No Go” tests on fuses, wires, and switches.
- Inductive rpm pickup for conventional ignitions.
- Duty cycle and dwell angle for checking fuel injection, feedback carburetors, and ignitions. No conversion charts needed!
- Autoranging for volts, ohms, amps, and frequency.
- Frequency for checking MAP, MAF, and other components for output.
- 10 meg ohm impedance protects sensitive components on today’s electronic systems.
- Low battery indicator.
- 3-year warranty.

No. 3505 — 100 Series autoranging multimeter set. Includes multimeter, test leads, large insulated alligator clips, inductive rpm pickup, bead type temperature probe.

No. 233870 — 10 amp fuse.
No. 233871 — 1.5 amp fuse.
Automotive DVOM

- Accurate ms-pulse width function to test on-time for fuel injectors, IAC motors, and transmission controls.
- Inductive rpm for 1–8 cylinders (2- or 4-stroke), inductive clamp included in the kit.
- Direct dwell readings and duty cycle. DC volts and mV, AC volts, ohms, continuity, frequency.
- Four step adjustable ± trigger.
- 4-1/4” digit display. Analog bar graph, 41 segment.
- Auto ranging, automatic power off, and data hold features.

No. 3514 – Automotive DVOM. Wt.,

Pocket DVOM

- CE/UL.
- DCV, ACV, ohms, continuity/diode, micro and milli amps.
- Auto power off/low battery indicator.
- Auto ranging data hold/max hold.
- Self-contained probe storage and carry pouch.

No. 3509 – Pocket DVOM. Wt., 1 lb., 15 oz.

Comparison Chart

<table>
<thead>
<tr>
<th>Test Description</th>
<th>Multimeter</th>
<th>3509</th>
<th>3514</th>
<th>3505</th>
<th>3535</th>
<th>3545</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volts AC/DC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ohms</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amps AC/DC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>mA AC/DC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fused amps</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diode check</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuity beeper</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RPM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-cycle / 2-cycle</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duty cycle</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequency</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temperature</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bar graph</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Digital display</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low battery indicator</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data hold</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Auto power off</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct dwell readings</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autorange</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Min./Max.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Averaging</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delta</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Logic check</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Test Description</th>
<th>Multimeter</th>
<th>3509</th>
<th>3514</th>
<th>3505</th>
<th>3535</th>
<th>3545</th>
</tr>
</thead>
<tbody>
<tr>
<td>Backlighting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>+/- Triggering</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adj. triggering level</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoothing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overmolded enclosure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sleep mode</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dual display</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEDs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjustable logic probe</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PC connectivity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ground test</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Charging system test</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Battery drain tester</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>O2 sensor with signal out</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TPS sensor with glitch</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAP/BP sensor (dedicated mode)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAF sensor (dedicated mode)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magnetic pickup (dedicated mode)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Noid Light (low impedance circuit)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fuel injection (on-time, peak V.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pressure/vacuum (dedicated mode)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ignition - peak kV/Burn Time/Spark kV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Terminal Test Kit with LED Circuit Tester (Extended Adapters)
- Computer safe circuit tester with two color LEDs indicate proper connection and probed voltage or ground source. Interchangeable probes for use with terminal test adapters for use on 6-12-24 volt systems.
- Terminal adapters have extended leads allowing for use with close pitch connectors. Also eliminates damaged connector terminals that result from testing with a standard test probe.
- Sturdy aluminum storage case with clear top.
No. 3969 – Terminal test kit with circuit tester.
No. 3969-1 – Circuit tester.

Terminal Test Kit with Circuit Tester (Standard Adapters)
- Circuit tester with bulb for 6-12-24 volt systems with interchangeable probes for use with terminal test adapters. Heavy-duty coil cord extends to 12 ft.
- Terminal adapters have flexible joints that eliminate damaged connector terminals that result from testing with a standard test probe.
- Complete kit in plastic storage case.
No. 3569 – Terminal test kit with circuit tester.
No. 3525 – Circuit tester.

Terminal Test Kit (Extended Adapters)
- Excellent accessory when testing with a scope or meter.
- Set of 4 patch cords (4 ft.) included for use on multiple terminal connectors, for use with terminal adapters.
- Terminal adapters have extended leads allowing for use with close pitch connectors. Also eliminates damaged connector terminals that result from testing with a standard test probe.
- Sturdy aluminum storage case with clear top.
No. 3987 – Terminal test kit.

Terminal Test Kit (Standard Adapters)
- Excellent accessory when testing with a scope or meter.
- Terminal adapters have flexible joints that eliminate damaged connector terminals that result from testing with a standard test probe.
- Set of 4 patch cords (4 ft.) included for use on multiple terminal connectors, for use with terminal adapters.
- Complete kit in plastic storage case.
No. 3587 – Terminal test kit.
Battery Powered Continuity Tester
Designed to test any type of non-live electrical circuit. Track down broken wires, bad grounds, and blown fuses quickly.

Features and Benefits
- Comes with AAA alkaline battery.
- Ergonomic, slim designed clear handle.
- 12', red coil cord.
- Low voltage replaceable bulb.
- Molded strain relief.
- Heavy-duty stainless steel probe with insulated shaft.
- Heavy-duty clip with positive soldered connection.

No. 3630 – Battery powered continuity tester.

Heavy-duty Logic Probe Tester
Multi-functional design allows testing range of 3–26 volts. Bright red and green LEDs interpret voltage signals such as ground, power, and frequency. Tests fuel injectors, solenoids, presence of serial data, and tach reference signals. Output tests on MAF, Cam, Crank, Hall Effect VRS sensors and more. High impedance input compatible with computer circuits and sensors.

Features and Benefits
- Air bag safe.
- 12', heavy-duty, twin clip, red coil cord lead.
- Checks 6-, 12-, and 24-volt systems.
- Ergonomic, slim designed clear handle.
- Positive contact molded strain relief.
- Heavy-duty stainless steel probe with insulated shaft.

No. 3631 – Heavy-duty logic probe tester.

12V–36V Truck Circuit Tester

Features and Benefits
- Works on 12–36 volt systems.
- Features 7” stainless steel probe.
- 24' coil cord.
- Extra large clamp.

No. 3642 – 12V–36V truck circuit tester.

Mini-coil Cord Circuit Tester
Small handle with needlepoint stainless steel probe allows easy backprobing and piercing. Special threaded probe comes with screw on alligator clip for additional versatility. Useful in testing electrical circuits and locating shorts, grounds, and open circuits.

Features and Benefits
- 12', heavy-duty, red coil, cord lead.
- Checks 6- and 12-volt systems.
- Ergonomic, slim designed clear handle.
- Bright red, high intensity/slim style replaceable bulb.
- Positive contact-molded strain relief.
- Heavy-duty, stainless steel probe with insulated shaft.
- Heavy-duty clip with positive soldered connection.

No. 3633 – Mini-coil cord circuit tester.
Heavy-Duty, Straight Cord Circuit Tester
Designed for testing electrical circuits and locating shorts, grounds, and open circuits.
Features and Benefits
- 5-foot heavy-duty cord.
- Checks 6- and 12-volt systems.
- Ergonomic, slim designed clear handle.
- Bright red, slim style replaceable bulb.
- Positive contact-molded strain relief.
- Heavy-duty, stainless steel probe with insulated shaft.
- Heavy-duty clip with positive soldered connection.
No. 3634 – Heavy-duty, straight cord circuit tester.

Heavy-Duty, Coil Cord Circuit Tester
Designed for testing electrical circuits and locating shorts, grounds, and open circuits.
Features and Benefits
- 12-foot, heavy-duty, red coil cord lead.
- Checks 6- and 12-volt systems.
- Ergonomic slim designed clear handle.
- Bright red, slim style replaceable bulb.
- Positive contact-molded strain relief.
- Heavy-duty, stainless steel probe with insulated shaft.
- Heavy-duty clip with positive soldered connection.
No. 3636 – Heavy-duty, coil cord circuit tester.

Extra Long, Heavy-Duty Circuit Tester
Long 7" probe shank allows access to difficult to reach areas for testing electrical circuits and locating shorts, grounds, and open circuits.
Features and Benefits
- 12-foot, heavy-duty, red coil cord lead.
- Checks 6- and 12-volt systems.
- Ergonomic, slim designed clear handle.
- Bright red, slim style replaceable bulb.
- Positive contact-molded strain relief.
- Heavy-duty, stainless steel probe with insulated shaft.
- Heavy-duty clip with positive soldered connection.
No. 3639 – Extra long, heavy-duty circuit tester.

12-Pack Display Assortment
Stand-up display of 12 circuit testers contains an assortment of all 6 circuit testers in a point-of-purchase display.
Contents include:
No. 3630 – Battery powered continuity tester - (1)
No. 3631 – Heavy-duty logic probe tester - (1)
No. 3633 – Mini-coil cord circuit testers - (3)
No. 3634 – Straight cord circuit testers - (2)
No. 3636 – Coil cord circuit testers - (3)
No. 3639 – Extra long circuit tester - (1)
No. 3642 – 12V–36V truck circuit tester - (1)
No. 3644 – 12-pack display assortment.

Replacement Bulbs
No. 3630-10 – 10 pack of replacement bulbs for No. 3630
No. 3633-10 – 10 pack of replacement bulbs for Nos. 3633 – 3639
No. 3642-10 – 10 pack of replacement bulbs for No. 3642
OTC Test Leads

Constructed from high quality polyurethane, these high visibility coil cord test leads have superior memory retention and resistance to grease and oil, making them a perfect compliment to any technician’s arsenal of test equipment. Test leads come with a variety of interchangeable tips suited for just the right application.

No. 3902 – Twin 5’ jumper leads. High visibility black and red leads stretch to over 5 feet in length.

No. 3903 – 24’ jumper leads. From headlight to taillight, this extra long test lead stretches to over 24 feet in length.

No. 3904 – Twin 5’ multimeter lead set. Expand the usefulness of any standard multimeter. This set includes one black and one red test lead, 2 multimeter probes, 2 banana plugs, and 4 alligator clips.

No. 3905 – Twin 5’ multimeter/piercing jumper lead set. Pierce small gauge wires with this complete jumper lead set. This set includes one black and one red test lead, 2 multimeter probes, 2 banana plugs, 2 bed-of-nails, and 2 alligator clips.

No. 3906 – Twin 5’ piercing test lead set. With 2 banana plugs and 2 bed-of-nails, this test lead set has just the right combination of tips for most testing applications.

Heavy-Duty, Remote Starter Switch

Allows one person to start and crank engine while under the hood or from either side of the vehicle.

Features and Benefits

• With convenient hot circuit indicator, red ready light glows when starter switch is connected to a hot circuit; light goes off when switch is depressed.

• High current, heavy-duty push button switch ensures reliable operation and long service life.

• 5’ leads made from heavy-duty, oil and grease resistant, 12-gauge wire.

• High current clips with protective boots open to an extra wide 5/8” for ease of hook-up.

• Soft, non-slip rubber grip.

No. 3650 – Heavy-duty, remote starter switch.

Component Diagnostic Guides

Sensor Testing & Specifications – Test procedure descriptions of powertrain sensor tests including sensor specifications.

Component Locations – Vehicle component diagrams clearly labeled with sensor locations for simple identification.

Wiring Diagrams – Diagrams are broken down into systems for engine and transmission applications. Includes wire colors, circuit and component descriptions.


Total Solution for TPMS Servicing - OTC TPM Tool Kit

The OTC Tire Pressure Monitor Kit is designed to be a complete universal kit covering vehicles with Tire Pressure Monitoring Systems (TPMS). The software has the option to AutoScan the wheel sensor or utilize the vehicle entry system for easy and accurate access to the proper interface to the vehicle. The manual contains the critical reset procedures along with all the system information including torque specifications and wiring diagrams.

The monitor has a graphical interface that allows for use of the tool with little or no knowledge of TPM systems. The monitor and manual frequently updated to keep up with changing vehicle requirements.

The TPM Tool includes software that includes the following features:

**AutoScan**

The new AutoScan features provides the capability to walk up to any TPM equipped vehicle and activate the sensor with the push of a button. This will search through all the communication protocols until the sensor is activated, then a successful activation is shown on the display.

**Diagnostics**

The Diagnostics feature allows for quick check of sensor via the Make – Model – Year vehicle entry system. Selection of the specific vehicle eliminates the search time of proper protocol. Live sensor information is displayed when available. Powerful feature that allows the technician to validate that all the sensors are functional before any work is started.
Reset Procedure
The Reset Procedure is the key function that “resets” the tire locations and will turn off the dash light. This function is accessed via the vehicle entry and walks the user through all the necessary steps to complete the reset procedure.

Sales and Services Support Material

3833-19
Service Procedure Flowchart Color Wall Poster 25-1/2” x 33”

3833-20
Consumer Poster Counter Display 11” x 17”

CDTPMS0506
TPMS Training Video

3833-18
Application Flip Chart

<table>
<thead>
<tr>
<th>Make</th>
<th>Model</th>
<th>Year</th>
<th>Type of System</th>
<th>Reset After Tire Rotate</th>
<th>Reset After Sensor Replace</th>
<th>Reset After Tire Change</th>
<th>Tool Used for Reset</th>
<th>Sensor Bolt or Nut Torque Inch/Lb-ft</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lexus</td>
<td>GS 430</td>
<td>2006</td>
<td>Direct</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>35/4.0</td>
</tr>
<tr>
<td>Lexus</td>
<td>GX 470</td>
<td>2004-06</td>
<td>Direct</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>35/4.0</td>
</tr>
<tr>
<td>Lexus</td>
<td>IS 250</td>
<td>2006</td>
<td>Direct</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>35/4.0</td>
</tr>
<tr>
<td>Lexus</td>
<td>IS 350</td>
<td>2006</td>
<td>Direct</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>35/4.0</td>
</tr>
<tr>
<td>Lexus</td>
<td>LS430</td>
<td>2004-06</td>
<td>Indirect</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>n/a</td>
</tr>
<tr>
<td>Lexus</td>
<td>LX 470</td>
<td>2006</td>
<td>Direct</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>35/4.0</td>
</tr>
<tr>
<td>Lexus</td>
<td>RX330</td>
<td>2004-06</td>
<td>Indirect</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>n/a</td>
</tr>
<tr>
<td>Lexus</td>
<td>SC430</td>
<td>2004-06</td>
<td>Direct</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>27/3.1</td>
</tr>
<tr>
<td>Lincoln</td>
<td>Aviator</td>
<td>2003-05</td>
<td>Direct</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Magnet 44/5.0</td>
</tr>
</tbody>
</table>
**Tire Pressure Monitor Base Kits**
Includes a TPM tool with latest software subscription, activation magnet, quick start guide, latest comprehensive reset manual, update cable, CD training video, 3 C batteries, backup software CD, and a blow molded case. Base kits are available with three different reset manual formats:

- **No. 3833** – Tire pressure monitor base kit, with printed full volume manual set. Wt., 10 lbs., 8 oz.
- **No. 3833QR** – Tire pressure monitor base kit, with printed Quick Reference manuals. Wt., 6 lbs.
- **No. 3833CD** – Tire pressure monitor base kit, with CD manual. Wt., 1 lb.

**Tire Pressure Monitor Master Kits**
Includes a TPM tool with latest software subscription, activation magnet, quick start guide, latest comprehensive reset manual, update cable, CD training video, 6 nM Hi rechargeable batteries and recharging station, backup software CD, digital tire pressure gauge, 4-way valve tool, valve core torque driver, laminated application flip chart, service procedure flowchart poster, consumer poster, and a blow molded case. Master kits are available with 3 different reset manual formats:

- **No. 3833T** – Tire pressure monitor master kit, with printed full volume manual set. Wt., 13 lbs., 12 oz.
- **No. 3833TQR** – Tire pressure monitor master kit, with printed Quick Reference manuals. Wt., 9 lbs.
- **No. 3833TCD** – Tire pressure monitor master kit, with CD manual. Wt., 5 lbs.

**Tire Pressure Monitor Master Update Kit**
Includes material to turn a Tire Pressure Monitor Base Kit into a Master Kit (ex; 3833QR to a 3833TQR). Includes latest comprehensive reset manual supplement, latest software CD subscription, update cable, CD training video, 6 nM Hi rechargeable batteries and recharging station, digital tire pressure gauge, 4-way valve tool, valve core torque driver, laminated application flip chart, service procedure flowchart poster, and consumer poster.

- **No. 3833-9** – Tire pressure monitor master update kit. Wt., 10 oz.

**Tire Pressure Monitor 2006-2007 Software Update Kit**


**Tire Pressure Reset Tool for Nissan**
This tool is designed to extinguish the Tire Pressure Warning Light on 2003 and newer Nissan vehicles with TPM Reset Connector. The connector end of the cable mates to the vehicle connector found behind the DLC connector under the dash. The alligator clip is clipped onto the metal bracket that holds the DLC connector. Once connected and the ignition is turned on, the tool trigger is pressed 5 times within 10 seconds causing the warning light to start flashing. With the tool disconnected, the vehicle can be started and driven over 30 mph until the light stops flashing, which completes the procedure.

- **No. 3831** – Tire pressure reset tool for Nissan. Wt., 1 lb.
## Tire Pressure Monitor Tool Accessories

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3833-2</td>
<td>TPM Manual-Printed, full volume manual set</td>
</tr>
<tr>
<td>3833-3</td>
<td>TPM Manual-CD</td>
</tr>
<tr>
<td>3833-4</td>
<td>TPM Magnet</td>
</tr>
<tr>
<td>3833-5</td>
<td>TPM Quick Ref Guide &amp; 2006 Supplement</td>
</tr>
<tr>
<td>3833-6</td>
<td>TPM Case</td>
</tr>
<tr>
<td>3833-7</td>
<td>TPM Update cable</td>
</tr>
<tr>
<td>3833-8</td>
<td>Update base kit(s) to a Master Tool Kit.</td>
</tr>
<tr>
<td>3833-9</td>
<td>TPM Update 2007 Subscription</td>
</tr>
<tr>
<td>3833-10</td>
<td>Batteries - 6 nM Hi and Charger</td>
</tr>
<tr>
<td>3833-11</td>
<td>Digital Tire Gauge – 0-150 psi, red backlight</td>
</tr>
<tr>
<td>3833-12</td>
<td>Valve Nut Tool – Installs valve stem grommets</td>
</tr>
<tr>
<td>3833-13</td>
<td>Valve Core Torque Driver – 2-5 inch pounds</td>
</tr>
<tr>
<td>3833-14</td>
<td>Application Flip Chart – 8” x 5” laminated pages</td>
</tr>
<tr>
<td>3833-15</td>
<td>Procedure Flowchart – Full color wall poster</td>
</tr>
<tr>
<td>3833-16</td>
<td>Consumer Poster – for counter display</td>
</tr>
<tr>
<td>3833-17</td>
<td>CDPMS0506 TPMS Training Video – CD</td>
</tr>
</tbody>
</table>

## IR/RF Signal Tester

- Provides quick and easy verification of RF and IR transmitter signal with audible beep and LED light.
- RF Example: Key fobs, garage door openers, tire pressure sensors activation tools, aftermarket key fobs, and remote starters, etc.
- IR Example: IR printer ports, in-vehicle audio/video remote controls, general IR remote control and signals.
- Designed to detect RF signals between 0-900 MHz.
- Operates on 9V battery (included).

**No. 3891** – IR/RF signal tester. Wt., 10 oz.

## Diesel Glow Plug Tester

**Features:**
Glow Plug Tester provides fault detection thru LED’s for a quick analysis; Short Circuit, Over Current, Normal Operation, Open Circuit/Under Current.

**Benefits:**
- Glow Plug Tester allows for testing without removing glow plug from engine.
- Powers the glow plug to test the plug in its operating state.
- Much more accurate test than a cold resistance test, which can miss short circuits.
- Tester uses a current measurement to accurately determine proper operation and check for short circuits.

**No. 3673** – Diesel glow plug tester Wt., 1 lb.

## Diesel Fuel Pressure Tester

**Features:**
- Simple one wire connectivity to the fuel pressure sensor signal wire. Designed for diesel engines that have a fuel pressure sensor reading used by vehicle computer.
- Displays pressure in PSI or BAR.
- Range 0-22,000 PSI (0-1500 BAR).

**Benefits:**
- Read diesel fuel pressure in vehicle.
- No fittings required.
- Readings alternate between current and max pressure.

**No. 3674** – Diesel glow plug tester Wt., 1 lb.
Universal Breakout Box

- An easy, affordable way to really “pick the brains” of domestic and import computerized vehicles with or without a data stream system.
- Designed to “T” into the vehicle wiring harness leading to the engine and various other computers. This unit permits vital readings of voltage, resistance, frequency, pulse width or duty cycle, depending on the instrumentation with which it’s used. With each accessory vehicle adapter cable (VAC) kit, you get a specially designed cable and a custom magnetic pin panel overlay that matches the make of vehicle system being tested.
- Used with any DVOM or scope, such as the Digital Automotive Tester or the Perception 2-channel scope.
- Exclusive isolated ground lead and tipjack prevents a faulty ground from interfering with a correct diagnosis, and permits locating bad grounds in just seconds.

Ford EEC-V 104-Pin Breakout Box

- Unit accesses all connections to the Powertrain Control Module (PCM) on all 1994 and newer EEC-V systems.
- Adapter cable interfaces with the PCM connector and vehicle’s harness connector.
- Includes a plastic overlay panel and a connecting cable for numeric identification of each jack to match the vehicle’s PCM pinout.

No. 3235 – Ford EEC-V 104-pin breakout box.
No. 3225-10 – 104- to 60-pin BOB adapter, Ford BOB.

EEC-IV 60-Pin Breakout Box

Use to completely test all 1983 and later EEC-IV vehicles. Critical resistance and voltage measurements are easily accessible from all 60 electrical circuits of the EEC-IV system through the remotely located diagnostic breakout box.

No. 3225 – EEC-IV 60-pin breakout box.

80-Pin Breakout Box

No. 3226 – 80-pin breakout box.
No. 3226-13 – 10’ extension cable, use with No. 3226.

180-Pin Universal Breakout Box

Universal breakout/pinout box with 180 pins. Consists of the No. 3238 and the No. 3238-UPD. Use in conjunction with vehicle adapter cable (VAC).

No. 3239 – 180-pin universal breakout box.

100-Pin Breakout Box

Universal breakout/pinout box with 100 test points. Use for vehicle diagnosis via voltage and resistance measurements. Not designed for signal injection. Expandable to 180-pin with No. 3238-UPD to handle future vehicle systems. Use in conjunction with a vehicle adapter cable (VAC).

No. 3238 – 100-pin breakout box. Same as J-39700.

80-Pin Expansion Panel for 3238

Expands the 100-pin No. 3238 with an additional 80-pin panel, resulting in a 180-pin No. 3239. Used with No. 3238.

No. 3238-UPD – 80-pin expansion panel for No. 3238.
Inductive Timing Light
Professional inductive timing light designed for standard base timing.

Unique features
• On/off touch control.

Standard features
• All metal inductive pickup.
• Reflected, super bright xenon flash.
• Removable leads with positive twist-lock connector.
• One touch control.
• Durable, plated ABS housing with over-molded grips.
• Heat resistant over-molding on clips.
• Blow-molded case included.

No. 3363 – Inductive timing light.

_________________________________________________________

Advance Timing Light
Professional advance timing light allows accurate adjustment of base and advance timing reading.

Unique features
• Adjustable knob measures centrifugal, vacuum, and computer advance.
• On/off touch control.

Standard features
• All metal inductive pickup.
• Reflected, super bright xenon flash.
• Removable leads with positive twist lock connector.
• One touch control.
• Durable, plated ABS housing with over-molded grips.
• Heat resistant over-molding on clips.
• Blow-molded case included.

No. 3365 – Advance timing light.

_________________________________________________________

Digital Timing Light
Professional digital timing light has advanced features with a bright LED screen and mode indicator lights.

Unique features
• Microprocessor-controlled circuitry.
• LED tachometer display reads 0–9999 rpm.
• LED advance display indicates to 1/10.
• Unique flashlight feature.
• 2/4 cycle and rpm/advance lights.
• Up and down scroll buttons.

Standard features
• All metal inductive pickup.
• Reflected, super bright xenon flash.
• Removable leads with positive twist lock connector.
• One touch control.
• Durable, plated ABS housing with over-molded grips.
• Heat resistant over-molding on clips.
• Blow-molded case included.

No. 3367 – Digital timing light.

Timing Light Comparison

<table>
<thead>
<tr>
<th>Timing Light - Functions/Features</th>
<th>3363</th>
<th>3365</th>
<th>3367</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conventional, electronic, computer controlled ignition systems</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>DIS and 2-cycle systems</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>On/off touch control</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Adjustable advance</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Digital LED readout tach and advance</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>2- to 4-cycle &amp; rpm/advance mode lights</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>2- to 4-cycle selector button</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Flashlight feature button</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>RPM to advance selector button</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Up or down scroll buttons</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
</tbody>
</table>
Multi-Application Digital Pressure and Temperature Analyzer
Combining the functions of vacuum, oil pressure, hydraulic system pressure, fuel pressure, transmission pressure, compression, and air conditioning—all in one!
No. 3490 – Deluxe digital pressure/temperature analyzer with four pressure input receptacles and protective boot. Set includes (500 psi) transducer, 12’ cable, 8-1/2” hose, bead-type temperature probe, assorted fittings, plastic storage case, instruction manual.
Wt., 4 lbs., 8 oz.
No. 3492 – Heavy-duty digital pressure/temperature analyzer with four pressure input receptacles and protective boot. Set includes: No. 3491-02 (5,000 psi) transducer, No. 3491-13 20’ cable, No. 3500-05 bead-type temperature probe, assorted fittings, No. 3491-31 plastic storage case, instruction manual.
Wt., 5 lbs.
Accessory Options:
No. 349-0 – 500 psi transducer. Wt., 4 oz.
No. 349-02 – 5,000 psi transducer. Required for ABS and power steering pressure readings. Wt., 4 oz.
No. 349-03 – 10,000 psi transducer. Wt., 4 oz.
(Note: For No. 3492 only.) No. 349-11 – 6’ cable. Wt., 4 oz.
No. 349-12 – 12’ cable. Wt., 7 oz.

Universal Gauge and Component Tester
This is the fast way to pinpoint problems in fuel, oil, temperature, and vacuum electrical gauges. This gauge and component tester includes a test light and switch to also test instrument voltage regulators on various vehicles. Plus, you can use it as an instrument gauge tester by attaching the alligator clips to sensors and wiring harnesses on a variety of vehicles. Included is an instrument gauge application data sheet listing resistance set points for GM, Ford, Chrysler, Toyota, Nissan, VW, Mack, Navistar, and John Deere.
No. 3385 – Universal gauge and component tester.
Wt., 1 lb., 15 oz.
Noid Lite/IAC Test Kits

- Noid Lites are a proven test device to quickly determine if the electrical signal is present at the fuel injector.
- Simplest method for eliminating the EFI system or idle air control as possible faults on no-start vehicles.
- Disconnect the fuel injectors, plug in a Noid Lite, and crank the engine. A flashing noid light indicates normal pulsing voltage.
- Expanded set of eight specific Noid Lites covers: GM PFI, Ford TBI, Geo TBI, Bosch PFI, GM TBI, GM SCPI, and new applications of Bosch 2 and Multec 2. Also includes two GM IAC testers (flat and square four-connector applications) with red and green LEDs.
- Kit comes in a molded plastic case and includes a harness extension that allows for convenient remote viewing from the driver’s seat.

Noid Lite Test Kit
Set includes (available separately):
- No. 7187 – GM TBI Noid Lite. Wt., 2 oz.
- No. 7188 – Bosch PFI Noid Lite. Wt., 2 oz.
- No. 7601 – Ford Noid TBI Lite. Wt., 2 oz.
- No. 6023 – GM Multec 2 Noid Lite. Wt., 2 oz.
- No. 7602 – GM PFI Noid Lite. Wt., 2 oz.
- No. 7608 – Geo TBI Noid Lite. Wt., 2 oz.
- No. 7828 – GM SCPI Noid Lite. Wt., 2 oz.
- No. 6266 – Bosch 2 Noid Lite. Wt., 2 oz.
- No. 6260 – Fiber optic Noid Lite extension. Wt., 5 oz.
- No. 3050C – Noid Lite test kit. Wt., 1 lb. 1 oz.

Noid Lite/IAC Test Kit
Set includes (available separately):
- No. 7187 – GM TBI Noid Lite. Wt., 2 oz.
- No. 7188 – Bosch PFI Noid Lite. Wt., 2 oz.
- No. 7601 – Ford Noid TBI Lite. Wt., 2 oz.
- No. 6023 – GM Multec 2 Noid Lite. Wt., 2 oz.
- No. 7602 – GM PFI Noid Lite. Wt., 2 oz.
- No. 7608 – Geo TBI Noid Lite. Wt., 2 oz.
- No. 7828 – GM SCPI Noid Lite. Wt., 2 oz.
- No. 6266 – Bosch 2 Noid Lite. Wt., 2 oz.
- No. 6260 – Fiber optic Noid Lite extension. Wt., 5 oz.
- No. 3052S – ’82 and newer GM TBI/PFI with square 4-pin connector. Wt., 2 oz.
- No. 3053S – ’87 and newer Model 700 TBNI/PFI with flat 4-pin connector. Wt., 2 oz.
- No. 3054C – Noid Lite/IAC test kit. Wt., 1 lb. 3 oz.

General Motors IAC Signal Test Lights
For checking the electronic control module signal that provides direction to the idle air control motor on General Motors vehicles with throttle body or port fuel injection systems.
- No. 3051 – Set consists of Nos. 3052S and 3053S. Wt., 2 oz.
- No. 3052S – Signal test light for 1982 and newer GM TBI and PFI fuel injection systems with square 4-pin connector. Wt., 2 oz.
- No. 3053S – Signal test light for 1987 and newer GM Model 700 TBI and PFI fuel injection systems with a flat 4-pin connector. Wt., 2 oz.
Oil Light Reset Tool

- Oil changes are the #1 service your shop will perform each year. Enhance your service with this complete electronic tool and manual kit, No. 3596E.
- This kit eliminates the need to take the vehicle to the dealer or use an OEM scan tool to reset oil service lights.
- Electronic tool set includes the adapters and interface module required to reset the oil service lights on Volkswagen, Audi, Mercedes Benz, BMW, and Volvo.
- Manual includes oil light reset procedures for all domestic and import vehicles not requiring electronic tools to reset, but have manual reset procedures.

Kit Includes:
No. 3596-1 – Oil reset monitor V2.1.
No. 3596-2 – Mercedes-Benz cable.
No. 3596-3 – BMW cable.
No. 3596-4 – Volvo cable.
No. 3596-5 – VW and Audi cable.
No. 3596-6 – VW and Audi OBD II cable.
No. 3596-8 – Case.
No. 3596-9 – Oil light reset manual.
No. 3596-10 – Battery power adapter cable.
No. 3596E – Oil light reset tool kit.

Sample of manual contents:

BMW

Vehicle Adapters / Data Link Connector Locations for BMW

There are two vehicle adapters for BMW vehicles. The illustrations below show the adapters and their data link connector (DLC) / socket locations.

Reset Procedures for BMW

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Model</th>
<th>Year</th>
<th>Reset Tool</th>
<th>Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMW</td>
<td>5-Series</td>
<td>2000-2005</td>
<td>X</td>
<td>Oil Reset Tool:</td>
</tr>
<tr>
<td></td>
<td>(E39, E53)</td>
<td></td>
<td></td>
<td>Use the BMW-OBII 16-pin Vehicle Adapter.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Select BMW then E46 (OBDII).</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Manual Reset:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1. Turn off the ignition.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2. Press and hold the TRIP ODOMETER button in the instrument cluster</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>and turn the ignition to Accessory (1).</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3. Keep the button pressed for approximately 5 more seconds until</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>OIL SERVICE RESET (RE) or INSPECTION RESET (RE) appears in the display.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Then release the button.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4. Press and hold the button again for approx. 5 seconds until RE or</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>RESET flashes in the display.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Then release the button.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5. With the display flashing, press the button briefly to reset and</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>display the new Service Interval. After this, END SIA appears in the</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>display for approximately 2 seconds.</td>
</tr>
</tbody>
</table>
Phototach

- No. 3665 phototach can be used as a contact as well as a non-contact tachometer.
- Four styles of contact adapter tips clip easily to the top of the phototach.
- Infrared technology makes the phototach accurate, convenient, and easy to use.
- Infrared beam not affected by ambient light.
- Non-contact design results in (zero) torque loss for true precision.
- Phototach is equipped with a laser pointer for accurate targeting.
- Reflective tape placed on a revolving object can be measured at distances from 2” to 20”.
- Wide measuring range and high resolution, 2.5 to 99,999 rpm with a large 5-digit display, autoranging, min/max memory storage, and low-battery indicator.

No. 3665 – Phototach contact/non-contact.
No. 3660 – Phototach non-contact only.
No. 3660-03 – Replacement reflective tape, 10’ roll.

Flex-View UV Bore Scope

- Flex-View fluoresces UV dyes.
- Use as a traditional bore scope.
- Battery powered.
- Quick detection of leak dye in hard-to-see and reach places.
- Ability to inspect inside components.
- Confirms leaks where component removal would normally be required.
- Saves time trying to diagnose A/C evaporator leaks.
- Inspects the top side of fuel tanks for EVAP leaks without removal.
- Saves costs by eliminating the need to remove and replace unrelated components.
- A/C systems: Evaporator/condenser, hoses, compressor.
- EVAP system.
- Engine oil, transmission, and power steering fluid.
- Coolant and fuel systems.
- EVAP Tester.
- Any system using fluorescent dye.

No. 3591 – 18” Flex-View UV bore scope in a sturdy case.

Flex-View Bore Scope

- Ultra-thin 1/4” cable.
- Small diameter cable allows for inspection in tighter locations.
- White light, non-fluorescent bulb.
- Uses two AA batteries.
- Flexible cable does not retain a set shape.

No. 3598 – 36” Flex-View bore scope in a sturdy case.
**Fuel Injection Tester**

Fuel injectors can pass a resistance test but still fail under load. With this tool, you can check and balance fuel injectors. Also tests fuel injector coil windings under load, and detects intermittent fuel injector coil faults. Adjustable current output. Works on both throttle body and multiport fuel injectors. TBI adapter included.

No. 3397 – Fuel injector tester. Wt., 3 lbs., 5 oz.

---

**Fuel Injection Pulse Tester**

Fuel injector testing requires precision equipment. This vehicle-powered tool fills that requirement. It enables you to check cylinder balance by firing individual injectors at 1/2-second increments in three different ranges: 1 pulse of 500 milliseconds, 50 pulses of 10 milliseconds, 100 pulses of 5 milliseconds.

- Power and output lights indicate test activation.
- Includes wiring harness adapter and instructions.

No. 3398 – Fuel injection pulse tester. Wt., 8 oz.
No. 306677 – Replacement lead. Wt., 2 oz.

---

**Electronic Stethoscope**

Quickly pinpoints noise and location of bad bearings, bushings, dirty fuel injectors, wind/air leaks, valves, and lifters.

- Flexible shaft reaches tight areas.
- Ultra-sensitive mic and amplifier provide a full range of sounds needed by the professional.
- 7 sound-level control settings; 60 dB to 120 dB.

No. 3590 – Electronic stethoscope. Wt., 3 lbs., 7 oz.

---

**Ignition System Quick Test Kit**

This kit enables technicians to do power-balance tests and diagnose problems on standard, electronic, or distributorless ignition systems. Comes with brass adapters to fit all auto coils, test probes and leads, spark gap tester, and step-by-step instructions that lead technicians through the power-balance test.

- Performs power-balance in less than 5 minutes on standard, electronic, or distributorless ignition systems.
- Spark gap tester checks for adequate kV voltages on electronic ignition systems, providing instant diagnosis of problems—whether a faulty coil, ignition wire, or spark plug.
- Ideal for checking spark in no-start condition, instead of wasting time trying to “ground out your screwdriver.”
- Step-by-step instructions lead technician through tests to check if ignition has a bad ground all the way to defective coils.

No. 3589 – Ignition system quick test kit. Wt., 2 lbs., 1 oz.
No. 3579 – Ignition system adapters, set of six. Wt., 14 oz.

---

**Spark Testers**

Check for spark on gasoline engines used in import and domestic cars and trucks, plus small engines.

No. 6588 – Standard ignition spark tester. Wt., 4 oz.
No. 6589 – Electronic ignition spark tester. Wt., 4 oz.
Self-Contained Spark Plug kV Tester – Digital
Features a display providing live, minimum and maximum readings for the following spark plug measurements:
• Firing voltage
• Burn time
• Burn voltage
This information permits accurate, professional diagnosis of the spark plugs, plug wires, ignition system, fuel control, and most other factors affecting the spark plug voltage and combustion chamber. Fully tested on both conventional and distributorless ignition systems, and direct spark systems using an additional spark plug wire. A simple rotary switch selects firing voltage, burn time, and burn voltage. All readings are taken on each firing of the spark plug. The tester may be used on any gas engine, including those on motor vehicles, lawn mowers, snow blowers, motorcycles, personal watercrafts, snowmobiles, marine and industrial equipment, etc. Tester has an internal battery. On-screen indicator advises when battery replacement is needed. An operator’s manual is included.
No. 3141 – Self-contained spark plug kV tester – digital. Wt., 1 lb., 1 oz.

Self-Contained Spark Plug kV Tester – LED
• Display indicates spark plug firing voltage on either conventional or distributorless ignition systems (DIS).
• Permits accurate, professional diagnosis of spark plugs, plug wires, fuel control, and other factors affecting performance.
No. 3142 – Self-contained spark plug kV tester – LED. Wt., 10 oz.

Two-in-One Idle Tester
• Idle Air Control
• Idle Speed Control
Now there’s one convenient tester for GM idle speed control, GM idle air control, and Chrysler/AMC automatic idle speed control. Use for adjusting high- and low-idle speed settings and controlling rpm for ignition and cylinder balancing testing. See page 43 for IAC signal testers.
No. 3320 – 2-in-1 tester for idle air control, idle speed control on GM and Chrysler/AMC vehicles. Wt., 10 oz.
No. 46589 – GM/Chrysler replacement cable. Wt., 2 oz.

Anti-Static Wrist Strap
Virtually eliminates the possibility of static electricity causing damage while working on electronic components.
• One-size-fits-most adjustable wrist strap.
• Includes a 6’ coil cord with alligator clip.
No. 7744 – Anti-static wrist strap. Wt., 4 oz.

GM Code Retrieval Key
This key retrieves trouble codes from pre-OBD II model GM vehicles.
No. 7739 – ECM code retrieval key. Jumps between A and B terminals on ALDL connector to retrieve trouble codes from the ECM. Wt., 2 oz.

Angle-Tip Relay Pliers
• Designed to remove and install relays, which are usually located in confined, hard-to-reach areas.
• Specially coated tips offer a solid grip on the relay.
No. 4493 – Angle-Tip Relay Pliers. Wt., 10 oz.
Terminal Release Tools

- Covers GM, Ford, Chrysler, and a variety of import vehicles.
- Quickest and easiest way to release terminals from their plastic connectors without damaging them or delicate computer components.
- Design makes them easier to hold on to than the key-ring style release tools.

No. 7737 – Computer edgeboard and header release tool. Each end of the tool works on different terminal connector configurations. Works on various domestic and import models. Wt., 2 oz.


No. 7740 – Micro-style terminal release tool. Works on various domestic and import vehicles. Wt., 2 oz.

No. 7741 – Specifically designed to release ID computer terminals on 1988 thru current GM W bodies, 1990 thru current Chevrolet Lumina sedans, and various other domestic and import vehicles. Wt., 2 oz.

No. 7742 – Universal harness release tool designed for the RWAL (rear wheel anti-lock) microprocessor found on 1988 thru current GM pickups. Also works on various other domestic and import vehicles. Wt., 2 oz.

No. 7743 – Releases terminals on most body wiring connectors on various domestic and import vehicles, including cold start injector and timer, water, O2, vacuum, and air temperature sensors. Wt., 2 oz.
Universal Air Bag Simulator... includes PC diagnostic software!

Universal design emulates nearly all OE simulators currently available. You need only this one tool, not several vehicle specific tools.

- The No. 3770 replaces the air bag in the system and puts the proper electrical load on the circuit. With no air bag installed, there is no chance for accidental deployment during testing.
- If a deployment condition is present in the system, the simulator will “blow,” not the expensive air bag. You can then find the problem and verify the fix before making the air bag “live” again.
- All systems typically turn themselves off after an intended deployment due to a collision. Use the No. 3770 to check for other problems before re-arming the system with an air bag scan tool such as the OTC No. 3761.

Included with the No. 3770 is an incredibly valuable tool—a Tools & Techniques CD which offers comprehensive air bag information on 1983–2000 vehicles. It includes diagnostic procedures, wiring schematics, and re-arming procedures on 1983 thru 2000 domestic and import cars, vans, and light trucks.

**Schematic Drawings**
Detailed drawings and component locations will lead you to easy repairs, if problems exist in an air bag system.

**System Inspection**
Recommended OE procedures for post-collision inspection. You can print this out, and attach it to the work order to show you’ve done the work by the book!

**Trouble Code Diagnosis**
Track down codes that keep the air bag warning light on! Procedures give you step-by-step information on all codes to help you find the problem.

**Applications**
- GM
- Ford
- Chrysler
- Saturn
- Honda
- Mitsubishi

**No. 3770** – Air bag simulator. Includes the simulator, leads for U.S. domestic and import vehicles, Tools & Techniques for air bags on CD-ROM, and a handy storage case. Wt., 5 lbs., 10 oz.

---

**Ford Air Bag Simulator**
When plugged into the vehicle harness connector, power is restored to simulate a complete circuit for diagnostic purposes.

**No. 7954** – Ford air bag simulator. For use on most Ford 1989 to 1991 air bag systems and 1992 Ford air bag system I. Wt., 6 oz.

**No. 7955** – Ford air bag simulator. Special one-ohm resistor for use on air bags on Probe vehicles. Wt., 6 oz.

**No. 7956** – Ford air bag simulator. Special two-ohm resistor for use on 1993 and newer Ford system II air bags. Wt., 6 oz.

**No. 7957** – Ford air bag simulator. Special three-ohm resistor for use on Ford Villager air bag systems. Wt., 6 oz.

---

**Air Bag Release Tool Kit**
- Use to remove the air bag module from the steering wheel.
- Work on many GM, Ford and Mercedes Benz vehicles.


Mercedes Benz Models 107,123, 124, 126, 129, 140, 140d, 163, 164, 170, 170D, 170E, 190, 190E, 200, 200D, 203, 208, 209, 210, 211, 215, 219, 220, 221 and 463

**No. 5945** – Air bag release tool kit. Wt., 2 lbs.
State-of-the-Art Engine Analyzer
Fast, High-Resolution Color Scope
Preselect Waveforms
Intuitive, Easy-to-Use Software
On-line Help and Operator Guide
Flexible Meter Display
Automated Diagnostic System Tests
Custom Fuel System Measurement Screen

Detailed diagnostic screens make for quick, accurate diagnostics!

Coil-on-Plug (COP)
- Primary and secondary ignition pattern display capability; single- or multiple-cylinder display in parade, raster, or 3-D view.
- Dedicated COP vehicle-specific database.
- Easy-to-read test instructions.
- Actual pictures of lead connection points.

Oscilloscope
- 4-channel display.
- Color separation of cylinder patterns.
- Fastest digital automotive scope on the market.

Ignition Tests
- View primary and secondary data.
- Optional timing light.
- Review kV, firing time, and firing line kV.
- Easy navigation.

Starting/Charging Tests
- Volts/amps graph.
- Procedural tests.
- Disable ignition.
- Display live diode. Waveforms.

Cylinder Tests
- Measure cranking amps and vacuum per cylinder.
- Cylinder contribution for DIS, interprets and reports.
- Cylinder kill-measuring percentage drop for each cylinder.

Fuel/Emission System Tests
- Optional 4- or 5-gas bench analyzer.
- Microgas 4- or 5-gas modules available for portable, cost effective, gas analysis.
- Horiba 4-gas module available for stationary, automated, gas analysis.

Custom Screens
- For maximum flexibility, you can customize up to seven different screens using up to four measurements.
No. 3955 – Vision Premier portable engine analyzer with boom. Vision Premier module, PC with stand, 9' leads, printer with cables, software, and manuals. (On-site setup and training provided.)

**Cable Descriptions**

- 534-07071 Interface Harness
- 538-0676-002 Scope B Adapter
- DIS Secondary Leads four pair shown (See options S44-5540)
- 000-31529 GM HEI
- 000-31598 Nippondenso
- 000-31568 Toyota
- 0000-8103 Vacuum “T”
- 3947-0 9’ Sync Probe
- 3947-1 9’ Scope A Lead Assembly
- 3947-2 9’ Scope A Lead Assembly
- 3947-3 9’ Conventional Ignition “T” Clip
- 3947-4 9’ Battery/Primary Lead
- 3947-5 9’ Engine Analyzer MUX Box
- 3947-6 6’ Engine Analyzer MUX Box
- 3947-7 6’ Engine Analyzer MUX Box
- 3947-8 9’ Scope B Lead Assembly
- 3947-9 9’ Scope B Lead Assembly

**Diesel Injection Adapter**

Requires the use of piezo adapters. (Sold separately:)

- 3840-16 – Diesel timing adapter - 1/4” piezo
- 3840-15 – Diesel timing adapter - 6 mm piezo
- 3840-17 – Diesel timing adapter - 6.5 mm piezo

- 3947-09 – Replacement lead kit
- 3947-10 9’ Sync Probe
- 3947-11 9’ Conventional Ignition “T” Clip
- 3947-12 9’ Battery/Primary Lead
- 3947-13 9’ Engine Analyzer MUX Box
- 3947-14 6’ Engine Analyzer MUX Box
- 3947-15 9’ Scope A Lead Assembly
- 3947-16 9’ Scope B Lead Assembly

**Optional Components**

- 3740 – 5-Gas module. Includes necessary cables and 5-gas module.
- 3947-02 COP Universal Lead (covers 2 cylinders)
- 3947-03 COP Chrysler
- 3947-04 COP Ford
- 3947-05 COP Honda/Isuzu/BMW
- 3947-06 COP VW/Audi
- 3947-07 COP Volvo
- 3947-08 Temp probe, two piece adapter cable.
- 3947-01 – COP Master Kit Includes:
  - COP Universal Lead (covers 2 cylinders) (4 ea.)
  - COP Chrysler (6 ea.)
  - COP Ford (8 ea.)
  - COP Honda/Isuzu/BMW (6 ea.)
  - COP VW/Audi (4 ea.)
  - COP Volvo (4 ea.)
  Comes complete with storage case.
- 3947-17 COP Master Kit Includes:
  - COP Universal Lead (covers 2 cylinders) (4 ea.)
  - COP Chrysler (6 ea.)
  - COP Ford (8 ea.)
  - COP Honda/Isuzu/BMW (6 ea.)
  - COP VW/Audi (4 ea.)
  - COP Volvo (4 ea.)
  - COP Mitsubishi (4 ea.)
  Comes complete with storage case.

- S44557 – Vision Premier power adapter. Includes AC/DC converter, “Y” battery adapter, cigarette lighter battery plug, and power cord.
- S44554 – Two-cylinder DIS secondary leads connect to MUX box for 10- and 12-cylinder capability. Optional coil-on-plug leads also available.
- S44555 – Vision Premier timing light. Includes timing light and instructions.
- 0046160 – Cadillac HEI secondary adapter.
- 0041920 – Propane enrichment.
No. 3740 — Deluxe MicroGas 5-gas module kit for use with OTC Vision Premier engine analyzer or your shop PC with the PC gas software. Includes the module along with sampling hose, probe, cables, filters, and PC gas software with cable.

MicroGas Accessories
No. 3700-25 — Calibration gas, 5-gas
No. 3700-26 — Sample inlet hose, 21’
No. 3700-27 — Sample probe
No. 3700-28 — Base filter, 10 pack
No. 3700-29 — Nox upgrade/replacement cell
No. 3700-30 — O₂ replacement cell
No. 3700-36 — Water trap pre-filter 10 pack
No. 3700-39 — Filter-internal water trap, 1 filter, and short hose
No. 3700-41 — Power cable
No. 3700-60 — Genisys/MicroGas Gas M-P vehicle diagnostic software
No. 234977 — Cleaning kit
No. 234978 — Replacement pump
No. 234979 — Replacement sample cell
No. 234980 — Annual maint. kit, includes: swabs, base filter kit (10), water trap pre-filter (10), internal water trap.
No. 235973 — Manual
No. 236404 — Replacement printer cable
No. 236406 — Replacement calibration hoses
No. 3780-05 — Regulator

Measurement Ranges:
- Hydrocarbons (HC): 0–30,000 ppm
- Carbon Monoxide (CO): 0–15%
- Carbon Dioxide (CO₂): 0–20%
- Oxygen (O₂): 0-25%
- Oxides of Nitrogen (NOx): 0-5000 ppm

Performance 5-Gas Module
Complete Emission Analysis and Diagnostics!
When you combine the compact, repair grade, Performance 5-Gas Plug-in Module with the Genisys scan tool, you have the complete interactive emission repair solution. This powerful combo covers any emission-related diagnosis required, and also gives you the ability to test for mechanical failures. The system meets or exceeds BAR 97, OIML Class 0 standards.

The module includes a reliable, heavy-duty pump, automatic water purge, water overload protection, automatic zero mode, easy pump and sensor servicing, and covers the full measurement ranges for HC, CO, CO₂, NOX, and O₂ gases.

Genisys—at the core of integrated diagnostics solutions!
Genisys takes the lead with new ID™ (Integrated Diagnostics) solutions—our exclusive capability lets you display 5-gas and scan data simultaneously. But this is just the beginning. It’s the direction technology is going that will give technicians access to more usable data—from a variety of sources—to service today’s high-tech vehicles faster and more accurately.

Solarity Performance 5-Gas
The Solarity emissions repair solution. Kit includes Solarity with plug-in 5-Gas Analyzer Module, hoses, exhaust probe, power cable and battery adapter, RS232 cable, AC power supply, Smart Card, Gas M-P software CD, filters, manual, and carrying case.

No. 3855 — Solarity performance 5-gas.
Smoke Check 1667 Diesel Emission Tester

In some states, failing the on-road emission test can result in a “must appear in court” citation, and up to an $1,800 fine. Add the downtime, missed delivery, rescheduling, and the potential for lost business. More states are adopting emissions standards and testing programs. This can cost time and money for local and interstate fleets.

SMOKE CHECK 1667 DIESEL EMISSION TESTER

- Fleets can determine immediately if the truck will pass state standards and interstate emission programs.
- Completely portable; all components in one case; there is no PC. One person can do the entire test.
- Windows-based, PC downloadable program transfers up to 100 stored tests.
- No warm-up time needed; perfect for random roadside testing or in your PM Service Program.
- The partial flow meter clips inside any smokestack; testing can be performed in any weather.
- Digital LCD screen walks you through each step; when testing is complete, a printout of results is produced for verification.
- This is the same meter used for enforcement in California, New York, Illinois, and the majority of states that test for diesel emissions compliance.
- Meets the latest SAE J1667 specifications.

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Range</th>
<th>0–100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>+/-1.0%</td>
</tr>
<tr>
<td>Light Source</td>
<td>Green LED</td>
</tr>
<tr>
<td>Power</td>
<td>12 VDC battery (built-in)</td>
</tr>
<tr>
<td>Battery Life</td>
<td>40 hrs./charge</td>
</tr>
<tr>
<td>Warm-up Time</td>
<td>5 sec.</td>
</tr>
<tr>
<td>Response Time</td>
<td>0.01 sec.</td>
</tr>
<tr>
<td>Control Unit</td>
<td>14&quot; x 10&quot; x 8&quot;</td>
</tr>
<tr>
<td>Maintenance</td>
<td>Clean lens w/cotton swab</td>
</tr>
<tr>
<td>Weight:</td>
<td></td>
</tr>
<tr>
<td>Control Unit</td>
<td>15.5 lbs.</td>
</tr>
<tr>
<td>Sensor</td>
<td>3.5 lbs.</td>
</tr>
</tbody>
</table>

ORDERING INFORMATION

No. RM1920CPC – Smoke Check 1667 diesel smoke opacity tester. Includes partial flow meter, base unit with hand-held display, built-in printer, ambient sensors, two battery chargers – one for vehicle or shop, 20 ft. cable, telescoping rod, spring clamp, neutral density filter, and sensor head case.

OPTIONAL ITEMS

No. OTC3020CPC – Standard meter listed above with OIL/RPM software and accessories. These options are required for state approval testing in New York and New Jersey.

No. OTCSH – New sensor head with quick detach release.

No. OTCSHCS – Sensor head case for new or existing meters and accessories.
Sabre HP
Sabre HP is designed to let you quickly diagnose bad batteries in a discharged state without needing to charge them first. By utilizing a patented SPX micro-load testing method, this tester ensures accurate test results without any interpretation on vehicle battery, starting, and charging systems. Ships with 3’ leads.

Features and Benefits
• Digital circuitry precisely controls battery test loads to accurately determine battery conditions using SPX patented micro-load test technology.
  • Tests the battery both statically and dynamically with multiple fixed loads.
  • Provides the most accurate test results.
  • Less susceptible to erroneous results from remote or bad connections, surface charge, and parasitic drains.
• Accurately tests both absorption glass mat (AGM) and flooded lead acid (FLA) batteries.
• Tests vehicle’s starting and charging systems with minimal user interaction; automatically applies loads for accurate charging system tests.
• Tests all 6- and 12-volt batteries with a 50–2000 CCA operating range.
• Tests batteries down to 1 volt state of charge.
• Temperature and low charge compensation.
• Detects bad cells.
• Scales: CCA, CA, AHR, MCA, JIS, DIN.
• 4 x 20 backlit display shows CCAs, voltage, and good/bad status.
• Over-molded enclosure with soft-touch keys.
• Built-in infrared printer interface for remote printing (printer optional).
• Flash upgradeable memory in field.
• Removable/auto-sensing leads (3’ leads included in kits; optional 10’ leads available).
• Printout has date/time stamp and user definable header and footer.
• Optional amp clamps for current drain tests and starting/charging measurements—the only hand-held battery tester with this feature.
• Reverse polarity protection.
• Hard carrying case.
• 3-year warranty.

SABRE HP
Includes SABRE HP, 3’ test leads, side-post terminal adapters, instruction manual, and molded-plastic carrying case.

No. 3167 – SABRE HP.

SABRE HP Deluxe Kit
Includes SABRE HP, 3’ test leads, side-post terminal adapters, instruction manual, infrared wireless printer, and molded-plastic carrying case.

No. 3168 – SABRE HP deluxe kit.

Accessories:
No. 3169 – Infrared wireless printer for use with No. 3167 (included with No. 3168).
No. 3167-01 – 3’ test leads.
No. 3172 – 10’ test leads.
Sabre Heavy-Duty Battery and Electrical System Diagnostic Tester

- Heavy-duty for 24-volt battery and electrical systems.
- Diagnoses battery packs in series, parallel, or series/parallel.
- Tests AGM/gel-cell batteries.

**HIGHEST CCA** capacity ranges (50–4000 CCA – 24V).

**LARGE DISPLAY** for less scrolling, more detailed instructions. It’s also backlit for all light conditions.

**INDUSTRY FIRST** amp-clamp connection ports for live amperage readings using optional external amp-clamp.

**15 FT. CABLE** to perform tests from the cab of the vehicle.

**FIELD UPDATEABLE** to accommodate new battery types, system updates, feature additions.

**Battery Testing**
- Tests the following battery pack configurations:
  - One battery (6V or 12V).
  - Two batteries in series (24V); 2, 3, or 4 batteries in parallel (12V).
  - Two banks in parallel, each bank having 2 batteries in series (24V).
- Uses pack configuration in algorithm design.
- Step-by-step user instructions for easy test completion.
- Tester-applied loads used on all pack combinations.

**Electrical System Testing**
- 12V and 24V charging system tests.
- 12V and 24V starting system tests.
- 12V and 24V diode tests.
- Amp-clamps available (not included) for starting/charging and current draw tests.

**Features**

**Amp-Clamp Connection** – allows current drain tests and starting/charging analysis.

**Tests Both FLA** (flooded lead acid) and **AGM** (absorbed glass mat) battery types.

**Scales** – CCA, CA, AHR, MCA, JIS, DIN

**User Definable** – print header and footer.

**Removable Test Cables** – easily field replaceable.

**PC Interface Port** – allows for field updateable software.

**IR Compatible** – allows optional infrared wireless printer.

**Readout Display** – backlit for low light conditions, easy to view data in direct sunlight (4 x 20 character display).

**Security Cable Connection** – protects against stolen or dropped units.

**Over-molded Surround with Soft-touch Keys** – ruggedly built, easy to use, even with gloves.

**No. 3167-HD** – Sabre HD deluxe kit includes 24-volt heavy-duty battery tester, 15’ test leads, instruction manual, molded-plastic carrying case.

**No. 3168-HD** – Same as No. 3167-HD above, but also includes an infrared wireless printer.

**Accessories:**
- No. 3169 – Infrared wireless printer.
Battery Charging/Starting System Professional Analyzer Kit

Made for the professional technician, No. 3185 tests batteries and starting/charging systems faster than ever before. The BCS system analyzer has an operating range of 50–2000 CCAs and is able to store data in memory or remotely print out the results using an infrared printer interface. It also measures voltage, and tests starting and charging systems at the push of a button.

Features and Benefits

• Utilizes cost effective, conductance test technology for accurate testing at a value price point.
• Quick 1-second initial results.
• Tests charging and starting systems 50–2000 CCA range accurate to 5 CCAs.
• Tests 6V and 12V batteries.
• Temperature and low charge compensation.
• Detects and identifies loose leads.
• Supports CCA, IEC, EN, BCI, and DIN scales.
• 4-line, 20-character LCD display shows CCAs, voltage, and good/bad status.
• Displays results in seven languages: English, French, Spanish, German, Italian, Dutch, Swedish.
• Built-in infrared printer interface for remote printing.
• Detachable cable leads.

No. 3184 – BCS system analyzer kit. Includes BCS system analyzer, a 12’ extension cable for in-cab testing, two voltmeter probes, battery side- and threaded-post adapters, detachable leads, 9-volt battery, soft-sided carrying case.

No. 3185 – BCS system analyzer kit. Same as No. 3184, but also includes an infrared printer.

Digital Battery Tester

Speed. Accuracy. Reliability. These are the cornerstones behind the technology in our digital battery testers. No. 3183 tests 12-volt batteries (125–1400 CCAs) and analyzes by measuring multiple parameters within the battery to deliver accurate results. A live voltmeter allows easy starting/charging system testing. Its bright, 4-digit LED display indicates the battery’s good/bad status, voltage, and available CCAs. It even compensates for cold temperatures.

Features and Benefits

• Utilizes cost effective, conductance test technology for accurate testing at a value price point.
• Quick 1-second initial results.
• 125–1400 CCA range.
• Analyze starting/charging system voltages.
• Tests 12V batteries.
• Temperature and low charge compensation.
• Detects and identifies loose leads.
• Detects bad cells.
• Surface charge warning.
• Measures multiple international units: CCA, IEC, DIN, BCI, and EN.
• 4-digit LED display shows good/bad status, available CCAs, and voltage.

No. 3183 – Includes digital battery tester. Includes digital battery tester and soft-side carrying case.
130-Amp Digital Battery Load Tester
Produce more accurate results with this 130-amp digital battery load tester. The compact, lightweight design is rugged enough for everyday testing of 6- and 12-volt batteries.

Features and Benefits
• Large, easy-to-read display.
• Side-clamp mount.
• Comfortable, easy-to-grip, ergonomic handle.
• Alternator test lead.
• Ripple detection light.
• 0–16 volt range.
• Dual jaw load clamp design.
• State of charge.
• Battery load test.
• Starter and charging system test.
• Alternator ripple test.

No. 3182 – Digital battery tester.
Includes 130-amp digital battery tester and test leads.

130-Amp Heavy-Duty Battery Load Tester
Applying an industry-leading 130-amp load, this ergonomically designed, heavy-duty battery tester provides accurate, reliable test results in just 10 seconds. It includes uniquely designed clamps for a positive grip on top- and side-post batteries and an extra-large, easy-to-read display.

Features and Benefits
• 130-amp load capacity for accurate results.
• 0–16 volt range.
• Uniquely designed clamps for both top- and side-post batteries.
• Extra-large display with zero adjust.
• Works on both 6V and 12V batteries.
• Ergonomic handle design.
• Side tabs for on-tool clamp storage.
• Back brackets for tool storage on wall or toolbox.

No. 3181 – 130 amp heavy-duty battery load tester.

100-Amp Battery Load Tester
Tests batteries on or off the car in just 10 seconds. Convenient, portable size and easy-to-read scales.

Features and Benefits
• Heavy-duty, copper-plated clamps.
• 100 amp load capacity.
• 0–16 volt range.
• Load safety switch prevents arcing.
• Heavy-duty, chrome-plated, ventilated steel case.
• Works on both 6V and 12V batteries.
• Ceramic insulators.
• Determines state-of-charge, cranking, and charging volts.
• Determines good/bad status.
• Extra-large display with zero adjust.

No. 3180 – 100-amp battery load tester.
Parasitic Draw Test Switch
Finding electrical problems that drain the battery is getting harder all the time. But using No. 7645 with your digital amp meter takes the guesswork out of a complicated job. Attach the test switch between the negative battery cable and the battery, and then road-test the vehicle. Next, connect an amp meter to the switch to determine the parasitic amperage draw, and locate the excessive electrical drain on the battery. Works on any vehicle with side- or top-post batteries.
No. 7645 – Parasitic test switch. Wt., 8 oz.

Parasitic Drain Tester with Memory Saver
• Provides instant feedback of a possible battery drain condition, eliminating unnecessary replacement of battery or charging system components.
• Memory saver feature protects vehicle’s computer memory, preserving stored fault codes, driveability parameters, and programmed electrical settings, such as clock, radio, seat position, etc.
No. 3382 – Parasitic drain tester.
No. 3382-01 – Charger.

Parasitic Battery Drain Tester
• Connects between battery and negative battery cable, providing instant feedback of a possible parasitic battery drain condition in an undriven vehicle.
• Prevents unnecessary replacement of a suspected battery or charging system component by verifying that a parasitic drain is responsible for a low battery.
• Calibrated to vehicle manufacturer standards to allow certain parasitic loads while detecting those that are above acceptable limits.
No. 3381 – Parasitic battery drain tester.

Antizap Auto Surge Protector
• Connects to battery, and becomes part of vehicle’s electrical circuit. If a voltage spike is detected, the Antizap automatically clips it to a safe level to prevent damage to sensitive electronic systems.
• Protects fuel gauge, ABS brakes, radios, tape and CD players, car alarms, SRS air bags, LED instrumentation, EFI, fuel, and climate control systems. Protects against welding (Arc, Mig, and TIG).
No. 3386 – Antizap auto surge protector.
MinuteMan Plus saves you hours when you're testing batteries, starters, alternators, regulators, and charging systems.

Features

- Special AGM test options for accurately diagnosing AGM and spiral (six-pack style) batteries.
- Can switch between English and Spanish languages with a menu-based selection.

Battery Testing

The way it has been: Your customer brings in a dead battery and you have to charge it up to test it. Then, if it's a keeper, you have to recharge it. Hardly efficient use of your valuable time. With MinuteMan Plus on the job, you can test discharged batteries down to as low as two volts, and it won't drain a charged battery you are testing. You won't waste time charging bad batteries.

Works on all 12-volt automotive-type batteries with cold cranking amp ratings of 100–1500. This includes batteries found in motor-vehicle, marine, agricultural, forestry, and industrial applications. The tester operates from either 110 volts AC or its own internal, rechargeable 6-volt battery. Features self-calibration, an internal battery check, and an automatic shut-down to reduce power consumption.

On certain competitive, carbon-pile load battery testers, the technician must interpret the readings, then make the electrical system diagnosis. With MinuteMan Plus, all you have to do is read simple test results on the LCD display.

Starter Testing

The MinuteMan Plus display shows cranking volts and amps, and indicates either “Good Starter” or “Bad Starter.” Excessive starter current draw can indicate a defective starter. Excessive engine drag, due to tight or damaged bearings or piston drag, can also cause an abnormally high starter draw.

Charging System Testing

Checks the charging system at high rpms and at idle, and stores the data. Results show regulator volts, peak amps, and a diode condition. MinuteMan Plus utilizes waveform analysis when testing alternator diodes, which provides more accuracy than the commonly used “ripple voltage” tests.

Battery Tachometer Capability

Unique, patented direct-from-battery technology gives you tachometer readings without having to make complicated connections to the ignition system. Provides battery-sensing measurements to 4,000 rpm, with 1 rpm resolution.

Order Information

No. 3130AGM – MinuteMan Plus multi-application electrical system tester. Includes connector cables, internal rechargeable battery, battery charger, and instructions. Wt., 27 lbs.

No. 3131AGM – Same as No. 3130AGM, but also includes roll-around cart with two additional shelves for other equipment. Wt., 53 lbs.

No. 3135 – Printer kit.

No. 3131-02 – Dust cover.
OneStep™ Battery Analyzer and Charger

The OneStep is a bench-top battery tester and charger that provides extremely accurate battery diagnosis. The combination of SABRE heavy load, dynamic charge, and accuracy test technologies yields unparalleled accuracy, and the addition of charge acceptance into the test algorithms further increases the level of accuracy. Precise high-output charging can test, fully charge, and return a battery to service in under 45 minutes. It also provides analysis of a battery’s charge acceptance by testing the battery again following the charge cycle. It is specifically designed for all forms of the newer AGM (including spiral wound types), gel cell and deep cycle batteries, as well as conventional FLA (lead-acid) batteries.

Features and Benefits
OneStep gives the user one piece of equipment to completely test and charge batteries with the highest accuracy.

- **Precise High-output Charging**—returns charged batteries to service in less than 45 min.
- **Compatible with** AGM, FLA, Gel Cell, and **Spiral-Wound** batteries.
- **Extremely accurate testing**—combination of Heavy-Load, Dynamic Charge and Accuracy Test Technology.
- **Sealed Numeric Keyboard**—clear covering keeps unit clean as you enter data.
- **LED Status Lights**—quickly identify test status.
- **Built Rugged**—all-steel construction with solid copper transformer.
- **Compact Flash Card Port**—updates software and add memory as needed.
- **Low Cost of Ownership**—designed with internal overload protections for high volume use; field replaceable cables.
- **Precise Output Charging**—computerized control of charging voltage and current.
- **Easy-to-Use Menus**—screen prompts guide user through procedures.
- **Expandability**—easy to update and expand as new battery technologies are released.
- **Bar Code Reader**—optional feature for fast and accurate entry of battery specifications.
- **Battery Warranty Output Code**—allows easy warranty administration analysis.

No. 364 – OneStep battery analyzer/charger, 20-amp input. Wt., 68 lbs.
No. 3640 – OneStep battery analyzer/charger, 15-amp input. Wt., 68 lbs.
No. 3136 – Serial printer kit.

Specifications:

**Battery Test Range:** 12 volt, 150 – 1500 CCA

**Battery Type:** Works on all constructions of 12-volt lead-acid, gel-cell, absorbed glass mat (AGM), wet cell, spiral-wound batteries.

**Operating Temperature Range:** 4°F – 158°F ambient air temperature.

**Humidity:** 0 – 85%

**Voltage Input:** 115 volt 20 amp dedicated. Optional 15 amp input available.
The Judge—Rotating Electrical Alternator/ Starter Bench Tester

This rotating electrical tester, using advanced computer technology, lets you quickly diagnose alternators and starters with extreme accuracy—validated by component manufacturers. It features an integrated self-test to eliminate bad test leads, thus improving test results and reducing warranty costs to the auto parts retailer. Your tester investment is protected by The Judge—it can be updated to accommodate manufacturer’s new starters and alternators, or to change test parameters on existing devices.

The Judge is easy to use and will test virtually every alternator and starter precisely, providing accurate results.

- **No More Flip Charts**—Integrated “Lester-based” part number database, or by vehicle selection.
- **Faster Set-up**—new improved mounting for alternators and starters.
- **Integrated Self-test Features** provide a lead check application—ensuring bad test leads are eliminated.
- **ETL Certified**—with circuitry specifically designed for reliability and durability.
- **Hooded Test Bay**—allows observation while capturing debris, grease, or oil when testing a well-used component.
- **Full-Color Touch Screen**—easy-to-use interface screen (10.5" display).
- **Ease of Component Mounting**—improved flexibility supports the latest mounting configurations.
- **Easy-to-Use Menus**—screen prompts guide technician through procedures.
- **Expandability**—easy to update and expand as new alternators/starters are developed.
- **Compact Flash Card Port**—update software and add memory as needed.
- **Bar Code Reader**—optional feature for fast and accurate test set-up.
- **Interlock Switch**—prevents operation when door is open.

No. 3643 – Judge rotating electrical tester. Includes bench tester, mounting pins, alternator cable, starter cable, solenoid cable, test leads, manuals.
No. 3643-01 – High-speed serial printer.
No. 3643-78 – Printer mount.
Quick Finder Index...

Fuel Injection Diagnostic and Cleaning Equipment and Tools .................. 66–74
Fuel Line Disconnect Tools .............. 75–76
Fuel Injection and Emission System Tools .................. 77–78
Diagnostic (Fuel Pressure Check)

1. Hang container under vehicle's hood on chain provided.
2. Connect cleaner container hose to fuel rail.
3. Start engine and check gauge for pressure reading, comparing it to vehicle specs.

Cleaning Injectors

1. Fully open air regulator. TURN COUNTERCLOCKWISE.
2. Unscrew top of container and pour in 16 ounces of No. 7000A Pro Inject-R Kleen. Replace container top securely.
3. Connect shop air supply.
4. Hang container under hood of vehicle on chain provided.
5. Connect No. 7448 to inlet of fuel rail.
6. Disable fuel pump.
7. Close air regulator slowly. TURN CLOCKWISE.
8. Adjust pressure regulator to 5 psi under normal system pressure. (This prevents cleaning fluid from backing up into fuel tank through pressure regulator and fuel return line.) Start engine.

Intake System Decarbonizing

1. Fully open air regulator by turning counter-clockwise.
2. Unscrew top of container and pour in 16 oz. of OTC No. 7904A D-Karbonizer.
3. Hang container under vehicle's hood on chain provided.
4. Connect canister hose to No. 7666 adapter fitting.
5. a) Locate a manifold vacuum port (NOT ported vacuum) near throttle body or carburetor to distribute decarbonizing solution evenly. Connect decarbonizer hose with adapter to vacuum port.
   b) Start engine. Manually increase throttle to 1,500 RPM. Slowly open shut-off valve until engine runs rough and RPM decreases. (Do not manually increase RPM at this point.)
   c) When 16 oz. of decarbonizer solution has been used, turn off engine. Remove adapter fitting from engine and reconnect vacuum hose. Do not start engine for at least 30 minutes, to allow cleaning solution to loosen carbon deposits.
Fuel Injector Cleaning Kit
Clogged fuel injectors cause sluggish engine performance, poor fuel economy, and a rough idle. You can easily correct such problems with this injector cleaning kit. It works on a wide range of engines, both domestic and imported. Using our Pro Inject-R Kleen fluid, you can effectively clean injectors, restore their spray patterns, and prevent recurring deposits. The kit also enables you to do low- and high-pressure fuel system tests. It will also work with your shop’s pressurized air supply for more powerful cleaning without expensive propellants.

- Removes carbon from intake and combustion systems when used with fitting No. 7666 and No. 7904A D-Karbonizer4 fluid.
- Includes canister, gauge, hose, fittings, operating instructions.

No. 7649 – Fuel injector cleaning kit. Wt., 9 lbs., 10 oz.
No. 7659 – Fuel injector cleaning kit. Includes everything in kit No. 7649, plus twelve 16 oz. cans of Pro Inject-R Kleen fluid. Wt., 29 lbs.

Canister-type Fuel Injector Cleaner
When connected to your shop’s pressurized air supply, this tool provides the most effective method of cleaning fouled fuel injectors. It’s much quicker than aerosol methods, and it works on many domestic and imported engines, with either low- or high-pressure systems. The canister, built with brass and aluminum, is rugged and holds 18 fluid ounces. The gauge’s large dial is easy to read. We recommend that our No. 7000A Pro Inject-R Kleen fluid be used with this cleaner.

- Works with all OTC fuel injection system adapters.
- Will remove carbon from intake and combustion systems, when used with our No. 7666 adapter and No. 7904A D-Karbonizer4 fluid.
- Includes gauge, 72" hose, under-hood hanger, and instructions.

No. 7448 – Canister-type fuel injector cleaner. Wt., 6 lbs., 14 oz.

Pro Inject-R Kleen Fluid
Clean fuel injectors mean cleaner running, more efficient engines – and lower emissions. This fluid restores injectors’ original spray pattern, helps prevent recurring problems, and reduces intake and port deposits. We recommend it for all of our canister-type cleaning devices.

- No mixing; use right from the can.

No. 7000A-1 – Pro Inject-R Kleen fluid single can.

D-Karbonizer4 Intake System Cleaning
When you need serious intake system cleaning, you need our D-Karbonizer4 fluid. It quickly strips away carbon, gum, and varnish. A clean intake and combustion system results in easier starting, less engine knocking, better fuel economy, and fewer emissions. We recommend it for all of our canister-type cleaning devices.

- No mixing; use right from the can.

No. 7904A-1 – D-Karbonizer4 single can.
Fuel Injection Diagnostic Set
With these sets, you can quickly and accurately diagnose fuel pressure problems on Chrysler, Ford, GM, or Jeep engines that have multi-port fuel injection systems. You can also bleed air from the system with the bleed valve. No. 7211 gauge assembly allows technicians to check fuel pressure and fuel volume.

Set Includes:
- No. 7665 – GM TBI fuel pressure adapter
- No. 7430 – Quick-disconnect 90° elbow fitting
- No. 7272 – Ford EFI quick-disconnect fitting
- No. 211398 – Pressure hose
- No. 206878 – Coupler
- No. 19088 – O-ring

No. 7635A – Basic fuel injection diagnostic set.
(Same as No. 7797, but does not include No. 7665 GM TBI adapter.) Wt., 1 lb., 8 oz.

Gauge and Hose Assembly
This gauge is designed to work with any of our fittings for testing fuel injection systems. It features a sturdy 3-1/2" dial that reads 0–100 psi. It also has a built-in (100–150 psi) retard to prevent excess pressure damage. The assembly’s disconnect fitting has a check valve to lessen chance of fuel spray.

- Includes 6-ft. bleed hose and 30" pressure hose.
- Bleed valve eliminates air from injection system and can be used to reduce pressure when disconnecting hoses.
- Bleed valve also allows gauge assembly to be used to check fuel pump volume.

No. 7211 – Gauge and hose assembly. Wt., 1 lb., 3 oz.
No. 306905 – Optional pressure hose, 70" long. Wt., 7 oz.
No. 7211M – Gauge, 6' bleed hose, and 70" pressure hose.

Fuel Pressure Tester Kit
Quickly and easily locate any malfunctioning fuel system component, including fuel filters, pressure regulators, fuel lines, and fuel pumps without removing it from the vehicle.

Features and benefits:
- Large, easy-to-read 0–100 psi scale, 0–700 kPa.
- Solid brass fittings.
- Pressure relief valve for safe, clean testing.

No. 5630 – Fuel pressure tester kit. Wt., 1 lb., 4 oz.
**Master Fuel Injection Kit**
Test fuel injection systems on most GMs, including GM TBI, Ford, Chrysler, and Jeep vehicles. Also works on imports, including CIS and CISE fuel systems. With this kit you can diagnose fuel-related problems, such as a weak fuel pump or restricted fuel filter, and perform leak-down tests. Kit includes 0–100 psi fuel pressure gauge and 35 of the popular OTC fuel injection adapters, each equipped with a quick-connect Schrader valve. Replacement seal kit also included.

No. 6550 – Master fuel injection kit. Wt., 11 lb., 12 oz.

---

**Domestic Fuel Injection Kit**
Test fuel injection systems on most GMs, including GM TBI, Ford, Chrysler, and Jeep vehicles. With this kit you can diagnose fuel-related problems, such as a weak fuel pump or restricted fuel filter, and perform leak-down tests. Kit includes 0–100 psi fuel pressure gauge and 17 of the popular OTC fuel injection adapters, each equipped with a quick-connect Schrader valve. Replacement seal kit also included.

No. 6551 – Domestic fuel injection kit. Wt., 4 lb., 2 oz.

---

**Import Fuel Injection Kit**
Test fuel injection systems on imports, including CIS and CISE fuel systems. With this kit you can diagnose fuel-related problems, such as a weak fuel pump or restricted fuel filter, and perform leak-down tests. Kit includes 0–100 psi fuel pressure gauge and 23 of the popular OTC fuel injection adapters, each equipped with a quick-connect Schrader valve for. Replacement seal kit also included.

No. 6552 – Import fuel injection kit. Wt., 4 lb., 2 oz.

---

**Asian Fuel Injection Fitting Kit**
The fittings in this kit enable you to connect OTC No. 7211 gauge (not included) to most Hyundai, Honda, Mitsubishi, and other Asian automotive engines, and diagnose most common fuel system problems involving low fuel pressure and low fuel volume at the injectors. Each fitting comes with a quick-connect Schrader valve for easy hookup to the gauge assembly.

- Fitting seals are compatible with most popular cleaning solvents.
- Includes operating instructions and handy blow-molded case.

No. 6570 – Asian fuel injection fitting kit. Wt., 3 lb.
## Fuel Injection Comparison Chart (Adapters, Fittings, and Accessories)

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>6550</th>
<th>6551</th>
<th>6552</th>
<th>6570</th>
</tr>
</thead>
<tbody>
<tr>
<td>518356</td>
<td>CIS/TBI hose assembly with shutoff valve</td>
<td>•</td>
<td>•</td>
<td></td>
<td></td>
</tr>
<tr>
<td>518472</td>
<td>16 mm x 1.5 internal o-ring adapter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518473</td>
<td>14 mm x 1.5 external o-ring adapter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518474</td>
<td>14 mm x 1.5 internal o-ring adapter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518476</td>
<td>Ford hairpin adapter (5/16&quot;)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518477</td>
<td>Seal Kit</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518478</td>
<td>Single-end hose adapter (1/4, 5/16, 3/8)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518480</td>
<td>Double-end hose adapter (5/16, 3/8)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518481</td>
<td>16 mm x 1.5 external o-ring adapter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518482</td>
<td>14 mm x 1.5 external o-ring plug</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518483</td>
<td>3-1/2” gauge, 0–100 psi (0–7 BAR)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518484</td>
<td>M10 x 1.0 internal o-ring adapter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518485</td>
<td>M8 x 1.0 internal o-ring adapter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518486</td>
<td>M12 x 1.5 internal swivel adapter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518487</td>
<td>GM TBI inline adapter (16 mm x 1.5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518488</td>
<td>M8 x 1.0 external o-ring adapter (long)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518489</td>
<td>M10 x 1.0 external o-ring adapter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518490</td>
<td>M6 x 1.0 external o-ring adapter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518491</td>
<td>M8 x 1.0 external banjo adapter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518492</td>
<td>M10 x 1.0 external banjo adapter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518493</td>
<td>M12 x 1.5 external banjo adapter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518494</td>
<td>M12 x 1.25 external banjo adapter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518495</td>
<td>Ford flexible EFI adapter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518496</td>
<td>M16 x 1.5 external &amp; internal swivel adapter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518497</td>
<td>1/4” BSPT external &amp; internal swivel adapter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518498</td>
<td>M14 x 1.5 external &amp; internal swivel adapter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518499</td>
<td>Ford spring lock adapter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518501</td>
<td>M14 x 1.5 external banjo adapter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518527</td>
<td>GM/Chrysler hairpin adapter (3/8&quot;)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518530</td>
<td>Gauge hose assembly with relief valve</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518534</td>
<td>5/8” x 18 external flare adapter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518535</td>
<td>5/8” x 18 internal flare adapter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518536</td>
<td>M8 x 1.0 external o-ring adapter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518537</td>
<td>M8 x 1.0 internal o-ring adapter (long)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518542</td>
<td>7/16 x 20 GM/Chrysler flexible adapter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>528177</td>
<td>7/16 x 20 GM/Chrysler elbow adapter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>528178</td>
<td>7/16 x 20 GM/Chrysler straight adapter (short)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>528180</td>
<td>Low pressure gauge 0–15 psi (0–1 BAR)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>528182</td>
<td>16 mm x 1.5 elbow GM TBI fitting</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>528183</td>
<td>3/8 hairpin adapter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>528541</td>
<td>5/8 x 18 flare straight adapter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>528766</td>
<td>M12 banjo adapter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>528767</td>
<td>M8 x 1.0 double banjo bolt</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>528768</td>
<td>M12 x 1.25 double banjo bolt</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>528769</td>
<td>M8 banjo fitting</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>528770</td>
<td>.430 diameter adapter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>528771</td>
<td>.560 diameter adapter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>528772</td>
<td>.5” diameter adapter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>528773</td>
<td>O-ring &amp; washer kit</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>528774</td>
<td>O-ring &amp; washer kit</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>528776</td>
<td>Ford EFI adapter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>528779</td>
<td>16 mm x 1.5 internal union adapter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Part No.</td>
<td>Description</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>-------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3054C</td>
<td>Noid Lite/IAC signal tester with fiber optic cable. Wt., 15 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3052S</td>
<td>IAC signal tester (GM). (Square 4-pi pin connector). Wt., 3 oz. See page 74.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3053S</td>
<td>IAC signal tester (GM). (Flat 4-pin connector). Wt., 3 oz. See page 74.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3305-53</td>
<td>TBI adapter. Wt., 11 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3320</td>
<td>2-in-1 idle air/idle speed control tester Wt., 10 oz. See page 49.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3398</td>
<td>Fuel injection pulse tester. Wt., 10 oz. See page 74.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4506</td>
<td>Fuel line clamp set Wt., 6 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6023</td>
<td>Noid Lite (for GM Multec 2 injectors). Wt., 2 oz. See page 73.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6260</td>
<td>Fiber Optic Noid Lite Extension Cable. Wt., 5 oz. See page 74.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6266</td>
<td>Noid Lite (for GM Bosch 2 injectors). Wt., 2 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6509</td>
<td>Fuel line disconnect tool. Wt., 3 oz. See page 76.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6511</td>
<td>Fuel line disconnect tool. Wt., 3 oz. See page 76.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7187</td>
<td>Noid Lite (GM TBI). GM model 220, 300, 500 series TBI. Wt., 2 oz. See page 73.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7188</td>
<td>Noid Lite (Bosch PFI). GM model 700 series TBI. Wt., 2 oz. See page 73.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7211</td>
<td>Pressure gauge assembly (0–100 psi). Wt., 1 lb., 3 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7214A</td>
<td>Quick-disconnect straight fitting (%20 internal). (Also conversion adapter for Champion and 3M.) Wt., 2 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7222A</td>
<td>Adapter set (5/6-18 internal, 45° flare inverted. Wt., 7 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7236</td>
<td>Spring lock coupling adapter same as Ford 310-D003 (D85L-9974-C). Wt., 7 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7272</td>
<td>EFI Quick coupler disconnect fitting (Ford .307-32 internal). Wt., 1 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7273</td>
<td>Pressure adapter (%4 &amp; %4 fuel line). Wt., 8 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7335</td>
<td>Fuel line disconnect tool (%4) (yellow). Same as Ford 310-D004 (D87L-9280-A). Wt., 2 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7336</td>
<td>Fuel line disconnect tool (%4) (green). Same as Ford 310-D005 (D87L-9280-B) Wt., 2 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7342</td>
<td>Quick coupler adapter. Wt., 2 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7370</td>
<td>Fuel line disconnect tool (%4&quot;) (gray). Same as Ford 310-040 (T90T-9550-B). Wt., 1 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7371</td>
<td>Fuel line disconnect tool (%3&quot;) (blue). Same as Ford 310-041 (T90T-9550-C). Wt., 1 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7340</td>
<td>Quick-disconnect 90° elbow fitting (%20 internal). Also conversion adapter for Champion &amp; 3M. Wt., 3 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7433</td>
<td>Fuel return line plug (%4&quot;) external. Wt., 2 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7439</td>
<td>Pressure gauge (0–100 psi). Has a built-in retard (100–150 psi). Wt., 11 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7442</td>
<td>Banjo fitting (M10 internal banjo). Wt., 3 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7443</td>
<td>Banjo fitting (M12 internal banjo). Wt., 3 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7472</td>
<td>Conversion adapter (M12 x 1.5 internal ball nose snap-on). Wt., 3 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7597</td>
<td>Conversion Adapter Kit (7430 &amp; 7472 snap-on). Wt., 7 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7601</td>
<td>Noid Lite (Ford TBI). Wt., 1 oz. See page 73.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7602</td>
<td>Noid Lite (GM PFI). Wt., 1 oz. See page 73.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7608</td>
<td>Noid Lite (Geo TBI). Wt., 1 oz. See page 73.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7628</td>
<td>Special fitting set (5/16”). Wt., 3 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7629</td>
<td>Special fitting set (3/8”). Wt., 3 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7631</td>
<td>Fuel return line plug (5/16”). Wt., 2 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7655</td>
<td>Pinch-off pliers. Wt., 13 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7660</td>
<td>Fuel line disconnect tool. Same as Ford 310-052 (T93T-9550-AH). Wt., 2 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7666</td>
<td>Decarbonizing adapter. Wt., 5 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>519154</td>
<td>Ford fuel line coupling tool. Same as Ford 310-052 (T90T-9550-A). Wt., 1 oz. See page 77.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7828</td>
<td>GM SCPI Noid-Lite. Wt., 10 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518501</td>
<td>EFI pressure test adapter (M14 x 1.5 external double banjo). Wt., 3 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Part No.</td>
<td>Description</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7896</td>
<td>Fuel line disconnect tool set, 5/16” red and 3/8” blue. (Same as Kent-Moore J-39504.) Wt., 7 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7915</td>
<td>Fuel injection quick coupler adapter. Wt., 2 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7902</td>
<td>Chrysler fuel injection fitting. Wt., 13 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7951</td>
<td>Ford idle speed control tester. Wt., 9 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518356</td>
<td>Fuel line adapter (CIS). Wt., 12 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518472</td>
<td>16 mm x 1.5 Internal o-ring adapter. Wt., 3 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518473</td>
<td>14 mm x 1.5 External o-ring adapter. Wt., 2 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518474</td>
<td>14 mm x 1.5 Internal o-ring adapter. Wt., 2 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518476</td>
<td>Ford hairpin adapter (5/16”). Wt., 5 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518477</td>
<td>Fuel injection seal kit. Wt., 2 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518478</td>
<td>Single-end hose adapter (1/4”, 5/16”, 3/8”). Wt., 12 oz..</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518481</td>
<td>16 mm x 1.5 external o-ring Wt., 2 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518482</td>
<td>Fuel return line plug (M14 x 1.5 external). Wt., 3 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518483</td>
<td>3-1/2” Gauge, 0–100 psi, 0–7 BAR. protective boot. Wt., 12 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518484</td>
<td>M10 x 1.0 internal o-ring adapter. Wt., 10 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518485</td>
<td>M8 x 1.0 Internal o-ring adapter. Wt., 10 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518486</td>
<td>M12 x 1.5 Internal swivel adapter. Wt., 1 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518487</td>
<td>GM TBI fuel pressure adapter. (16 mm x 1.5). Wt., 5 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518488</td>
<td>Quick-disconnect fitting (M8 x 1.0 x 3/4” long external o-ring). Wt., 3 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518489</td>
<td>Quick-disconnect fitting (M10 x 1.0 external o-ring). Wt., 2 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518490</td>
<td>Quick-disconnect fitting (M6 x 1.0 external o-ring). Wt., 3 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518491</td>
<td>Quick-disconnect banjo fitting (M8 x 1.0 external). Wt., 3 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518492</td>
<td>Quick-disconnect banjo fitting (M10 x 1.0 external). Wt., 3 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518493</td>
<td>Quick-disconnect banjo fitting (M12 x 1.5 external). Wt., 3 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518494</td>
<td>Quick-disconnect banjo fitting (M12 x 1.25 external). Wt., 3 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518495</td>
<td>Ford adapter, Schrader, 308 x 32 thread (Ford EFI). Wt., 2 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518496</td>
<td>M16 x 1.5 External &amp; internal swivel adapter. Wt., 2 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518497</td>
<td>1/4” Pipe External &amp; internal swivel adapter. Wt., 5 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518498</td>
<td>M14 x 1.5 External &amp; internal swivel adapter. Wt., 2 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518499</td>
<td>Ford spring lock adapter. 2003 – newer with returnless fuel system. Wt., 7 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518501</td>
<td>M14 x 1.5 External banjo bolt. Wt., 2 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518527</td>
<td>3/8” Hairpin adapter. Wt., 5 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518530</td>
<td>Hose assembly with relief valve. Wt., 1 lb. 2 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518534</td>
<td>Adapter set (%–18 external, 45° inverted flare). Wt., 3.5 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518535</td>
<td>Adapter set (%–18 internal, 45° inverted flare). Wt., 3.5 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518536</td>
<td>Quick-disconnect fitting (M8 x 1.0 external o-ring). Wt., 2 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518537</td>
<td>M8 x 1.0 Internal o-ring adapter (long). Wt., 5 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>518542</td>
<td>GMC/Chrysler adapter (7/16 x 20). Wt., 6 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>528177</td>
<td>7/16 x 20 GM/Chrysler elbow adapter. Wt., 4 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>528178</td>
<td>7/16 x 20 GM/Chrysler straight adapter (short). Wt. 4 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>528180</td>
<td>Low-pressure gauge 0–15 psi (0–1 BAR). Wt. 12 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>528182</td>
<td>16 mm x 1.5 elbow GM TBI fitting. Wt. 4 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>528183</td>
<td>3/8 hairpin adapter. Wt. 4 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>528766</td>
<td>M12 x 1.0 Double Banjo Bolt. Wt., 5 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>528767</td>
<td>M8 x 1.0 Double Banjo Bolt. Wt., 2 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>528768</td>
<td>M12 x 1.25 Double Banjo Bolt. Wt., 2 oz.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Fuel Injection Adapters, Fittings, and Accessories

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>528541</td>
<td>5/8 x 18 flare straight adapter. Wt. 3 oz.</td>
</tr>
<tr>
<td>528769</td>
<td>Banjo fitting (M8 banjo). Wt. 3 oz.</td>
</tr>
<tr>
<td>528770</td>
<td>Quick-disconnect fitting (.430 Ø external) (Mitsubishi/Chrysler). Wt. 3 oz.</td>
</tr>
<tr>
<td>528771</td>
<td>Quick-disconnect fitting (.580 Ø external) (Mitsubishi/Chrysler). Wt. 3 oz.</td>
</tr>
<tr>
<td>528772</td>
<td>Quick-disconnect fitting (5/8” Ø external) (Mitsubishi). Wt. 5 oz.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>528773</td>
<td>O-ring and washer set for kit No. 6571. Wt. 1 oz.</td>
</tr>
<tr>
<td>528774</td>
<td>O-ring and washer set for kit No. 6570. Wt. 1 oz.</td>
</tr>
<tr>
<td>528776</td>
<td>Ford EFI Adapter. Wt. 4 oz.</td>
</tr>
<tr>
<td>528779</td>
<td>16 mm x 1.5 Internal union adapter. Wt. 2 oz.</td>
</tr>
</tbody>
</table>

Noid Lite/IAC Test Kits

- Noid Lites are a proven test device to quickly determine if the electrical signal is present at the fuel injector.
- Simplest method for eliminating the EFI system or idle air control as possible faults on no-start vehicles.
- Disconnect the fuel injectors, plug in a Noid Lite, and crank the engine. A flashing noid light indicates normal pulsing voltage.

No. 3050C – Noid Lite Test kit. Wt., 1 lb. 1 oz.
Set includes: (available separately)
- No. 7178 – GM TBI Noid Lite. Wt., 2 oz.
- No. 7188 – Bosch PFI Noid Lite. Wt., 2 oz.
- No. 7601 – Ford TBI Noid Lite. Wt., 2 oz.
- No. 6023 – GM Multec 2 Noid Lite. Wt., 2 oz.
- No. 7602 – GM PFI Noid Lite. Wt., 2 oz.
- No. 7608 – Geo TBI Noid Lite. Wt., 2 oz.
- No. 7828 – GM SCPI Noid Lite. Wt., 2 oz.
- No. 6266 – Bosch 2 Noid Lite. Wt., 2 oz.
- No. 6260 – Fiber optic Noid Lite extension. Wt., 5 oz.

No. 3054C – Noid Lite/IAC test kit. Wt., 1 lb. 3 oz.
Set includes: (available separately)
- No. 7178 – GM TBI Noid Lite. Wt., 2 oz.
- No. 7188 – Bosch PFI Noid Lite. Wt., 2 oz.
- No. 7601 – Ford TBI Noid Lite. Wt., 2 oz.
- No. 6023 – GM Multec 2 Noid Lite. Wt., 2 oz.
- No. 7602 – GM PFI Noid Lite. Wt., 2 oz.
- No. 7608 – Geo TBI Noid Lite. Wt., 2 oz.
- No. 7828 – GM SCPI Noid Lite. Wt., 2 oz.
- No. 6266 – Bosch 2 Noid Lite. Wt., 2 oz.
- No. 6260 – Fiber optic Noid Lite extension. Wt., 5 oz.
- No. 3052S – ‘82 and newer GM TBI/PFI IAC tester with square 4-pin connector. Wt., 2 oz.
- No. 3053S – ‘87 and newer Model 700 TBI/PFI with flat 4-pin connector. Wt., 2 oz.
Fuel Injection Tester

Fuel injectors can pass a resistance test but still fail under load. With this tool, you can check and balance fuel injectors. Also tests fuel injector coil windings under load, and detects intermittent fuel injector coil faults. Adjustable current output. Works on both throttle body and multiport fuel injectors. TBI adapter included.

No. 3397 – Fuel injector tester. Wt., 3 lbs., 5 oz.

Fuel Injection Pulse Tester

Fuel injector testing requires precision equipment. This vehicle-powered tool fills that requirement. It enables you to check cylinder balance by firing individual injectors at 1/2-second increments in three different ranges: 1 pulse of 500 milliseconds, 50 pulses of 10 milliseconds, 100 pulses of 5 milliseconds.

• Power and output lights indicate test activation.
• Includes wiring harness adapter and instructions.

No. 3398 – Fuel injection pulse tester. Wt., 8 oz.
No. 306677 – Replacement lead. Wt., 2 oz.

General Motors IAC Signal Test Lights

For checking the electronic control module signal that provides direction to the idle air control motor on General Motors vehicles with throttle body or port fuel injection systems.

No. 3051 – Set consists of Nos. 3052S and 3053S. Wt., 4 oz.
No. 3052S – Signal test light for 1982 and newer GM TBI and PFI fuel injection systems with a square 4-pin connector. Wt., 2 oz.
No. 3053S – Signal test light for 1987 and newer GM Model 700 TBI and PFI fuel injection systems with a flat 4-pin connector. Wt., 2 oz.

Fiber Optic Noid Lite Extension Cable

• Four-foot length permits easy viewing of Noid Lite signal. Used with OTC’s Nos. 7187, 7188, 7601, 7602, 7608, 7828, 6023, and 6266, as well as other brands of Noid Lites.
• Noid Lite is inserted into cup end of extension cable, then plugged into vehicle’s wiring harness. Fiber optic cable is routed out of engine compartment with end placed where it can be observed. Engine is cranked, and flashing at end of extension indicates normal injector pulsing voltage.
• Suction cup at end of extension cable permits secure placement on hood, fender, windshield, etc., without damage to surface.

No. 6260 – Fiber optic Noid Lite extension cable. Wt., 5 oz.
Full-Coverage Disconnect Tool Set

If you’re working on Chrysler, Ford, or General Motors vehicles, this set will make your job easier. The tools are designed for heater hoses, transmission oil coolers, air conditioning and fuel lines. They’re approved by vehicle manufacturers and will not damage the fittings being disconnected. Tool Nos. 518092, 518896, 518897, 518898, 518899, 518900, and 518901 are spring-loaded in the closed position to deflect any spray that occurs when lines are disconnected.

• Comes in blow-molded case.

No. 6508 – Disconnect tool set. Wt., 4 lbs., 8 oz.

Contents of set:

<table>
<thead>
<tr>
<th>Tool</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>440384</td>
<td>GM hydraulic clutch line disconnect tool.</td>
</tr>
<tr>
<td>440486</td>
<td>GM transmission oil cooler line.</td>
</tr>
<tr>
<td>511410</td>
<td>Fuel line disconnect tool.</td>
</tr>
<tr>
<td>511413</td>
<td>Fuel line disconnect tool.</td>
</tr>
<tr>
<td>518902</td>
<td>Heater hose disconnect tool.</td>
</tr>
<tr>
<td>519158</td>
<td>Fuel line disconnect tool set.</td>
</tr>
<tr>
<td>518582</td>
<td>Fuel line disconnect tool.</td>
</tr>
<tr>
<td>518583</td>
<td>Fuel line disconnect tool.</td>
</tr>
<tr>
<td>518584</td>
<td>Fuel line disconnect tool.</td>
</tr>
<tr>
<td>518896</td>
<td>Fuel line disconnect tool. (Yellow, 3/8&quot;)</td>
</tr>
<tr>
<td>518897</td>
<td>A/C spring lock coupling tool. (Black, 5/8&quot;)</td>
</tr>
<tr>
<td>518898</td>
<td>A/C spring lock coupling tool. (Blue, 1/2&quot;)</td>
</tr>
<tr>
<td>518899</td>
<td>Fuel line disconnect tool. (Green, 1/2&quot;)</td>
</tr>
<tr>
<td>518900</td>
<td>A/C spring lock coupling tool. (Red, 3/8&quot;)</td>
</tr>
<tr>
<td>518901</td>
<td>A/C spring lock coupling tool. (White, 3/4&quot;)</td>
</tr>
<tr>
<td>519067</td>
<td>Fuel line disconnect tool.</td>
</tr>
<tr>
<td>519068</td>
<td>Fuel line disconnect tool.</td>
</tr>
<tr>
<td>519151</td>
<td>Quick disconnect tool.</td>
</tr>
<tr>
<td>519152</td>
<td>Oil cooler line disconnect tool.</td>
</tr>
<tr>
<td>519153</td>
<td>Clutch coupling tool.</td>
</tr>
<tr>
<td>519154</td>
<td>Fuel line coupling tool.</td>
</tr>
<tr>
<td>519155</td>
<td>Chrysler fuel line disconnect tool.</td>
</tr>
<tr>
<td>519156</td>
<td>Ford heater hose disconnect tool.</td>
</tr>
<tr>
<td>519157</td>
<td>GM heater line quick connect separator.</td>
</tr>
<tr>
<td>519159</td>
<td>Oil cooler line disconnect tool.</td>
</tr>
</tbody>
</table>
FUEL SERVICE TOOLS

Fuel Service Tools

Disconnected Tool Set
Designed for A/C lines, fuel lines, and transmission cooler lines.
- Contains the 3/8" and 1/2" fuel line disconnect tool for Ford vehicles.
- Contains the 5/16" and 3/8" fuel line disconnect tools for GM and Chrysler vehicles.
- Contains the transmission oil cooler line disconnect tool used on many GM and Ford vehicles.

No. 6517 – Disconnect tool set. Wt. 7 oz.

GM Fuel Line Disconnect Tool
Applications: 2002–newer Tahoe and light-duty trucks with the 5.3L V8 engine.
- This is a required tool to remove the fuel line from the fuel filter.

No. 6603 – GM fuel line disconnect tool. Wt. 1 oz.

FordFuel Line Disconnect Tool Set
These tools will easily disconnect the spring lock couplings of fuel lines on Ford’s throttle body and port fuel injection systems. The tools are spring-loaded and durable, and they enclose the line to help deflect spray.
- Tools fit 3/8" and 1/2" lines.

No. 7337 – Ford fuel line disconnect tool set. Includes 7335 (3/8" yellow) and 7336 (1/2" green) disconnect tools. Wt., 4 oz.

Fuel Line Disconnect Tool Set
These two disconnect tools are designed to fit quick-connect fuel line fasteners. They’ll work on Chrysler, Ford, or GM vehicles, and separate fuel lines without damaging the connectors.
- Tools fit 5/16" and 3/8" lines.

No. 7361 – Fuel line disconnect tool set. Includes 7370 (5/16" gray) and 7371 (3/8" blue) disconnect tools. Wt., 1 oz.

Fuel Line Disconnect Tools
- Special low-profile design works in close quarters on GM, Ford, and Chrysler vehicles where there is limited clearance between the fuel line fittings and fuel filters, fuel rails, or sending units. Both tools are designed to access the center port on the GM fuel tank sending unit.


No. 6511 – For 3/8" and 1/2" applications. Will also service 2001–current 3/4- & 1-ton trucks with the Duramax diesel engines. Wt., 3 oz.
Fuel and Air Conditioning Line Release Tool
• This spring-lock coupling release tool easily separates fittings on fuel and air conditioning lines.
• Tool sizes are 3/4", 5/8", 1/2", and 3/8".
No. 4494 – Fuel and air conditioning line release tool. Wt., 5 oz.

Ford Fuel Line Disconnect Tool Set
Here’s the best tool for easy, frustration-free fuel line separation. As you put the tool on the fuel line coupling, its fingers depress the retaining collar to release the fuel line, preventing component damage.
• Works on 1990 to 1995 Ford Ranger and Explorer models fitted with 4.0L, 6-cylinder engines.
No. 519154 – Ford fuel line coupling tool. Wt., 2 oz.

Rubber Line Clamp Set
• Set of two clamps. Used to quickly shut off flow from vacuum, brake, and fuel lines.
• Enables you to clamp and hold hose without damage.
No. 4506 – Rubber line clamp set. Wt., 6 oz.

7-Piece Sensor Socket Set
Includes:
No. 4673-1 – 29 mm pressure / vacuum switch socket.
No. 4673-2 – 7/8" vacuum switch socket.
No. 4673-3 – 27 mm oil pressure sending unit socket.
No. 4673-4 – 7/8" vacuum switch socket.
No. 4673-5 – 1-1/16" & 1" oil pressure sending unit socket.
No. 4673-6 – 22 mm heated oxygen sensor wrench.
No. 4673-7 – 7/8" short oxygen sensor socket.
No. 4673 – 7-Piece sensor socket set. Wt. 4 lbs. 10 oz.

Oxygen Sensor Socket
• Designed to easily remove an oxygen sensor.
• Heat-treated cast steel.
• 7/8" hex, 1/2" square drive (double square for easy access).
No. 7189 – Oxygen sensor socket. Wt., 8 oz.

Oxygen Sensor Socket
• Works on all domestic and imported vehicles with oxygen sensors.
• Slot in socket’s side allows wire clearance.
• Outside rib provides added strength, yet does not restrict access to sensors.
• 1/2" square drive, 1" male hex drive on top, 7/8" six-point opening, 3-7/8" long
No. 6931 – Oxygen sensor wrench. Wt., 1 lb.
Fuel Service Tools

Exhaust Back Pressure Gauge
Now you can quickly read back pressure to determine the amount of restriction in an exhaust system. This gauge accurately measures through the oxygen sensor hole. Its large dial clearly shows pressure from 0–8 psi. The system has a stainless steel braided tube to withstand high-heat conditions.
- Includes a universal adapter for vehicles with thermactor systems.
- Works on domestic and imported vehicles.

No. 7215 – Exhaust back pressure gauge with universal adapter. Wt., 1 lb., 3 oz.

Fuel Emission Flow Meter
- Enables precise adjustment of engine idle mixtures.
- Works with OTC No. 7148 propane enrichment kit to monitor the propane going into the engine.
- Works on domestic or imported vehicles that have carburetors.

No. 7416 – Fuel emission flow meter. Wt., 6 oz.

Propane Enrichment Kit
- Ensures a correct idle mixture and compliance with emission standards.
- Works on domestic or imported vehicles that have carburetors.
- Uses standard 14-oz. propane cartridge.

No. 7148 – Propane enrichment kit. Wt., 14 oz.

Chrysler Fuel Pump Module Spanner Wrench

No. 7998 – Chrysler fuel pump module spanner wrench. Wt., 1 lb., 5 oz.

Fuel Tank Lock Ring Wrench
Universal design allows tool to fit fuel tank lock rings on Ford, Chrysler, and GM vehicles with gas engines.
- Tool easily removes and installs lock ring on the fuel tank when servicing the fuel pump or fuel sending unit.
- Used with a 1/2" drive ratchet or breaker bar.

No. 6599 – Fuel tank lock ring wrench. Wt. 1 lb. 8 oz.

Mercedes-Benz Fuel Tank Service Tool Kit
- Tool kit designed to remove fuel tank lids and plastic fuel tank cups to allow service on the fuel pump and/or the fuel sending unit.

No. 6598 – Mercedes-Benz Fuel Tank Service Tool Kit. Wt. 4 lb. 2 oz.
Smoke Leak Detection 80–81
Strut Tools 81–83
Suspension/Steering Tools 84–105
Ball Joint Application Charts 94–97
Cam Tools 105–117
Cam Tool Application Charts 106–117
Engine Service 118–133
Coolant Service 134–137
Fan Clutch Wrenches 139–142
Hub Service Tools 142–144
CV Joint Service 145–147
Rear Axle Service 148–149
Transmission Service 150–154
Differential Service 155
Fuel & A/C Tools 156–157
Locknut Sockets 158–162
Brake Tools 162–168
Flaring Tools 168–169
TORX® Fastener Tools 170–173
Ribe Key, Seat Belt Tools 174
LeakMaster™ & LeakTamer™ Plus Evap Systems

- Vacuum Leak Testing
- Exhaust Leaks
- Crankcase Oil
- Cooling System Testing
- Wind and Water Leaks
- 1-Year Warranty

The LeakMaster and LeakTamer Plus Evap are the latest generation of leak detection systems, providing more smoke and better control. Solid-state circuitry improves reliability and ensures more consistent smoke output. A wide assortment of accessories make the LeakMaster and LeakTamer Plus Evap versatile tools for quickly locating different kinds of leaks.

The LeakMaster and LeakTamer Plus Evap offer:

- Densest smoke in the industry.
- Newly redesigned smoke chamber and control system.
- More complete line of accessories.
- User refillable.
- More than 1000 tests per refill.
- Non-toxic, non-corrosive smoke.
- Built-in flowmeter to verify flow (6525 only).

No. 6521 – LeakTamer Plus Evap system. Wt., 20 lb.
No. 6525 – LeakMaster leak detection system. Wt., 22 lb.

### OTC LeakMaster & LeakTamer Plus Evap System

**Parts included and available separately**

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
<th>6525</th>
<th>6521</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEA-01</td>
<td>Exhaust Cone (2 each)</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>CEA-02</td>
<td>Cap Plug Kit</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>CEA-03</td>
<td>Smoke Diffuser Adapter</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>CEA-04</td>
<td>Standard Service Port Adapter</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>CEA-041</td>
<td>Nitrogen Coiled Hose 25 ft.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>CEA-042</td>
<td>Small Service Port Adapter</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>CEA-049</td>
<td>Schrader Removal Tool</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>HS-400AC</td>
<td>Halogen Spotlight</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>6525-1</td>
<td>Pressure Regulator</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>6525-2</td>
<td>Dipstick</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>6525-3</td>
<td>Pointer Flag (for flow meter)</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>6525-4</td>
<td>Water Trap w/filter</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>6525-5</td>
<td>Battery Power Cable Assembly</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>6525-6</td>
<td>Remote On/Off (switch only)</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>6525-7</td>
<td>Remote Cable Assembly (w/switch)</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>6525-8</td>
<td>Brass Nozzle</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>6525-9</td>
<td>Brass Nozzle and Hose Assembly</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>6525-10</td>
<td>Rubber Feet (4 reqd.)</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>6525-11</td>
<td>Accessory Storage Bag</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>6525-12</td>
<td>Tech Tips Manual</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>P-0716-UV</td>
<td>Smoke Producing Solution</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
LeakMaster with EVAP cart

- Recessed area on top of the cart allows smoke machine to fit tightly and ensures its safety from tipping.
- Includes holding well for a standard sized 60 or 75 cubic foot SAE nitrogen tank.
- Large shelf area for the adapters and other accessories that come with the smoke machine.
- Raised handle, large recessed rollers, and a minimum floor footprint for ease in moving the unit around the shop floor.

No. 6625 – EVAP cart only. Wt., 35 lbs., 2 oz.

Clamshell Strut Spring Compressor

Servicing MacPherson struts is convenient and affordable with this compressor. It fits a wide range of struts and requires no special adapter shoes.

- Locking pins hold the compressor jaws in place.
- Tool compresses springs of 4 in. to 9 in. O.D., with wire diameters of 7/16" to 11/16".
- Built to use with an impact wrench

No. 6494 – Clamshell strut spring compressor. Wt., 19 lbs.
**StrutTamer™ HD Strut Spring Compressor**

Simply the most effective compressor for virtually any straight, conical, or offset spring.

- Four-point locking jaws securely hold the spring in place.
- Open-ended design means you can take the strut in and out, quickly and easily.
- The arms adjust in and out, up and down, to accept many sizes of springs.
  - (2-1/2" to 10" diameter)
  - (2-1/2" to 24" vertical stroke)
- Extra long 3-bar handle gives user the leverage needed to compress the big strut springs.
- No need to change shoes for different size springs.
- Easy to transport when mounted on optional stand (No. 6586 – StrutTamer HD with stand; No. 6582 – stand only).
- Comes with No. 6583 Bridge accessory to be used on springs that cannot be compressed enough to remove the retaining nut.

**No. 6585** – StrutTamer HD strut spring compressor, and No. 6583 Bridge accessory. Wt., 82 lbs.

**No. 6586** – StrutTamer HD. Includes StrutTamer spring compressor, No. 6583 Bridge accessory, and No. 6582 mobile stand. Wt., 150 lbs.

**No. 6582** – StrutTamer stand. Wt., 68 lbs.

**No. 6587** – 2:1 reduction gearbox. Allows a 2:1 torque compression increase when compressing struts.

**StrutTamer™ Elite Strut Spring Compressor**

Our new StrutTamer Elite for MacPherson strut springs is an effective compressor for handling almost any straight, conical, or offset spring. With its adjustable arms and four-point locking jaws, the StrutTamer Elite securely holds the spring.

**The StrutTamer features:**

- Adjustable center screw that keeps a strut and spring aligned.
- Crank designed to compress a spring faster and easier.
- Coverage: 2-1/2" to 10" spring diameters, 2-1/2" to 24" vertical stroke range.
- Comes with No. 6583 Bridge accessory to be used on springs that cannot be compressed enough to remove the retaining nut.
- Easy mounting to wall or optional stand.
- Welded steel frame with two wheels that enable easy movement of the unit. (6581)
- Non-slip rubber pads that keep the stand firmly in place during compression. (6581)

**No. 6580** – StrutTamer Elite strut spring compressor, and No. 6583 Bridge accessory. Wt., 81 lb.

**No. 6581** – Master StrutTamer Elite set. Includes StrutTamer spring compressor, No. 6583 Bridge accessory, and portable stand. Wt., 142 lb.

**No. 6582** – StrutTamer Elite portable stand. Wt., 61 lb.
StrutTamer™ HD and StrutTamer™ Elite Strut Compressor Bridge Accessory
- Used to compress strut springs if technician prefers to press on the top plate of the strut rather than attaching the locking jaws to the top coils of the spring.
- Attaches to the locking jaws and is manually adjusted to bridge the strut top plate to be compressed. Lower part of spring is still held in the two lower locking jaws.
- Included with the 6580 & 6585. Available separately for owners of previous model No. 6070. Also works with 6494.

No. 6583 – Bridge accessory for StrutTamer Elite and HD. Wt., 2 lbs. 5 oz.

3-Knob Handle for StrutTamer Elite
- Large, easy-to-grasp knobs provide ease of spring compression when using the StrutTamer Elite strut spring compressor.
- Included with the 6580. Available separately for owners of previous model No. 6070.

No. 518450 – 3-knob handle for StrutTamer Elite. Wt., 1 lb. 5 oz.

MacPherson Strut Spring Hook Compressor
These devices quickly and easily compress most sizes of MacPherson strut springs. Setup is fast and simple. Compression is achieved by alternating from one assembly to another. Each device has a heat-treated alloy thrust screw (5/8”–11 x 12”) with forged hooks.

No. 7294 – MacPherson strut spring hook compressor, for most sizes of MacPherson strut springs. Wt., 7 lbs., 3 oz.

Front Coil Spring Compressor
This compressor fits most late-model rear wheel drive domestic vehicles in which the coil springs are between the upper and lower control arms. The tool features four case-hardened, self-aligning plates to ensure correct load distribution under tension. Includes two 3-3/8" ID plates and two 4" ID plates. Will not work on Mercedes-Benz vehicles.

No. 7045B – Front coil spring compressor. Wt., 13 lbs.

GM W-Body Strut Service Set
This set has the tools needed for removing and installing gas-charged or oil-filled strut cartridges on 1988–96 Pontiac Grand Prix, 1988–98 Oldsmobile Cutlass Supreme, 1988–99 Chevrolet Lumina sedan, 1995–99 Chevrolet Monte Carlo, and 1988–96 Buick Regal. It enables you to work through the strut tower without removing the strut assembly from the vehicle.

GM W-Body Strut Tool Kit
- Includes one T50 TORX® bit, a universal drive handle, and a double-ended socket.
- Use one end of the socket to remove/install the jounce bumper; the other end to remove/install the strut cap nut.

Works on GM W-body vehicles:
- 1988–96 Pontiac Grand Prix
- 1988–98 Olds Cutlass Supreme & Chevrolet Lumina Sedan
- 1995–99 Chevrolet Monte Carlo
- 1988–96 Buick Regal

No. 4533 – GM W-body strut tool kit. Wt., 3 lbs., 14 oz.

VW and Audi Strut Nut Socket
This 1-3/4” long socket is built for VW and Audi FWD cars in which the top shock-retaining nut is recessed inside the strut tower. The tool’s center bore allows you to hold the strut shaft from turning, using a 7/8” (22 mm) hex key and appropriately sized wrench.

No. 7707 – VW / Audi strut nut socket. Wt., 4 oz.

Strut Rod Nut Socket (24 mm)
This specially designed socket is needed to loosen and tighten the top strut nut when servicing the strut spring or strut cartridge. The socket is used with a 1/2” ratchet or breaker bar to turn the strut nut while holding the strut rod with the appropriate wrench. The socket fits 24 mm strut rod nuts found on many domestic FWD vehicles including 1988–96 Pontiac Grand Prix, 1988–98 Oldsmobile Cutlass Supreme, 1988–99 Chevrolet Lumina sedan, 1995–99 Chevrolet Monte Carlo, and 1988–96 Buick Regal.

No. 7544 – Strut rod nut socket. Wt., 8 oz.

GM Upper Control Arm Knock-Out Tool

No. 7491C – GM upper control arm knock-out tool. Wt., 8 oz.

Ford Truck Torsion Bar Tool

No. 7826 – Ford truck torsion bar tool. Wt., 2 lbs., 10 oz.
Ford Torsion Bar Adjustment Tool
Before servicing a torsion bar on 1995–2001 Ford Explorer and 1998–2001 Mercury Mountaineer vehicles, you must first contain the bar to avoid possible damage. This tool securely accomplishes that task, allowing you to make adjustments.
No. 7816 – Ford torsion bar adjustment tool.
Wt., 3 lbs., 10 oz.

GM Torsion Bar Unloading Tool
This rugged tool is built for GM’s K-3500 series trucks with heavy-duty chassis and a larger torsion bar. It features a larger C-frame opening to accommodate beefier torsion bars. The tool holds the torsion bar while you make adjustments. It also works on 1988 to 2003 GMC and Chevrolet 1/2-, 3/4-, and 1-ton pickups; the S-10 Blazer and S-15 Jimmy, 4WD pickups with 4.3L V-6 engines; and 1991 to 2001 Oldsmobile Bravada.
No. 7822A – GM torsion bar unloading tool.
Wt., 4 lbs., 3 oz.

Ford/Mercury Rear Toe Adjustment Wrench
With this wrench and a 1/2” drive ratchet or breaker bar, you can easily adjust the rear toe cams on 1986–95 Taurus and Sable station wagons – from outside the suspension area, even while the vehicle sits on alignment plates.
No. 7706 – Ford/Mercury rear toe adjustment wrench.
Wt., 8 oz.

Ford Rear Toe Adjustment Wrench
This wrench is designed for the larger 2-1/2” star-shaped adjusting cam on late model Ford cars. It works on 1995 to 2003 Lincoln Continentals, and 1996 to 2003 Taurus/Sable station wagons.
No. 7899 – Ford rear toe adjustment wrench.
Wt., 1 lb., 8 oz.

Ford Rear Toe Adjustment Wrench Set
This set contains two wrenches for adjusting the rear toe on Ford and Mercury vehicles. One wrench fits the 1984–94 Tempo and Topaz; the other fits 1986–95 Taurus and Sable sedans, and 1986–95 FWD Continental. Each wrench accommodates a 1/2” ratchet or breaker bar.
• No. 49885 – for Taurus/Sable with 2-1/2” opening.
• No. 49884 – for Tempo/Topaz with 2” opening.
No. 7814 – Ford rear toe adjustment wrench set.
Wt., 1 lb., 6 oz.
Chrysler LH Toe Adjustment Set
Here’s a tool set that will quicken front toe adjustments on Chrysler LH series cars. Consisting of a wrench, socket, and retainer, this set is for the 1993–97 Chrysler Concorde and New Yorker, Dodge Intrepid, and Eagle Vision.

No. 7891 – Chrysler LH toe adjustment set. Wt., 1 lb., 14 oz.

Chrysler LH Toe Adjusting Tool Set
This set enables the technician to adjust toe, to obtain a straight steering wheel, and correctly center the tie rod end. Permits easily reaching and breaking loose the tie rod jam nuts, while the entire assembly is held stable. Services 1998–newer Chrysler Concorde, Concorde 300M, New Yorker LHS, Dodge Intrepid, Dodge R/T, and Eagle Vision.

No. 6272 – Chrysler LH toe adjusting tool set. Wt., 1 lb., 13 oz.

Front End Service Set
Kit includes five popular tools used for servicing Pitman arms, ball joints, and tie rods on most vehicles.

No. 6295 – Front end service set. Wt., 12 lbs., 8 oz.

Set includes:
- No. 7314A – Pitman arm puller.
- No. 7315A – Tie rod end remover.
- No. 7503 – Outer tie rod remover/ball joint separator.
- No. 6296 – Pitman arm/tie rod end puller.
- No. 6297 – Ball joint separator.

Pitman Arm Puller
This puller will handle nearly any Pitman arm job on passenger cars and light trucks. It features special forged jaws shaped to fit the job, ensuring a positive grip every time. Spread between jaw tips: 1-5/16".

No. 7314A – Pitman arm puller. Wt., 2 lbs., 11 oz.

Tie Rod End Remover
Redesigned to use on imports and many front wheel drive vehicles, including SUVs with rack and pinion steering. Live center tip on forcing screw swivels to align tool to tie rod stud to ease in removal and prevent damage to stud.

No. 7315A – Tie rod end remover. Wt., 1 lb. 7 oz.

Outer Tie Rod Remover/Ball Joint Separator
This tool is a must when you’re servicing outer tie rods and ball joints. It works on imported and domestic models, front or rear wheel drive, cast or stamped-steel steering knuckles.

- Handles up to 5 tons of force.
- Jaws spread to 3" and has a 4" reach.
- Jaws, once tightened, won’t slip on the knuckle.

No. 7503 – Outer tie rod remover. Wt., 2 lbs., 12 oz.
**Ball Joint Separator**

This tool is used to separate the ball joint from the spindle support arm. It works on many domestic and import front wheel drive vehicles, and is adjustable up to 2" for different size ball joints.

No. 6297 – Ball joint separator. Wt., 2 lbs., 13 oz.

---

**Pitman Arm/Tie Rod End Puller**

The versatile design allows this tool to be used as a Pitman arm remover for many small, domestic rear wheel drive vehicles, or as a tie rod end puller for many domestic and import vehicles. The jaws, with a spread of 1", give a positive grip in tight work places.

No. 6296 – Pitman arm/tie rod end remover. Wt., 1 lb., 3 oz.

---

**Super-Duty Pitman Arm Puller**

- Allows the Pitman arm to be removed from the steering gear while the steering gear is still in the vehicle.
- Two clamp bolts lock the jaws on the Pitman arm, ensuring a solid grip.
- Maximum jaw spread is 3-1/4".

No. 6497 – Super-duty Pitman arm puller. Wt., 5 lbs.

---

**Pitman Arm Puller**

Cuts Removal Time from 3½ Hours to 40 Minutes!

- Labor intensive removal of steering sector not necessary.
- Compact design allows easy access to the Pitman arm.
- Works on most domestic SUVs and pickups.
- Live center on forcing screw and use of a standard wrench results in less effort required.
- Tool is forged steel for durability and long life.

<table>
<thead>
<tr>
<th>Works on the following four-wheel-drive vehicles</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998 – 2003</td>
</tr>
<tr>
<td>1997 – 2004</td>
</tr>
<tr>
<td>1991 – 2001</td>
</tr>
<tr>
<td>1992 – 2006</td>
</tr>
<tr>
<td>1986 – 2005</td>
</tr>
<tr>
<td>1988 – 2006</td>
</tr>
<tr>
<td>1995 – 2006</td>
</tr>
</tbody>
</table>

No. 6496 – Pitman arm puller. Wt., 2 lbs. 8 oz.

---

**Pitman Arm Puller**

The No. 8149 conical tool is designed to fit Pitman arms on compact and intermediate cars.

- Conical design gives increased strength, stability, and fits securely on a Pitman arm.
- Spread is 1-1/4" with a reach of 2-1/4".
- 3/4-16 x 4-3/4" forcing screw provides enough power to remove stubborn Pitman arms.

No. 8149 – Pitman arm puller. Wt., 1 lb., 5 oz.
**Pitman Arm Puller**
The No. 8150 conical tool is designed to fit Pitman arms on domestic cars and light-duty trucks.
- Conical design gives increased strength, stability, and fits securely on a Pitman arm.
- Spread is 1-1/2" with a reach of 2-1/2".
- 3/4-16 x 4-3/4" forcing screw provides enough power to remove stubborn Pitman arms.

No. 8150 – Pitman arm puller. Wt., 1 lb., 13 oz.

---

**Pitman Arm Pullers**
These pullers are designed for the toughest Pitman arm jobs. They’re adjustable and have rugged forged jaws shaped to fit the job. Two clamp bolts lock the jaws on the Pitman arm, ensuring a solid grip. Puller No. 7310A includes an adapter for added versatility. Both pullers cover a variety of pulling jobs.

No. 7310A – Pitman arm puller for medium- and heavy-duty trucks. Max jaw spread: 2-1/4". Wt., 4 lbs., 8 oz.

No. 7311A – Pitman arm puller for cars and light trucks to 3/4 ton. Max jaw spread: 2-1/8". Wt., 3 lbs.

---

**Upper Control Arm Bushing Service Set**
Now you can easily replace press-in type upper control arm bushings on most rear wheel drive Chrysler, Ford, and GM vehicles. Mechanical screw power does the work. Set includes C-frame, screw assembly, and all adapters needed for quick removal or installation of bushings without removing or damaging the control arm.

No. 7068 – Upper control arm bushing service set. Wt., 8 lbs., 3 oz.

---

**GM Truck Bushing Adapter Set**
- Adapter set is designed for quick and easy removal of the OE control arm bushing and installation of the offset camber bushing.
- Saves shop time by being able to install the offset camber bushing while aligning the front end.
- Saves replacement cost of the control arm assembly.
- Use with OTC No. 7248 C-Frame.

No. 8348 – GM truck bushing adapter set. Wt., 2 lbs., 10 oz.

---

**Pitman Arm Separator**
Separating Pitman arms on cars and light trucks is quick and easy with this wedge and an appropriate sized hammer.
- 11" long and has a 1-1/8" fork spread.

No. 6531 – Pitman arm separator. Wt., 2 lbs., 2 oz.
GM Pitman Arm Remover
Removes Pitman arms on pickups and sport utility vehicles. The wedge end is placed between the Pitman arm and steering gear box, and with just a few hammer blows, it separates them. Works on 1988 and newer Chevrolet and GMC 1/2- and 3/4-ton 4WD pickups, Suburban, Tahoe, and Yukon.
• 11-3/4" long with a 1-5/8" fork spread.
No. 6532 – GM Pitman arm remover. Wt., 2 lbs., 2 oz.

Separator Tool
This handy tool is multipurpose. It will remove camber adjustment sleeves on 1980-86 F-150 & F-250 and 1982-88 Bronco II & Ranger Ford pickups that have an adjustable camber. It’s also a separating tool for tie rods on medium- and heavy-duty trucks. And it works as a Pitman arm wedge on light trucks.
• 11-5/8" long with a 1-7/16" fork spread.
No. 6533 – Separator tool. Wt., 2 lbs.

Shock Link and Tie Rod Separator
Here’s a tool that will convince even the most stubborn shock links and tie rods to part company. Just insert the tapered wedge between the seized parts, and smack the other end with a hammer.
• 16" long with 11/16" fork spread.
No. 6534 – Shock link/tie rod separator. Wt., 2 lbs., 7 oz.

Ball Joint Separator
Ball joint service is easier with this tool. It was designed to remove ball joints from spindle support arms, and can be used on a wide variety of vehicles, from compact cars to light-duty trucks.
• 16" long and has a 15/16" fork spread.
No. 6535 – Ball joint separator. Wt., 2 lbs., 11 oz.

Separator Set (5 piece)
• Features five popular “pickle forks” in a blow-molded case.
• Used to remove shock linkage, tie rods, and ball joints. Also for general service on many cars and light trucks.
Includes:
No. 6531 – Size 11" x 1-1/8" Fork Spread.
No. 6532 – Size 11-3/4" x 1-5/8" Fork Spread.
No. 6533 – Size 11-5/8" x 1-7/16" Fork Spread.
No. 6534 – Size 16" x 11/16" Fork Spread.
No. 6535 – Size 16" x 15/16" Fork Spread.
6299 – Separator set. Wt., 10 lbs.
Manual / Pneumatic Pickle Fork Set
- Use to separate ball joints, tie rods, and Pitman arms.
- Set contains two handles: knurled handle allows use of a hammer; smooth handle fits in a pneumatic hammer.
- Three sizes of pickle forks included: 1-1/8", 15/16", and 11/16".

1. Select the correct size fork head that fits the work piece.
2. Completely thread the fork head onto the appropriate handle: knurled handle allows use of a hammer; smooth handle fits in a pneumatic hammer.
3. Tighten the handle’s jam nut to the fork to secure the fork to the handle assembly.

Set contains:
- No. 4559-1 fork heads (set of three: 11/16", 15/16", and 1-1/8").
- No. 4559-2 handles (set of two: knurled handle for use with a hammer; smooth handle for use with an air hammer).

Wt., 4 lbs., 2 oz.

Chrysler/Jeep Truck and SUV Ball Joint Set
- All new kit with more applications.
- Works on newer vehicle applications:
  - High clearance C-frame for most Chrysler/Jeep trucks and SUVs.
  - 2WD & 4WD.
  - 1992 to 2006 and other larger 4x4s.
- Kit comes in a blow-molded case and includes an application chart and instructions.

No. 8031 – Chrysler/Jeep truck ball joint set.
Wt., 26 lbs.

C-Frame Update Kit
- Kit contains two adapters which, when coupled with the large C-frame included in OTC No. 8031 SUV Ball Joint Kit, make it possible to use any adapter designed for use with the smaller OTC No. 7248 C-frame.

No. 6730 – C-frame update kit.
Wt., 1 lb., 11 oz.

Ball Joint Super Set
- This set allows for the removal and installation of press-fit ball joints on many GM and Ford light-duty trucks, vans, and SUVs through 2003; Dodge light trucks through 1998; Dodge vans, Durango, and Dakota through 2003; and Honda Accord, Civic, del Sol, and Prelude through 2001.
- Combines the popular OTC Nos. 7249, 7918, and 7996 ball joint sets into one SUPER set, competitively priced.
- The OTC designed and produced C-frame tool can be used alone to remove and replace universal joints.
- Comes complete with an application cross-reference and instructions in a blow-molded case.

No. 6530 – Ball joint super set.
Wt., 30 lbs.
Ball Joint Service Tool Set
The tools in this set will press in, or out, most sizes of press-fit ball joints. Plus, the C-frame press can be used alone to remove and replace universal joints.
Set Includes:
- No. 7248 – C-frame press.
- No. 29504 – Receiver tube (2-1/2" O.D. x 2-1/4" I.D.).
- No. 305227 – Installing adapter.
- No. 305228 – Removing adapter.
- No. 62810 – Plastic carrying case only.
No. 7249 – Ball joint removing/installing set. Wt., 15 lbs., 3 oz.

Ford Ball Joint Adapter Set
- Lower ball joint can now be replaced without having to replace the entire spindle assembly.
- Adapters are used with OTC No. 7248 C-Frame.
No. 8032 – Ford ball joint adapter set. Wt., 1 lb., 15 oz.

Ford Ball Joint Remover
This tool enables you to quickly remove the lower ball joint on 1992 to current 3/4- and 1-ton vans (E-250 and E-350) when used with ball joint service set Nos. 6530, 7248, and 7249.
No. 7825 – Ford ball joint remover. Wt., 1 lb., 5 oz.

4WD Ball Joint Service Kit
This kit is used with ball joint service set Nos. 6530, 7248, and 7249 to remove and install upper and lower ball joints on 1967 to 1992 1/2- and 3/4-ton 4WD vehicles fitted with Dana 44 front axles (found on Ford, Dodge, GM, International, and Jeep vehicles).
No. 7704 – 4WD ball joint service kit for Dana 44 front axles. Wt., 2 lbs., 5 oz.

Jeep/Dodge Ram Ball Joint Service Adapter Kit
No. 7894 – Jeep/Dodge Ram ball joint adapter kit. Wt., 3 lbs.
2WD Ford Van Ball Joint Adapter Set
This set is designed to remove and install press-fit upper and lower ball joints. Fits most Ford 1992 to '97 2WD 3/4- and 1-ton vans.
No. 7919 – 2WD Ford van ball joint adapter set.
Wt., 3 lbs., 14 oz.

Ford Ball Joint Adapter Update Kit
Three-piece kit contains specialty ball joint adapters for use with the industry standard OTC No. 7248 C-frame.
Designed to work with the following Ford vehicles:

<table>
<thead>
<tr>
<th>Make</th>
<th>Years</th>
<th>Make</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ranger</td>
<td>1998-2004</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

No. 6731 – Ford ball joint adapter update kit.
Wt., 2 lbs., 2 oz.

4WD GM Ball Joint Adapter Set
Use with ball joint service set Nos. 6530, 7248, and 7249 to service GM’s 1996 to 2001 4WD 1/2- and 3/4-ton pickups, and Suburban, Yukon, and Tahoe SUVs. Easily remove or install either aftermarket or original equipment press-fit lower ball joints.
No. 7920 – 4WD GM ball joint adapter set. Wt., 2 lbs., 3 oz.

GM Ball Joint Adapter Update Kit
Four-piece kit designed to be used with the industry standard OTC No. 7248 C-frame. Contains specialty ball joint adapters to fit the following GM vehicles:

- TrailBlazer & Envoy 2002-2005
- 1500 Silverado 1999-2004
- Suburban & Tahoe 1995-2004
- Avalanche 2002-2004
- Escalade 1999-2004
- Express & Savana 2003-2004
- Hummer H2 2003-2004


Honda Lower Ball Joint Tool Set
No. 7996 – Honda lower ball joint service set.
Wt., 2 lbs., 6 oz.
Asian Vehicle Ball Joint Adapter Update Kit
Two-piece kit contains specialty ball joint adapters for use with the industry standard OTC No. 7248 C-frame. Designed to work with the following Honda and Toyota vehicles:
- Honda CR-V 1997-2005
- Honda Odyssey 1995-2004
- Toyota 4Runner 1996-2005
- Toyota Sequoia 2001-2003
- Toyota Tacoma 1995-2005
No. 6733 – Asian vehicle ball joint adapter update kit. Wt., 2 lbs., 2 oz.

Live Center Forcing Screw Plug
This plug replaces the existing forcing screw on the No. 7248 C-frame to allow its use on heavy-duty ball joints. The shorter length gives the C-frame a wider opening to accommodate the larger ball joints on 3/4- and 1-ton trucks.
No. 7917 – Live center forcing screw plug. Wt., 6 oz.

Master Ball Joint Adapter Set
This set is designed to expand the capability of ball joint service set Nos. 6530, 7248, and 7249. It includes all the receiver tubes and removing/installing adapters needed to work on press-fit ball joints on most GM, Ford, and Dodge pickups, vans, and SUVs, through 1997. It also includes the No. 7917 live center forcing screw plug. Packaged in a plastic carrying case.
No. 7918 – Master ball joint adapter set. Includes application chart. Wt., 14 lbs., 5 oz.
No. 514479 – Plastic carrying case. Wt., 4 lbs., 10 oz.
See charts on next page.

Chrysler Ball Joint Socket
- Removes and installs the screw-in type ball joints used on mid-size, rear-wheel drive Chrysler cars.
- Similar to Miller Tools No. C-3560.
- Socket is 2" long with a 3/4" drive; fits 1-59/64" ball joints.
No. 8033 – Chrysler ball joint socket. Wt., 5 oz.

Chrysler Ball Joint Socket
- Removes and installs the screw-in type ball joints used on Chrysler / Dodge light trucks and vans.
- Similar to Miller Tools No. C-3561.
- Socket is 2" long with a 3/4" drive; fits 2-9/64" ball joints.
No. 8034 – Chrysler ball joint socket. Wt., 5 oz.

Ball Joint Spanner Wrench
- Permits easy torquing with 1" socket for correct upper ball-joint preload.
No. 7080 – Ball joint spanner wrench. Wt., 8 oz.
<table>
<thead>
<tr>
<th>Upper or Lower Ball Joint</th>
<th>Application</th>
<th>29501</th>
<th>29503</th>
<th>29504</th>
<th>29505</th>
<th>38355A</th>
<th>38356A</th>
<th>204508A</th>
<th>222304</th>
<th>222305</th>
<th>222306</th>
<th>222307</th>
<th>305228</th>
<th>313967</th>
<th>313968</th>
<th>313969</th>
<th>313970</th>
<th>314392</th>
<th>531738</th>
<th>531739</th>
<th>537499</th>
<th>537500</th>
<th>537501</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DODGE / CHRYSLER / PLYMOUTH</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>1998-03 4WD Dakota &amp; Durango</td>
<td>R</td>
<td>I</td>
<td>R</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>1987-01 2WD Dakota &amp; Durango</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>1972-93 1/2-, 3/4-ton 2WD Pickup &amp; Ramcharger</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>1979-03 1-ton 2WD van</td>
<td>R</td>
<td>I</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>1972-93 3/4- , 1-ton 2WD Pickup &amp; Ramcharger</td>
<td>R</td>
<td>I</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>1979-03 1-ton 2WD van</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>1984-01 Caravan, Voyager, Town &amp; Country</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>1994-99 1-ton solid axle, 2WD</td>
<td>R</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>1994-01 3/4- , 1-ton Dana 60 axle, 4WD (not HD axle)</td>
<td>R</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>1994-99 1-ton solid axle, 2WD</td>
<td>R</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>1994-94 3/4- , 1-ton Dana 60 axle, 4WD</td>
<td>R</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>1994-01 1/2-ton Dana 44 axle, 4WD</td>
<td>R</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>1994-98 3/4-ton Dana 44 axle, 4WD</td>
<td>R</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>1994-01 1/2-ton Dana 44 axle, 4WD</td>
<td>R</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>1994-98 3/4-ton Dana 44 axle, 4WD</td>
<td>R</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>JEEP</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper</td>
<td>1993-98 2WD Grand Cherokee</td>
<td>R</td>
<td>R</td>
<td>I</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper</td>
<td>1993-98 4WD Grand Cherokee, Grand Wagoneer</td>
<td>R</td>
<td>R</td>
<td>I</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper</td>
<td>1987-98 4WD Wrangler</td>
<td>R</td>
<td>R</td>
<td>I</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper</td>
<td>1984-99 4WD Wagoneer, Comanche, Cherokee</td>
<td>R</td>
<td>R</td>
<td>I</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>1993-98 2WD Grand Cherokee</td>
<td>R</td>
<td>R</td>
<td>I</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>1990-98 2WD Cherokee, Wagoneer, Comanche, Cherokee</td>
<td>R</td>
<td>R</td>
<td>I</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>1993-98 4WD Grand Cherokee, Grand Wagoneer</td>
<td>R</td>
<td>R</td>
<td>I</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>1990-98 4WD Wrangler</td>
<td>R</td>
<td>R</td>
<td>I</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>1990-95 2WD &amp; 4WD Wagoneer, Comanche, Cherokee</td>
<td>R</td>
<td>R</td>
<td>I</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>1984-99 2WD Cherokee, Wagoneer, Comanche</td>
<td>R</td>
<td>R</td>
<td>I</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>1984-89 2WD Cherokee, Wagoneer, Comanche</td>
<td>R</td>
<td>R</td>
<td>I</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>1987-89 4WD Wrangler</td>
<td>R</td>
<td>R</td>
<td>I</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>1984-89 4WD Wagoneer, Comanche, Cherokee</td>
<td>R</td>
<td>R</td>
<td>I</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>1984-89 full size 4WD Grand Wagoneer</td>
<td>R</td>
<td>R</td>
<td>I</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>1982-88 4WD Truck, CJ, full size Cherokee, Wagoneer</td>
<td>R</td>
<td>R</td>
<td>I</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>1984-89 full size 4WD Grand Wagoneer</td>
<td>R</td>
<td>R</td>
<td>I</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>1972-88 4WD Truck, CJ, full size Cherokee, Wagoneer</td>
<td>R</td>
<td>R</td>
<td>I</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Ball Joint Application Chart**

**R** = Remove  
**I** = Install
### GM

<table>
<thead>
<tr>
<th>Upper or Lower Ball Joint</th>
<th>Application</th>
<th>R = Remove</th>
<th>I = Install</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lower</strong></td>
<td>1982-05 2WD S-10 Blazer, Jimmy &amp; Pickup</td>
<td>R</td>
<td>I</td>
</tr>
<tr>
<td><strong>Lower</strong></td>
<td>1993-99 2WD 1/2-, 3/4-, 1-ton Pickup; Suburban</td>
<td>R</td>
<td>I</td>
</tr>
<tr>
<td><strong>Lower</strong></td>
<td>1996-04 1/2-, 3/4-, &amp; 1-ton 2WD G Van</td>
<td>RI</td>
<td>R</td>
</tr>
<tr>
<td><strong>Lower</strong></td>
<td>1988-92 2WD 1/2-, 3/4-, 1-ton, Pickup; Suburban</td>
<td>R</td>
<td>I</td>
</tr>
<tr>
<td><strong>Lower</strong></td>
<td>1985-05 Astro, Safari van</td>
<td>R</td>
<td>I</td>
</tr>
<tr>
<td><strong>Lower</strong></td>
<td>1973-95 1/2-, 3/4-ton 2WD G van</td>
<td>R</td>
<td>I</td>
</tr>
<tr>
<td><strong>Lower</strong></td>
<td>1996-00 1/2-, 3/4-, 1-ton 4x4</td>
<td>I</td>
<td>R</td>
</tr>
<tr>
<td><strong>Lower</strong></td>
<td>2002-05 TrailBlazer, Envoy, &amp; Bravada 2WD/4WD</td>
<td>I</td>
<td>I</td>
</tr>
<tr>
<td><strong>Lower</strong></td>
<td>2002-05 TrailBlazer, Envoy, &amp; Bravada 2WD/4WD</td>
<td>R</td>
<td>I</td>
</tr>
<tr>
<td><strong>Upper</strong></td>
<td>1999-00 1/2-ton Silverado &amp; Sierra 4WD std. cab</td>
<td>I</td>
<td>I</td>
</tr>
<tr>
<td><strong>Lower</strong></td>
<td>2001-04 1/2-ton Silverado, Sierra, Denali 2WD/4WD std. &amp; extd cab</td>
<td>RI</td>
<td>R</td>
</tr>
<tr>
<td><strong>Lower</strong></td>
<td>2000-04 1/2-ton Suburban, Tahoe, Yukon, Denali 2WD/4WD</td>
<td>I</td>
<td>I</td>
</tr>
<tr>
<td><strong>Lower</strong></td>
<td>2002-04 1/2-ton Avalanche 2WD/4WD</td>
<td>RI</td>
<td>R</td>
</tr>
<tr>
<td><strong>Lower</strong></td>
<td>2002-04 Cadillac Escalade 2WD/4WD</td>
<td>I</td>
<td>I</td>
</tr>
<tr>
<td><strong>Lower</strong></td>
<td>2003-04 1/2- &amp; 3/4-ton Express, &amp; Savana Van 4WD</td>
<td>RI</td>
<td>R</td>
</tr>
<tr>
<td><strong>Upper</strong></td>
<td>1999-00 1/2-ton Silverado &amp; Sierra 2WD/4WD std. cab</td>
<td>I</td>
<td>I</td>
</tr>
<tr>
<td><strong>Lower</strong></td>
<td>2001-04 1/2-ton Silverado, Sierra, Denali 2WD/4WD std. &amp; extd cab</td>
<td>RI</td>
<td>R</td>
</tr>
<tr>
<td><strong>Lower</strong></td>
<td>2000-04 1/2-ton Suburban, Tahoe, Yukon, Denali 2WD/4WD</td>
<td>I</td>
<td>I</td>
</tr>
<tr>
<td><strong>Lower</strong></td>
<td>2002-04 1/2-ton Avalanche 2WD/4WD</td>
<td>RI</td>
<td>R</td>
</tr>
<tr>
<td><strong>Lower</strong></td>
<td>2002-04 Cadillac Escalade 2WD/4WD</td>
<td>I</td>
<td>I</td>
</tr>
<tr>
<td><strong>Lower</strong></td>
<td>2003-04 1/2- &amp; 3/4-ton Express &amp; Savana Van 4WD</td>
<td>RI</td>
<td>R</td>
</tr>
<tr>
<td><strong>Upper</strong></td>
<td>2001-03 1/2-ton Silverado, Sierra, 2WD/4WD HD Crew Cab</td>
<td>I</td>
<td>I</td>
</tr>
<tr>
<td><strong>Lower</strong></td>
<td>1999-04 3/4-ton Silverado, Sierra, 2WD/4WD</td>
<td>RI</td>
<td>R</td>
</tr>
<tr>
<td><strong>Lower</strong></td>
<td>2000-04 3/4-ton Suburban, Yukon 2WD/4WD</td>
<td>I</td>
<td>I</td>
</tr>
<tr>
<td><strong>Lower</strong></td>
<td>2001-04 1-ton Silverado, Sierra 4WD</td>
<td>RI</td>
<td>R</td>
</tr>
<tr>
<td><strong>Lower</strong></td>
<td>2002-04 3/4-TON AVALANCHE 2WD/4WD</td>
<td>I</td>
<td>I</td>
</tr>
<tr>
<td><strong>Lower</strong></td>
<td>2003-04 Hummer H2</td>
<td>RI</td>
<td>R</td>
</tr>
<tr>
<td><strong>Upper</strong></td>
<td>2001-03 1/2-ton Silverado, Sierra, 2WD/4WD HD Crew Cab</td>
<td>I</td>
<td>I</td>
</tr>
<tr>
<td><strong>Lower</strong></td>
<td>1999-04 3/4-ton Silverado, Sierra, 2WD/4WD</td>
<td>RI</td>
<td>R</td>
</tr>
<tr>
<td><strong>Lower</strong></td>
<td>2000-04 3/4-ton Suburban, Yukon 2WD/4WD</td>
<td>I</td>
<td>I</td>
</tr>
<tr>
<td><strong>Lower</strong></td>
<td>2001-04 1-ton Silverado, Sierra 4WD</td>
<td>RI</td>
<td>R</td>
</tr>
<tr>
<td><strong>Lower</strong></td>
<td>2002-04 3/4-TON AVALANCHE 2WD/4WD</td>
<td>I</td>
<td>I</td>
</tr>
<tr>
<td><strong>Lower</strong></td>
<td>2003-04 Hummer H2</td>
<td>RI</td>
<td>R</td>
</tr>
<tr>
<td><strong>Upper</strong></td>
<td>1999-99 Tahoe, Yukon 4WD</td>
<td>I</td>
<td>R</td>
</tr>
<tr>
<td><strong>Lower</strong></td>
<td>2000 Tahoe Z71 4WD (old style)</td>
<td>I</td>
<td>R</td>
</tr>
<tr>
<td><strong>Lower</strong></td>
<td>1999-99 1/2- &amp; 3/4-ton Suburban 4WD</td>
<td>I</td>
<td>R</td>
</tr>
</tbody>
</table>
### Ball Joint Application Chart

#### FORD

<table>
<thead>
<tr>
<th>Upper or Lower Ball Joint</th>
<th>Application</th>
<th>R = Remove</th>
<th>I = Install</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1986-97 Aerostar</strong></td>
<td>66092</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>1989-90 2WD Bronco II</strong></td>
<td>29503</td>
<td></td>
<td>R I I</td>
</tr>
<tr>
<td><strong>1991-94 2WD Explorer</strong></td>
<td>29504</td>
<td></td>
<td>R</td>
</tr>
<tr>
<td><strong>1989-97 2WD Ranger</strong></td>
<td>29505</td>
<td></td>
<td>I</td>
</tr>
<tr>
<td><strong>1986-88 2WD Bronco</strong></td>
<td>38554</td>
<td></td>
<td>R I I</td>
</tr>
<tr>
<td><strong>1983-88 2WD Ranger</strong></td>
<td>38555A</td>
<td></td>
<td>R</td>
</tr>
<tr>
<td><strong>1989-90 2WD Bronco II</strong></td>
<td>38556</td>
<td></td>
<td>I I</td>
</tr>
<tr>
<td><strong>1991-94 2WD Explorer</strong></td>
<td>38557</td>
<td></td>
<td>R</td>
</tr>
<tr>
<td><strong>1989-97 2WD Ranger</strong></td>
<td>38558</td>
<td></td>
<td>I</td>
</tr>
<tr>
<td><strong>1986-88 2WD Bronco II</strong></td>
<td>38559</td>
<td></td>
<td>R I I</td>
</tr>
<tr>
<td><strong>1983-88 2WD Ranger</strong></td>
<td>38560</td>
<td></td>
<td>R I</td>
</tr>
<tr>
<td><strong>1997-03 1/2-ton Pickup, 2WD &amp; 4WD</strong></td>
<td>222303</td>
<td>R I I I</td>
<td>R I</td>
</tr>
<tr>
<td><strong>1997-99 3/4-ton Pickup, 2WD &amp; 4WD</strong></td>
<td>222304</td>
<td>R I I I</td>
<td>R I</td>
</tr>
<tr>
<td><strong>1987-96 1/2-ton 2WD Pickup</strong></td>
<td>222305</td>
<td>R I I I</td>
<td>R I</td>
</tr>
<tr>
<td><strong>1987-97 3/4-, 1-ton 2WD Pickup</strong></td>
<td>222306</td>
<td>R I I I</td>
<td>R I</td>
</tr>
<tr>
<td><strong>1987-98 1/2-ton 2WD Pickup</strong></td>
<td>222307</td>
<td>R I I I</td>
<td>R I</td>
</tr>
<tr>
<td><strong>1988-96 1/2- &amp; 3/4-ton 4WD</strong></td>
<td>222308</td>
<td>R I I I</td>
<td>R I</td>
</tr>
<tr>
<td><strong>1998-98 3/4-ton &amp; 1-ton 2WD Pickup</strong></td>
<td>222309</td>
<td>R I I I</td>
<td>R I</td>
</tr>
<tr>
<td><strong>1992-03 1/2-, 3/4-, 1-ton 2WD Van</strong></td>
<td>222310</td>
<td>R I I I</td>
<td>R I</td>
</tr>
<tr>
<td><strong>1992-03 E 150, 250, 350 Econoline Van &amp; Club Wagon</strong></td>
<td>222311</td>
<td>R I I I</td>
<td>R I</td>
</tr>
<tr>
<td><strong>1999-03 E 350 Superduty Van 2WD</strong></td>
<td>222312</td>
<td>R I I I</td>
<td>R I</td>
</tr>
<tr>
<td><strong>2002-03 E 450 Superduty Van 2WD</strong></td>
<td>222313</td>
<td>R I I I</td>
<td>R I</td>
</tr>
<tr>
<td><strong>1999-04 F 250, 350 Superduty Twin I Beam 2WD</strong></td>
<td>222314</td>
<td>R I I I</td>
<td>R I</td>
</tr>
<tr>
<td><strong>2000-04 Excursion Twin I Beam 2WD</strong></td>
<td>222315</td>
<td>R I I I</td>
<td>R I</td>
</tr>
<tr>
<td><strong>1992-03 3/4- &amp; 1-ton 2WD Van</strong></td>
<td>222316</td>
<td>R I I I</td>
<td>R I</td>
</tr>
<tr>
<td><strong>1992-03 1/2-ton 2WD Van</strong></td>
<td>222317</td>
<td>R I I I</td>
<td>R I</td>
</tr>
<tr>
<td><strong>1990 4WD Bronco II w/Dana 35</strong></td>
<td>222318</td>
<td>R I I I</td>
<td>R I</td>
</tr>
<tr>
<td><strong>1991-94 4WD Explorer w/Dana 35</strong></td>
<td>222319</td>
<td>R I I I</td>
<td>R I</td>
</tr>
<tr>
<td><strong>1990-97 4WD Ranger w/Dana 35</strong></td>
<td>222320</td>
<td>R I I I</td>
<td>R I</td>
</tr>
<tr>
<td><strong>1984-89 4WD Bronco II</strong></td>
<td>222321</td>
<td>R I I I</td>
<td>R I</td>
</tr>
<tr>
<td><strong>1991-94 4WD Explorer w/Dana 28</strong></td>
<td>222322</td>
<td>R I I I</td>
<td>R I</td>
</tr>
<tr>
<td><strong>1989-97 4WD Ranger w/Dana 28</strong></td>
<td>222323</td>
<td>R I I I</td>
<td>R I</td>
</tr>
<tr>
<td><strong>1983-89 4WD Bronco II</strong></td>
<td>222324</td>
<td>R I I I</td>
<td>R I</td>
</tr>
<tr>
<td><strong>1991-94 4WD Explorer w/Dana 28</strong></td>
<td>222325</td>
<td>R I I I</td>
<td>R I</td>
</tr>
<tr>
<td><strong>1990-97 4WD Ranger w/Dana 28</strong></td>
<td>222326</td>
<td>R I I I</td>
<td>R I</td>
</tr>
<tr>
<td><strong>1983-89 4WD Bronco II</strong></td>
<td>222327</td>
<td>R I I I</td>
<td>R I</td>
</tr>
<tr>
<td><strong>1991-94 4WD Explorer w/Dana 28</strong></td>
<td>222328</td>
<td>R I I I</td>
<td>R I</td>
</tr>
<tr>
<td><strong>1992-03 1-ton 4WD &amp; 1-ton 2WD (IFS)</strong></td>
<td>222329</td>
<td>R I I I</td>
<td>R I</td>
</tr>
<tr>
<td><strong>1980-96 4WD Bronco II</strong></td>
<td>222330</td>
<td>R I I I</td>
<td>R I</td>
</tr>
</tbody>
</table>
## Ball Joint Application Chart

<table>
<thead>
<tr>
<th>Upper or Lower Ball Joint</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>R = Remove</td>
</tr>
<tr>
<td></td>
<td>I = Install</td>
</tr>
</tbody>
</table>

**FORD**

### Lower

- **1992-99 1-ton 4WD w/solid axle**
- **1980-95 3/4- & 1-ton 4WD spindle**
- **1992-97 F350 4WD (monobeam)**
  - 1999-04 F250, 350, 450 & 550 Superduty 4WD (monobeam)
  - 2000-02 Excursion 4WD (monobeam)
  - 1999-02 F250, 350, 450 & 550 Superduty 2WD (monobeam)
  - 1999-04 F250, 350 Superduty 2WD (twin I beam)
  - 2000-04 Excursion 2WD (twin I beam)
- **1992-97 F350 4WD (monobeam)**
  - 1999-04 F250, 350, 450 & 550 Superduty 4WD (monobeam)
  - 2000-02 Excursion 4WD (monobeam)
  - 1999-02 F250, 350, 450 & 550 Superduty 2WD (monobeam)
  - 1997 F250 HD 4WD (twin I beam)
- **1980-96 F150, 250 4WD**
- **1980-85 F350 4WD before 2-1-85 (twin I beam)**
- **1992-97 F350 4WD (monobeam)**
  - 1999-04 F250, 350, 450 & 550 Superduty 4WD (monobeam)
  - 2000-02 Excursion 4WD (monobeam)
  - 1999-02 F250, 350, 450 & 550 Superduty 2WD (monobeam)
  - 1997 F250 HD 4WD (twin I beam)
- **1997-03 F150 2WD/4WD**
- **1997-99 F250 2WD/4WD**
- **1997-02 Expedition 2WD/4WD**
- **1998-04 Ranger 2WD/4WD (awronen bar susp.)**
- **1995-04 Explorer, Explorer Sport & Sport Trac 2WD/4WD**
- **1989-97 F250 4WD (3850 axle and larger)**
- **1980-85 F350 4WD (except 3800 axle)**

### Upper

- **1992-97 F350 4WD (monobeam)**
  - 1999-04 F250, 350, 450 & 550 Superduty 4WD (monobeam)
  - 2000-02 Excursion 4WD (monobeam)
  - 1999-02 F250, 350, 450 & 550 Superduty 2WD (monobeam)
  - 1997 F250 HD 4WD (twin I beam)
- **1995-04 Explorer, Explorer Sport & Sport Trac 2WD/4WD**

### Component Dimensions

<table>
<thead>
<tr>
<th>Tool No.</th>
<th>Description</th>
<th>O.D.</th>
<th>I.D.</th>
<th>Length</th>
<th>7249</th>
<th>7918</th>
<th>7919</th>
<th>7920</th>
<th>7704</th>
<th>7894</th>
</tr>
</thead>
<tbody>
<tr>
<td>29501</td>
<td>Plug</td>
<td>7/8“</td>
<td>—</td>
<td>3-5/8”</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29503</td>
<td>Receiving Tube</td>
<td>3”</td>
<td>2-3/4”</td>
<td>2-3/16”</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29504</td>
<td>Receiving Tube</td>
<td>2-1/2”</td>
<td>2-1/4”</td>
<td>1-11/16”</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29505</td>
<td>Receiving Tube</td>
<td>2”</td>
<td>1-3/4”</td>
<td>1-11/16”</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>38354</td>
<td>Receiving Tube</td>
<td>2-1/4”</td>
<td>2”</td>
<td>2”</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>38355A</td>
<td>Installing Tube</td>
<td>2”</td>
<td>1-13/16”</td>
<td>3”</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>39976</td>
<td>Receiving Tube</td>
<td>2-1/2”</td>
<td>2-1/4”</td>
<td>1-1/2”</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>204508A</td>
<td>Receiving Cup</td>
<td>2-1/4”</td>
<td>2”</td>
<td>7/16”</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>222304</td>
<td>Receiving Tube</td>
<td>2-1/2”</td>
<td>2-1/4”</td>
<td>3/4”</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>222305</td>
<td>Receiving Tube</td>
<td>2-1/2”</td>
<td>2-1/4”</td>
<td>2-3/4”</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>222306</td>
<td>Receiving Tube</td>
<td>3”</td>
<td>2-3/4”</td>
<td>2-1/4”</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>222307</td>
<td>Receiving Tube</td>
<td>2-3/4”</td>
<td>2-7/16”</td>
<td>2-1/4”</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>305227</td>
<td>Installing Adapter</td>
<td>3”</td>
<td>15/16”</td>
<td>1-1/8”</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>305228</td>
<td>Removing Adapter</td>
<td>3-1/16”</td>
<td>1-1/8”</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>313444</td>
<td>Receiving Tube</td>
<td>2-7/8”</td>
<td>2-5/8”</td>
<td>2-7/8”</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>313967</td>
<td>Receiving Tube</td>
<td>2-7/16”</td>
<td>2-3/16”</td>
<td>3-3/16”</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>313968</td>
<td>Remover/Installer</td>
<td>1-7/16”</td>
<td>3/4”</td>
<td>1”</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>313969</td>
<td>Installing Tube</td>
<td>2”</td>
<td>1-3/4”</td>
<td>2-5/16”</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>313970</td>
<td>Receiving Cup</td>
<td>2-1/8”</td>
<td>1-3/4”</td>
<td>1/2”</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>314392</td>
<td>Plug</td>
<td>7/8”</td>
<td>—</td>
<td>3”</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>531738</td>
<td>Installing Tube</td>
<td>1-9/16”</td>
<td>1-5/16”</td>
<td>2-1/8”</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>531739</td>
<td>Receiving Tube</td>
<td>2-1/2”</td>
<td>2-1/4”</td>
<td>1-1/2”</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>537499</td>
<td>Receiving Tube</td>
<td>2-3/4”</td>
<td>2-7/16”</td>
<td>2”</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>537500</td>
<td>Remover</td>
<td>1-9/16”</td>
<td>13/16”</td>
<td>2-3/16”</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>537501</td>
<td>Remover</td>
<td>1-3/4”</td>
<td>13/16”</td>
<td>2-3/16”</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Lower Control Arm Prying Tool
Installing a ball joint on a lower control arm typically requires the effort of two people. However, with this tool and our No. 7420 or 7421 pry bar – or any 7/8" diameter pry bar – it's a one-person job.
No. 6007 – Lower control arm prying tool. Wt., 8 oz.

GM F-Body Camber Adjusting Tool
This unique tool works like an extra hand to hold the strut while you're making camber adjustments. For use on 1982 to '92 Camaro and Firebird.
No. 7539 – GM F-body camber adjusting tool. Wt., 8 oz.

GM Caster/Camber Adjusting Tool
This tool is designed to make caster/camber adjustments quick and easy. Simply place it into the holes in the cross-member and lower control arm, then turn the tool's turnbuckle nut to hold the correct adjustment. This allows you to tighten the adjusting bolts. For use on 1993 to 2000 Chevrolet Camaro and Pontiac Firebird. Also works on 1986–92 Buick Riviera, Cadillac Seville, Oldsmobile Toronado, and 1986–91 Buick Regal.

Ford Caster/Camber Adjusting Tool
• Tool allows you to slide control arm in the positive or negative direction.
• Saves up to 30 minutes and allows more accuracy. Adjust caster/camber while maintaining live alignment reading.
No. 8312 – Ford caster/camber adjusting tool. Wt., 3 lbs., 5 oz.

Ford Caster/Camber Adjusting Wrench
This wrench is specially bent to fit on the caster/camber adjusting cam on 1995 to 2001 Ford Explorer 4WD SUVs, and 1997 2WD and 4WD F-150 pickups. You can use it on the nut to loosen the adjusting cam, and on the bolt to set the caster/camber.
• Has a 21 mm, 12-point design.
• Accommodates a 1/2" drive ratchet or breaker bar.
No. 7829 – Ford caster/camber adjusting wrench. Wt., 13 oz.
Upper Arm Alignment Wrenches
These specialized 1/2" drive wrenches provide easy access to the upper control arm bolts for front wheel alignment jobs.
No. 7414 – 13/16" hex wrench for use on 1985 to '97 Ford Aerostar vans. Wt., 12 oz.
No. 7537 – 18 mm hex wrench for use on U.S.-built 1985 to '90 GM Astro vans. Wt., 13 oz.

Ford Caster/Camber Alignment Set
The tools in this set help ensure accurate caster/camber adjustment on the front suspensions of 1979 to 1991 Ford and Mercury full size, rear wheel drive vehicles. They effectively limit movement of the front suspension once the cross shaft bolts are loosened.
No. 7091 – Ford caster/camber alignment set. Wt., 1 lb., 2 oz.

Ford 4WD Caster/Camber Sleeve Puller
Rusted or seized bushings are no match for this puller. It easily pulls most aftermarket and OEM bushings on Ford 4WD vehicles. It’s the only tool that works on any angle OEM bushing, removing it quickly and without damage. For 1980 to '96 Ford Broncos, full-size E- and F-series vans and pickups; 1983 to '89 Ranger and Bronco II. The puller comes with adapters to pull most aftermarket bushings having removable retaining rings.
No. 7588A – Ford 4WD caster/camber sleeve puller. Wt., 1 lb., 14 oz.
No. 221476 – Arnwood-style bushing adapter. Wt., 1 oz.

Alignment Assist Tool
With this tool, you won’t need to remove tires to adjust the camber on most GM and some Chrysler FWD vehicles. The tool sits on top of a tire and presses against the strut to prevent the tire from moving, allowing you to do the adjustments. For Chrysler and GM vehicles with slotted strut mounts that don’t use eccentric washers on the through slots for camber adjustment. (Applications do not include Buick Park Avenue, Cadillac Fleetwood, Oldsmobile 88 and 98, and Pontiac Bonneville – if they have rear air suspension.)
No. 7676 – Alignment assist tool. Wt., 3 lbs., 2 oz.

Tie Rod Adjusting Tool
Here’s a tool that will fit most models of compact and standard-size cars and light trucks. It has a four-position feature and 360° rotation that lets you locate the tool to grip the sleeve correctly, even when access is limited.
No. 7023 – Universal tie rod adjusting tool. Wt., 13 oz.
Tie Rod/Pitman Arm Adjusting Set
These tools have a unique design that permits 360° rotation of the adjusting sleeve, even where space is limited.
- Accommodates 1/2" drive ratchet or breaker bar.
- Set consists of the following tools in a blow-molded case:
  - No. 7095 – For compact cars with 3/4" diameter adjusting sleeves. Wt., 7 oz.
  - No. 7096 – For full size cars with 7/8" diameter adjusting sleeves. Wt., 7 oz.
  - No. 7097 – For light trucks with 1-1/8" diameter adjusting sleeves. Wt., 8 oz.
  - No. 6274 – For Ford 3/4-ton and 1-ton trucks with 1-13/16" diameter adjusting sleeves. Wt., 10 oz.
  - No. 6084 – Pitman arm adjusting tool for Ford F-250 thru F-450 trucks with 1-7/16" dia. adjusting sleeves. Wt., 7 oz.
  - No. 6275 – Tie rod/Pitman arm adjusting set. Wt., 3 lbs.

Inner Tie Rod Removal Set
Remove and install inner tie rods without removing steering gear. The adapters fit into the tie rod socket, and a 1/2" drive ratchet or breaker bar fits the drive end.
- Services both old and new style inner tie rods.
- For use on most Chrysler, Ford, and GM vehicles.
- No. 7572 socket is 16" long and is “stepped” to accept 1-3/16" tie rods and 1-5/16" tie rods.
- Nos. 7678, 7593, and 7594 adapters fit into socket and work on 1-3/16", 1-5/16", and 1-7/16" tie rods.
  - No. 7595A – Inner tie rod removal set. Wt., 5 lbs., 2 oz.

2-in-1 Inner Tie Rod Socket Tool
Using “piggy-backed” sockets, this tool makes short work of inner tie rod removal or installation.
- For use on Ford and Chrysler vehicles with rack and pinion steering.
- Accommodates 1/2" drive ratchet or breaker bar.
- Socket is 16" long and is “stepped” to accept 1-3/16" tie rods and 1-5/16" tie rods.
  - No. 7572 – 2-in-1 inner tie rod socket tool. Fits Ford and most Chrysler vehicles with rack and pinion power steering. Wt., 2 lbs., 2 oz.

Inner Tie Rod Adapter Sockets
These sockets enable you to remove and install inner tie rods without removing steering gear. Drive end fits No. 7572 inner tie rod sockets.
- No. 7593 – 1-3/16" socket fits tie rod on Ford FWD vehicles with rack and pinion steering. Wt., 15 oz.
- No. 7594 – 1-5/16" socket fits tie rod on Ford RWD and most Chrysler vehicles with rack and pinion steering. Wt., 1 lb.
- No. 7678 – 1-7/16" socket fits GM and Chrysler FWD cars with Saginaw steering gear. Wt., 1 lb.
Tie Rod Socket for Medium-Duty Trucks
Here’s a heavy-duty tool for removing tie rod ends on Chrysler, Ford, and GM 1-ton trucks. It also works on many medium-duty trucks, Class 2 through 6.

- Accommodates a 1/2” drive impact wrench.

No. 6065 – Truck tie rod socket. Wt., 1 lb., 8 oz.

Inner Tie Rod Tool
Now you can work on inner tie rods without removing the steering gear, saving time and effort. The tool’s design has a dual purpose: The outer tube supports the steering rack, preventing damage to the pinion gear. The inner socket fits on the tie rod end.

- For use on Chrysler and GM vehicles with Saginaw steering gear assemblies.
- Accommodates 1/2” drive ratchet or breaker bar.
- Used with No. 7504 tie rod crimping tool.

No. 7505A – Inner tie rod tool. Wt., 9 lbs., 7 oz.

Inner Tie Rod Crimper Tool
This handy tool will crimp a tie rod housing to the flats on the rack to keep it from coming loose, while the steering gear remains mounted. It’s much easier and neater than the hammer and chisel method.

- For use on GM and Chrysler vehicles having Saginaw steering gear assemblies.
- Used with No. 7505 inner tie rod tool.

No. 7504A – Inner tie rod crimper tool. Wt., 2 lbs., 11 oz.

Outer Tie Rod Ball Joint Separator
This tool is a must when you’re servicing outer tie rods and ball joints on imported and domestic models, front or rear wheel drive, cast or stamped-steel steering knuckles.

- Handles up to 5 tons of force.
- Jaws, once tightened, won’t slip on the knuckle.

No. 7503 – Outer tie rod ball joint separator. Wt., 2 lbs., 12 oz.

Steering Wheel Puller Leg Set
- Particularly useful during steering wheel removal when there are no tapped holes in the assembly.
- The 7929A is designed for use with either the No. 7245 or No. 7403 OTC steering wheel puller.
- These legs get behind the steering wheel assembly to provide an even, straight pull. The collar is designed for use on Ford and Chrysler vehicles.
- Works on:
  - 1988–1993 Pontiac LeMans
  - 1997–newer GM cars, SUVs, and light trucks
  - 1997–newer Ford SUVs and light trucks
  - 1999–newer Jeep Grand Cherokee
  - 2003–newer Jeep Liberty
  - 2004–newer Dodge Sprinter van

No. 7929A – Steering wheel puller leg set. Wt., 8 oz.
Steering Wheel Puller
This puller removes steering wheels on most domestic and imported vehicles, with or without telescoping steering columns. Five sets of cap screws are included for various thread requirements. The forcing screw features a swivel end to protect steering shaft. Cap screws included (pairs): 3/8-16 x 3-1/2; 5/16-18 x 3-1/2; 5/16-24 x 3-1/2; M8-1.25 x 90 mm; and 5/16-18 x 4 (SIR).

No. 7245 – Steering wheel puller with five pairs of cap screws. Bar measures 4” x 1” x 1”. Wt., 1 lb., 15 oz.

Steering Wheel, Pulley, and Flywheel Puller
Here’s a puller that works in a variety of applications. It pulls steering wheels on most late model cars. It also works as a regular 2/3-way puller to remove pulleys and small engine flywheels. Cap screws included (pairs): 3/8-16 x 3-1/2 in.; 5/16-18 x 3-1/2 in.; 5/16-24 x 3-1/2 in.; M8-1.25 x 90 mm; and 5/16-18 x 4 in. (SIR).

• Works on domestic cars with or without collapsible steering columns.

No. 7403 – Steering wheel/pulley/flywheel puller. Wt., 1 lb., 10 oz.

Steering Wheel Remover/ Lock Plate Compressor Set
With this set, it’s easy to remove the steering wheels of most domestic and imported vehicles, with or without tilt steering columns. Also accesses the turn signal switch and SIR modules on current GM vehicles.

• Includes No. 7815 steering wheel lock plate remover,
No. 7889 steering pivot pin remover for Saginaw steering columns, No. 7245 steering wheel puller, plus four sets of cap screws (2 of each size: M8–1.25 x 90 mm, 3/8”–16 x 3-1/2”, 5/16”–24 x 3-1/2”, and 5/16”–18 x 4”).

• Contained in convenient plastic blow-molded case.

No. 7927A – Steering wheel remover/lock plate compressor set. Wt., 4 lbs., 5 oz.

Steering Wheel Lock Plate Remover
This tool simplifies the removal and installation of round wire snap rings that hold steering wheel lock plates. It’s a must for accessing turn signal switches on AMC, Chrysler, and GM model cars, with or without tilt steering columns. Will not work on GM SIR steering columns.

• Also works on metric columns.

No. 7031A – Steering wheel lock plate remover. Wt., 1 lb., 8 oz.

Steering Wheel Lock Plate Remover
This is an essential tool for compressing steering wheel lock plates on AMC, Chrysler, and GM vehicles, with or without tilt steering columns. It’s also necessary for accessing the turn signal switch and SIR modules on GM vehicles.

• Also works on metric columns.

No. 7815 – Steering wheel lock plate remover. Wt., 1 lb., 12 oz.
Steering Pivot Pin Remover
Tilt steering columns are much easier to service when your tool box has one of these pivot pin removers in it. Works on GM, Chrysler, and Ford vehicles with Saginaw tilt steering columns.
No. 7889 – Steering pivot pin remover. Wt., 3 oz.

Ford Lock Pin Remover
Removes tie rod inner socket retaining pin on Ford vehicles with rack and pinion power steering. Replacement tips available separately.
No. 7122R – Lock pin remover. Wt., 5 oz.
No. 37907 – Tip for 7122R. Wt., 1 oz.

GM Power Steering Pump Pulley Installer
No. 7209 – GM power steering pump pulley installer. Wt., 7 oz.

GM Power Steering Pump Pulley Service Kit
Remove and install the power steering pump pulley easily and without damaging the pump shaft or pulley.
• Includes remover and installer.
No. 7362 – GM power steering pump pulley service kit. Wt., 1 lb., 3 oz.

Ford Power Steering Pump Pulley Installer
• 8 mm x 1.25" threads fit Ford’s C111 pump.
No. 7771 – Ford power steering pump pulley installer. Wt., 1 lb., 8 oz.

Ford Air Bag Simulator
Today’s air bag systems have self-diagnostic capabilities, but sometimes these internal diagnostics must be serviced or replaced. That’s when our air bag simulators come in handy. In fact, it’s almost impossible to check and resolve air bag fault codes without such tools. This makes the simulators essential equipment for body shops and other types of service centers.
No. 7955 – Special one-ohm resistor for use on air bags on Probe vehicles. Wt., 6 oz.
No. 7956 – Special two-ohm resistor for use on 1993–02 Ford System II air bags. Wt., 6 oz.
No. 7957 – Special three-ohm resistor for use on Mercury Villager air bag systems. Wt., 6 oz.
Power Steering Pump/Alternator Remover/Installer Tool

- Reversible 2-in-1 tool removes and installs press-fit alternator and power steering pump pulleys.
- Also removes and installs other press-fit pulleys with a hub diameter of 1-1/8" (28 mm), 1-1/4" (32 mm), 1-5/16" (34 mm), or 1-3/8" (35 mm).

No. 4681 – Power steering pump/alternator remover/installer tool. Wt., 2 lbs.

Power Steering/Alternator Pulley Puller/Installer Set

- Properly replaces pressed-on power steering and alternator pulleys on Ford, Chrysler, and late GM engines.
- Housed in a blow-molded plastic storage case.

No. 4529 – Power steering and alternator pulley puller/installer. Wt., 1 lb., 14 oz.

Power Steering Pump/Alternator Pulley Remover

This puller removes pulleys on most Chrysler, Ford, GM, and VW vehicles fitted with Saginaw, Thompson, or Ford’s C2 and C111 power steering pumps; GM belt-driven vacuum pumps on cars; and press-on water pump pulleys on GM 4- and 6-cylinder engines. It works on pulleys with hub diameters of 1-1/8", 1-1/4", 1-5/16", and 1-3/8".
- Designed to ensure damage-free removal.


Power Steering Pump Pulley Service Set

- A complete set of tools required to remove and install power steering pump pulleys of most domestic vehicles.
- Fits pulley hubs with diameters of 1-1/8", 1-1/4", 1-5/16", and 1-3/8".
- Includes the necessary adapters for servicing: GM 3.1L, 3100, 3400, and 3800 V6 engines, GM 2.3L Quad 4 four-cylinder engines, and Ford 4.6L & 5.4L V8, 6.8 V10 engines.

No. 4530 – Power steering pump pulley puller/installer set. Wt. 2 lbs., 5 oz.

Power Steering Pump Pulley Kit

- Also includes No. 7931 spacer for work on Chrysler Cirrus, Dodge Stratus, and Plymouth Breeze.

No. 7830A – Power steering pump pulley kit. Wt., 1 lb., 10 oz.
**Ford Diesel Vacuum Pump Pulley Remover Jaws**

These jaws, together with No. 7185 pulley remover, make quick work of vacuum pump removal on newer Ford diesel engines.

- For use on 1984 to ’87 6.9L, and 1988–2003 7.3L.

**No. 7922** – Ford diesel vacuum pump pulley remover jaws. Wt., 8 oz.

**Power Steering Pump Pulley Installer**

This is an ideal companion to our No. 7185 pulley remover. It’s a real timesaver for installing power steering pump pulleys and GM press-on water pump pulleys.

- Designed to ensure damage-free installation.
- Internal roller bearing allows for easy turning.
- Threads are 3/8"-16 to match pulley shafts.

**No. 7005** – Power steering pump pulley installer. Wt., 11 oz.

---

The OTC Ford cam tools ensure correct cam timing when servicing timing belts, chains, head gaskets, or other valve train repairs.

**Ford Cam Tool Kit**

**No. 6486** – Ford cam tool kit for 2.0L Zetec engines in Contour, Mystique, and Focus. Contains tool Nos. 6474 and No. 6475. Wt., 1 lb.

**Ford Cam Tool Kit**

**No. 6487** – Ford cam tool kit for 1992 thru 2004 4.6L, 5.4L V8, and 6.8L V10 engines. Contains tool Nos. 6476, 6477, 6009, 6020, and molded storage case. Wt., 5 lbs.

Note: See page 106, kit 6489 for applications.

**Ford Cam Tool Kit**

**No. 6488** – Ford cam tool kit for 1997 thru 2004 4.0L Explorer/Mountaineer SOHC V6 engines. Kit contains tool Nos. 6478, 6479, 6480, 6481, 6482, 6484, 6485, and molded storage case. Wt., 7 lbs. 10 oz.

Note: See page 106, kit 6489 for applications.
### Ford Cam Tool Application Chart

**Ford Cam Tool Kit**

**No. 6489** – Ford master cam tool kit containing all 22 cam tools covering 1992 thru 2004 for over 50 applications, in a molded storage case. Wt., 12 lbs. 5 oz.

**Ford cam tool application chart for No. 6489**

Note: Some applications require more than one tool to accomplish the task.

<table>
<thead>
<tr>
<th>Year</th>
<th>Make &amp; Model</th>
<th>Engine</th>
<th>Tool Description</th>
<th>OTC Part No.</th>
<th>Ford Am. Part No.</th>
<th>Global Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996–1998</td>
<td>Aerostar</td>
<td>4.0L V6</td>
<td>Cam Sensor Sync Tool</td>
<td>6472</td>
<td>T95T-12200-A</td>
<td>303-529</td>
</tr>
<tr>
<td>1994–2002</td>
<td>Contour</td>
<td>2.0L 4 cyl. DOHC Zetec</td>
<td>Cam Alignment Tool</td>
<td>6474</td>
<td>T94P-6256-CH</td>
<td>303-465</td>
</tr>
<tr>
<td>1997–2002</td>
<td>Contour</td>
<td>2.0L 4 cyl. DOHC Zetec</td>
<td>Crankshaft TDC Timing Pin</td>
<td>6475</td>
<td>T97P-6000-A</td>
<td>303-574</td>
</tr>
<tr>
<td>1997–1998</td>
<td>Econoline</td>
<td>4.6L &amp; 5.4L V8, 6.8L V10</td>
<td>Cam Positioning Tool</td>
<td>6009</td>
<td>T91P-6256-A</td>
<td>303-380</td>
</tr>
<tr>
<td>1997–2006</td>
<td>Econoline</td>
<td>5.4L V8</td>
<td>Cam Positioning Tool Set</td>
<td>6476</td>
<td>T96T-6256-AR</td>
<td>303-5568</td>
</tr>
<tr>
<td>1997–2006</td>
<td>Econoline</td>
<td>6.8L V10</td>
<td>Cam Positioning Tool Set</td>
<td>6477</td>
<td>T96T-6256-B</td>
<td>303-557</td>
</tr>
<tr>
<td>1997–2006</td>
<td>Econoline</td>
<td>Windsor V8</td>
<td>Cam Holding Tool</td>
<td>6477</td>
<td>T96T-6256-AR</td>
<td>303-5568</td>
</tr>
<tr>
<td>1997–1998</td>
<td>Expedition</td>
<td>5.4L V8</td>
<td>Cam Positioning Tool</td>
<td>6009</td>
<td>T91P-6256-A</td>
<td>303-380</td>
</tr>
<tr>
<td>1997–2004</td>
<td>Expedition</td>
<td>5.4L V8</td>
<td>Cam Positioning Tool Set</td>
<td>6476</td>
<td>T96T-6256-AR</td>
<td>303-5568</td>
</tr>
<tr>
<td>1996–1998</td>
<td>Explorer</td>
<td>4.0L V6</td>
<td>Cam Sensor Sync Tool</td>
<td>6472</td>
<td>T95T-12200-A</td>
<td>303-529</td>
</tr>
<tr>
<td>1997–2006</td>
<td>Explorer</td>
<td>4.0L SOHC V6</td>
<td>Cam Gear Holding Tool</td>
<td>6478</td>
<td>T97T-6256-B</td>
<td>303-564</td>
</tr>
<tr>
<td>1999–2002</td>
<td>Explorer</td>
<td>4.0L Push Rod V6</td>
<td>Cam Sensor Sync Tool</td>
<td>6483</td>
<td>T96T-12200-A</td>
<td>303-562</td>
</tr>
<tr>
<td>1996–1998</td>
<td>Explorer</td>
<td>5.0L V8</td>
<td>Cam Sensor Sync Tool</td>
<td>6469</td>
<td>T96T-12200-A</td>
<td>303-562</td>
</tr>
<tr>
<td>1999–2002</td>
<td>Explorer</td>
<td>5.0L V8</td>
<td>Cam Sensor Sync Tool</td>
<td>6470</td>
<td>T96T-12200-A</td>
<td>303-520</td>
</tr>
<tr>
<td>1997–1998</td>
<td>F-Series Truck</td>
<td>4.6L &amp; 5.4L V8</td>
<td>Cam Positioning Tool</td>
<td>6009</td>
<td>T91P-6256-A</td>
<td>303-380</td>
</tr>
<tr>
<td>1997–2004</td>
<td>F-Series Truck</td>
<td>4.6L &amp; 5.4L</td>
<td>Cam Positioning Tool Set</td>
<td>6476</td>
<td>T96T-6256-AR</td>
<td>303-5568</td>
</tr>
<tr>
<td>1997–2004</td>
<td>F-Series Truck</td>
<td>5.4L V8</td>
<td>Cam Holding Tool</td>
<td>6477</td>
<td>T96T-6256-B</td>
<td>303-557</td>
</tr>
<tr>
<td>1997–2004</td>
<td>F-Series Truck</td>
<td>Windsor V8</td>
<td>Cam Holding Tool</td>
<td>6477</td>
<td>T96T-6256-B</td>
<td>303-557</td>
</tr>
</tbody>
</table>
## Ford Cam Tool Application Chart

### Note: Some applications require more than one tool to accomplish the task.

<table>
<thead>
<tr>
<th>Year</th>
<th>Make &amp; Model</th>
<th>Engine</th>
<th>Tool Description</th>
<th>OTC Part No.</th>
<th>Ford Am. Part No.</th>
<th>Global Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996–2004</td>
<td>Mustang</td>
<td>4.6L 4V</td>
<td>Camshaft Holding Tool</td>
<td>525217</td>
<td>T32C-6256-AH</td>
<td>303-398</td>
</tr>
<tr>
<td>1996–1997</td>
<td>Taurus</td>
<td>3.0L V6 2-valve</td>
<td>Cam Sensor Sync Tool</td>
<td>6472</td>
<td>T95T-12200-A</td>
<td>303-529</td>
</tr>
<tr>
<td>1990–1995</td>
<td>Thunderbird</td>
<td>3.8L V6</td>
<td>Cam Sensor Sync Tool</td>
<td>6467</td>
<td>T89P-12200-A</td>
<td>303-358</td>
</tr>
<tr>
<td>1997</td>
<td>Thunderbird</td>
<td>3.8L V6</td>
<td>Cam Sensor Sync Tool</td>
<td>6469</td>
<td>T96T-12200-A</td>
<td>303-562</td>
</tr>
<tr>
<td>1998</td>
<td>Lincoln Navigator</td>
<td>5.4L V8</td>
<td>Cam Positioning Tool</td>
<td>6009</td>
<td>T91P-6256-A</td>
<td>303-380</td>
</tr>
<tr>
<td>1998–2004</td>
<td>Lincoln Navigator</td>
<td>5.4L V8</td>
<td>Cam Positioning Tool Set</td>
<td>6020</td>
<td>T92P-6256-A</td>
<td>303-413</td>
</tr>
<tr>
<td>2003–2005</td>
<td>Lincoln Aviator</td>
<td>4.6L 4V</td>
<td>Camshaft Holding Tool</td>
<td>525217</td>
<td>T96T-6256-A</td>
<td>303-446</td>
</tr>
<tr>
<td>1998–2004</td>
<td>Lincoln Aviator</td>
<td>4.6L 4V</td>
<td>Camshaft Holding Tool</td>
<td>525217</td>
<td>T96T-6256-A</td>
<td>303-446</td>
</tr>
<tr>
<td>1999–1995</td>
<td>Cougar</td>
<td>3.8L V6</td>
<td>Cam Sensor Sync Tool</td>
<td>6467</td>
<td>T89P-12200-A</td>
<td>303-358</td>
</tr>
<tr>
<td>1997</td>
<td>Cougar</td>
<td>3.8L V6</td>
<td>Cam Sensor Sync Tool</td>
<td>6469</td>
<td>T96T-12200-A</td>
<td>303-562</td>
</tr>
<tr>
<td>1997–2006</td>
<td>Mountaineer</td>
<td>4.0L SOHC V6</td>
<td>Cam Gear Holding Tool</td>
<td>6485</td>
<td>T97T-6256-F,-G</td>
<td>303-565,-575</td>
</tr>
<tr>
<td>1999–2004</td>
<td>Mountaineer</td>
<td>4.0L Push Rod V6</td>
<td>Cam Sensor Sync Tool</td>
<td>6483</td>
<td>T97T-6256-B</td>
<td>303-564</td>
</tr>
<tr>
<td>1999–2001</td>
<td>Mountaineer</td>
<td>5.0L V8</td>
<td>Cam Sensor Sync Tool</td>
<td>6470</td>
<td>T96T-12200-A</td>
<td>303-562</td>
</tr>
<tr>
<td>1994–2002</td>
<td>Mystique</td>
<td>2.0L 4 cyl. DOHC Zetec</td>
<td>Cam Alignment Tool</td>
<td>6474</td>
<td>T94P-6256-CH</td>
<td>303-465</td>
</tr>
<tr>
<td>1997–2002</td>
<td>Mystique</td>
<td>2.0L 4 cyl. DOHC Zetec</td>
<td>Crankshaft TDC Timing Pin</td>
<td>6475</td>
<td>T97P-6000-A</td>
<td>303-574</td>
</tr>
<tr>
<td>1993–1995</td>
<td>Sable</td>
<td>3.0L V6</td>
<td>Cam Sensor Sync Tool</td>
<td>6471</td>
<td>T93P-12200-A</td>
<td>303-453</td>
</tr>
<tr>
<td>1996–1997</td>
<td>Sable</td>
<td>3.0L V6 2-valve</td>
<td>Cam Sensor Sync Tool</td>
<td>6472</td>
<td>T95T-12200-A</td>
<td>303-529</td>
</tr>
<tr>
<td>1998–2004</td>
<td>Sable</td>
<td>3.0L V6</td>
<td>Cam Sensor Sync Tool</td>
<td>6473</td>
<td>T95T-12200-A</td>
<td>303-529</td>
</tr>
<tr>
<td>2003–2004</td>
<td>Mercury Marauder</td>
<td>4.6L 4V</td>
<td>Camshaft Positioning Tool</td>
<td>525217</td>
<td>T96T-6256-A</td>
<td>303-446</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Camshaft Holding Tool</td>
<td>525217</td>
<td>T96T-6256-A</td>
<td>303-446</td>
</tr>
</tbody>
</table>
The OTC Ford cam tools ensure correct cam timing when servicing timing belts, chains, head gaskets, or other valve train repairs.

**Ford 4.6L 4-Valve Cam Timing Kit**
- Kit includes: Camshaft positioning tool, camshaft holding tool, crankshaft positioning tool, secondary chain tensioner tool.
- Saves time; all tools required for camshaft timing are in one kit.

No. 6498 – Ford 4.6L 4-valve cam timing kit.
Wt., 6 lbs., 11 oz.

### Ford 4.6L V8 4 valve Cam Timing application chart for 6498

<table>
<thead>
<tr>
<th>Year</th>
<th>Make</th>
<th>Model</th>
<th>Engine</th>
<th>Tool Description</th>
<th>OTC PN</th>
<th>OE PN</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993-98</td>
<td>Lincoln</td>
<td>Mark VIII</td>
<td>4.6L VIN V</td>
<td>Camshaft Positioning Tool</td>
<td>525216</td>
<td>303-445</td>
</tr>
<tr>
<td>1995-02</td>
<td>Lincoln</td>
<td>Continental</td>
<td>4.6L VIN V</td>
<td>Camshaft Positioning Tool</td>
<td>525216</td>
<td>303-445</td>
</tr>
<tr>
<td>1996-97</td>
<td>Ford</td>
<td>Mustang</td>
<td>4.6L VIN V</td>
<td>Camshaft Positioning Tool</td>
<td>525216</td>
<td>303-445</td>
</tr>
<tr>
<td>2003-04</td>
<td>Mercury</td>
<td>Marauder</td>
<td>4.6L VIN V</td>
<td>Camshaft Positioning Tool</td>
<td>525216</td>
<td>303-445</td>
</tr>
<tr>
<td>1993-98</td>
<td>Lincoln</td>
<td>Mark VIII</td>
<td>4.6L VIN V</td>
<td>Camshaft Holding Tool</td>
<td>525217</td>
<td>303-446</td>
</tr>
<tr>
<td>1995-02</td>
<td>Lincoln</td>
<td>Continental</td>
<td>4.6L VIN V</td>
<td>Camshaft Holding Tool</td>
<td>525217</td>
<td>303-446</td>
</tr>
<tr>
<td>1996-01</td>
<td>Ford</td>
<td>Mustang</td>
<td>4.6L VIN V</td>
<td>Camshaft Holding Tool</td>
<td>525217</td>
<td>303-446</td>
</tr>
<tr>
<td>2003-04</td>
<td>Mercury</td>
<td>Marauder</td>
<td>4.6L VIN V</td>
<td>Camshaft Holding Tool</td>
<td>525217</td>
<td>303-446</td>
</tr>
<tr>
<td>2003-05</td>
<td>Lincoln</td>
<td>Aviator</td>
<td>4.6L VIN V</td>
<td>Camshaft Holding Tool</td>
<td>525217</td>
<td>303-446</td>
</tr>
<tr>
<td>1993-97</td>
<td>Lincoln</td>
<td>Mark VIII</td>
<td>4.6L VIN V</td>
<td>Secondary Timing Chain Tensioner tool</td>
<td>525218</td>
<td>303-447</td>
</tr>
<tr>
<td>1995-97</td>
<td>Lincoln</td>
<td>Continental</td>
<td>4.6L VIN V</td>
<td>Secondary Timing Chain Tensioner tool</td>
<td>525218</td>
<td>303-447</td>
</tr>
<tr>
<td>1996-97</td>
<td>Ford</td>
<td>Mustang</td>
<td>4.6L VIN V</td>
<td>Secondary Timing Chain Tensioner tool</td>
<td>525218</td>
<td>303-447</td>
</tr>
<tr>
<td>1993-98</td>
<td>Lincoln</td>
<td>Mark VIII</td>
<td>4.6L VIN V</td>
<td>Crankshaft Positioning Tool</td>
<td>525219</td>
<td>303-448</td>
</tr>
<tr>
<td>1995-02</td>
<td>Lincoln</td>
<td>Continental</td>
<td>4.6L VIN V</td>
<td>Crankshaft Positioning Tool</td>
<td>525219</td>
<td>303-448</td>
</tr>
<tr>
<td>1996-01</td>
<td>Ford</td>
<td>Mustang</td>
<td>4.6L VIN V</td>
<td>Crankshaft Positioning Tool</td>
<td>525219</td>
<td>303-448</td>
</tr>
<tr>
<td>2003-04</td>
<td>Mercury</td>
<td>Marauder</td>
<td>4.6L VIN V</td>
<td>Crankshaft Positioning Tool</td>
<td>525219</td>
<td>303-448</td>
</tr>
<tr>
<td>2003-04</td>
<td>Ford</td>
<td>Mustang</td>
<td>4.6L VIN V</td>
<td>Crankshaft Positioning Tool</td>
<td>525219</td>
<td>303-448</td>
</tr>
<tr>
<td>2005-06</td>
<td>Ford</td>
<td>Mustang</td>
<td>4.6L VIN V</td>
<td>Crankshaft Positioning Tool</td>
<td>525219</td>
<td>303-448</td>
</tr>
<tr>
<td>2003-05</td>
<td>Lincoln</td>
<td>Aviator</td>
<td>4.6L VIN V</td>
<td>Crankshaft Positioning Tool</td>
<td>525219</td>
<td>303-448</td>
</tr>
</tbody>
</table>
Chrysler/Jeep Cam Tool Set

The Chrysler/Jeep cam timing tools are provided to ensure correct cam timing when servicing timing belts, chains, head gaskets, or performing other valve train repairs.

These 15 tools are based on OE designs and are offered to service the following applications:

Cam positioning is an IMPORTANT procedure. If cam timing is not correct, the engine may still run, but emissions and mileage will be affected. The engine computer may also initiate the “Check Engine” light.


Chrysler/Jeep Cam Tool application chart for 6689 Note: Some applications require more than one tool to accomplish the task.

<table>
<thead>
<tr>
<th>Year</th>
<th>Make</th>
<th>Model</th>
<th>Engine</th>
<th>Tool Decription</th>
<th>OTC PN</th>
<th>OE PN</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990-2006</td>
<td>Chrysler</td>
<td>Town &amp; Country Van</td>
<td>3.3 L V6</td>
<td>Crankshaft Damper Puller</td>
<td>6667 or 513990</td>
<td>8454</td>
</tr>
<tr>
<td>1990-2006</td>
<td>Dodge</td>
<td>Caravan &amp; Grand Caravan</td>
<td>3.3 L V6</td>
<td>Crankshaft Damper Puller</td>
<td>6667 or 513990</td>
<td>8454</td>
</tr>
<tr>
<td>1990-2000</td>
<td>Plymouth</td>
<td>Voyager &amp; Grand Voyager</td>
<td>3.3 L V6</td>
<td>Crankshaft Damper Puller</td>
<td>6667 or 513990</td>
<td>8454</td>
</tr>
<tr>
<td>1993-1996</td>
<td>Chrysler</td>
<td>Concorde</td>
<td>3.3 L V6</td>
<td>Crankshaft Damper Puller</td>
<td>6667 or 513990</td>
<td>8454</td>
</tr>
<tr>
<td>1993-1997</td>
<td>Dodge</td>
<td>Intrepid</td>
<td>3.3 L V6</td>
<td>Crankshaft Damper Puller</td>
<td>6667 or 513990</td>
<td>8454</td>
</tr>
<tr>
<td>1993-1997</td>
<td>Chrysler</td>
<td>Concorde</td>
<td>3.5L V6</td>
<td>Crankshaft Damper Puller</td>
<td>6667 or 513990</td>
<td>8454</td>
</tr>
<tr>
<td>1994-2006</td>
<td>Dodge</td>
<td>Intrepid</td>
<td>3.5L V6</td>
<td>Crankshaft Damper Puller</td>
<td>6667 or 513990</td>
<td>8454</td>
</tr>
<tr>
<td>1994-2006</td>
<td>Chrysler</td>
<td>Town &amp; Country Van</td>
<td>3.8L V6</td>
<td>Crankshaft Damper Puller</td>
<td>6667 or 513990</td>
<td>8454</td>
</tr>
<tr>
<td>1994-2006</td>
<td>Dodge</td>
<td>Caravan &amp; Grand Caravan</td>
<td>3.8L V6</td>
<td>Crankshaft Damper Puller</td>
<td>6667 or 513990</td>
<td>8454</td>
</tr>
<tr>
<td>1994-2000</td>
<td>Plymouth</td>
<td>Voyager &amp; Grand Voyager</td>
<td>3.8L V6</td>
<td>Crankshaft Damper Puller</td>
<td>6667 or 513990</td>
<td>8454</td>
</tr>
<tr>
<td>1994-2006</td>
<td>Dodge</td>
<td>Ram Truck</td>
<td>8.0L V10</td>
<td>Crankshaft Damper Puller</td>
<td>6667 or 513990</td>
<td>8454</td>
</tr>
<tr>
<td>1995-2006</td>
<td>Dodge</td>
<td>Neon</td>
<td>2.0L I4</td>
<td>Crankshaft Damper Puller</td>
<td>6667 or 513990</td>
<td>8454</td>
</tr>
<tr>
<td>1995-1999</td>
<td>Dodge</td>
<td>Avenger</td>
<td>2.0L I4</td>
<td>Crankshaft Damper Puller</td>
<td>6667 or 513990</td>
<td>8454</td>
</tr>
<tr>
<td>1995-2000</td>
<td>Dodge</td>
<td>Avenger</td>
<td>2.5L V6</td>
<td>Crankshaft Damper Puller</td>
<td>6667 or 513990</td>
<td>8454</td>
</tr>
<tr>
<td>2003-2006</td>
<td>Dodge</td>
<td>Neon</td>
<td>2.4L I4</td>
<td>Crankshaft Damper Puller</td>
<td>6667 or 513990</td>
<td>8454</td>
</tr>
<tr>
<td>1995-1999</td>
<td>Chrysler</td>
<td>Sebring</td>
<td>2.0L I4</td>
<td>Crankshaft Damper Puller</td>
<td>6667 or 513990</td>
<td>8454</td>
</tr>
<tr>
<td>1995-2000</td>
<td>Chrysler</td>
<td>Sebring</td>
<td>2.5L V6</td>
<td>Crankshaft Damper Puller</td>
<td>6667 or 513990</td>
<td>8454</td>
</tr>
<tr>
<td>1995-2000</td>
<td>Chrysler</td>
<td>Cirrus</td>
<td>2.4L I4</td>
<td>Crankshaft Damper Puller</td>
<td>6667 or 513990</td>
<td>8454</td>
</tr>
<tr>
<td>1995-2000</td>
<td>Chrysler</td>
<td>Cirrus</td>
<td>2.5L V6</td>
<td>Crankshaft Damper Puller</td>
<td>6667 or 513990</td>
<td>8454</td>
</tr>
<tr>
<td>2001-2006</td>
<td>Chrysler</td>
<td>Sebring</td>
<td>2.4L I4</td>
<td>Crankshaft Damper Puller</td>
<td>6667 or 513990</td>
<td>8454</td>
</tr>
<tr>
<td>1995-2001</td>
<td>Plymouth</td>
<td>Neon</td>
<td>2.0L I4</td>
<td>Crankshaft Damper Puller</td>
<td>6667 or 513990</td>
<td>8454</td>
</tr>
<tr>
<td>1995-2000</td>
<td>Plymouth</td>
<td>Breeze</td>
<td>2.0L I4</td>
<td>Crankshaft Damper Puller</td>
<td>6667 or 513990</td>
<td>8454</td>
</tr>
<tr>
<td>1995-2000</td>
<td>Plymouth</td>
<td>Breeze</td>
<td>2.4L I4</td>
<td>Crankshaft Damper Puller</td>
<td>6667 or 513990</td>
<td>8454</td>
</tr>
<tr>
<td>2001-2006</td>
<td>Chrysler</td>
<td>PT Cruiser</td>
<td>2.4L I4</td>
<td>Crankshaft Damper Puller</td>
<td>6667 or 513990</td>
<td>8454</td>
</tr>
<tr>
<td>1998-2004</td>
<td>Chrysler</td>
<td>Concorde</td>
<td>2.7L V6</td>
<td>Crankshaft Damper Puller</td>
<td>6667 or 513990</td>
<td>8454</td>
</tr>
<tr>
<td>1998-2004</td>
<td>Chrysler</td>
<td>Concorde</td>
<td>3.2L V6</td>
<td>Crankshaft Damper Puller</td>
<td>6667 or 513990</td>
<td>8454</td>
</tr>
<tr>
<td>1999-2006</td>
<td>Chrysler</td>
<td>300</td>
<td>3.5L V6</td>
<td>Crankshaft Damper Puller</td>
<td>6667 or 513990</td>
<td>8454</td>
</tr>
<tr>
<td>2005-2006</td>
<td>Chrysler</td>
<td>300</td>
<td>2.7L V6</td>
<td>Crankshaft Damper Puller</td>
<td>6667 or 513990</td>
<td>8454</td>
</tr>
<tr>
<td>2005-2006</td>
<td>Chrysler</td>
<td>PT Cruiser</td>
<td>2.7L V6</td>
<td>Crankshaft Damper Puller</td>
<td>6667 or 513990</td>
<td>8454</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Chrysler</td>
<td>Pacifica</td>
<td>3.5L V6</td>
<td>Crankshaft Damper Puller</td>
<td>6667 or 513990</td>
<td>8454</td>
</tr>
<tr>
<td>2006</td>
<td>Dodge</td>
<td>Charger</td>
<td>3.5L V6</td>
<td>Crankshaft Damper Puller</td>
<td>6667 or 513990</td>
<td>8454</td>
</tr>
<tr>
<td>2006</td>
<td>Dodge</td>
<td>Charger</td>
<td>2.7L V6</td>
<td>Crankshaft Damper Puller</td>
<td>6667 or 513990</td>
<td>8454</td>
</tr>
<tr>
<td>1998-2006</td>
<td>Dodge</td>
<td>Intrepid</td>
<td>2.7L V6</td>
<td>Crankshaft Damper Puller</td>
<td>6667 or 513990</td>
<td>8454</td>
</tr>
<tr>
<td>1998-2006</td>
<td>Dodge</td>
<td>Intrepid</td>
<td>3.2L V6</td>
<td>Crankshaft Damper Puller</td>
<td>6667 or 513990</td>
<td>8454</td>
</tr>
<tr>
<td>2000-2006</td>
<td>Dodge</td>
<td>Dakota</td>
<td>4.7L V8</td>
<td>Crankshaft Damper Puller</td>
<td>6667 or 513990</td>
<td>8454</td>
</tr>
<tr>
<td>2000-2006</td>
<td>Dodge</td>
<td>Durango</td>
<td>4.7L V8</td>
<td>Crankshaft Damper Puller</td>
<td>6667 or 513990</td>
<td>8454</td>
</tr>
<tr>
<td>1999-2006</td>
<td>Jeep</td>
<td>Grand Cherokee</td>
<td>4.7L V8</td>
<td>Crankshaft Damper Puller</td>
<td>6667 or 513990</td>
<td>8454</td>
</tr>
</tbody>
</table>
Chrysler / Jeep Cam Tool application chart for 6689

Note: Some applications require more than one tool to accomplish the task.

<table>
<thead>
<tr>
<th>Year</th>
<th>Make</th>
<th>Model</th>
<th>Engine</th>
<th>Tool Description</th>
<th>OTC PN</th>
<th>OE PN</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>Jeep</td>
<td>Commander</td>
<td>4.7L V8</td>
<td>Crankshaft Damper Puller</td>
<td>522890</td>
<td>8186</td>
</tr>
<tr>
<td>1994-1997</td>
<td>Chrysler</td>
<td>New Yorker &amp; LHS</td>
<td>3.5L V6</td>
<td>Crankshaft Damper Puller</td>
<td>522890</td>
<td>8186</td>
</tr>
<tr>
<td>1993-1997</td>
<td>Chrysler</td>
<td>Concorde</td>
<td>3.5L V6</td>
<td>Camshaft alignment tools</td>
<td>7999 or 522888</td>
<td>6642</td>
</tr>
<tr>
<td>1994-1997</td>
<td>Chrysler</td>
<td>New Yorker &amp; LHS</td>
<td>3.5L V6</td>
<td>Camshaft alignment tools</td>
<td>7999 or 522888</td>
<td>6642</td>
</tr>
<tr>
<td>1993-1997</td>
<td>Dodge</td>
<td>Intrepid</td>
<td>3.5L V6</td>
<td>Timing Chain Tensioner Reset Tool</td>
<td>522890</td>
<td>8186</td>
</tr>
<tr>
<td>2002-2006</td>
<td>Chrysler</td>
<td>Sebring</td>
<td>2.7L V6 vin R</td>
<td>Timing Chain Tensioner Reset Tool</td>
<td>522890</td>
<td>8186</td>
</tr>
<tr>
<td>2005-2006</td>
<td>Chrysler</td>
<td>300</td>
<td>2.7L V6 vin R</td>
<td>Timing Chain Tensioner Reset Tool</td>
<td>522890</td>
<td>8186</td>
</tr>
<tr>
<td>1994-2004</td>
<td>Dodge</td>
<td>Intrepid</td>
<td>2.7L V6 vin R</td>
<td>Timing Chain Tensioner Reset Tool</td>
<td>522890</td>
<td>8186</td>
</tr>
<tr>
<td>2002-2006</td>
<td>Dodge</td>
<td>Stratus</td>
<td>2.7L V6 vin R</td>
<td>Timing Chain Tensioner Reset Tool</td>
<td>522890</td>
<td>8186</td>
</tr>
<tr>
<td>2005-2006</td>
<td>Dodge</td>
<td>Magnum</td>
<td>2.7L V6 vin R</td>
<td>Timing Chain Tensioner Reset Tool</td>
<td>522890</td>
<td>8186</td>
</tr>
<tr>
<td>2006</td>
<td>Dodge</td>
<td>Charger</td>
<td>2.7L V6 vin R</td>
<td>Timing Chain Tensioner Reset Tool</td>
<td>522890</td>
<td>8186</td>
</tr>
<tr>
<td>1999-2006</td>
<td>Jeep</td>
<td>Grand Cherokee</td>
<td>4.7L V8</td>
<td>Timing Chain Wedge</td>
<td>522892</td>
<td>8350</td>
</tr>
<tr>
<td>2006</td>
<td>Jeep</td>
<td>Commander</td>
<td>4.7L V8</td>
<td>Timing Chain Wedge</td>
<td>522892</td>
<td>8350</td>
</tr>
<tr>
<td>2000-2006</td>
<td>Dodge</td>
<td>Durango</td>
<td>4.7L V8</td>
<td>Timing Chain Wedge</td>
<td>522892</td>
<td>8350</td>
</tr>
<tr>
<td>2000-2006</td>
<td>Dodge</td>
<td>Dakota</td>
<td>4.7L V8</td>
<td>Timing Chain Wedge</td>
<td>522892</td>
<td>8350</td>
</tr>
<tr>
<td>2002-2006</td>
<td>Dodge</td>
<td>Ram Truck</td>
<td>4.7L V8</td>
<td>Timing Chain Wedge</td>
<td>522892</td>
<td>8350</td>
</tr>
<tr>
<td>2002-2006</td>
<td>Dodge</td>
<td>Liberty</td>
<td>3.7L V6</td>
<td>Timing Chain Wedge</td>
<td>522893</td>
<td>8379</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Jeep</td>
<td>Grand Cherokee</td>
<td>3.7L V6</td>
<td>Timing Chain Wedge</td>
<td>522893</td>
<td>8379</td>
</tr>
<tr>
<td>2002-2006</td>
<td>Dodge</td>
<td>Ram Truck</td>
<td>3.7L V6</td>
<td>Timing Chain Wedge</td>
<td>522893</td>
<td>8379</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Dodge</td>
<td>Dakota</td>
<td>3.7L V6</td>
<td>Timing Chain Wedge</td>
<td>522893</td>
<td>8379</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Dodge</td>
<td>Durango</td>
<td>3.7L V6</td>
<td>Timing Chain Wedge</td>
<td>522893</td>
<td>8379</td>
</tr>
<tr>
<td>2002-2006</td>
<td>Dodge</td>
<td>Liberty</td>
<td>3.7L V6</td>
<td>Camshaft Wrench</td>
<td>522894</td>
<td>8428</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Jeep</td>
<td>Grand Cherokee</td>
<td>3.7L V6</td>
<td>Camshaft Wrench</td>
<td>522894</td>
<td>8428</td>
</tr>
<tr>
<td>2002-2006</td>
<td>Dodge</td>
<td>Ram Truck</td>
<td>3.7L V6</td>
<td>Camshaft Wrench</td>
<td>522894</td>
<td>8428</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Dodge</td>
<td>Dakota</td>
<td>3.7L V6</td>
<td>Camshaft Wrench</td>
<td>522894</td>
<td>8428</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Dodge</td>
<td>Durango</td>
<td>3.7L V6</td>
<td>Camshaft Wrench</td>
<td>522894</td>
<td>8428</td>
</tr>
<tr>
<td>1999-2006</td>
<td>Jeep</td>
<td>Grand Cherokee</td>
<td>4.7L V8</td>
<td>Idler Shaft Remover</td>
<td>522896</td>
<td>8517</td>
</tr>
<tr>
<td>2006</td>
<td>Jeep</td>
<td>Commander</td>
<td>4.7L V8</td>
<td>Idler Shaft Remover</td>
<td>522896</td>
<td>8517</td>
</tr>
<tr>
<td>2000-2006</td>
<td>Dodge</td>
<td>Durango</td>
<td>4.7L V8</td>
<td>Idler Shaft Remover</td>
<td>522896</td>
<td>8517</td>
</tr>
<tr>
<td>2000-2006</td>
<td>Dodge</td>
<td>Dakota</td>
<td>4.7L V8</td>
<td>Idler Shaft Remover</td>
<td>522896</td>
<td>8517</td>
</tr>
<tr>
<td>2002-2006</td>
<td>Dodge</td>
<td>Ram Truck</td>
<td>4.7L V8</td>
<td>Idler Shaft Remover</td>
<td>522896</td>
<td>8517</td>
</tr>
<tr>
<td>1999-2006</td>
<td>Jeep</td>
<td>Grand Cherokee</td>
<td>4.7L V8</td>
<td>Tensioner lock pin</td>
<td>522897</td>
<td>8514</td>
</tr>
<tr>
<td>2006</td>
<td>Jeep</td>
<td>Commander</td>
<td>4.7L V8</td>
<td>Tensioner lock pin</td>
<td>522897</td>
<td>8514</td>
</tr>
<tr>
<td>2000-2006</td>
<td>Dodge</td>
<td>Durango</td>
<td>4.7L V8</td>
<td>Tensioner lock pin</td>
<td>522897</td>
<td>8514</td>
</tr>
<tr>
<td>2000-2006</td>
<td>Dodge</td>
<td>Dakota</td>
<td>4.7L V8</td>
<td>Tensioner lock pin</td>
<td>522897</td>
<td>8514</td>
</tr>
<tr>
<td>2002-2006</td>
<td>Dodge</td>
<td>Ram Truck</td>
<td>4.7L V8</td>
<td>Tensioner lock pin</td>
<td>522897</td>
<td>8514</td>
</tr>
<tr>
<td>2001-2005</td>
<td>Chrysler</td>
<td>Sebring</td>
<td>2.4L I4 vin G</td>
<td>Camshaft Holding Pins</td>
<td>522898</td>
<td>8599</td>
</tr>
<tr>
<td>2001-2005</td>
<td>Dodge</td>
<td>Stratus</td>
<td>2.4L I4 vin G</td>
<td>Camshaft Holding Pins</td>
<td>522898</td>
<td>8599</td>
</tr>
<tr>
<td>2001-2005</td>
<td>Chrysler</td>
<td>Sebring</td>
<td>3.0L V6 vin H</td>
<td>Camshaft Holding Pins</td>
<td>522898</td>
<td>8599</td>
</tr>
<tr>
<td>2001-2005</td>
<td>Dodge</td>
<td>Stratus</td>
<td>3.0L V6 vin H</td>
<td>Camshaft Holding Pins</td>
<td>522898</td>
<td>8599</td>
</tr>
<tr>
<td>1981-1988</td>
<td>Dodge</td>
<td>Omni</td>
<td>2.2 L I4</td>
<td>Timing Belt Tensioner</td>
<td>7695 or 522899</td>
<td>C-4703</td>
</tr>
<tr>
<td>1981-1988</td>
<td>Dodge</td>
<td>Aries</td>
<td>2.2 L I4</td>
<td>Timing Belt Tensioner</td>
<td>7695 or 522899</td>
<td>C-4703</td>
</tr>
<tr>
<td>1982-1983</td>
<td>Dodge</td>
<td>400</td>
<td>2.2 L I4</td>
<td>Timing Belt Tensioner</td>
<td>7695 or 522899</td>
<td>C-4703</td>
</tr>
<tr>
<td>1983-1988</td>
<td>Dodge</td>
<td>600</td>
<td>2.2 L I4</td>
<td>Timing Belt Tensioner</td>
<td>7695 or 522899</td>
<td>C-4703</td>
</tr>
<tr>
<td>1984-1986</td>
<td>Dodge</td>
<td>Charger</td>
<td>2.2 L I4</td>
<td>Timing Belt Tensioner</td>
<td>7695 or 522899</td>
<td>C-4703</td>
</tr>
<tr>
<td>1984-1989</td>
<td>Dodge</td>
<td>Daytona</td>
<td>2.2 L I4</td>
<td>Timing Belt Tensioner</td>
<td>7695 or 522899</td>
<td>C-4703</td>
</tr>
<tr>
<td>1984-1987</td>
<td>Dodge</td>
<td>Caravan &amp; Grand Caravan</td>
<td>2.2 L I4</td>
<td>Timing Belt Tensioner</td>
<td>7695 or 522899</td>
<td>C-4703</td>
</tr>
<tr>
<td>1983-1990</td>
<td>Dodge</td>
<td>Shelby</td>
<td>2.2 L I4</td>
<td>Timing Belt Tensioner</td>
<td>7695 or 522899</td>
<td>C-4703</td>
</tr>
<tr>
<td>1987-1994</td>
<td>Dodge</td>
<td>Shadow</td>
<td>2.2 L I4</td>
<td>Timing Belt Tensioner</td>
<td>7695 or 522899</td>
<td>C-4703</td>
</tr>
<tr>
<td>1985-1989</td>
<td>Dodge</td>
<td>Lancer</td>
<td>2.2 L I4</td>
<td>Timing Belt Tensioner</td>
<td>7695 or 522899</td>
<td>C-4703</td>
</tr>
<tr>
<td>1986-1993</td>
<td>Dodge</td>
<td>Daytona</td>
<td>2.2 L I4</td>
<td>Timing Belt Tensioner</td>
<td>7695 or 522899</td>
<td>C-4703</td>
</tr>
</tbody>
</table>
### Chrysler / Jeep Cam Tool Application Chart

**Note:** Some applications require more than one tool to accomplish the task.

<table>
<thead>
<tr>
<th>Year</th>
<th>Make</th>
<th>Model</th>
<th>Engine</th>
<th>Tool Description</th>
<th>OTC PN</th>
<th>OE PN</th>
</tr>
</thead>
<tbody>
<tr>
<td>1986-1989</td>
<td>Dodge</td>
<td>Aries</td>
<td>2.5 L I4</td>
<td>Timing Belt Tensioner</td>
<td>7695 or 522899</td>
<td>C-4703</td>
</tr>
<tr>
<td>1986-1988</td>
<td>Dodge</td>
<td>600</td>
<td>2.5 L I4</td>
<td>Timing Belt Tensioner</td>
<td>7695 or 522899</td>
<td>C-4703</td>
</tr>
<tr>
<td>1987-1989</td>
<td>Dodge</td>
<td>Lancer</td>
<td>2.5 L I4</td>
<td>Timing Belt Tensioner</td>
<td>7695 or 522899</td>
<td>C-4703</td>
</tr>
<tr>
<td>1987-1995</td>
<td>Dodge</td>
<td>Caravan &amp; Grand Caravan</td>
<td>2.5 L I4</td>
<td>Timing Belt Tensioner</td>
<td>7695 or 522899</td>
<td>C-4703</td>
</tr>
<tr>
<td>1988-1991</td>
<td>Dodge</td>
<td>Shelby</td>
<td>2.5 L I4</td>
<td>Timing Belt Tensioner</td>
<td>7695 or 522899</td>
<td>C-4703</td>
</tr>
<tr>
<td>1988-1993</td>
<td>Dodge</td>
<td>Dynasty</td>
<td>2.5 L I4</td>
<td>Timing Belt Tensioner</td>
<td>7695 or 522899</td>
<td>C-4703</td>
</tr>
<tr>
<td>1989-1994</td>
<td>Dodge</td>
<td>Shadow</td>
<td>2.5 L I4</td>
<td>Timing Belt Tensioner</td>
<td>7695 or 522899</td>
<td>C-4703</td>
</tr>
<tr>
<td>1989-1995</td>
<td>Dodge</td>
<td>Spirit</td>
<td>2.5 L I4</td>
<td>Timing Belt Tensioner</td>
<td>7695 or 522899</td>
<td>C-4703</td>
</tr>
<tr>
<td>1982-1990</td>
<td>Chrysler</td>
<td>Lebaron</td>
<td>2.2 L I4</td>
<td>Timing Belt Tensioner</td>
<td>7695 or 522899</td>
<td>C-4703</td>
</tr>
<tr>
<td>1983-1988</td>
<td>Chrysler</td>
<td>New Yorker</td>
<td>2.2 L I4</td>
<td>Timing Belt Tensioner</td>
<td>7695 or 522899</td>
<td>C-4703</td>
</tr>
<tr>
<td>1984-1986</td>
<td>Chrysler</td>
<td>Laser</td>
<td>2.2 L I4</td>
<td>Timing Belt Tensioner</td>
<td>7695 or 522899</td>
<td>C-4703</td>
</tr>
<tr>
<td>1986-1993</td>
<td>Chrysler</td>
<td>Lebaron</td>
<td>2.5 L I4</td>
<td>Timing Belt Tensioner</td>
<td>7695 or 522899</td>
<td>C-4703</td>
</tr>
<tr>
<td>1986-1987</td>
<td>Chrysler</td>
<td>New Yorker</td>
<td>2.5 L I4</td>
<td>Timing Belt Tensioner</td>
<td>7695 or 522899</td>
<td>C-4703</td>
</tr>
<tr>
<td>1981-1989</td>
<td>Plymouth</td>
<td>Horizon</td>
<td>2.2 L I4</td>
<td>Timing Belt Tensioner</td>
<td>7695 or 522899</td>
<td>C-4703</td>
</tr>
<tr>
<td>1981-1989</td>
<td>Plymouth</td>
<td>Reliant</td>
<td>2.2 L I4</td>
<td>Timing Belt Tensioner</td>
<td>7695 or 522899</td>
<td>C-4703</td>
</tr>
<tr>
<td>1984-1988</td>
<td>Plymouth</td>
<td>Voyager</td>
<td>2.2 L I4</td>
<td>Timing Belt Tensioner</td>
<td>7695 or 522899</td>
<td>C-4703</td>
</tr>
<tr>
<td>1982-1986</td>
<td>Plymouth</td>
<td>Turismo</td>
<td>2.2 L I4</td>
<td>Timing Belt Tensioner</td>
<td>7695 or 522899</td>
<td>C-4703</td>
</tr>
<tr>
<td>1990-1994</td>
<td>Plymouth</td>
<td>Sundance</td>
<td>2.2 L I4</td>
<td>Timing Belt Tensioner</td>
<td>7695 or 522899</td>
<td>C-4703</td>
</tr>
<tr>
<td>1986-1988</td>
<td>Plymouth</td>
<td>Caravelle</td>
<td>2.5 L I4</td>
<td>Timing Belt Tensioner</td>
<td>7695 or 522899</td>
<td>C-4703</td>
</tr>
<tr>
<td>1986-1989</td>
<td>Plymouth</td>
<td>Reliant</td>
<td>2.5 L I4</td>
<td>Timing Belt Tensioner</td>
<td>7695 or 522899</td>
<td>C-4703</td>
</tr>
<tr>
<td>1987-1995</td>
<td>Plymouth</td>
<td>Voyager</td>
<td>2.5 L I4</td>
<td>Timing Belt Tensioner</td>
<td>7695 or 522899</td>
<td>C-4703</td>
</tr>
<tr>
<td>1987-1994</td>
<td>Plymouth</td>
<td>Sundance</td>
<td>2.5 L I4</td>
<td>Timing Belt Tensioner</td>
<td>7695 or 522899</td>
<td>C-4703</td>
</tr>
<tr>
<td>1990-1995</td>
<td>Plymouth</td>
<td>Acclaim</td>
<td>2.5 L I4</td>
<td>Timing Belt Tensioner</td>
<td>7695 or 522899</td>
<td>C-4703</td>
</tr>
<tr>
<td>1989-1995</td>
<td>Dodge</td>
<td>Colt</td>
<td>2.4L I4</td>
<td>Timing Belt Tensioner</td>
<td>522900A</td>
<td>MD-998738</td>
</tr>
<tr>
<td>1989-1995</td>
<td>Eagle</td>
<td>Summit</td>
<td>2.4L I4</td>
<td>Timing Belt Tensioner</td>
<td>522900A</td>
<td>MD-998738</td>
</tr>
<tr>
<td>1991-1997</td>
<td>Dodge</td>
<td>Stealth</td>
<td>3.0L V6</td>
<td>Timing Belt Wrench</td>
<td>7997 or 522901</td>
<td>MD-998767</td>
</tr>
<tr>
<td>1992-1994</td>
<td>Eagle</td>
<td>Summit</td>
<td>2.4L I4</td>
<td>Timing Belt Wrench</td>
<td>7997 or 522901</td>
<td>MD-998767</td>
</tr>
<tr>
<td>1992-1994</td>
<td>Dodge</td>
<td>Colt</td>
<td>2.4L I4</td>
<td>Timing Belt Wrench</td>
<td>7997 or 522901</td>
<td>MD-998767</td>
</tr>
<tr>
<td>1984-1991</td>
<td>Dodge</td>
<td>Colt</td>
<td>2.0L I4</td>
<td>Timing Belt Wrench</td>
<td>7997 or 522901</td>
<td>MD-998767</td>
</tr>
<tr>
<td>1999-2006</td>
<td>Jeep</td>
<td>Grand Cherokee</td>
<td>4.7L V8</td>
<td>Secondary Timing Chain Holder</td>
<td>522902</td>
<td>8515</td>
</tr>
<tr>
<td>2006</td>
<td>Jeep</td>
<td>Commander</td>
<td>4.7L V8</td>
<td>Secondary Timing Chain Holder</td>
<td>522902</td>
<td>8515</td>
</tr>
<tr>
<td>2000-2006</td>
<td>Dodge</td>
<td>Durango</td>
<td>4.7L V8</td>
<td>Secondary Timing Chain Holder</td>
<td>522902</td>
<td>8515</td>
</tr>
<tr>
<td>2000-2006</td>
<td>Dodge</td>
<td>Dakota</td>
<td>4.7L V8</td>
<td>Secondary Timing Chain Holder</td>
<td>522902</td>
<td>8515</td>
</tr>
<tr>
<td>2002-2006</td>
<td>Dodge</td>
<td>Ram Truck</td>
<td>4.7L V8</td>
<td>Secondary Timing Chain Holder</td>
<td>522902</td>
<td>8515</td>
</tr>
<tr>
<td>1999-2006</td>
<td>Jeep</td>
<td>Grand Cherokee</td>
<td>4.7L V8</td>
<td>Secondary Timing Chain Holder</td>
<td>522902</td>
<td>8515</td>
</tr>
<tr>
<td>2006</td>
<td>Jeep</td>
<td>Commander</td>
<td>4.7L V8</td>
<td>Secondary Timing Chain Holder</td>
<td>522902</td>
<td>8515</td>
</tr>
<tr>
<td>2000-2006</td>
<td>Dodge</td>
<td>Durango</td>
<td>4.7L V8</td>
<td>Secondary Timing Chain Holder</td>
<td>522902</td>
<td>8515</td>
</tr>
<tr>
<td>2000-2006</td>
<td>Dodge</td>
<td>Dakota</td>
<td>4.7L V8</td>
<td>Secondary Timing Chain Holder</td>
<td>522902</td>
<td>8515</td>
</tr>
<tr>
<td>2002-2006</td>
<td>Dodge</td>
<td>Ram Truck</td>
<td>4.7L V8</td>
<td>Secondary Timing Chain Holder</td>
<td>522902</td>
<td>8515</td>
</tr>
</tbody>
</table>
GM In-line 4-Cylinder Cam Tool Set

- Comprehensive tool kit designed to save time when servicing GM 4-cylinder engines.
- Tools are actually easier to use than the original OE essential tools.

No. 6685 – GM In-line 4-Cylinder Cam Tool Set. Wt., 17 lbs., 8 oz.

GM In-line 4-Cylinder Cam Tool Application Chart for 6685

Note: Some applications require more than one tool to accomplish the task.

<table>
<thead>
<tr>
<th>Year</th>
<th>Make</th>
<th>Model</th>
<th>Engine</th>
<th>Tool Description</th>
<th>OTC PN</th>
<th>OE PN</th>
</tr>
</thead>
<tbody>
<tr>
<td>1988-1995</td>
<td>Buick</td>
<td>Skylark</td>
<td>2.3L</td>
<td>Camshaft Sprocket Wrench</td>
<td>527046</td>
<td>J-36013</td>
</tr>
<tr>
<td>1990-1991</td>
<td>Oldsmobile</td>
<td>Calais</td>
<td>2.3L</td>
<td>Camshaft Sprocket Wrench</td>
<td>527046</td>
<td>J-36013</td>
</tr>
<tr>
<td>1987-1991</td>
<td>Oldsmobile</td>
<td>Calais</td>
<td>2.3L</td>
<td>Camshaft Sprocket Wrench</td>
<td>527046</td>
<td>J-36013</td>
</tr>
<tr>
<td>1988-1995</td>
<td>Pontiac</td>
<td>Grand Am</td>
<td>2.3L</td>
<td>Camshaft Sprocket Wrench</td>
<td>527046</td>
<td>J-36013</td>
</tr>
<tr>
<td>1995</td>
<td>Pontiac</td>
<td>Sunfire</td>
<td>2.3L</td>
<td>Camshaft Sprocket Wrench</td>
<td>527046</td>
<td>J-36013</td>
</tr>
<tr>
<td>1996-1998</td>
<td>Buick</td>
<td>Skylark</td>
<td>2.4L</td>
<td>Camshaft Sprocket Wrench</td>
<td>527049</td>
<td>J-39579</td>
</tr>
<tr>
<td>1996-2002</td>
<td>Chevrolet</td>
<td>Cavalier</td>
<td>2.4L</td>
<td>Camshaft Sprocket Wrench</td>
<td>527049</td>
<td>J-39579</td>
</tr>
<tr>
<td>1996-1998</td>
<td>Oldsmobile</td>
<td>Achieva</td>
<td>2.4L</td>
<td>Camshaft Sprocket Wrench</td>
<td>527049</td>
<td>J-39579</td>
</tr>
<tr>
<td>1999-2001</td>
<td>Oldsmobile</td>
<td>Alero</td>
<td>2.4L</td>
<td>Camshaft Sprocket Wrench</td>
<td>527049</td>
<td>J-39579</td>
</tr>
<tr>
<td>1996-2001</td>
<td>Pontiac</td>
<td>Grand Am</td>
<td>2.4L</td>
<td>Camshaft Sprocket Wrench</td>
<td>527049</td>
<td>J-39579</td>
</tr>
<tr>
<td>1996-2002</td>
<td>Pontiac</td>
<td>Sunfire</td>
<td>2.4L</td>
<td>Camshaft Sprocket Wrench</td>
<td>527049</td>
<td>J-39579</td>
</tr>
<tr>
<td>1988-1998</td>
<td>Buick</td>
<td>Skylark</td>
<td>2.3L/2.4L</td>
<td>Camshaft Timing Alignment Pins</td>
<td>527045</td>
<td>J-36008A</td>
</tr>
<tr>
<td>1996-2002</td>
<td>Chevrolet</td>
<td>Cavalier</td>
<td>2.3L/2.4L</td>
<td>Camshaft Timing Alignment Pins</td>
<td>527045</td>
<td>J-36008A</td>
</tr>
<tr>
<td>1987-1991</td>
<td>Oldsmobile</td>
<td>Calais</td>
<td>2.3L/2.4L</td>
<td>Camshaft Timing Alignment Pins</td>
<td>527045</td>
<td>J-36008A</td>
</tr>
<tr>
<td>1990-1991</td>
<td>Oldsmobile</td>
<td>Calais</td>
<td>2.3L/2.4L</td>
<td>Camshaft Timing Alignment Pins</td>
<td>527045</td>
<td>J-36008A</td>
</tr>
<tr>
<td>1992-1998</td>
<td>Oldsmobile</td>
<td>Achieva</td>
<td>2.3L/2.4L</td>
<td>Camshaft Timing Alignment Pins</td>
<td>527045</td>
<td>J-36008A</td>
</tr>
<tr>
<td>1999-2001</td>
<td>Oldsmobile</td>
<td>Alero</td>
<td>2.3L/2.4L</td>
<td>Camshaft Timing Alignment Pins</td>
<td>527045</td>
<td>J-36008A</td>
</tr>
<tr>
<td>1998-2001</td>
<td>Pontiac</td>
<td>Grand Am</td>
<td>2.3L/2.4L</td>
<td>Camshaft Timing Alignment Pins</td>
<td>527045</td>
<td>J-36008A</td>
</tr>
<tr>
<td>1995-2002</td>
<td>Pontiac</td>
<td>Sunfire</td>
<td>2.3L/2.4L</td>
<td>Camshaft Timing Alignment Pins</td>
<td>527045</td>
<td>J-36008A</td>
</tr>
<tr>
<td>1996-1998</td>
<td>Buick</td>
<td>Skylark</td>
<td>2.4L</td>
<td>Timing Chain Tensioner &amp; Shoe Retainer</td>
<td>532174</td>
<td>NA</td>
</tr>
<tr>
<td>1996-2002</td>
<td>Chevrolet</td>
<td>Cavalier</td>
<td>2.4L</td>
<td>Timing Chain Tensioner &amp; Shoe Retainer</td>
<td>532174</td>
<td>NA</td>
</tr>
<tr>
<td>1996-1998</td>
<td>Oldsmobile</td>
<td>Achieva</td>
<td>2.4L</td>
<td>Timing Chain Tensioner &amp; Shoe Retainer</td>
<td>532174</td>
<td>NA</td>
</tr>
<tr>
<td>1999-2001</td>
<td>Oldsmobile</td>
<td>Alero</td>
<td>2.4L</td>
<td>Timing Chain Tensioner &amp; Shoe Retainer</td>
<td>532174</td>
<td>NA</td>
</tr>
<tr>
<td>1996-2001</td>
<td>Pontiac</td>
<td>Grand Am</td>
<td>2.4L</td>
<td>Timing Chain Tensioner &amp; Shoe Retainer</td>
<td>532174</td>
<td>NA</td>
</tr>
<tr>
<td>1996-2002</td>
<td>Pontiac</td>
<td>Sunfire</td>
<td>2.4L</td>
<td>Timing Chain Tensioner &amp; Shoe Retainer</td>
<td>532174</td>
<td>NA</td>
</tr>
<tr>
<td>1988-1995</td>
<td>Buick</td>
<td>Skylark</td>
<td>2.3L</td>
<td>Timing Chain Tensioner Retainer</td>
<td>532195</td>
<td>J-36589</td>
</tr>
<tr>
<td>1987-1991</td>
<td>Oldsmobile</td>
<td>Calais</td>
<td>2.3L</td>
<td>Timing Chain Tensioner Retainer</td>
<td>532195</td>
<td>J-36589</td>
</tr>
<tr>
<td>1990-1991</td>
<td>Oldsmobile</td>
<td>Calais</td>
<td>2.3L</td>
<td>Timing Chain Tensioner Retainer</td>
<td>532195</td>
<td>J-36589</td>
</tr>
<tr>
<td>1992-1995</td>
<td>Oldsmobile</td>
<td>Achieva</td>
<td>2.3L</td>
<td>Timing Chain Tensioner Retainer</td>
<td>532195</td>
<td>J-36589</td>
</tr>
<tr>
<td>1988-1995</td>
<td>Pontiac</td>
<td>Grand Am</td>
<td>2.3L</td>
<td>Timing Chain Tensioner Retainer</td>
<td>532195</td>
<td>J-36589</td>
</tr>
<tr>
<td>1995</td>
<td>Pontiac</td>
<td>Sunfire</td>
<td>2.3L</td>
<td>Timing Chain Tensioner Retainer</td>
<td>532195</td>
<td>J-36589</td>
</tr>
<tr>
<td>2002-2005</td>
<td>Chevrolet</td>
<td>Cavalier</td>
<td>2.2L vin F</td>
<td>Timing Chain Tensioner Loading Tools</td>
<td>527061-1 &amp; 527061-2</td>
<td>J-45027</td>
</tr>
<tr>
<td>2003-2006</td>
<td>Chevrolet</td>
<td>Malibu</td>
<td>2.2L vin F</td>
<td>Timing Chain Tensioner Loading Tools</td>
<td>527061-1 &amp; 527061-2</td>
<td>J-45027</td>
</tr>
<tr>
<td>2004-2005</td>
<td>Chevrolet</td>
<td>Malibu Classic</td>
<td>2.2L vin F</td>
<td>Timing Chain Tensioner Loading Tools</td>
<td>527061-1 &amp; 527061-2</td>
<td>J-45027</td>
</tr>
<tr>
<td>2002-2004</td>
<td>Oldsmobile</td>
<td>Alero</td>
<td>2.2L vin F</td>
<td>Timing Chain Tensioner Loading Tools</td>
<td>527061-1 &amp; 527061-2</td>
<td>J-45027</td>
</tr>
<tr>
<td>2002-2005</td>
<td>Pontiac</td>
<td>Sunfire</td>
<td>2.2L vin F</td>
<td>Timing Chain Tensioner Loading Tools</td>
<td>527061-1 &amp; 527061-2</td>
<td>J-45027</td>
</tr>
<tr>
<td>2002-2005</td>
<td>Pontiac</td>
<td>Grand Am</td>
<td>2.2L vin F</td>
<td>Timing Chain Tensioner Loading Tools</td>
<td>527061-1 &amp; 527061-2</td>
<td>J-45027</td>
</tr>
</tbody>
</table>
## GM In-line 4-Cylinder Cam Tool Application Chart for 6685

Note: Some applications require more than one tool to accomplish the task.

<table>
<thead>
<tr>
<th>Year</th>
<th>Make</th>
<th>Model</th>
<th>Engine</th>
<th>Tool Description</th>
<th>OTC PN</th>
<th>OE PN</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000-05</td>
<td>Saturn</td>
<td>L Series</td>
<td>2.2L vin F</td>
<td>Timing Chain Tensioner Loading Tools</td>
<td>527061-1 &amp; 527061-2</td>
<td>J-45027</td>
</tr>
<tr>
<td>2002-06</td>
<td>Saturn</td>
<td>Vue</td>
<td>2.2L vin F</td>
<td>Timing Chain Tensioner Loading Tools</td>
<td>527061-1 &amp; 527061-2</td>
<td>J-45027</td>
</tr>
<tr>
<td>2003-06</td>
<td>Saturn</td>
<td>Ion</td>
<td>2.2L vin F</td>
<td>Timing Chain Tensioner Loading Tools</td>
<td>527061-1 &amp; 527061-2</td>
<td>J-45027</td>
</tr>
<tr>
<td>2005-06</td>
<td>Chevrolet</td>
<td>Cobalt</td>
<td>2.2L vin F</td>
<td>Timing Chain Tensioner Loading Tools</td>
<td>527061-1 &amp; 527061-2</td>
<td>J-45027</td>
</tr>
<tr>
<td>2005-06</td>
<td>Chevrolet</td>
<td>Cobalt</td>
<td>2.4L vin B</td>
<td>Timing Chain Tensioner Loading Tools</td>
<td>527061-1 &amp; 527061-2</td>
<td>J-45027</td>
</tr>
<tr>
<td>2006</td>
<td>Chevrolet</td>
<td>HHR</td>
<td>2.4L vin B</td>
<td>Timing Chain Tensioner Loading Tools</td>
<td>527061-1 &amp; 527061-2</td>
<td>J-45027</td>
</tr>
<tr>
<td>2006</td>
<td>Pontiac</td>
<td>G6</td>
<td>2.4L vin B</td>
<td>Timing Chain Tensioner Loading Tools</td>
<td>527061-1 &amp; 527061-2</td>
<td>J-45027</td>
</tr>
<tr>
<td>2006</td>
<td>Pontiac</td>
<td>Pursuit</td>
<td>2.4L vin B</td>
<td>Timing Chain Tensioner Loading Tools</td>
<td>527061-1 &amp; 527061-2</td>
<td>J-45027</td>
</tr>
<tr>
<td>2006</td>
<td>Pontiac</td>
<td>Solstice</td>
<td>2.4L vin B</td>
<td>Timing Chain Tensioner Loading Tools</td>
<td>527061-1 &amp; 527061-2</td>
<td>J-45027</td>
</tr>
<tr>
<td>2005-06</td>
<td>Chevrolet</td>
<td>Cobalt</td>
<td>2.0L</td>
<td>Timing Chain Tensioner Loading Tools</td>
<td>527061-1 &amp; 527061-2</td>
<td>J-45027</td>
</tr>
<tr>
<td>2002-05</td>
<td>Chevrolet</td>
<td>Cavalier</td>
<td>2.2L vin F</td>
<td>Camshaft Sprocket Holding Tool</td>
<td>527056</td>
<td>J-45027</td>
</tr>
<tr>
<td>2003-06</td>
<td>Chevrolet</td>
<td>Malibu</td>
<td>2.2L vin F</td>
<td>Camshaft Sprocket Holding Tool</td>
<td>527056</td>
<td>J-45027</td>
</tr>
<tr>
<td>2004-05</td>
<td>Chevrolet</td>
<td>Malibu Classic</td>
<td>2.2L vin F</td>
<td>Camshaft Sprocket Holding Tool</td>
<td>527056</td>
<td>J-45027</td>
</tr>
<tr>
<td>2002-04</td>
<td>Oldsmobile</td>
<td>Alero</td>
<td>2.2L vin F</td>
<td>Camshaft Sprocket Holding Tool</td>
<td>527056</td>
<td>J-45027</td>
</tr>
<tr>
<td>2002-05</td>
<td>Pontiac</td>
<td>Sunfire</td>
<td>2.2L vin F</td>
<td>Camshaft Sprocket Holding Tool</td>
<td>527056</td>
<td>J-45027</td>
</tr>
<tr>
<td>2002-05</td>
<td>Pontiac</td>
<td>Grand Am</td>
<td>2.2L vin F</td>
<td>Camshaft Sprocket Holding Tool</td>
<td>527056</td>
<td>J-45027</td>
</tr>
<tr>
<td>2000-05</td>
<td>Saturn</td>
<td>L Series</td>
<td>2.2L vin F</td>
<td>Camshaft Sprocket Holding Tool</td>
<td>527056</td>
<td>J-45027</td>
</tr>
<tr>
<td>2002-06</td>
<td>Saturn</td>
<td>Vue</td>
<td>2.2L vin F</td>
<td>Camshaft Sprocket Holding Tool</td>
<td>527056</td>
<td>J-45027</td>
</tr>
<tr>
<td>2003-06</td>
<td>Saturn</td>
<td>Ion</td>
<td>2.2L vin F</td>
<td>Camshaft Sprocket Holding Tool</td>
<td>527056</td>
<td>J-45027</td>
</tr>
<tr>
<td>2005-06</td>
<td>Chevrolet</td>
<td>Cobalt</td>
<td>2.2L vin F</td>
<td>Camshaft Sprocket Holding Tool</td>
<td>527056</td>
<td>J-45027</td>
</tr>
<tr>
<td>2005-06</td>
<td>Chevrolet</td>
<td>Cobalt</td>
<td>2.0L</td>
<td>Camshaft Sprocket Holding Tool</td>
<td>527056</td>
<td>J-45027</td>
</tr>
<tr>
<td>2006</td>
<td>Chevrolet</td>
<td>Cobalt</td>
<td>2.4L vin B</td>
<td>Camshaft Sprocket Holding Tool</td>
<td>527056</td>
<td>J-45027</td>
</tr>
<tr>
<td>2006</td>
<td>Chevrolet</td>
<td>HHR</td>
<td>2.4L vin B</td>
<td>Camshaft Sprocket Holding Tool</td>
<td>527056</td>
<td>J-45027</td>
</tr>
<tr>
<td>2006</td>
<td>Pontiac</td>
<td>G6</td>
<td>2.4L vin B</td>
<td>Camshaft Sprocket Holding Tool</td>
<td>527056</td>
<td>J-45027</td>
</tr>
<tr>
<td>2006</td>
<td>Pontiac</td>
<td>Pursuit</td>
<td>2.4L vin B</td>
<td>Camshaft Sprocket Holding Tool</td>
<td>527056</td>
<td>J-45027</td>
</tr>
<tr>
<td>2006</td>
<td>Pontiac</td>
<td>Solstice</td>
<td>2.4L vin B</td>
<td>Camshaft Sprocket Holding Tool</td>
<td>527056</td>
<td>J-45027</td>
</tr>
<tr>
<td>2002-05</td>
<td>Chevrolet</td>
<td>Cavalier</td>
<td>2.2L vin F</td>
<td>Timing Chain Holders</td>
<td>536186 &amp; 536187</td>
<td>J-44217-1 &amp; J44217-2</td>
</tr>
<tr>
<td>2003-06</td>
<td>Chevrolet</td>
<td>Malibu</td>
<td>2.2L vin F</td>
<td>Timing Chain Holders</td>
<td>536186 &amp; 536187</td>
<td>J-44217-1 &amp; J44217-2</td>
</tr>
<tr>
<td>2002-04</td>
<td>Oldsmobile</td>
<td>Alero</td>
<td>2.2L vin F</td>
<td>Timing Chain Holders</td>
<td>536186 &amp; 536187</td>
<td>J-44217-1 &amp; J44217-2</td>
</tr>
<tr>
<td>2002-05</td>
<td>Pontiac</td>
<td>Grand Am</td>
<td>2.2L vin F</td>
<td>Timing Chain Holders</td>
<td>536186 &amp; 536187</td>
<td>J-44217-1 &amp; J44217-2</td>
</tr>
<tr>
<td>2002-06</td>
<td>Saturn</td>
<td>Vue</td>
<td>2.2L vin F</td>
<td>Timing Chain Holders</td>
<td>536186 &amp; 536187</td>
<td>J-44217-1 &amp; J44217-2</td>
</tr>
<tr>
<td>2003-06</td>
<td>Saturn</td>
<td>Ion</td>
<td>2.2L vin F</td>
<td>Timing Chain Holders</td>
<td>536186 &amp; 536187</td>
<td>J-44217-1 &amp; J44217-2</td>
</tr>
<tr>
<td>2005-06</td>
<td>Chevrolet</td>
<td>Cobalt</td>
<td>2.2L vin F</td>
<td>Timing Chain Holders</td>
<td>536186 &amp; 536187</td>
<td>J-44217-1 &amp; J44217-2</td>
</tr>
<tr>
<td>2005-06</td>
<td>Chevrolet</td>
<td>Cobalt</td>
<td>2.0L</td>
<td>Timing Chain Holders</td>
<td>536186 &amp; 536187</td>
<td>J-44217-1 &amp; J44217-2</td>
</tr>
<tr>
<td>2005-06</td>
<td>Chevrolet</td>
<td>Cobalt</td>
<td>2.4L vin B</td>
<td>Timing Chain Holders</td>
<td>536186 &amp; 536187</td>
<td>J-44217-1 &amp; J44217-2</td>
</tr>
</tbody>
</table>
### GM In-line 4-Cylinder Cam Tool Application Chart for 6685

Note: Some applications require more than one tool to accomplish the task.

<table>
<thead>
<tr>
<th>Year</th>
<th>Make</th>
<th>Model</th>
<th>Engine</th>
<th>Tool Description</th>
<th>OTC PN</th>
<th>OE PN</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>Chevrolet</td>
<td>HHR</td>
<td>2.4L vin B</td>
<td>Timing Chain Holders</td>
<td>536186 &amp; 536187</td>
<td>J-44217-1 &amp; J44217-2</td>
</tr>
<tr>
<td>2006</td>
<td>Pontiac</td>
<td>Solstice</td>
<td>2.4L vin B</td>
<td>Timing Chain Holders</td>
<td>536186 &amp; 536187</td>
<td>J-44217-1 &amp; J44217-2</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Chevrolet</td>
<td>Colorado</td>
<td>2.8L</td>
<td>Camshaft Sprocket Holding Tool</td>
<td>536181</td>
<td>J-44222</td>
</tr>
<tr>
<td>2004-2006</td>
<td>GMC</td>
<td>Canyon</td>
<td>2.8L</td>
<td>Camshaft Sprocket Holding Tool</td>
<td>536181</td>
<td>J-44222</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Chevrolet</td>
<td>Colorado</td>
<td>2.8L</td>
<td>Camshaft Holding Tool</td>
<td>536172</td>
<td>J-44221</td>
</tr>
<tr>
<td>2004-2006</td>
<td>GMC</td>
<td>Canyon</td>
<td>2.8L</td>
<td>Camshaft Holding Tool</td>
<td>536172</td>
<td>J-44221</td>
</tr>
<tr>
<td>2002-2005</td>
<td>Chevrolet</td>
<td>Cavalier</td>
<td>2.2L vin F</td>
<td>Crankshaft Pulley Holder</td>
<td>536178</td>
<td>J-38122</td>
</tr>
<tr>
<td>2003-2006</td>
<td>Chevrolet</td>
<td>Malibu</td>
<td>2.2L vin F</td>
<td>Crankshaft Pulley Holder</td>
<td>536178</td>
<td>J-38122</td>
</tr>
<tr>
<td>2004-2005</td>
<td>Chevrolet</td>
<td>Malibu Classic</td>
<td>2.2L vin F</td>
<td>Crankshaft Pulley Holder</td>
<td>536178</td>
<td>J-38122</td>
</tr>
<tr>
<td>2002-2004</td>
<td>Oldsmobile</td>
<td>Alero</td>
<td>2.2L vin F</td>
<td>Crankshaft Pulley Holder</td>
<td>536178</td>
<td>J-38122</td>
</tr>
<tr>
<td>2002-2005</td>
<td>Pontiac</td>
<td>Sunfire</td>
<td>2.2L vin F</td>
<td>Crankshaft Pulley Holder</td>
<td>536178</td>
<td>J-38122</td>
</tr>
<tr>
<td>2002-2005</td>
<td>Pontiac</td>
<td>Grand Am</td>
<td>2.2L vin F</td>
<td>Crankshaft Pulley Holder</td>
<td>536178</td>
<td>J-38122</td>
</tr>
<tr>
<td>2000-2005</td>
<td>Saturn</td>
<td>L Series</td>
<td>2.2L vin F</td>
<td>Crankshaft Pulley Holder</td>
<td>536178</td>
<td>J-38122</td>
</tr>
<tr>
<td>2002-2006</td>
<td>Saturn</td>
<td>Vue</td>
<td>2.2L vin F</td>
<td>Crankshaft Pulley Holder</td>
<td>536178</td>
<td>J-38122</td>
</tr>
<tr>
<td>2003-2006</td>
<td>Saturn</td>
<td>Ion</td>
<td>2.2L vin F</td>
<td>Crankshaft Pulley Holder</td>
<td>536178</td>
<td>J-38122</td>
</tr>
<tr>
<td>2005-2006</td>
<td>Chevrolet</td>
<td>Cobalt</td>
<td>2.2L vin F</td>
<td>Crankshaft Pulley Holder</td>
<td>536178</td>
<td>J-38122</td>
</tr>
<tr>
<td>2005-2006</td>
<td>Chevrolet</td>
<td>Cobalt</td>
<td>2.0L</td>
<td>Crankshaft Pulley Holder</td>
<td>536178</td>
<td>J-38122</td>
</tr>
<tr>
<td>2005-2006</td>
<td>Chevrolet</td>
<td>Cobalt</td>
<td>2.4L vin B</td>
<td>Crankshaft Pulley Holder</td>
<td>536178</td>
<td>J-38122</td>
</tr>
<tr>
<td>2006</td>
<td>Chevrolet</td>
<td>HHR</td>
<td>2.4L vin B</td>
<td>Crankshaft Pulley Holder</td>
<td>536178</td>
<td>J-38122</td>
</tr>
<tr>
<td>2006</td>
<td>Pontiac</td>
<td>G6</td>
<td>2.4L vin B</td>
<td>Crankshaft Pulley Holder</td>
<td>536178</td>
<td>J-38122</td>
</tr>
<tr>
<td>2006</td>
<td>Pontiac</td>
<td>Pursuit</td>
<td>2.4L vin B</td>
<td>Crankshaft Pulley Holder</td>
<td>536178</td>
<td>J-38122</td>
</tr>
<tr>
<td>2006</td>
<td>Pontiac</td>
<td>Solstice</td>
<td>2.4L vin B</td>
<td>Crankshaft Pulley Holder</td>
<td>536178</td>
<td>J-38122</td>
</tr>
<tr>
<td>1996-1998</td>
<td>Buick</td>
<td>Skylark</td>
<td>2.4L</td>
<td>Crankshaft Pulley Holder</td>
<td>536178</td>
<td>J-38122</td>
</tr>
<tr>
<td>1996-2002</td>
<td>Chevrolet</td>
<td>Cavalier</td>
<td>2.4L</td>
<td>Crankshaft Pulley Holder</td>
<td>536178</td>
<td>J-38122</td>
</tr>
<tr>
<td>1996-1998</td>
<td>Oldsmobile</td>
<td>Achieva</td>
<td>2.4L</td>
<td>Crankshaft Pulley Holder</td>
<td>536178</td>
<td>J-38122</td>
</tr>
<tr>
<td>1999-2001</td>
<td>Oldsmobile</td>
<td>Alero</td>
<td>2.4L</td>
<td>Crankshaft Pulley Holder</td>
<td>536178</td>
<td>J-38122</td>
</tr>
<tr>
<td>1996-2001</td>
<td>Pontiac</td>
<td>Grand Am</td>
<td>2.4L</td>
<td>Crankshaft Pulley Holder</td>
<td>536178</td>
<td>J-38122</td>
</tr>
<tr>
<td>1996-2002</td>
<td>Pontiac</td>
<td>Sunfire</td>
<td>2.4L</td>
<td>Crankshaft Pulley Holder</td>
<td>536178</td>
<td>J-38122</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Chevrolet</td>
<td>Aveo</td>
<td>1.6L</td>
<td>Timing Belt Adjuster</td>
<td>536173</td>
<td>J-42492A</td>
</tr>
<tr>
<td>2000-2002</td>
<td>Saturn</td>
<td>SC-2,SL-2, SW-2</td>
<td>1.9L vin 7</td>
<td>Camshaft Holding Tool</td>
<td>536174</td>
<td>J-43299</td>
</tr>
<tr>
<td>1999-2002</td>
<td>Saturn</td>
<td>SC-2,SL-2, SW-2</td>
<td>1.9L vin 7</td>
<td>Camshaft Timing Alignment Pins</td>
<td>536254</td>
<td>NA</td>
</tr>
<tr>
<td>1999-2002</td>
<td>Saturn</td>
<td>SC-2,SL-2, SW-2</td>
<td>1.9L vin 7</td>
<td>Timing Chain Tensioner Retainer</td>
<td>536255</td>
<td>NA</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Chevrolet</td>
<td>Colorado</td>
<td>2.8L</td>
<td>Timing Chain Holder</td>
<td>536265</td>
<td>J-44217-46</td>
</tr>
<tr>
<td>2004-2006</td>
<td>GMC</td>
<td>Canyon</td>
<td>2.8L</td>
<td>Timing Chain Holder</td>
<td>536265</td>
<td>J-44217-46</td>
</tr>
</tbody>
</table>
GM NorthStar V8 Cam Tool Application Chart

- Kit is indispensable for quickly and correctly servicing GM NorthStar 4.0L and 4.6L V8 engines.
- Over one million NorthStar V8s have been sold since 1993; cylinder heads and valve trains tend to wear out somewhere between 80,000 to 120,000 miles.

No. 6686 – GM NorthStar V8 cam tool kit.
Wt., 5 lbs., 1 oz.

<table>
<thead>
<tr>
<th>Year</th>
<th>Make</th>
<th>Model</th>
<th>Engine</th>
<th>Tool Description</th>
<th>OTC PN</th>
<th>OE PN</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993-1999</td>
<td>Cadillac</td>
<td>Eldorado Seville</td>
<td>4.6L</td>
<td>Cam Chain Tension Tool</td>
<td>527048</td>
<td>J-38822</td>
</tr>
<tr>
<td>1994-1999</td>
<td>Cadillac</td>
<td>Deville Concours</td>
<td>4.6L</td>
<td>Cam Chain Tension Tool</td>
<td>527048</td>
<td>J-38822</td>
</tr>
<tr>
<td>2000-2002</td>
<td>Cadillac</td>
<td>Eldorado</td>
<td>4.6L</td>
<td>Crankshaft Rotating Tool</td>
<td>527050</td>
<td>J-39946</td>
</tr>
<tr>
<td>2000-2005</td>
<td>Cadillac</td>
<td>Seville Deville</td>
<td>4.6L</td>
<td>Crankshaft Rotating Tool</td>
<td>527050</td>
<td>J-39946</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Cadillac</td>
<td>XLR, SRX</td>
<td>4.6L</td>
<td>Crankshaft Rotating Tool</td>
<td>527050</td>
<td>J-39946</td>
</tr>
<tr>
<td>2005-2006</td>
<td>Cadillac</td>
<td>STS</td>
<td>4.6L</td>
<td>Crankshaft Rotating Tool</td>
<td>527050</td>
<td>J-39946</td>
</tr>
<tr>
<td>2006</td>
<td>Cadillac</td>
<td>DTS</td>
<td>4.6L</td>
<td>Crankshaft Rotating Tool</td>
<td>527050</td>
<td>J-39946</td>
</tr>
<tr>
<td>2001-2003</td>
<td>Oldsmobile</td>
<td>Aurora</td>
<td>4.0L</td>
<td>Camshaft Holding Tool</td>
<td>527050</td>
<td>J-39946</td>
</tr>
<tr>
<td>2000-2002</td>
<td>Cadillac</td>
<td>Eldorado</td>
<td>4.6L</td>
<td>Camshaft Holding Tool</td>
<td>527057</td>
<td>J-44212</td>
</tr>
<tr>
<td>2000-2005</td>
<td>Cadillac</td>
<td>Seville Deville</td>
<td>4.6L</td>
<td>Camshaft Holding Tool</td>
<td>527057</td>
<td>J-44212</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Cadillac</td>
<td>XLR, SRX</td>
<td>4.6L</td>
<td>Camshaft Holding Tool</td>
<td>527057</td>
<td>J-44212</td>
</tr>
<tr>
<td>2005-2006</td>
<td>Cadillac</td>
<td>STS</td>
<td>4.6L</td>
<td>Camshaft Holding Tool</td>
<td>527057</td>
<td>J-44212</td>
</tr>
<tr>
<td>2006</td>
<td>Cadillac</td>
<td>DTS</td>
<td>4.6L</td>
<td>Camshaft Holding Tool</td>
<td>527057</td>
<td>J-44212</td>
</tr>
<tr>
<td>2001-2003</td>
<td>Oldsmobile</td>
<td>Aurora</td>
<td>4.0L</td>
<td>Camshaft Holding Tool</td>
<td>527057</td>
<td>J-44212</td>
</tr>
<tr>
<td>2000-2002</td>
<td>Cadillac</td>
<td>Eldorado</td>
<td>4.6L</td>
<td>Secondary Drive Sprocket Fixture</td>
<td>527058</td>
<td>J-44213</td>
</tr>
<tr>
<td>2000-2005</td>
<td>Cadillac</td>
<td>Seville Deville</td>
<td>4.6L</td>
<td>Secondary Drive Sprocket Fixture</td>
<td>527058</td>
<td>J-44213</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Cadillac</td>
<td>XLR, SRX</td>
<td>4.6L</td>
<td>Secondary Drive Sprocket Fixture</td>
<td>527058</td>
<td>J-44213</td>
</tr>
<tr>
<td>2005-2006</td>
<td>Cadillac</td>
<td>STS</td>
<td>4.6L</td>
<td>Secondary Drive Sprocket Fixture</td>
<td>527058</td>
<td>J-44213</td>
</tr>
<tr>
<td>2006</td>
<td>Cadillac</td>
<td>DTS</td>
<td>4.6L</td>
<td>Secondary Drive Sprocket Fixture</td>
<td>527058</td>
<td>J-44213</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Pontiac</td>
<td>Bonneville</td>
<td>4.6L</td>
<td>Secondary Drive Sprocket Fixture</td>
<td>527058</td>
<td>J-44213</td>
</tr>
<tr>
<td>2006</td>
<td>Buick</td>
<td>Lucerne</td>
<td>4.6L</td>
<td>Secondary Drive Sprocket Fixture</td>
<td>527058</td>
<td>J-44213</td>
</tr>
<tr>
<td>2001-2003</td>
<td>Oldsmobile</td>
<td>Aurora</td>
<td>4.0L</td>
<td>Secondary Drive Sprocket Fixture</td>
<td>527058</td>
<td>J-44213</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Cadillac</td>
<td>SRX, STS, XLR</td>
<td>4.6L VIN A</td>
<td>Timing Chain Retention Tools</td>
<td>529636</td>
<td></td>
</tr>
<tr>
<td>2004-2006</td>
<td>Cadillac</td>
<td>SRX, STS, XLR</td>
<td>4.6L VIN A</td>
<td>Timing Chain Retention Tools</td>
<td>529637</td>
<td></td>
</tr>
<tr>
<td>2004-2006</td>
<td>Cadillac</td>
<td>SRX, STS, XLR</td>
<td>4.6L VIN A</td>
<td>Timing Chain Retention Tools</td>
<td>529638</td>
<td></td>
</tr>
<tr>
<td>2004-2006</td>
<td>Pontiac</td>
<td>Bonneville GPX</td>
<td>4.6L VIN A</td>
<td>Timing Chain Retention Tools</td>
<td>529636</td>
<td></td>
</tr>
<tr>
<td>2004-2006</td>
<td>Pontiac</td>
<td>Bonneville GPX</td>
<td>4.6L VIN A</td>
<td>Timing Chain Retention Tools</td>
<td>529637</td>
<td></td>
</tr>
<tr>
<td>2004-2006</td>
<td>Pontiac</td>
<td>Bonneville GPX</td>
<td>4.6L VIN A</td>
<td>Timing Chain Retention Tools</td>
<td>529638</td>
<td></td>
</tr>
</tbody>
</table>
GM Cam Tool Application Chart

### GM 6 Cylinder Cam Tool Set
- Required tools to adjust and hold camshaft timing on GM 3.0 and 3.2 V-6 engines.
- Kit is designed to save shop time when servicing GM 3.0 and 3.2 V-6 engines.

**No. 6687 – GM 6 cylinder cam tool set. Wt., 4 lbs., 13 oz.**

<table>
<thead>
<tr>
<th>Year</th>
<th>Make</th>
<th>Model</th>
<th>Engine</th>
<th>Tool Description</th>
<th>OTC PN</th>
<th>OE PN</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002-2003</td>
<td>Cadillac</td>
<td>CTS</td>
<td>3.2L vin N</td>
<td>Camshaft Locking Tool</td>
<td>536594</td>
<td>J-42069-1</td>
</tr>
<tr>
<td>1997-2001</td>
<td>Cadillac</td>
<td>Catera</td>
<td>3.0L vin R</td>
<td>Camshaft Locking Tool</td>
<td>536594</td>
<td>J-42069-1</td>
</tr>
<tr>
<td>2002-2003</td>
<td>Cadillac</td>
<td>CTS</td>
<td>3.2L vin N</td>
<td>Camshaft Locking Tool</td>
<td>536595</td>
<td>J-42069-2</td>
</tr>
<tr>
<td>2002-2003</td>
<td>Cadillac</td>
<td>CTS</td>
<td>3.2L vin N</td>
<td>Crankshaft Holding Tool</td>
<td>536596</td>
<td>J-42069-10</td>
</tr>
<tr>
<td>1997-2001</td>
<td>Cadillac</td>
<td>Catera</td>
<td>3.0L vin R</td>
<td>Crankshaft Holding Tool</td>
<td>536596</td>
<td>J-42069-10</td>
</tr>
<tr>
<td>2002-2003</td>
<td>Cadillac</td>
<td>CTS</td>
<td>3.2L vin N</td>
<td>Camshaft Alignment Gauge</td>
<td>536608</td>
<td>J-42069-20</td>
</tr>
<tr>
<td>1997-2001</td>
<td>Cadillac</td>
<td>Catera</td>
<td>3.0L vin R</td>
<td>Camshaft Alignment Gauge</td>
<td>536608</td>
<td>J-42069-20</td>
</tr>
<tr>
<td>2002-2003</td>
<td>Cadillac</td>
<td>CTS</td>
<td>3.2L vin N</td>
<td>Timing Belt Installation Tool</td>
<td>536611</td>
<td>J-42069-30</td>
</tr>
<tr>
<td>1997-2001</td>
<td>Cadillac</td>
<td>Catera</td>
<td>3.0L vin R</td>
<td>Timing Belt Installation Tool</td>
<td>536611</td>
<td>J-42069-30</td>
</tr>
<tr>
<td>2002-2003</td>
<td>Cadillac</td>
<td>CTS</td>
<td>3.2L vin N</td>
<td>Crankshaft socket</td>
<td>536613</td>
<td>MKM-602-21</td>
</tr>
<tr>
<td>1997-2001</td>
<td>Cadillac</td>
<td>Catera</td>
<td>3.0L vin R</td>
<td>Crankshaft socket</td>
<td>536613</td>
<td>MKM-602-21</td>
</tr>
</tbody>
</table>

### GM In-line 5, 6, or V6 Cam Tool Set
- Comprehensive tool kit designed to save time when servicing GM 5-, 6-cylinder engines.
- Tools are actually easier to use than the original OE essential tools.

**No. 6688 – GM In-line 5, 6, or V6 cam tool set. Wt., 17 lbs., 4 oz.**

<table>
<thead>
<tr>
<th>Year</th>
<th>Make</th>
<th>Model</th>
<th>Engine</th>
<th>Tool Description</th>
<th>OTC PN</th>
<th>OE PN</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-2006</td>
<td>Buick</td>
<td>Lacrosse</td>
<td>3.6L vin 7</td>
<td>Timing Chain Retention Tools</td>
<td>536589 &amp; 536590</td>
<td>EN-46108</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Buick</td>
<td>Rendezvous</td>
<td>3.6L vin 7</td>
<td>Timing Chain Retention Tools</td>
<td>536589 &amp; 536590</td>
<td>EN-46108</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Cadillac</td>
<td>CTS</td>
<td>3.6L vin 7</td>
<td>Timing Chain Retention Tools</td>
<td>536589 &amp; 536590</td>
<td>EN-46108</td>
</tr>
<tr>
<td>2005-2006</td>
<td>Cadillac</td>
<td>STS</td>
<td>3.6L vin 7</td>
<td>Timing Chain Retention Tools</td>
<td>536589 &amp; 536590</td>
<td>EN-46108</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Cadillac</td>
<td>SRX</td>
<td>3.6L vin 7</td>
<td>Timing Chain Retention Tools</td>
<td>536589 &amp; 536590</td>
<td>EN-46108</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Cadillac</td>
<td>CTS</td>
<td>3.6L vin 7</td>
<td>Timing Chain Retention Tools</td>
<td>536589 &amp; 536590</td>
<td>EN-46108</td>
</tr>
<tr>
<td>2005-2006</td>
<td>Buick</td>
<td>Lacrosse</td>
<td>3.6L vin 7</td>
<td>Crankshaft Turning Socket</td>
<td>536588</td>
<td>EN-46111</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Buick</td>
<td>Rendezvous</td>
<td>3.6L vin 7</td>
<td>Crankshaft Turning Socket</td>
<td>536588</td>
<td>EN-46111</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Cadillac</td>
<td>CTS</td>
<td>3.6L vin 7</td>
<td>Crankshaft Turning Socket</td>
<td>536588</td>
<td>EN-46111</td>
</tr>
<tr>
<td>2005-2006</td>
<td>Cadillac</td>
<td>STS</td>
<td>3.6L vin 7</td>
<td>Crankshaft Turning Socket</td>
<td>536588</td>
<td>EN-46111</td>
</tr>
</tbody>
</table>
### GM In-line 5, 6, or V6 Cam Tool Application Chart for 6688

Note: Some applications require more than one tool to accomplish the task.

<table>
<thead>
<tr>
<th>Year</th>
<th>Make</th>
<th>Model</th>
<th>Engine</th>
<th>Tool Description</th>
<th>OTC PN</th>
<th>OE PN</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004-2006</td>
<td>Cadillac</td>
<td>SRX</td>
<td>3.6L vin 7</td>
<td>Crankshaft Turning Socket</td>
<td>536588</td>
<td>EN-46111</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Cadillac</td>
<td>CTS</td>
<td>2.8L vin T</td>
<td>Crankshaft Turning Socket</td>
<td>536588</td>
<td>EN-46111</td>
</tr>
<tr>
<td>2005-2006</td>
<td>Buick</td>
<td>Lacrosse</td>
<td>3.6L vin 7</td>
<td>Timing Chain Tensioner Pins</td>
<td>536587</td>
<td>EN-46112</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Buick</td>
<td>Rendezvous</td>
<td>3.6L vin 7</td>
<td>Timing Chain Tensioner Pins</td>
<td>536587</td>
<td>EN-46112</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Cadillac</td>
<td>CTS</td>
<td>3.6L vin 7</td>
<td>Timing Chain Tensioner Pins</td>
<td>536587</td>
<td>EN-46112</td>
</tr>
<tr>
<td>2005-2006</td>
<td>Cadillac</td>
<td>STS</td>
<td>3.6L vin 7</td>
<td>Timing Chain Tensioner Pins</td>
<td>536587</td>
<td>EN-46112</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Cadillac</td>
<td>SRX</td>
<td>3.6L vin 7</td>
<td>Timing Chain Tensioner Pins</td>
<td>536587</td>
<td>EN-46112</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Cadillac</td>
<td>CTS</td>
<td>2.8L vin T</td>
<td>Timing Chain Tensioner Pins</td>
<td>536587</td>
<td>EN-46112</td>
</tr>
<tr>
<td>2005-2006</td>
<td>Buick</td>
<td>Lacrosse</td>
<td>3.6L vin 7</td>
<td>Timing Chain Tensioner Tool</td>
<td>536587</td>
<td>J-45027</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Buick</td>
<td>Rendezvous</td>
<td>3.6L vin 7</td>
<td>Timing Chain Tensioner Tool</td>
<td>536587</td>
<td>J-45027</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Cadillac</td>
<td>CTS</td>
<td>3.6L vin 7</td>
<td>Timing Chain Tensioner Tool</td>
<td>536587</td>
<td>J-45027</td>
</tr>
<tr>
<td>2005-2006</td>
<td>Cadillac</td>
<td>STS</td>
<td>3.6L vin 7</td>
<td>Timing Chain Tensioner Tool</td>
<td>536587</td>
<td>J-45027</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Cadillac</td>
<td>SRX</td>
<td>3.6L vin 7</td>
<td>Timing Chain Tensioner Tool</td>
<td>536587</td>
<td>J-45027</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Cadillac</td>
<td>CTS</td>
<td>2.8L vin T</td>
<td>Timing Chain Tensioner Tool</td>
<td>536587</td>
<td>J-45027</td>
</tr>
<tr>
<td>2005-2006</td>
<td>Buick</td>
<td>Lacrosse</td>
<td>3.6L vin 7</td>
<td>Camshaft Locking Tool</td>
<td>536584 &amp; 536585</td>
<td>EN-46105</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Buick</td>
<td>Rendezvous</td>
<td>3.6L vin 7</td>
<td>Camshaft Locking Tool</td>
<td>536584 &amp; 536585</td>
<td>EN-46105</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Cadillac</td>
<td>CTS</td>
<td>3.6L vin 7</td>
<td>Camshaft Locking Tool</td>
<td>536584 &amp; 536585</td>
<td>EN-46105</td>
</tr>
<tr>
<td>2005-2006</td>
<td>Cadillac</td>
<td>STS</td>
<td>3.6L vin 7</td>
<td>Camshaft Locking Tool</td>
<td>536584 &amp; 536585</td>
<td>EN-46105</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Cadillac</td>
<td>SRX</td>
<td>3.6L vin 7</td>
<td>Camshaft Locking Tool</td>
<td>536584 &amp; 536585</td>
<td>EN-46105</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Cadillac</td>
<td>CTS</td>
<td>2.8L vin T</td>
<td>Camshaft Locking Tool</td>
<td>536584 &amp; 536585</td>
<td>EN-46105</td>
</tr>
<tr>
<td>2002-2004</td>
<td>Oldsmobile</td>
<td>Bravada</td>
<td>4.2L vin S</td>
<td>Camshaft Holding Tool</td>
<td>536172</td>
<td>J-44221</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Buick</td>
<td>Rainier</td>
<td>4.2L vin S</td>
<td>Camshaft Holding Tool</td>
<td>536172</td>
<td>J-44221</td>
</tr>
<tr>
<td>2002-2006</td>
<td>Chevrolet</td>
<td>Trailblazer</td>
<td>4.2L vin S</td>
<td>Camshaft Holding Tool</td>
<td>536172</td>
<td>J-44221</td>
</tr>
<tr>
<td>2002-2006</td>
<td>GMC</td>
<td>Envoy</td>
<td>4.2L vin S</td>
<td>Camshaft Holding Tool</td>
<td>536172</td>
<td>J-44221</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Chevrolet</td>
<td>Colorado</td>
<td>3.5L vin 5 5 cylinder</td>
<td>Camshaft Holding Tool</td>
<td>536172</td>
<td>J-44221</td>
</tr>
<tr>
<td>2004-2006</td>
<td>GMC</td>
<td>Canyon</td>
<td>3.5L vin 5 5 cylinder</td>
<td>Camshaft Holding Tool</td>
<td>536172</td>
<td>J-44221</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Cadillac</td>
<td>CTS</td>
<td>2.8L vin T</td>
<td>Camshaft Sprocket Holding Tool</td>
<td>536189 &amp; 536187</td>
<td>J-44217</td>
</tr>
<tr>
<td>2002-2004</td>
<td>Oldsmobile</td>
<td>Bravada</td>
<td>4.2L vin S</td>
<td>Camshaft Sprocket Holding Tool</td>
<td>536189 &amp; 536187</td>
<td>J-44217</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Buick</td>
<td>Rainier</td>
<td>4.2L vin S</td>
<td>Camshaft Sprocket Holding Tool</td>
<td>536189 &amp; 536187</td>
<td>J-44217</td>
</tr>
<tr>
<td>2002-2006</td>
<td>Chevrolet</td>
<td>Trailblazer</td>
<td>4.2L vin S</td>
<td>Camshaft Sprocket Holding Tool</td>
<td>536189 &amp; 536187</td>
<td>J-44217</td>
</tr>
<tr>
<td>2002-2006</td>
<td>GMC</td>
<td>Envoy</td>
<td>4.2L vin S</td>
<td>Camshaft Sprocket Holding Tool</td>
<td>536189 &amp; 536187</td>
<td>J-44217</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Chevrolet</td>
<td>Colorado</td>
<td>3.5L vin 5 5 cylinder</td>
<td>Camshaft Sprocket Holding Tool</td>
<td>536189 &amp; 536187</td>
<td>J-44217</td>
</tr>
<tr>
<td>2004-2006</td>
<td>GMC</td>
<td>Canyon</td>
<td>3.5L vin 5 5 cylinder</td>
<td>Camshaft Sprocket Holding Tool</td>
<td>536189 &amp; 536187</td>
<td>J-44217</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Cadillac</td>
<td>CTS</td>
<td>2.8L vin T</td>
<td>Timing Chain Retention Tools</td>
<td>536189 &amp; 536187</td>
<td>J-44217</td>
</tr>
<tr>
<td>2002-2004</td>
<td>Oldsmobile</td>
<td>Bravada</td>
<td>4.2L vin S</td>
<td>Timing Chain Retention Tools</td>
<td>536189 &amp; 536187</td>
<td>J-44217</td>
</tr>
<tr>
<td>2002-2006</td>
<td>Chevrolet</td>
<td>Trailblazer</td>
<td>4.2L vin S</td>
<td>Timing Chain Retention Tools</td>
<td>536189 &amp; 536187</td>
<td>J-44217</td>
</tr>
<tr>
<td>2002-2006</td>
<td>GMC</td>
<td>Envoy</td>
<td>4.2L vin S</td>
<td>Timing Chain Retention Tools</td>
<td>536189 &amp; 536187</td>
<td>J-44217</td>
</tr>
<tr>
<td>2004-2006</td>
<td>Chevrolet</td>
<td>Colorado</td>
<td>3.5L vin 5 5 cylinder</td>
<td>Timing Chain Retention Tools</td>
<td>536189 &amp; 536187</td>
<td>J-44217</td>
</tr>
<tr>
<td>2004-2006</td>
<td>GMC</td>
<td>Canyon</td>
<td>3.5L vin 5 5 cylinder</td>
<td>Timing Chain Retention Tools</td>
<td>536189 &amp; 536187</td>
<td>J-44217</td>
</tr>
<tr>
<td>2001-2004</td>
<td>Chevrolet</td>
<td>Tracker</td>
<td>2.5L</td>
<td>Timing Chain Tensioner Pin</td>
<td>536586</td>
<td>EN-46330</td>
</tr>
<tr>
<td>2001-2002</td>
<td>Oldsmobile</td>
<td>Aurora</td>
<td>3.5L vin H</td>
<td>Timing Chain Tensioner Pin</td>
<td>536586</td>
<td>EN-46330</td>
</tr>
<tr>
<td>1999-2002</td>
<td>Oldsmobile</td>
<td>Intrigue</td>
<td>3.5L vin H</td>
<td>Timing Chain Tensioner Pin</td>
<td>536586</td>
<td>EN-46330</td>
</tr>
<tr>
<td>2001-2002</td>
<td>Oldsmobile</td>
<td>Aurora</td>
<td>3.5L vin H</td>
<td>Camshaft Holding Tool</td>
<td>527051</td>
<td>J-42038</td>
</tr>
<tr>
<td>1999-2002</td>
<td>Oldsmobile</td>
<td>Intrigue</td>
<td>3.5L vin H</td>
<td>Camshaft Holding Tool</td>
<td>527051</td>
<td>J-42038</td>
</tr>
<tr>
<td>2001-2002</td>
<td>Oldsmobile</td>
<td>Aurora</td>
<td>3.5L vin H</td>
<td>Cam Gear Holding Fixture</td>
<td>527052</td>
<td>J-42042</td>
</tr>
<tr>
<td>1999-2002</td>
<td>Oldsmobile</td>
<td>Intrigue</td>
<td>3.5L vin H</td>
<td>Cam Gear Holding Fixture</td>
<td>527052</td>
<td>J-42042</td>
</tr>
<tr>
<td>2001-2002</td>
<td>Oldsmobile</td>
<td>Aurora</td>
<td>3.5L vin H</td>
<td>Crankshaft Socket</td>
<td>527055</td>
<td>J-43032</td>
</tr>
<tr>
<td>1999-2002</td>
<td>Oldsmobile</td>
<td>Intrigue</td>
<td>3.5L vin H</td>
<td>Crankshaft Socket</td>
<td>527055</td>
<td>J-43032</td>
</tr>
<tr>
<td>2004-2005</td>
<td>Saturn</td>
<td>Vue</td>
<td>3.5L vin 4</td>
<td>Camshaft Holding Tool</td>
<td>536583</td>
<td>EN-46337</td>
</tr>
<tr>
<td>2004-2005</td>
<td>Saturn</td>
<td>Vue</td>
<td>3.5L vin 4</td>
<td>Timing Chain Tensioner Pin</td>
<td>536586</td>
<td>EN-46330</td>
</tr>
<tr>
<td>2004-2005</td>
<td>Saturn</td>
<td>Vue</td>
<td>3.5L vin 4</td>
<td>Timing Belt Tensioner Retainer</td>
<td>536582</td>
<td>EN-46331</td>
</tr>
</tbody>
</table>
Ford Crankshaft Positioning Tool
- Designed for use on Ford 1993–2004 4.2L, 4.6L 2-valve, 4.6L 4-valve, 5.4L V8, and 6.8L V10 engines when installing timing chains. These engines are not free-wheeling, and if an engine has “jumped time,” it is possible the cylinder heads have to be removed because of damage to the valves or pistons.
- Easily installs over the crankshaft and engine front cover alignment dowel to position the crankshaft at top-dead-center — the correct position for timing chain installation. OTC recommends the No. 6024 be used with Nos. 6009 and 6020 (but it is not required).

No. 6024 – Ford crankshaft positioning tool. Wt., 10 oz.

Camshafts Timing Tools
- Tool (A) holds the camshaft in the correct position; tool (B) is used to pull the cam gear from the camshaft; and tool (C) is used to turn the cam gear to time the camshaft.

No. 6045 – Camshaft timing tools. Wt., 3 lbs., 12 oz.

Chrysler Camshaft Alignment Tool Set
These special brackets are necessary to ensure exact alignment of the camshaft sprockets during timing belt installation on all 1993–current LH vehicles with a 3.5L OHC engine.

No. 7999 – Chrysler camshaft alignment tool set. Wt., 8 oz.

Chrysler Timing Belt Wrench

No. 7997 – Chrysler timing belt wrench. Wt., 3 oz.

Chrysler Timing Belt Adjustment Wrench
Guessing at the correct tension on timing belts is bad news — for you and your customers. To make belt tension adjustment easier on Chrysler’s 2.2L and 2.5L engines, this wrench is a big help. It holds the tension on the belt for you, while you tighten the nut to the correct torque — eliminates over or under tightening. Plus, the weight can be shifted from one side of the wrench to the other to accommodate conning areas.

No. 7695 – Chrysler timing belt adjustment wrench. Wt., 13 oz.
Universal Belt Tension Gauge
• Belt tension gauges are used to check drive belt tension on drive belts to ensure maximum belt and bearing life.
• Scale reads 30–180 inch lbs.
No. 6673 – Universal belt tension gauge. Wt., 1 lb., 7 oz.

Ford Spark Plug Socket
• This unique and patented design works on 2004–newer Ford vehicles with 5.4L, 4.6L, 5.4L, 3-valve Triton V8 & 6.8L Triton V10 engines.
• Socket end is 9/16". Soft rubber insert holds and protects spark plug during removal and installation.
• Extension is part of the socket. Easily fits down spark plug tube in cylinder head.
• Socket has a 3/8" drive for use with a ratchet or breaker bar.
No. 6900 – Ford F-150 spark plug socket, 5-7/8" long. Wt., 7 oz.

5/8" & 13/16" Spark Plug Sockets
• Works on GM, Chrysler, Ford, and many import vehicles with 5/8" or 13/16" spark plugs.
• Socket end has a soft rubber insert to hold and protect the spark plug during removal and installation.
• Drive end is 3/8" for use with ratchet or breaker bar.
No. 6899 – 5/8" Spark plug socket, 4-7/8" long. Wt., 7 oz.
No. 6898 – 13/16" Spark plug socket, 4-7/8" long. Wt., 7 oz.

3-Piece Spark Plug Socket Set
This kit combines the most popular spark plug sockets. Each socket has a 3/8" drive end for use with a ratchet or breaker bar. Socket ends have soft rubber inserts to hold and protect the spark plug during removal and installation.
• No. 6898 works on GM, Chrysler, Ford, and many import vehicles with 13/16" spark plugs, 4-7/8" long.
• No. 6899 works on GM, Chrysler, Ford, and many import vehicles with 5/8" spark plugs, 4-7/8" long.
• No. 6900 works on 2004–newer Ford vehicles with 5.4L, 4.6L, 5.4L, 3-valve Triton V8 & 6.8L Triton V10 engines, 5-7/8" long.
No. 6897 – 3-piece spark plug socket set. Wt., 2 lbs., 2 oz.

Ford Valve Spring Compressor Tool
Compresses valve springs for quicker, easier camshaft, valve seal, valve spring, or retainer service—because you don’t have to remove the head from the engine first! It’s an OEM-approved tool that you use with a 3/8" ratchet or breaker bar. Works on: 1991–2004 Ford vehicles with 4.6L, two-valve, V8 engines; 4.6 4V, 5.4 V8 and 6.8 V10.
No. 7928 – Ford valve spring compressor tool. Wt., 6 oz.
Ford Rear Main Seal Installer
This installer is the most accurate way to ensure that the rear main seal is set to the correct depth on the crankshaft. The installer fits over the seal, and with the two bolts included, attaches to the engine crankshaft. By alternately tightening the bolts, the seal is pulled into place quickly, easily, and with no damage to the rear main seal. Works on 2.0L, 2.3L, 2.3L OHC, 2.5L, 2.5L OHC 4-cylinder engines; 3.0L 2V, 3.0L 4V, 3.4L SOHC, 3.8L, 3.8L SC V6 engines; 4.6L 2V, 4.6L 4V, 5.0L and 5.8L V8 engines.
No. 7786 – Ford rear main seal installer. Wt., 2 lbs., 4 oz.

Ford Rear Crankshaft Seal Installer
• This installer works on crankshaft rear oil seals that come with or without a metal wear sleeve.
• Designed for use on 1993–1997 Aerostar or 1993–2006 Ranger and Explorer w/4.0L V6 engine
No. 7834 – Ford rear crankshaft seal installer. Wt., 1 lbs., 12 oz.

GM Oil Pump Drive Removal Tool
On certain GM V6 engines, the oil pump drive is difficult to get at, making it a real hassle to remove it to repair o-ring leaks. This tool removes the oil pump drive from the engine without first having to remove the exhaust cross-over pipe or other components.
For 1987–89 2.8L V6 engines; 1990–94 3.1L V6 engines; 1994 and newer 3100 V6 engines; and 1999 and newer 3400 engines.
No. 7943 – GM oil pump drive removal tool. Wt., 8 oz..

GM Crankshaft Balancer Puller Kit and Adapter Set
Everything you need to pull harmonic balancers having three tapped holes. The shoulder bolts are designed to prevent them from being installed too deeply, protecting the crank sensor and/or interrupter rings from damage. The spacer adapter gives the puller’s forcing screw something to push against. The kit works on 1990–2002 3300 and 3800 V6 engines. The No. 7911 adapter set consists of the spacer adapter and shoulder bolts only, for use with your No. 518 or No. 6930 flange-type puller.
No. 7911 – GM crankshaft balancer puller adapter set. Includes shoulder bolts and spacer adapter only. Wt., 8 oz.
No. 7912 – GM crankshaft balancer puller kit. Includes No. 518 flange-type puller and No. 7911 adapter set. Wt., 3 lbs., 2 oz.

Chrysler Harmonic Balancer Holding Tool
• Designed as a holding ring with three pins to fit into the openings on a harmonic balancer.
• Use with a 1/2" ratchet or breaker bar to hold the harmonic balancer in place when turning the bolt that holds the balancer to the crankshaft. Also use to hold the balancer when removing it from the engine.
No. 6495 – Chrysler harmonic balancer holding tool. Wt., 1 lb., 10 oz.
Harmonic Balancer Puller

Designed for removing damper pulleys in tight engine compartments, without removing the radiator. Use on the following:

- Chrysler engines from 1990–later, including 2.0L, 2.4L-4s; plus 2.5L, 2.7L, 3.3L, 3.5L, and 3.8L V6s.
- Ford 1995–later V8 engines with 3 spoke pressed on damper.
- Kit contains the 3-jaw puller, four lengths of forcing rods, and a forcing screw with a 3/8” square drive for ratchet use, and a 3/4” hex for wrench or socket use.

Replacement rods:
- No. 537757-4 – 5/16” x 4”
- No. 537757-5 – 5/16” x 5-13/32”
- No. 537757-6 – 5/16” x 6-1/2”
- No. 537757-7 – 5/16” x 7.13/32”

No. 6667 – Harmonic balancer puller. Wt., 2 lbs., 11 oz.

Harmonic Balancer Puller Set

- Includes No. 6267 puller, which removes the harmonic balancer from the crankshaft; and No. 6495 holding tool, which holds the harmonic balancer when tightening or loosening the crankshaft bolt, or removing the balancer.

No. 6284 – Harmonic balancer puller set, includes both the No. 6267 and the No. 6495 tools. Wt., 3 lbs., 7 oz.

Chrysler Crankshaft Damper Remover/Installer Kit

- The special 3-jaw puller is used with the insert to remove the crankshaft damper whenever timing belt, water pump, or front cover service is required. The tool kit includes a damper installing tool with bearing.
- Services Chrysler-built 2.0L, 2.4L, 2.5L, 3.3L and 3.5L engines.
- 1995–newer 3.3L and 3.5L V6 used in Chrysler New Yorker and Concorde, Dodge Intrepid, and Eagle Vision; 1995–newer 2.0L, 2.4L 4-cyl., and 2.5L V6 used in Cirrus, Stratus, and Breeze; 1995–newer 2.0L 4-cyl. used in Neon.

No. 6075 – Chrysler crankshaft damper remover/installer kit. Wt., 4 lbs., 8 oz.

Distributor Bushing Remover

- Used to remove the distributor drive shaft lower bushing from the engine block.
- Works on Chrysler, Dodge, and Plymouth 3.9L V6, 5.2L and 5.9L V8 vehicles with distributors.

No. 6292 – Distributor bushing remover. Wt., 1 lb., 4 oz.
**Distributor Bushing Installer/Reamer**

- Used to install the distributor drive shaft lower bushing into the engine block. Then use this same tool to ream the new bushing so the distributor drive shaft correctly fits into the bushing.
- Works on Chrysler, Dodge, and Plymouth 3.9L V6, 5.2L & 5.9L V8 vehicles with distributors.
- Compatible with OEM and aftermarket distributor drive bushings.

No. 6293 – Distributor bushing installer/reamer. Wt., 2 lbs.

**Compression Tester - Deep Well Connector**

Use with OTC compression testers or other compression testers.

- Solid steel 8" length shaft.
- Upper t-wing grip for ease of installation and removal.
- Popular 14 mm thread for both flat and tapered seat plugs.
- Corrosion resistant nickel plated finish.

No. 5603 – Compression tester – deep well connector. Wt., 15 oz.

**Compression Tester Ford Adapter**

Use with OTC compression testers to access hard to reach spark plug holes.

- Works on 2004 and newer Ford 4.6 and 5.4 L, 3 valve Triton™ V-8 engines. (Triton is a Registered Trade Mark of the Ford Motor Co.)
- Easy-to-turn feature makes starting thread fast.
- Use with compression testers with 14 mm thread.
- Patent pending.

No. 5607 – Compression tester Ford adapter. Wt., 15 oz.

**Compression Tester Kit**

Designed for complete compression testing on gasoline engines, including domestic, imports, motorcycles, marine, and small engines. Unique problem solving features for today’s limited space engine compartments.

- Corrosion resistant nickel plated finish.
- Adapters work on both flat and tapered seat plugs.
- Extra long 25" flex hose gauge assembly with quick coupler, allows easy viewing out of cluttered engine compartment.
- 2-1/2" gauge features chrome bezel and rugged protective outer boot.
- Dual scale gauge reads 0-300 psi and 0-2100 kPa.
- 12" flex-14 mm standard reach.
- 12" flex-14 mm long reach.
- 10 mm, 12 mm, and 18 mm thread adapters.
- Rugged blow molded hard case with removable lid.
- Repair parts kit.

No. 5606 – Compression tester kit. Wt., 3 lbs., 11 oz.
Motorcycle Compression Tester Kit

Designed specifically for testing motorcycle and small engines, this kit features a specially designed compression gauge and hose assembly, plus three different size hose adapters. Compression Tester and hose lengths are designed for optimal viewing along side engine. Covers most popular motorcycle and small engine plug sizes.

**Functions and Features:**
- Corrosion resistant nickel plated finish
- 10" flex hose gauge assembly with quick coupler.
- 2-1/2" gauge features chrome bezel and rugged protective outer boot
- Dual scale gauge reads 0-300 psi and 0-2100 kPa
- 12" flex hose -14 mm standard/plus reach (extra length supports V-Twin applications)
- 12" flex hose -12 mm standard reach
- 12" flex hose -10 mm standard reach
- Rugged blow molded hard case with removable lid
- Repair parts kit

No. 5604 – Motorcycle compression tester kit. Wt., 3 lbs., 14 oz.

---

Deluxe Compression Tester Kit

Complete with standard and specialty adapters, this deluxe kit offers a complete package for compression testing on gasoline engines. Kit includes the deep well connector used on recessed plug well style heads and the new Ford Triton™ engine adapter using 16 mm thread plugs.

**Functions and Features:**
- Corrosion resistant nickel plated finish
- Adapters work on both flat and tapered seat plugs
- Extra long 25" flex hose gauge assembly with quick coupler, allows easy viewing out of cluttered engine compartment
- 2-1/2" gauge features chrome bezel and rugged protective outer boot
- Dual scale gauge reads 0-300 psi and 0-2100 kPa
- 8" deep well 14 mm connector
- 5" flex Ford Triton™ 16mm adapter
- 12" flex-14 mm standard reach
- 12" flex-14 mm long reach
- 10 mm, 12mm, and 18 mm thread adapters
- Rugged blow molded hard case with removable lid
- Repair parts kit

No. 5605 – Deluxe compression tester kit. Wt., 4 lbs., 10 oz.

Ford Triton is a Registered Trade Mark of the Ford Motor Company. Patent Pending
**Cylinder Leakage Tester Kit**

Quickly diagnose internal engine problems such as bad rings, valves and leaking head gaskets. Kit come complete with adapters for most applications.

Features and benefits:
- Dual 2-1/2” gauges feature chrome bezel and rugged protective outer boot.
- Scales read 0-100 psi and 0-700 kPa.
- Pressure regulated manifold includes quick couplers.
- Long flex 24” 14 mm hose.
- 10 mm, 12 mm and 18 mm thread adapters.
- Blow molded hard case with removable lid.
- Detailed instruction chart.

**No. 5609** – Cylinder leakage tester kit. Wt., 4 lbs.

**Transmission/Engine Oil Pressure Kit**

The 5610 professional kit can be used for domestic and import applications. High and low pressure gauges make this kit useful for both transmission and engine work. Kit comes complete with adapter for most applications. Designed to be used for both static and on road testing.

Features and benefits:
- Large 3-1/2” gauges feature a chrome bezel and rugged protective outer boot.
- Low pressure gauge reads 0–100 psi and 0–700 kPa.
- High pressure gauge reads 0–400 psi and 0–2800 kPa.
- Both gauges include rear hook to allow gauge to be hung conveniently out of the way.
- Gauges and hose assembly incorporate quick couplers for easy disconnect.
- Kit includes 13 adapters and a detailed instruction manual.
- Blow molded hard case with removable lid.

**No. 5610** – Transmission/engine oil pressure kit. Wt., 5 lbs., 3 oz.

**Vacuum/Pressure Gauge Kit**

The 5613 is ideal for testing vacuum lines and components. Accurately tests low-pressure fuel systems. Quickly diagnose internal engine problems such as bad rings, valves and leaking head gaskets. Kit comes complete with adapter for most applications. Pin point hard to find problems such as cracked lines, PCV, fuel pump, fuel filters and more.

Features and benefits:
- Large 3-1/2” gauge features a chrome bezel and rugged protective outer boot.
- Dual purpose gauge reads vacuum and pressure.
- Dual scale gauge reads 0–30 in. Hg vac and 0–70 cm Hg, also reads 0–15 psi and 0–100 kPa.
- Built in rear hook allows gauge to be hung at eye level.
- Adapters for most applications.
- Blow molded hard case with removable lid.
- Detailed instruction chart.

**No. 5613** – Vacuum/pressure gauge kit. Wt., 3 lbs.
Universal Overhead Valve Spring Compressor
- Permits removal and installation of valve springs without removing the cylinder head on many cars and light trucks. Durable steel construction.
- Spring loaded offset jaws easily grip and compress valve springs.

No. 4573 – Universal overhead valve spring compressor. Wt. 1 lb.

Large Valve Spring Compressor
- Designed to compress valve springs on overhead valve engines.
- Includes two valve spring adapters, which fit valve spring retainers up to 1" (25 mm) and 1-3/16" (30 mm).
- Unique, direct action compressor lever gives better visibility of valve spring retainers located in difficult access areas.
- Jaw opening of 1-3/8" to 5-5/8" (35 mm to 142 mm); throat clearance of 5-7/8" (150 mm).

No. 4572 – Large valve spring compressor. Wt. 5 lbs.

Honda / Acura Crankshaft Damper Holding Tool
- Tool allows the technician to hold the crankshaft damper when tightening or loosening the crankshaft bolt.
- 50mm hex on holding tool.
- Works on the following Honda and Acura engines:
  - 1996–1997 Honda Accord 2.7L V6
  - 1998–newer Honda Accord 2.3L 4 cyl. & 3.0L V6
  - 1992–newer Honda Civic 1.6L 4 cyl.
  - 2000–newer Honda Insight 1.0L 3 cyl.
  - 1998 Honda Odyssey 2.3L 4 cyl.
  - 1999–newer Honda Odyssey 3.5L V6
  - 1992–newer Honda Prelude 2.2L 4 cyl.
  - 1997 Acura CL 2.2L 4 cyl.
  - 2000–newer Acura CL 3.2L V6
  - 1999–newer Acura CL 2.3L 4 cyl.
  - 1999–newer Acura RL 3.5L V6
  - 1995–newer Acura TL 3.2L V6

No. 4731 – Honda/Acura crankshaft damper holding tool.

Flange Puller
Pulls harmonic balancers, timing gears, and parts having two or three tapped holes. Slotted holes in puller body permit cap screws to be positioned to handle bolt circle diameters from 1/2" to 4-5/8". Reach of puller is 4-1/4". Includes three cap screws (3/8"–24 x 3"), and three cap screws (3/8"–16 x 3").

No. 6930 – Flange puller. Wt., 3 lbs. 4 oz.
Flange-Type Puller Set – 48 Piece

- Versatile puller capable of removing a wide variety of components having tapped pulling holes, including harmonic balancers, gears, crankshaft pulleys, etc.
- Capable of handling 2- or 3-way bolt pulling applications.
- Works on many cars, pickups, SUVs, and small engines.
- Carries the OTC Lifetime Marathon Warranty® against defects in workmanship and material.

Contents of set:
- Puller flange: adapts to bolt circle dia. of 1-1/2" to 4-5/8".
- Shaft protector: 1-3/16" dia. x 3/4" thick.
- Three each of the following flat washers: 1/4"; 5/16"; 3/8".
- Three each of the following bolt sizes:
  - 1/4"-28 x 3" lg.
  - 5/16"-24 x 3" lg.
  - 5/16"-18 x 3-1/2" lg.
  - 5/16"-18 x 6" lg.
  - 3/8"-24 x 1-1/2" lg.
  - 3/8"-16 x 2" lg.
  - 3/8"-16 x 3" lg.
  - 3/8"-16 x 4-1/2" lg.
  - M8 x 1.25 x 45 mm lg.
  - M8 x 1.25 x 65 mm lg.
  - M8 x 1.25 x 90 mm lg.

No. 7790 – Flange-type puller set – 48 piece. Wt., 7 lbs., 3 oz.

Flange-Type Puller Set

- Covers almost every car, pick-up, SUV, and small engine.
- Capable of handling almost every two- or three-way bolt pull possible.
- For use on a variety of jobs: harmonic balancers, steering wheels, crankshaft pulleys, and gears.
- OTC Lifetime Marathon Warranty® covers defects in workmanship or materials.
- Storage tray and detailed application chart included.
- Slotted holes in puller flange permit cap screws to be positioned to handle bolt circles from 1-1/2" to 4-1/4".

Contents of set:
- Three each of the following washer head bolts (Grade 8):
  - M8 x 1.25 x 90 mm
  - M8 x 1.25 x 65 mm
  - 5/16"-18 UNC x 3.5" lg.
  - 5/16"-24 UNF x 3" lg.
  - 3/8"-24 UNF x 1.5" lg.
  - 3/8"-16 UNC x 2" lg.
  - 3/8"-16 UNC x 4.5" lg.
  - M10 x 1.5 x 35 mm
- Two forcing screws: 6" long and 3" long.
- Two pointed forcing screw center tips.
- Two flat forcing screw center tips.

No. 6294 – Flange-type puller set. Wt., 6 lbs., 13 oz.

Master Harmonic Balancer Installer

- 11 special adapters make this a complete master harmonic balancer installer set for most car and light truck applications.
- The heavy-duty 7/8" diameter forcing screw has internal threads to fit the threaded adapters.
- Plastic storage tray keeps set components organized for easy selection.

No. 6505 – Master harmonic balancer installer. Wt., 2 lbs., 13 oz.
Harmonic Balancer Puller/Installer Set
- For easy removal of most harmonic balancers and drive pulleys which are press-fitted onto the crankshaft. A bearing-centered circular 2/3-way puller flange and an assortment of metric and fractional bolts and adapters provide wide coverage.
- A heavy-duty, 3/4" dia. forcing screw is internally threaded to fit the eight adapters to install harmonic balancers. Adapter sizes included: M16 x 2.0, M14 x 1.5, M12 x 1.5, 3/4"-16, 5/8"-18, 9/16"-18, 1/2"-20 and 7/16"-20.
- A blow-molded plastic storage case keeps set contents organized and protected from loss.

BMW Head Bolt Socket
- Socket is designed to fit in the cylinder head on M42 and M50 engines to remove and install cylinder head bolts.
- Spring loaded detent ball holds bolt in place.
- Works with 1/2 inch ratchet, breaker bar, or torque wrench.
- Socket size is E12 for external TORX® bolts.
No. 5940 – BMW head bolt socket. Wt., 8 oz.

Toyota Head Bolt Socket
- Specially designed socket is needed to tighten or loosen head bolts on Toyota Paseo vehicles with 3S-GE and 3S-FE engines.
- 8 mm socket features a 12-point, 1/2 inch drive socket.
No. 6022 – Toyota head bolt socket. Wt., 13 oz.

Universal Pulley Holder
- Universal design fits many different size pulleys having slots or holes, such as camshaft pulleys or crankshaft pulleys.
- Wrench is adjustable from 1-1/2" to 8-5/8"; four different size step pins are interchangeable.
- Long handle enables technician to easily hold the pulley when tightening or loosening retaining bolts.
No. 4754 – Universal pulley holder. Wt., 4 lbs., 15 oz.

Serpentine Belt Tool
- Fits tensioner pulleys with 13 mm–16 mm, 18 mm hex or 3/8" and 1/2" square drives.
- For hard to access tensioners; there are 13 mm and 15 mm 12-point wrenches built into the handle.
- 13 mm, 14 mm and 15 mm crows foot wrenches also included.
No. 4645 – Serpentine belt tool. Wt., 4 lbs., 13 oz.
### Engine Preluber Kit
- Ensures oil is present to internal engine components on the first start of a new or rebuilt engine, or after major engine work is performed.
- Required to prime the oil pump and fill the oil galleries and internal engine components with clean, new oil.
- Connects to engine oil system at the oil pressure sensor on a variety of domestic and import engines.
- Oil pressure sensor adapters included.

**No. 6492** – Engine preluber kit. Wt., 2 lbs., 5 oz.

### Variable Pin Spanner Wrench
- Universal design fits many different types of pulleys having slots or holes, including camshaft pulleys and crankshaft pulleys.
- Wrench is adjustable from 1-1/4 inch to 5 inches; works with a 1/2 inch drive ratchet or breaker bar.

**Replacement Parts:**
- 526908-1..... 3.5 mm pin
- 526908-2...... 4 mm pin
- 526908-3...... 4.5 mm pin
- 526908-4...... 5 mm pin
- 526908-5..... 6 mm pin
- 526908-6..... 7 mm pin
- 526908-7..... 10 mm pin
- 526908-8..... Handle

**No. 6613** – Variable pin spanner wrench. Wt., 2 lbs.

### Belt Installation Tool
With this tool and the correct serpentine belt tool for the job, installing those almost impossible serpentine belts is a lot less frustrating and time-consuming. The two-pin hook end holds the belt for precise placement, and the handle gives you the grip you need to maneuver it around the pulleys easier. It’s also a handy tool to have around for installing V-belts and timing belts that are never in easy-to-reach places. 25" long.

**No. 7654** – Belt installation tool. Wt., 10 oz.

### Ford Halfshaft Remover/Differential Rotator
No. 7140 is essential when removing the left-hand halfshaft from Escort/Lynx transaxles. It ensures correct removal and allows the technician to turn the differential.

**No. 7140** – Ford halfshaft remover/differential rotator. Wt., 1 lb., 13 oz.
Delco Alternator Insulator Wrench
Getting the positive battery wire off the back of Delco alternators should be a quick and easy job. But if you turn the nut holding the battery wire and don’t keep the terminal stud from twisting, there’s a good chance the insulator will break. Keep a simple job simple with the No. 7780 insulator wrench. It steadies the insulator block on new Delco CS and older Delco SI alternators found on many GM vehicles (1972 and newer), and 1975–90 AMC and Jeep vehicles.
No. 7780 – Delco alternator insulator wrench. Wt., 3 oz.

Frost Plug Installer Set
• Designed to install frost plugs in liquid-cooled gas and diesel engines found in automobiles, trucks, SUVs, agricultural equipment, and construction equipment.
• Simply use an air hammer with the driver and appropriate disc to install frost plugs ranging from 1" to 2-1/16" in diameter.
Set contains: No. 4604-1 Driver (14” lg.); No. 4604-2 Frost Plug Disc Set (3 qty.).
No. 4604 – Frost plug installer set. Wt., 1 lb., 13 oz.

Frost Plug Remover/Installer Set
• Designed to remove and install frost plugs used in liquid-cooled gas and diesel engines found in automobiles, trucks, SUVs, agricultural equipment, and construction equipment.
• Simply use a hammer with the driver and appropriate disc to install frost plugs ranging from 1” to 2-3/8” in diameter.
Set contains: No. 4603-1 Installer Handle (18” lg.); No. 4604-2 Frost Plug Remover; No. 4604-3 Frost Plug Disc Set (7 ea., plus 1 retaining nut).
No. 4603 – Frost plug remover/installer set. Wt., 6 lbs.

Glow Plug Remover
Set includes 10 mm and 12 mm split nuts, three spacers (3/16", 1/4", and 5/16"), plastic storage/organizer case and instructions. The 10 mm split nut will work on Ford 6.9L and 7.3L diesels; GM 5.7L, 6.2L, and 6.5L diesels; and various diesels in import vehicles. The 12 mm split nut works on various diesels in import vehicles, plus many agricultural and construction diesel applications.
No. 6005 – Glow plug removal tool. Wt., 5 oz.

Fuel Injector Nozzle Puller
• Pulls fuel injection nozzles on Ford 6.9L/7.3L and Navistar DT466/9L diesel engines.
• Slide hammer action gives an even, straight pull on the nozzle for fast, easy removal.
• Puller nut screws onto injector nozzle inlet port.
No. 7454 – Fuel injector nozzle puller. Wt., 1 lb., 15 oz.
Diesel Compression Tester with Adapters

Easy-to-use compression tester is designed specifically for medium-duty diesel engines equipped with glow plugs. Dual reading gauge measures compression to 1000 psi and 7000 kPa. Gauge has a push-button release valve and quick disconnect fittings on the hose end. Tester comes with all the necessary glow plug and nozzle adapters in a handy storage case.

Tester services these engines:
- Cummins B and C
- Navistar DT466/DT360
- Ford/Navistar 6.9 & 7.3L
- GM 6.2L and 6.5L
- Hino diesel and Mitsubishi Fuso truck engines

No. 5020 – Diesel compression tester with adapters. Wt., 7 lbs., 13 oz.

Replacement Adapters (available separately):
- No. 47484 – Hino diesel truck engines with 12 mm x 1.25 threads.
- No. 209633 – Ford 6.6L & 7.8L diesels.
- No. 217791 – Cummins B & 5.9L.
- No. 308472 – Mitsubishi Fuso truck 4D & 6D engines with 10 mm x 1.25 threads.
- No. 310810 – Cummins C.
- No. 310832 – Ford/Navistar 6.9 & 7.3L, Detroit 6.2L with 10 mm x 1.0 threads.
- No. 310840 – Navistar DT466/DT360.

Universal Diesel Engine Compression Gauge

Works on any diesel engine to test compression up to 1000 psi and 7000 kPa. Features include a check valve, push button compression release, and a quick disconnect fitting on the hose end. Straight and 45° hose connectors are included.

No. 5021 – Universal diesel engine compression gauge. Wt., 1 lb., 8 oz.

No. 304802 – Replacement gauge. Wt., 8 oz.

Ford Diesel Compression Test Adapter

When the glow plug is removed from the cylinder, this adapter is used to connect the No. 5021 gauge to perform a compression test.
- Works on 1994–newer Ford vans and pickups with 7.3L direct-injected turbocharged (DIT) diesel engine.

No. 6076 – Ford diesel compression test adapter. Wt., 5 oz.

Compression Tester

- Use with OTC No. 5021 diesel engine compression gauge.

No. 6660 – Compression tester. Wt., 7 oz.
**Ford Rear Main Oil Seal Kit**
- A complete kit with the tools you need to correctly remove and install the rear main oil seal and wear ring on the crankshaft.
- Eliminates makeshift methods of seal removal and installation that could damage the new seal or crankshaft.

No. 7835 – Ford rear main oil seal kit. Wt., 7 lbs.

---

**Ford 5-pin Connector Harness for Glow Plug Testing**
- Provides an easy way to check glow plug resistance without having to remove the valve cover of 1994–98 Ford trucks and vans with 7.3L DIT (direct-injected turbocharged) diesel engines.
- Used with any standard digital volt ohmmeter to check glow plug resistance.

No. 6088 – Ford 5-pin connector harness for glow plug testing. Wt., 3 oz.

---

**Ford 9-pin Connector Harness for Glow Plug Testing**
- Permits testing glow plug resistance without having to remove the valve cover of 1998-1/2 thru 2003 Ford trucks and vans with 7.3L DIT (direct-injected turbocharged) diesel engines.
- Use with any standard digital volt ohmmeter to check glow plug resistance.

No. 6089 – Ford 9-pin connector harness for glow plug testing. Wt., 4 oz.

---

**Ford Oil Line Disconnect Tool for 6.0 L**
- Use to disconnect the high-pressure oil rail supply line from the fuel rail when removing fuel injectors.

No. 6594 – Ford oil line disconnect tool for 6.0 L. Wt., 5 oz.
**Ford High Pressure Oil Line Disconnect Tool**

- Use to disconnect the high pressure oil line from the cylinder head.

No. 6595 – High pressure oil line disconnect tool.
Wt., 3 oz.

**Ford Injector Remover / Installer Kit**

- Removes and installs injectors without damaging the injector or cylinder head.

No. 6067 – Ford injector remover/installer kit.
Wt., 6 oz.

**Cummins Diesel Fuel Injector Remover Kit**

- Kit contains a fuel injector connector tube remover and fuel injector puller. The fuel injector connector tube must be removed before removal of the injector, or both will be damaged.

No. 6069 – Cummins diesel fuel injector remover kit.
Wt., 8 oz.

**GM Injection Pump Wrench Set**

- Use to loosen or tighten injection pump retaining bolts whenever pump timing adjustment or pump service is required. Services 1996–1999 GM full-size 2- and 4-wheel drive trucks, vans, and Suburbs with 6.5L diesel engine.
- Two specially bent wrenches are needed, due to the location of the throttle, cruise control, T.V. cable bracket, cooling system crossover pipe and bracket, and the thermostat housing on vans and pickups.
- Wrenches are 15 mm, 12-point, double box-end type.

No. 6087 – GM injection pump wrench set.
Wt., 1 lb.

**Detroit Diesel Injector Socket**

- Used on GM 6.2L and 6.5L engines. This 30 mm socket ensures proper fit during nozzle removal and installation. The 3/8" square drive and 7/8" hex permit easy access in tight quarters, and prevent damage to nozzle and related components.

No. 5060 – Detroit diesel injector socket.
Wt., 8 oz.
**Cummins Engine Barring Tool**

Need to manually rotate an engine? This tool makes the job easy. Just insert the tool into the flywheel housing until it engages the ring gear, then attach a 1/2" square drive ratchet or breaker bar and turn. The tool’s load-bearing collar provides friction-free operation while rotating the tool in the housing.

- Works on Cummins B and C series diesel engines and 5.9L liter diesels used in Dodge pickups.

No. 7471A – Cummins engine barring tool. Wt., 11 oz.

---

**Master Cummins Diesel Fuel Injection Test Kit**

Includes the fittings and gauge needed to check fuel pressure, fuel volume, and fuel restrictions from the delivery pump to the injection pump.

Contents:
- No. 518501 - Special quick-disconnect banjo fitting (M14 x 1.5 male).
- No. 7915 - Two fuel injection quick-coupler adapters.
- No. 518493 - Quick-disconnect banjo fitting (M12 x 1.5 male).
- No. 22336 - Gauge assembly.
- No. 6082 - Fuel volume test adapter.
- No. 6078 - Diesel fuel inlet restriction test adapter.

- For 1988–98 Dodge pickups and vans with 5.9L 12-valve, and 1998-1/2–newer 5.9L 24-valve Cummins diesel engines.

No. 6080 – Master Cummins diesel fuel injection test kit. Wt., 5 lbs.

---

**Cummins Diesel Fuel Volume Test Adapter**

Used to perform fuel volume test of fuel transfer pump. Fuel volume is as important as fuel pressure. Pump may pass pressure test, but fail volume test. No. 6082 fitting is threaded into transfer pump. The end of the 2 ft. tubing is placed into a container for fuel to be measured.

This adapter is included in OTC Master Kit No. 6080.


No. 6082 – Cummins diesel fuel volume test adapter. Wt., 3 oz.

---

**Special Quick-Disconnect Banjo Fitting**

Adapter fitting (M14 x 1.5 male) is used to check fuel pressure from the delivery pump to the injection pump. Used with gauge assembly of OTC set No. 6079. Has quick-connect schrader valve on end of fitting for safety and ease of hook-up to gauge. Included in OTC kit No. 6080.


No. 518501 – Special quick-disconnect banjo fitting. Wt., 3 oz.
Coolant Exchange Unit

Designed with the user in mind.

Increase Your Profits

• Our 10-minute exchange process means no more waiting for the engine to warm up!

Safety First

• Our “engine off” feature removes pulleys, belts, and fan blades from the safety equation.
• No additional ventilation required.
• Vacuum mode creates a “push/pull” exchange process allowing the technician to safely remove high pressure in a hot system.
• “Hands-off” transfer of used coolant to a bulk tank prevents spills and helps protect the technician.

Simple to Operate

• Two clearly marked valves and an easy-to-read gauge make this machine very simple to use.
• Sight glass clearly shows the amount of coolant in the waste tank.
• One valve controls the flow of coolant; process is easy to understand—no special training needed.
• No electricity required. 90 psi shop air drives the exchange process, as well as the 2 gpm pump on the waste tank.

Designed to Survive

• Impact-resistant polypropylene cabinet will not scratch or dent vehicle.
• Cabinet is impervious to chemicals commonly used in the shop.
• Large, inflatable tires carry a well-balanced platform easily across any shop floor.
• Easy to maneuver between bays and vehicles.

Extra Design Features

• Two external new coolant supply tanks allow on-board storage of two different coolants.
• Graduations on tanks show user the amount of new coolant on board.
• On-board storage of step adapters.
• Adapter kit included.
• No hoses to cut.
• 96" hoses can be neatly stored on unit.
• One-year warranty.

Specifications:

<table>
<thead>
<tr>
<th>Power Supply</th>
<th>90 psi shop air</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tanks</td>
<td>Internal waste – 15-gallon capacity – External supply (2) 7-gallon capacity (removable)</td>
</tr>
<tr>
<td>Dimensions</td>
<td>47” H x 26” W x 33” D (119 cm x 66 cm x 84 cm)</td>
</tr>
<tr>
<td>Medium Step Adapter</td>
<td>Two included; fits hose size 1-1/4”, 1-3/8”, and 1-1/2”</td>
</tr>
<tr>
<td>Large Step Adapter</td>
<td>Two included; fits hose size 1-3/4”, 2”, and 2-1/4”</td>
</tr>
</tbody>
</table>

No. 75700 – Coolant exchange unit. Wt., 180 lbs.
No. 75115 – Replacement coolant 5-gallon tank.
No. 75360 – Heavy-duty adapter kit. Links the two tanks for 14 gal. capacity to service class A vehicles. (Note: must have 7-gallon tank No. 75370).
No. 75370 – Replacement coolant 7-gallon tank.
No. 17490 – Protect your investment with a heavy-duty vinyl dust cover. Features corded seams for durability; medium gray color with CoolTech logo.
Coolant and Battery Refractometer
This can be used for measuring the freezing point of either propylene and ethylene glycol based cooling systems. It can also be used for checking the strength of electrolyte solution in batteries. This precision instrument features high quality optics with ultra smooth focusing on the body. Coolant scale range: 32°F/0°C to -60°F/-51°C.
No. 75240 – Coolant and battery refractometer (C & F scales). Wt., 12 oz.

Econo-Clean Coolant Service Accessories
To ensure coolant will provide adequate protection to the vehicle, the coolant should be adjusted to the manufacturer’s specifications. These accessories will help you quickly test coolant.
No. 75133 – Pocket pH pen — Quickly shows the pH of the coolant, whether used or recycled. Wt., 7 oz.
No. 75134 – Coolant test strips — Just dip a strip in coolant and it shows the freeze point and the pH; bottle of 50 strips. Wt., 15 oz.
No. 75234 – 3-way heavy-duty truck coolant test strips – shows pH, freeze point, and nitrite (0–4000 ppm), pH <7.5–11+, glycol 0-60%. Wt., 1 lb.

Coolant Refiller
• 26" Hg vacuum refills cooling system without air lock.
• Eliminates the need for “bleeding.”
• Checks for system leaks and utilizes OEM approved technology.
• Universal “fits all” cone adapter.
• Built-in gauge protector.
No. 75260 – Coolant refiller. Wt., 1 lb., 12 oz.

Radiator Coolant Dye
• Pinpoint leaks in radiators, hoses/fittings, water pumps, and head gaskets.
• Extended-life dye is specifically formulated for use in extended-life coolants. This eliminates the color distortion problem found in the existing regular radiator coolant dye when mixed with extended-life coolant.
• Extended-life dye is for use with red, orange, or yellow extended-life coolants.
• Each bottle services one vehicle.
No. 16266 – Extended-life radiator coolant dye. Six (1 oz./30 ml) bottles. Wt., 8 oz.
No. 16255 – Standard radiator coolant dye. Six 1/4 oz. (7.5 ml) bottles. Wt., 4 oz.
Cooling System Pressure Tester

Now you can pressure test the cooling system on most cars, light commercial trucks, motorcycles, and even marine applications. The tester’s universal fit eliminates the need for multiple adapters.

Note: Will not work on Saturn and Kia cars or Jeep with the plastic reservoir.

No. 7991 – Cooling system pressure tester. Wt., 3 lbs., 2 oz.
No. 70600-96 – Replacement bladder. Wt., 1 oz.

Hose Clamp Pliers Set (2 piece)

- Includes a cross-slotted jaw pliers and a wide, flat-band hose clamp pliers. Services most ring-type or flat-band hose clamps.
- The clamps are held open with a ratchet locking mechanism. Jaws swivel to access hose clamps in any position.

No. 4502 – Hose clamp pliers set. Wt., 1 lb., 3 oz.

Hose Clamp Pliers Set

- Contains five different styles of hose clamp pliers, which will service most flat-band and ring-style hose clamps. Also contains a hose removal tool.

   Set Contains:
   - Straight hose clamp pliers set
   - Hose removal tool
   - Flat-type hose clamp pliers
   - Offset hose clamp pliers
   - 45° hose clamp pliers

No. 4496 – Hose clamp pliers set. Wt., 3 lbs., 13 oz.

Vacuum Hose and Fuel Line Removal Tool

- Designed to remove vacuum hose or fuel lines (3/16” to 1/2”) from fittings or tubing.
- Simply place the black jaw on the fitting or tubing – the jaw will grip the material. Then use the silver jaw to push the vacuum hose or fuel line off the fitting or tube.

No. 4522 – Vacuum hose and fuel line removal tool. Wt., 3 oz.
Offset Hose Clamp Pliers
- Head is offset from handle to allow access to hard-to-reach clamps.
- Swivel jaws allow pliers to be used on many different flat-band and ring-type hose clamps.
No. 4523 – Offset hose clamp pliers. Wt., 5 oz.

45° Hose Clamp Pliers
- Jaws are bent at a 45° angle and pliers tips swivel to allow easy access to confined areas.
- Ratchet lock mechanism holds jaws open.
- Works on most flat-band hose clamps.
No. 4524 – 45° hose clamp pliers. Wt., 5 oz.

Flexible Hose Clamp Pliers
- Allows technician to access the flat-type hose clamps located in hard-to-access areas.
- Pliers has locking mechanism to hold clamp in the open position – makes removal and installation of clamp much easier.
- Heavy-duty, 24" cable flexes to almost any position.
No. 4525 – Flexible hose clamp pliers. Wt., 5 oz.

Hose Removal Tool
- Unique tip easily fits between hose and fitting to break stubborn hoses loose.
- Large handle provides a good grip on tool during hose removal.
- Works on radiator hoses, heater hoses, transmission lines – any place a rubber hose is clamped to a fitting.
No. 4521 – Hose removal tool. Wt., 7 oz.
GM Water Pump Socket
- 1/2” sq. drive for use with 1/2” drive breaker bar or ratchet.
- Tool is designed to self-center in the water pump housing, allowing the tangs to fully engage the water pump for removal or installation.
No. 6060A – GM water pump socket. Wt., 2 lbs., 10 oz.

GM Heater Line Quick-Connect Release Tool
- Specially designed for separating quick-connect fittings on heater lines of 1999–2006 Chevy and GMC C/K trucks.
- Tool snaps around the hose and simultaneously depresses the locking tabs to disengage the fitting.
No. 6046 – GM heater line quick-connect release tool. Wt., 2 oz.

Ford Gear-Position Sensor Adjuster
When you’re adjusting the manual-lever position sensor on a Ford automatic transmission, this tool gets the detent setting right the first time.
- For use on E40D, AXOD-E, AX4N, AX4NS, C6, and AOD-E automatic transaxles and transmissions.
No. 7784 – Ford gear-position sensor adjuster. Wt., 2 oz.

“Blast-Vac” Multipurpose Cleaning Gun
- Perfectly suited for quick and efficient cooling system flushing. Simply attach it to radiator or heater hoses and you’re in business.
- Also usable in washing engines and even shop floors.
- Two simple connections: one to shop air and one to a typical water faucet.
- No. 6043 creates a unique vortex air/water blast for powerful cleaning applications.
- The tool can also be used to vacuum by turning the venturi inside the gun in the opposite direction. Air flow is reversed to create a strong vacuum.
Note: While normal water pressure will handle the majority of a cooling system flush, short blasts are sometimes needed to loosen some contaminants from within the system.
No. 6043 – “Blast-Vac” multipurpose cleaning gun. Wt., 13 oz.
Fan Clutch Wrench Master Set
Conventional wrenches are just too wide for the job of removing the fan clutch assembly on some engines. Here’s the solution: You hold the fan clutch stationary with the clutch holder tool, and turn the fan clutch nut with the special wrench. Most wrenches feature a square drive for attaching a breaker bar for extra torque. Time savers when replacing water pumps, or for any other front engine service in body or repair shops. Holding tools and wrenches are available individually and in sets (see chart on next page).

No. 7885 – Fan clutch wrench master set – Includes all individual components except Nos. 7925-1, 7925-2, and 6068. Includes molded carrying case. Wt., 16 lbs.

Individual Holding Tools, Wrenches, and Sets
Individual Components
No. 7204E1 – Holding tool. 2-1/4" (57 mm). Wt., 14 oz.
No. 7204E2 – Wrench. 1-7/16" (36 mm). Wt., 1 lb., 14 oz.
No. 7205E1 – Holding tool. 3-1/4" (82 mm). Wt., 1 lb., 8 oz.
No. 7205E2 – Wrench. 1-7/8" (47 mm). Wt., 3 lbs., 10 oz.
No. 6068 – Wrench. 1-7/8" (47 mm). Wt., 2 lbs., 8 oz.
No. 7818 – Holding tool. 2-1/8" (54 mm). Wt., 1 lb., 8 oz.
No. 7823 – Wrench. 1-9/16" (39 mm). Wt., 1 lb., 11 oz.
No. 7855 – Holding tool. 2-3/8" (60 mm). Wt., 14 oz.
No. 7887 – Holding tool. 3" (76 mm). Wt., 1 lb., 8 oz.
No. 7925-1 – Wrench. 2" (51 mm). Wt., 2 lbs.
No. 7925-2 – Holding tool. 2-1/4" (57 mm). Wt., 2 lbs., 5 oz.

Sets:
No. 7204E Set – (7204E1 & 7204E2). Wt., 2 lbs., 8 oz.
No. 7205E Set – (7205E1 & 7205E2). Wt., 4 lbs., 13 oz.
No. 7817 Set – (7205E2 & 7818). Wt., 4 lbs., 10 oz.
No. 7854 Set – (7204E2 & 7855). Wt., 2 lbs., 8 oz.
No. 7925 Set – (7925-1 & 7925-2). Wt., 4 lbs., 5 oz.

Ford Diesel Fan Clutch Wrench
- Designed for use with OTC No. 7205E1 holding tool to remove fan clutch assembly.

Has the same size opening as the OTC No. 7205E2 wrench, but has a special bend in the handle to provide clearance for accessories found on some vehicles.


No. 6068 – Ford diesel fan clutch wrench. Wt., 2 lbs., 2 oz.
## Fan Clutch Service

<table>
<thead>
<tr>
<th>Year</th>
<th>Make / Model</th>
<th>Engine</th>
<th>U.S. Size</th>
<th>Metric Size</th>
<th>OTC Tool No.</th>
<th>OTC Tool Set</th>
<th>Global Number</th>
<th>Ford Tool No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1983–1993</td>
<td>Ford / F-Series Truck, E-Series Van</td>
<td>6.9L, 7.3L Diesel</td>
<td>3-1/4&quot;</td>
<td>82 mm</td>
<td>7205E1</td>
<td>7205E</td>
<td>303-213</td>
<td>T83T-6312-A</td>
</tr>
<tr>
<td>1983–1993</td>
<td>Ford / F-Series Truck, E-Series Van</td>
<td>6.9L, 7.3L Diesel</td>
<td>1-7/8&quot;</td>
<td>47 mm</td>
<td>7205E2</td>
<td>7205E</td>
<td>303-214</td>
<td>T83T-6312-B</td>
</tr>
<tr>
<td>1984–1991</td>
<td>Ford / F-Series Truck, E-Series Van</td>
<td>4.9L Inline 6</td>
<td>2-1/4&quot;</td>
<td>57 mm</td>
<td>7204E1</td>
<td>7204E</td>
<td>303-239</td>
<td>T84T-6312-C</td>
</tr>
<tr>
<td>1984–1991</td>
<td>Ford / F-Series Truck, E-Series Van</td>
<td>4.9L Inline 6</td>
<td>2-1/4&quot;</td>
<td>36 mm</td>
<td>7204E2</td>
<td>7204E</td>
<td>303-240</td>
<td>T84T-6312-D</td>
</tr>
<tr>
<td>1987–1997</td>
<td>Ford / F-Series Truck, E-Series Van</td>
<td>5.0L, 5.8L, 7.5L V8</td>
<td>1-7/16&quot;</td>
<td>57 mm</td>
<td>7204E1</td>
<td>7204E</td>
<td>303-239</td>
<td>T84T-6312-C</td>
</tr>
<tr>
<td>1987–1997</td>
<td>Ford / F-Series Truck, E-Series Van</td>
<td>5.0L, 5.8L, 7.5L V8</td>
<td>1-7/16&quot;</td>
<td>36 mm</td>
<td>7204E2</td>
<td>7204E</td>
<td>303-240</td>
<td>T84T-6312-D</td>
</tr>
<tr>
<td>1992–1996</td>
<td>Ford / F-Series Truck, E-Series Van</td>
<td>4.9L Inline 6</td>
<td>2-1/4&quot;</td>
<td>57 mm</td>
<td>7204E1</td>
<td>7823</td>
<td>303-239</td>
<td>T84T-6312-C</td>
</tr>
<tr>
<td>1992–1996</td>
<td>Ford / F-Series Truck, E-Series Van</td>
<td>4.9L Inline 6</td>
<td>2-1/4&quot;</td>
<td>36 mm</td>
<td>7204E2</td>
<td>7823</td>
<td>303-240</td>
<td>T84T-6312-D</td>
</tr>
<tr>
<td>1983–1989</td>
<td>Ford / Ranger, Bronco II</td>
<td>2.8L, 2.9L V6</td>
<td>2-1/4&quot;</td>
<td>57 mm</td>
<td>7204E1</td>
<td>7204E</td>
<td>303-239</td>
<td>T84T-6312-C</td>
</tr>
<tr>
<td>1983–1989</td>
<td>Ford / Ranger, Bronco II</td>
<td>2.8L, 2.9L V6</td>
<td>2-1/4&quot;</td>
<td>36 mm</td>
<td>7204E2</td>
<td>7204E</td>
<td>303-240</td>
<td>T84T-6312-D</td>
</tr>
<tr>
<td>1990–2004</td>
<td>Ford / Ranger, Explorer, Bronco II</td>
<td>4.0L V6</td>
<td>2-1/4&quot;</td>
<td>57 mm</td>
<td>7204E1</td>
<td>7204E</td>
<td>303-239</td>
<td>T84T-6312-C</td>
</tr>
<tr>
<td>1990–2004</td>
<td>Ford / Ranger, Explorer, Bronco II</td>
<td>4.0L V6</td>
<td>2-1/4&quot;</td>
<td>36 mm</td>
<td>7204E2</td>
<td>7204E</td>
<td>303-240</td>
<td>T84T-6312-D</td>
</tr>
<tr>
<td>1998–2003</td>
<td>Ford / F-Series Truck, E-Series Van</td>
<td>7.3 DIT Diesel</td>
<td>3-1/4&quot;</td>
<td>82 mm</td>
<td>7205E1</td>
<td>6068</td>
<td>303-213</td>
<td>T83T-6312-A</td>
</tr>
<tr>
<td>1998–2003</td>
<td>Ford / F-Series Truck, E-Series Van</td>
<td>7.3 DIT Diesel</td>
<td>1-7/8&quot;</td>
<td>47 mm</td>
<td>7205E2</td>
<td>N/A</td>
<td>303-591</td>
<td>N/A</td>
</tr>
<tr>
<td>1988–2004</td>
<td>Dodge / Full Size Pickup, Full Size Van</td>
<td>5.9L Diesel</td>
<td>3&quot;</td>
<td>76 mm</td>
<td>7887</td>
<td>7204E2</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1992–2004</td>
<td>Dodge / Dakota, Ram Pickup, Ram Van</td>
<td>3.9L V6, 5.2L, 5.9L V8</td>
<td>3&quot;</td>
<td>76 mm</td>
<td>7887</td>
<td>7204E2</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1992–2004</td>
<td>Dodge / Dakota, Ram Pickup, Ram Van</td>
<td>8.0L V10</td>
<td>3&quot;</td>
<td>36 mm</td>
<td>7204E2</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1993–1998</td>
<td>Jeep / Grand Cherokee</td>
<td>5.2L V8</td>
<td>3&quot;</td>
<td>76 mm</td>
<td>7887</td>
<td>7204E2</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1999–2000</td>
<td>GM / Full Size Pickup, Full Size Van, Astro / Safari Vans, S-Truck, Blazer / Jimmy, Yukon / Tahoe</td>
<td>4.3L V6</td>
<td>2-3/8&quot;</td>
<td>60 mm</td>
<td>7855</td>
<td>7204E2</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1999–2000</td>
<td>GM / Full Size Pickup, Full Size Van, Astro / Safari Vans, S-Truck, Blazer / Jimmy, Yukon / Tahoe</td>
<td>5.0L, 5.7L V8</td>
<td>1-7/16&quot;</td>
<td>36 mm</td>
<td>7854</td>
<td>7204E2</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1994–1999</td>
<td>Navistar / medium-duty trucks and school buses</td>
<td>466</td>
<td>2&quot;</td>
<td>51 mm</td>
<td>7925-1</td>
<td>7925</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1994–1999</td>
<td>Navistar / medium-duty trucks and school buses</td>
<td>2-1/4&quot;</td>
<td>57 mm</td>
<td>7925-2</td>
<td>7925</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### Adjustable Fan Clutch Holding Tool
- Adjustable jaws fit various water pump pulley bolt patterns.
- Jaws adjust from 1/2" to 8-5/16" opening.
- Jaws lock in place to securely hold water pump bolts.
- Long handle offers leverage for extra torque.

No. 4652 – Adjustable fan clutch holding tool. Wt., 2 lbs., 5 oz.
Ford Fan Clutch Wrench Set

• Set contains five of the most popular wrenches used to service water pumps and fan clutches, and other components on the front of Ford engines.
• Set contains three holding tools and two turning tools. Use with a 1/2” breaker bar or ratchet.

Note: Wrench Nos. 4585-2, 4585-3, and 4585-5 are used to hold the water pump; wrench Nos. 4585-1 and 4585-4 are used to turn the fan clutch.

1. Select the wrench that most closely fits the water pump, and attach it to a 1/2" breaker bar or ratchet.
2. Select the wrench that most closely fits the O.D. of the fan clutch nut.
3. Hold the water pump, and turn the fan clutch nut to remove or install the fan clutch.

Note: Some Ford vehicles have left-hand threads on the fan clutch. Refer to each vehicle service manual for the correct thread specifications.

Replacement parts:

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4585-1</td>
<td>48 mm (1-7/16”) turning wrench.</td>
</tr>
<tr>
<td>4585-2</td>
<td>83 mm (3-1/4”) holding wrench.</td>
</tr>
<tr>
<td>4585-3</td>
<td>72 mm (2-13/16”) &amp; 54 mm (2-1/8”) holding wrench.</td>
</tr>
<tr>
<td>4585-4</td>
<td>40 mm (1-1/2”) turning wrench.</td>
</tr>
<tr>
<td>4585-5</td>
<td>76 mm (3”) &amp; 68 mm (2-11/16”) holding wrench.</td>
</tr>
</tbody>
</table>

No. 4585 – Ford fan clutch wrench set. Wt., 8 lbs., 6 oz.

Ford 6.0L Diesel Fan Clutch Wrench


• This is a required tool to tighten or loosen the fan clutch on the water pump.
• Wrench has a 68.45 mm (2-11/16”) opening.

No. 6974 – Ford 6.0L diesel fan clutch wrench. Wt., 3 lbs., 2 oz.
Mercedes-Benz and BMW Fan Clutch Service Kit

- Mercedes-Benz fan clutch holding wrench holds the water pump pulley to allow release of the fan.
- BMW Fan clutch holding wrench holds the water pump pulley in place while loosening the radiator fan. Works on BMW M10, M20, M30, & other late model vehicles. (Holes at 38 mm & 44.5 mm.)
- Mercedes-Benz fan clutch wrench removes the thermo-viscous radiator fans found on Mercedes-Benz and Ford vehicles. Works on M-B engines: M111, OM604, OM605, and OM606 (C & E Class; 36 mm opening).
- Mercedes-Benz fan clutch wrench is used to remove or install the fan clutch assembly. Slim shaft handle lets you easily work in tight spaces. Works on M-B engines: M103, M104, M119, and M120 (65 mm opening).
- BMW fan clutch wrench is used to remove and install the thermo-viscous fan on BMWs and Fords (32 mm opening).
- Mercedes-Benz Fan Clutch Holding Tool is used to remove / replace thermo-viscous fan coupling with the radiator in place.
- Universal fan belt adjustment wrench services Mercedes-Benz, Nissan Quest, and Mercury Villager radiator fans and pulley belts. It also can be used for loosening the A/C idler pulley tensioner lock nuts for A/C belt adjustment or replacement. Also contains 2.5 mm, 8 mm, and 10 mm Allen keys.

No. 6985 – Mercedes-Benz and BMW fan clutch service kit. Wt., 10 lbs., 2 oz.

HubTamer Elite Bearing Service Set

From start to finish, complete front wheel bearing service using just one set of tools. Take off the hub, remove the old bearing and install the new one, and then reinstall the hub. All this is done while the knuckle assembly remains on the car; no shop press or unnecessary alignments are needed.
- Works on virtually all floating and trapped rotors found on domestic and import vehicles.
- Cuts service time 50% when replacing front wheel bearings.
- Pushes on the steering knuckle, not the rotor.
- Fits easily behind the rotor, leaving plenty of room for positioning the tool and wrench. One-piece design has no sliding arms to adjust and is impact wrench compatible.

The HubTamer Elite gives you these added benefits:
- Puller weldment adapter has been improved with the addition of a beveled edge for use in tight fitting applications!

No. 6537 – HubTamer elite bearing service set. Includes all adapters and tools necessary for removing hubs and replacing front wheel bearings on most domestic and import vehicles with floating or trapped rotors. Also includes updated case and application information. Wt., 42 lbs., 13 oz.

If you want to update your current No. 6490 HubTamer, you can purchase the weldment and Ford adapter separately.
No. 6573 – Weldment with beveled edge. Wt., 9 lbs.
No. 6536 – Ford adapter for Taurus/Sable and Contour/Mystique. Wt., 1 lb., 3 oz.
Front Hub Installer and Puller Set
Here are three tools that make front hub service easier. The universal puller removes front hubs from most FWD cars without damaging wheel bearings. The installer is used to pull the axle shaft into the front hub on Ford vehicles.
- Spare locknut works with a standard slide hammer puller and the 7208A for rear axle flanges.
- Tools are available separately.
No 6298 – Front hub installer and puller set includes the No. 7208A, 7135A, and 7924A in a molded plastic case. Wt., 61 lbs., 8 oz.
No. 7208A – Hub remover to push the axle shaft from the front hub. Wt., 2 lbs., 7 oz.
No. 7135A – Installer is used to pull the axle shaft into the front hubs on Ford Taurus/Sable vehicles. Fits axle shafts with 20 mm x 1.5 thread. Wt., 1 lb., 7 oz.
No 7924A – Installer is used to pull the axle shaft into the front hub. Fits axle shafts with 22 mm x 1.5 thread on Ford Contour/Mystique, Probe, and Focus. Wt., 1 lb., 5 oz.

Universal Hub Puller
With its adjustable sliding arms, this puller makes wheel-hub removal quick, easy, and damage free. It has maximum bolt circle of 7-1/2”.
- The No. 32937 puller leg is available separately to complete the five necessary for Cadillac and Jeep hub removal.
- Includes striking wrench and puller screw.
No. 7394 – Universal hub puller. Wt., 9 lbs., 2 oz.
No. 32937 – Puller leg. Wt., 1 lb.

Front Hub Puller for 4WD Vehicles
For removal of the front hub assembly, necessary for wheel bearing or brake rotor service. Provides the mechanical advantage and straight pull not possible with a slide hammer.
- Will not work on trucks with dual rear wheels.
- Services:
No. 6290 – Front hub puller for 4WD vehicles. Wt., 7 lbs. 2 oz.

Front Hub Puller for 4WD Vehicles
This puller is required for removing a front hub assembly in 3/4- and 1-ton 4WD pickups with 8-bolt hubs. It works on 1994 to 2004 Dodge Ram and 1988 to 2004 Ford and GM.
- Fits bolt hole pattern 8 x 6.5”.
- Will not work on trucks with dual rear wheels.
- Use with our No. 7703 10-lb. slide hammer for maximum pulling force.
No. 7901 – Front hub puller for 4WD vehicles. Wt., 5 lbs.
Ford Vacuum Front Hub Release Tool Set
Here’s the equipment you need to safely remove the plastic vacuum hubs on Ford pickups. Standard tools won’t work for the job, but this set has special clips that slip into slots on the hub to release it.
- For use on 1998 to 2000 4WD Ranger with vacuum front hubs.
No. 7932 – Ford vacuum front hub release tool set. Wt., 10 oz.
No. 7932-1 – Ford vacuum front hub puller. Wt., 8 oz.
No. 7932-2 – Ford vacuum front hub removal clip set. Wt., 3 oz.

Ford Axle Shaft Seal Installer
- Correctly installs the seal onto the axle shaft and into the wheel knuckle, preventing front hub vacuum leaks that would cause the 4WD to not engage.
No. 6695 – Ford axle shaft seal installer. Wt., 10 lbs., 8 oz.

Hub Resurfacing Kit
- Fits your power drill to quickly sand rust off lug studs and rotors on the hub assembly. Sanding pads attach with Velcro™.
- For most domestic and import vehicles with either front or rear disc brakes. Includes holder and five sanding discs.
- Run at speeds of 1200 rpm or less for best results. (Do not exceed 1200 rpm.)
No. 7942A – Hub resurfacing kit. Wt., 5 oz.
No. 222548 – 10 pack of replacement sanding pads for No. 7942A. Wt., 1 oz.

4WD Front Spindle Puller
This puller enables you to remove the front spindle on light-duty 4WD trucks. It’s designed for full-size Ford, GM, International, and Jeep pickups with Dana front axles. Also works on Ford Ranger and Bronco II.
- 5/8” fine thread makes it ideal for use with our No. 1155 slide hammer.
- Fits spindle thread sizes 2"-16, 1-5/8"-16 and 38 mm-1.5.
No. 7502 – 4WD front spindle puller. Wt., 2 lbs., 8 oz.
### Subaru Front Axle Shaft Installer
Here's a real time saver when servicing front axles, CV joints, or wheel bearings on 1980 to current Subaru.

- Fits 24 mm x 1.5 axle shafts.
- **No. 7535** – Subaru front axle shaft installer.
  - Wt., 2 lbs., 8 oz.

### Bearing Cup Remover
This is an ideal tool for servicing hubs on today’s small FWD cars. It’s perfect for pulling internal bearing cups, seals, and bushings.

- Jaws spread 15/16" to 3-1/4" and reach to 3-1/2".
- Use with any slide hammer having 5/8"–18 thread (our Nos. 1155 or 1156, or the 927 Push-Puller).
- **No. 6542** – Universal bearing cup remover.
  - Wt., 1 lb., 8 oz.

### Outer Tie Rod Remover/Ball Joint Separator
This tool is a must when you’re servicing outer tie rods. It works on imported and domestic models, front- or rear-wheel drive, cast or stamped-steel steering knuckles.

- Handles up to 5 tons of knuckle twisting force.
- Jaw reach is 3" with a spread of 3".
- Jaws, once tightened, won’t slip on the knuckle.
- Can be used to separate lower ball joints on import FWD vehicles.
- **No. 7503** – Outer tie rod remover.
  - Wt., 2 lbs., 12 oz.

### Inner CV Joint Puller
This is the puller you need for CV work on many Ford cars. Used with a slide hammer, it will remove an axle assembly from the transaxle without causing damage to expensive aluminum transmission cases or other components.

- **No. 7507** – CV joint fork only. Use with OTC slide hammer No. 1155, extension No. 7508, or both.
  - Wt., 13 oz.
- **No. 7508** – 17-1/2"-long slide hammer extension.
  - Wt., 2 lbs., 7 oz.
- **No. 7509** – Complete CV joint tool.
  - Wt., 8 lbs.

### U-Joint Removing/Installing Tool
This helpful tool uses a forcing-screw press to safely remove and replace automotive universal joints with needle bearings, including GM plastic pin CV U-joints.

- **No. 7248** – U-joint removing/installing tool.
  - Wt., 9 lbs., 7 oz.
**Outer CV Joint Remover**

Removes the outer CV joint on most front-wheel drive vehicles with a concealed internal circlip.

- Use with OTC No. 1155 or 1156 slide hammer with 5/8-18 UNF thread.

No. 7995 – Outer CV joint remover. Wt., 2 lbs., 6 oz.

---

**Outer CV Joint Remover**

- Use to remove the outer CV joint on most front-wheel drive vehicles with a concealed internal circlip.
- Use with slide hammer that has 5/8-18 UNF thread.
- Do NOT use this tool to remove front axle assemblies. The inner or outer CV joint may be pulled apart inside the axle boot.

No 4703 – Outer CV joint remover. Wt., 1 lbs. 10 oz.

---

**Boot Clamp Pliers – Chrysler**

- Required tool for correct installation of strap-and-buckle style CV boot clamps.
- Works on A.C.I. and G.K.N. boots found on various Chrysler, Plymouth, and Dodge front-wheel drive vehicles.
- Prevents damage to CV boot and clamp during installation.

No 4720 – Boot clamp pliers – Chrysler. Wt., 7 oz.

---

**Dust Boot Cap Installer**

Works on all vehicles with band-type boot clamps (up to 1/4" wide & .020" thick). The clamp must be installed correctly after servicing to prevent moisture and foreign material from entering the CV joint area. This tool provides exact installation of those clamps with ease.

No. 7085 – Boot clamp installer. Wt., 8 oz.

---

**CV Boot Clamp Pliers**

- Special tips work on the ear-less type CV boot clamps.
- Grips clamp in many positions to tighten clamp around boot.

No. 4724 – CV boot clamp pliers. Wt., 12 oz.
Ear-type CV Boot Clamp Pliers
- For removal of the front hub assembly, necessary for wheel bearing or brake rotor service. Provides the mechanical advantage and straight pull not possible with a slide hammer.
- Services:
No. 4723 – Ear-type CV boot clamp pliers. Wt., 13 oz.

Heavy-Duty CV Boot Clamp Installer
- Designed to clamp the ear-type CV boot clamps used on front-wheel drive vehicles.
- May also be used to crimp the clamps used on fuel and cooling system hoses.
- Ensures even, precise crimping, and eliminates possibility of damage to the clamp, boot, or hose.
No. 4722 – Heavy-duty CV boot clamp installer. Wt., 1 lb., 7 oz.

CV Boot Clamp Cutter
- Designed to easily cut the CV boot clamp without damaging the boot.
- Will cut boot clamps up to 10 mm wide and .7 mm thick.
- Handles are spring loaded to the open position to allow easy access to the clamp.
No. 4721 – CV boot clamp cutter. Wt., 12 oz.

CV Joint Banding Tool and Cutter
- Use to install and tighten the “band-it” or strap style clamps on CV joint boots, or on power steering rack and pinion steering gear boots.
- Once installed into the tool, tighten the band by turning the handle on the tool; use a socket or wrench on the handle to torque the band to OE specifications.
- When the boot clamp has been tightened to specs, cut the band to the correct length by flipping the lever (at the front of the tool) forward.
No. 4623 – CV joint banding tool and cutter. Wt., 10 oz.
Rear Axle Service Set
The tools you need for flange-type rear axle and bearing removal on most late model passenger cars and light trucks. Set includes the No. 7374 rear axle pulling plate and 5 lb. slide hammer. The axle bearing pullers, used with the slide hammer, make short work of removing semi-floating rear axle bearings.

No. 7792 – Rear axle service set. Wt., 11 lbs., 4 oz.
Consists of:
No. 7374 - Rear axle pulling plate with 5 lb. slide hammer.
No. 7495A - Rear axle bearing puller. Fits min. bearing tube I.D. of 1" and max. axle tube I.D. of 1-7/8".
No. 7496A - Rear axle bearing puller. Fits min. bearing tube I.D. of 15/16" and max. axle tube I.D. of 2-3/8".
No. 7497A - Rear axle bearing puller. Fits min. bearing tube I.D. of 1-3/8" and max. axle tube I.D. of 2-7/8".
No. 27315 - Puller hook for use with the 5 lb. slide hammer. Removes oil seals, bearings, etc.

Slide Hammer Rear Axle Puller
This puller will enable you to remove flange-type rear axles from most late model cars and light trucks. It works on axles having bolts and studs up to 9/16" diameter.

• Fits 4-, 5-, or 6-bolt patterns and stud circles from 4-1/4" to 5-9/16".

No. 7372 – Rear axle pulling plate. Wt., 1 lb., 7 oz.
No. 7374 – Rear axle pulling plate with 5-lb. slide hammer assembly. Wt., 8 lbs., 13 oz.

Pulling Hook
• This slide hammer puller attachment is used to remove seals, bearings, and other press-fit parts.
• Designed to be used with OTC No. 1155 (5 lb.) or No. 1156 (2-1/2 lb.) slide hammer, or other slide hammers having 5/8-18 threads.

No. 6541 – Pulling hook. Wt., 8 oz.
Rear Axle Bearing Puller Set
- Set contains slide hammer and popular attachments needed for servicing flange-type, floating rear axle bearings and seals in most late model, rear-wheel drive cars and light trucks; comes in a molded case.
- Rear axle bearing puller fits min. bearing tube I.D. of 1" and max. axle tube I.D. of 1-7/8".
- Rear axle bearing puller, fits min. bearing tube I.D. of 1-5/16" and max. axle tube I.D. of 2-3/8".
- Rear axle bearing puller fits min. tube I.D. of 1-3/8" and max. axle tube I.D. of 2-7/8".
Also includes:
Slide hammer tee bar, slide hammer 5 lb. weight, pulling hook, rear axle pulling plate, bearing cup remover
No. 6540 – Rear axle bearing puller set. Wt., 11 lbs., 7 oz.

Rear Axle Bearing Service Set
All three pullers have been redesigned to make the removal of semi-floating rear axle bearings easier. The new design allows you to capture the bearing firmly, distributing the pulling force over the entire bearing. This reduces damage and increases the amount of applications. Set includes three pullers to service most domestic cars. Use with OTC Nos. 1155 or 1156 slide hammer with 5/8"-18 UNF thread. Pullers also available separately.
No. 7494A – Rear axle bearing puller set. Includes one each Nos. 7495A, 7496A, and 7497A, and a storage case. Wt., 2 lbs., 8 oz.
No. 7495A – Rear axle bearing puller. Fits minimum bearing tube I.D. of 1" and maximum axle tube I.D. of 1-7/8". Wt., 12 oz.

When does your clock start?
Robinair’s new transmission oil exchanger has the vehicle in and out of the service bay in less than 20 minutes!
Our unique approach to exchanging fluid... through the transmission oil dipstick!
- Exchange oil in the pan before it passes through the transmission filter.
- Easy, convenient, and no damage to other engine components.
- It cannot be hooked up backwards.
- No rusty fittings to break loose.
Transmission Fluid Exchanger

- Top-off feature. Add or subtract in 1/10 qt. increments.
- “Low Fluid Alarm” and “Indicator Light” to alert operator.
- “Drain Waste” feature automatically pumps used fluid from the machine into a waste oil container.
- “Drain Pan” feature drains the pan for easy filter replacement. No mess.

Three modes of operations: Dipstick only, cooler line, or a combination of the two!

<table>
<thead>
<tr>
<th>Specifications</th>
<th>12V DC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exchange Accuracy</td>
<td>+/- 1/4 qt.</td>
</tr>
<tr>
<td>Controls</td>
<td>Microprocessor with digital keypad and LEDs</td>
</tr>
<tr>
<td>Fluid Tanks</td>
<td>32 quarts (24.6 liters) each for both new and used fluids</td>
</tr>
<tr>
<td>Hoses</td>
<td>91” black and red (Exchange); 76” white transfer tube (Straw)</td>
</tr>
<tr>
<td>Fluid Types</td>
<td>Multiple fluid capability.</td>
</tr>
<tr>
<td>Adapter Set</td>
<td>Complete set for most applications. Standard adapters for Ford, GM, Chrysler, European, and Universal (covering most Asian imports).</td>
</tr>
<tr>
<td>Pump</td>
<td>Positive displacement gear pump, 2 gallons per minute maximum</td>
</tr>
<tr>
<td>Weight</td>
<td>158 lbs. (72 kg)</td>
</tr>
<tr>
<td>Dimensions</td>
<td>52”H x 33”W x 20”D (132 cm x 84 cm x 51 cm)</td>
</tr>
<tr>
<td>Process Time</td>
<td>Depends on mode</td>
</tr>
<tr>
<td>Warranty</td>
<td>1 year parts and labor</td>
</tr>
</tbody>
</table>

- Exchange accuracy approximately +/- 1/4 qt.
- 32-quart supply tank; 34-quart waste tank.
- Unprecedented one-tenth quart flow metering for adding or subtracting fluid from the pan.
- Complete set of cooler line adapters for most foreign and domestic vehicles.
- Works with all types of automatic transmission fluid.
- Integral performance designed hose and tool compartment with drain.

No. 92500 – Transmission fluid exchanger. Wt., 215 lbs.
No. 529734 – Replacement nylon tube.

Automatic Transmission Fluid Diagnostic Pads

Easy, quick way to test automatic transmission fluid to determine when service is necessary. Simply place a few drops of transmission fluid from transmission dipstick onto test pad. Pad will change color indicating condition of transmission fluid. Package contains 100 pads.

No. 92001 – Automatic transmission fluid diagnostic pads. Wt., 4 oz.

Transflow Transmission Oil Cooler Flusher

Fix it right the first time... designed to measure oil flow capacity within the transmission oil cooler, and also has the capability to flush contaminated oil from the TOC after repairs.

- Only unit in the industry that performs a flow rate test.
- Flush and flow test time is 5 to 8 minutes.
- 32-quart supply tank; 34-quart waste tank.
- Supply and waste hoses each 10’ long.
- 10’ long, 12V DC power cables with battery lead clips.
- Requires shop air (90 psi, min.) and 12V DC source.

No. 92000 – Transflow transmission oil cooler flusher. Wt., 173 lbs.
PORTABLE TORQUE CONVERTER AND OIL COOLER CLEANER

When a newly overhauled transmission fails, it’s goodbye to profits and customer goodwill! Often a dirty torque converter or oil cooler is the culprit—sludge and metal particles can jam up valve bodies and clog filter screens, causing malfunctions and costly comebacks. Developed with the cooperation and approval of leading auto manufacturers, this cleaner effectively removes contaminants from converters and also performs the essential job of flushing out transmission oil cooler and cooler lines on most popular makes, 1960–current. A pair of hoses for attachment to the cooler lines is provided. The vehicle’s converter is bolted to a universal mounting plate, and the adjustable timer is set for desired cycle period. As the converter is rotated at 20 rpm, cleaning solvent is circulated through it and intermittent injections of compressed air into the solvent provide an effective pulsating, cleaning action.

No. 60081 – Torque converter/cleaner, complete with cooler flushing hoses, one 200251 adapter, two 10017 cap screws for C-3 transmissions, and three 15677 metric cap screws. Instruction manual. Wt., 230 lbs.

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Description</th>
<th>Part No.</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>200251</td>
<td>Spacer adapter</td>
</tr>
<tr>
<td>B</td>
<td>200231</td>
<td>End cap</td>
</tr>
<tr>
<td>C</td>
<td>15677</td>
<td>Cap screw</td>
</tr>
<tr>
<td>D</td>
<td>10017</td>
<td>Cap screw</td>
</tr>
</tbody>
</table>

*Note: Products are available in other voltages. Contact your customer service representative for the part numbers to order.

ACCESSORIES

For added versatility, you may order the accessories listed to the left, which adapt the 60081 unit for cleaning a variety of foreign and small domestic automatic transmission converters.
Transmission Fluid Fill Adapter
- This is a required tool to fill or add fluid to the 5R55W automatic transmission used on 2003–newer Ford Explorers.
- Operating Instructions: Remove fill plug from transmission; install No. 6604; fill transmission to correct fluid level; remove No. 6604; and reinstall fill plug in transmission.

No. 6604 – Transmission fluid fill adapter. Wt., 1 oz.

Transmission Adapter Kit
Converts your OTC No. 1726 or No. 1735 engine stand into a transmission service stand. Kit replaces the adjustment arms of the stand to hold and position the transmission at workbench height for repair.
- The transmission is held with three sides fully exposed for working convenience.
- Can be rotated a full 360° for complete access to all parts.
- Comes with mounting hardware.

No. 7118 – Transmission adapter kit. Wt., 10 lbs., 8 oz.

Ford Clutch Coupling Tool
- Wedge-shaped design allows easy removal of clutch line without damaging clutch line, coupling, or slave cylinder. No need to pry the coupler apart.

No. 7646A – Ford clutch coupling tool. Wt., 4 oz.

Quick-Disconnect Tool
Two popular disconnect tools in one set give you the versatility to quickly separate the quick connectors found on everything from radiators to transmission and power steering lines. The quick disconnect coupler tool, No. 7244, works on late model Ford and GM vehicles without disturbing the quick-connect seals. No. 7587 releases the finger on the transmission-to-radiator oil cooler line quickly, without damaging the hose or connector. Works on 1986 and newer Ford Tauruses and Mercury Sables with an AXOD, AOD, or ATX transmission.
- Tools available separately.

No. 7244 – Quick-disconnect coupler tool. Wt., 2 oz.
No. 7587 – Ford oil cooler line disconnect tool. Wt., 5 oz.
GM Hydraulic Clutch Line Disconnect Tool
This is a versatile tool for disconnecting clutch lines when you’re working on clutch assemblies or slave and master cylinders. The bent end, intended for NVG3500 and NV4500 manual transmissions, works on 1996 to 2004 full-size 2WD and 4WD trucks, Chevrolet S-10 Blazer, and pickups. The straight end is for 1993 to ‘94 Chevrolet Lumina sedan, 1995 to 2000 Chevrolet Monte Carlo, 1993 to ‘99 Buick Regal, 1998 to 2002 Olds Intrigue, 1993 to ’97 Olds Cutlass Supreme and Pontiac Grand Prix.
No. 7910 – GM hydraulic clutch line disconnect tool. Wt., 5 oz.

Automatic Transmission Clutch Spring Compressor
This is a handy, adjustable tool for removing or installing the snap ring on a transmission rear clutch piston. It applies pressure to the clutch drum’s retaining washer to compress piston return springs.
• For use on most American cars and light trucks.
No. 7024 – Automatic transmission clutch spring compressor. Wt., 2 lbs., 13 oz.

Transmission Disconnect Set
This set is used to service automatic transmission cooler lines and manual transmission hydraulic clutch lines.
Set includes:
No. 7937 – GM transmission oil cooler line disconnect tool.
No. 7646A – Ford clutch coupling tool.
No. 7910 – GM hydraulic clutch line disconnect tool.
No. 7244 – GM & Ford oil cooler line disconnect tool.
No. 7798 – Ford oil cooler line disconnect tool.
No. 519378 – Chrysler/Jeep oil cooler line disconnect tool.

Ford Transmission Cooler Line Disconnect Set
• Snap around cooler line, push into the fitting, fitting releases. The cooler line can then be removed.
• 3/8” disconnect is used on 2003–newer Ford Explorers with the 5R55W transmission.
• 1/2” disconnect is used on 2003–newer Ford Super Duty trucks with the 4R100 transmission.
No. 6593 – Ford transmission cooler line disconnect set. Wt., 8 oz.

Transmission Line Disconnects
• Used on 2001 to current Chevrolet Corvette with the 4L60E transmission, and 2003 to current Cadillac CTS with the 5L40E transmission.
• 6 per pack.
No. 6611 – Transmission line disconnects. Wt., 4 oz.
**Dodge Transmission Cooler Line Disconnect Tool**

- Designed for removing the cooler line from the radiator to transmission on 1995 and newer Dodge pickups with automatic transmissions.
- Tool encloses the quick connect fittings and releases the locking fingers on the line. It works on both 3/8" and 1/2" lines.

No. 6047 – Dodge transmission cooler line disconnect tool. Wt., 4 oz.

---

**GM Transmission Oil Cooler Line Disconnect Tool**

- Specially designed to work in tight places. So simple to operate, you can do it with just one hand.
- After insertion into the quick-connect fitting on 1/2" dia. lines, a quarter turn of the tool quickly and easily releases the fitting on the transmission end of the transmission-to-radiator oil cooler line.

No. 7937 – GM transmission oil cooler line disconnect tool. Wt., 2 oz.

---

**Clutch Alignment Tool Set (17 piece)**

- Essential for clutch installation on virtually all cars and light-duty trucks. Aligns clutch plate by using tapered cones and pilot adapters.
- Includes five metric pilot adapters, 19mm, 17mm, 16mm, 14mm, 12mm, two clutch disc centering adapters, and one alignment shaft.
- Housed in a blow-molded storage case.

No. 4528 – Clutch alignment tool set (17 piece). Wt., 4 lbs., 3 oz.
Differential Bearing Pullers
For removing differential side carrier bearings on a wide variety of passenger cars and light trucks. Use with step plate adapters Nos. 8060, 8061, 8063, and 8064. (Step plate adapters are not included with 1028 or 1031.)

No. 1028 – Puller with 3-1/2” maximum reach, 1-1/4” to 4-1/2” spread. Primarily for servicing Ford products. Wt., 1 lb., 13 oz.

No. 1031 – Puller with 3-1/4” maximum reach, 6” maximum spread. For servicing most General Motors, American Motors, and Chrysler products. Wt., 2 lbs.

Escort/Lynx Half-Shaft Remover/ Differential Rotator
This tool is required when you’re removing the left-hand half-shaft from Escort/Lynx transaxles. It ensures removal and enables you to turn the differential.

No. 7140 – Escort/Lynx half-shaft remover/differential rotator. Wt., 1 lb., 13 oz.

Differential Bearing Preload Wrench
• Similar to Miller C-4164.
• Use to adjust differential bearing free play on Chrysler/Dodge vehicles with 7-1/4”, 8-1/4”, 8-3/4”, and 9-1/4” rear axles.
• Tool fits inside axle tube to access the threaded adjusters.

No. 6602 – Differential bearing preload wrench. Wt., 2 lbs., 14 oz.

Differential Housing Spreader
Here’s a tool that eases the job of removing or installing differential ring-gear assemblies on Dana axle models 30 through 70. It’s a heavy-duty device using mechanical screw power to spread the housing. It helps prevent the component damage that often results from the use of homemade devices.

No. 7071 – Differential housing spreader. Wt., 34 lbs.

Toyota A/C Disconnect Tool
• Used to release the plastic quick-connect fittings on the high- and low-pressure air conditioning lines at the evaporator.
• Easy to use: Plastic fitting on A/C line is rotated to show access to the two release holes in the fitting; tool is inserted into release holes, and pushed to release the fitting.

No. 6073 – Toyota A/C disconnect tool. Wt., 4 oz.
**A/C Spring-Lock Coupling Tool Set**

These tools will quickly separate spring-lock refrigerant pressure lines on the air conditioning systems of 1981 to 2002 Ford vehicles, and 1994 to 2002 Chrysler and Jeep vehicles.

- Spring-loaded in the closed position to deflect spray that occurs when a line is disconnected.
- Tools available separately.

**No. 6538** – Set of four A/C spring-lock coupling tools:
- Wt., 3 oz.

**No. 518901** – 3/4” (white). Wt., 2 oz.
**No. 518900** – 3/8” (red). Wt., 2 oz.
**No. 518898** – 1/2” (blue). Wt., 2 oz.
**No. 518897** – 5/8” (black). Wt., 2 oz.

---

**A/C and Fuel Line Disconnect Set**

- Used to remove A/C and fuel line quick-disconnect fittings from hard-to-reach areas.

**No. 4495** – A/C and fuel line disconnect set.
- Wt., 5 oz.

---

**Fuel and Air Conditioning Line Release Tool**

- This spring-lock coupling release tool easily separates fittings on fuel and air conditioning lines.
- Tool sizes are 3/4”, 5/8”, 1/2”, and 3/8”.

**No. 4494** – Fuel and air conditioning line release tool.
- Wt., 5 oz.
Full-Coverage Disconnect Tool Set

If you're working on Chrysler, Ford, or General Motors vehicles, this set will make your job easier. The tools are designed for heater hoses, transmission oil coolers, air conditioning and fuel lines. They're approved by vehicle manufacturers and will not damage the fittings being disconnected. Tool Nos. 518092, 518896, 518897, 518898, 518899, 518900, and 518901 are spring-loaded in the closed position to deflect any spray that occurs when lines are disconnected.

• Comes in blow-molded case.

No. 6508 – Disconnect tool set. Wt., 4 lbs., 8 oz.

Contents of set:

<table>
<thead>
<tr>
<th>Tool</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>440384</td>
<td>GM hydraulic clutch line disconnect tool.</td>
</tr>
<tr>
<td>440486</td>
<td>GM transmission oil cooler line.</td>
</tr>
<tr>
<td>511410</td>
<td>Fuel line disconnect tool.</td>
</tr>
<tr>
<td>511413</td>
<td>Fuel line disconnect tool.</td>
</tr>
<tr>
<td>518902</td>
<td>Heater hose disconnect tool.</td>
</tr>
<tr>
<td>519158</td>
<td>Fuel line disconnect tool set.</td>
</tr>
<tr>
<td>518582</td>
<td>Fuel line disconnect tool.</td>
</tr>
<tr>
<td>518583</td>
<td>Fuel line disconnect tool.</td>
</tr>
<tr>
<td>518584</td>
<td>Fuel line disconnect tool.</td>
</tr>
<tr>
<td>518896</td>
<td>Fuel line disconnect tool. (Yellow, 3/8&quot;)</td>
</tr>
<tr>
<td>518897</td>
<td>A/C spring lock coupling tool. (Black, 5/8&quot;)</td>
</tr>
<tr>
<td>518898</td>
<td>A/C spring lock coupling tool. (Blue, 1/2&quot;)</td>
</tr>
<tr>
<td>518899</td>
<td>Fuel line disconnect tool. (Green, 1/2&quot;)</td>
</tr>
<tr>
<td>518900</td>
<td>A/C spring lock coupling tool. (Red, 3/8&quot;)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tool</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>518901</td>
<td>A/C spring lock coupling tool. (White, 3/4&quot;)</td>
</tr>
<tr>
<td>519067</td>
<td>Fuel line disconnect tool.</td>
</tr>
<tr>
<td>519068</td>
<td>Fuel line disconnect tool.</td>
</tr>
<tr>
<td>519151</td>
<td>Quick disconnect tool.</td>
</tr>
<tr>
<td>519152</td>
<td>Oil cooler line disconnect tool.</td>
</tr>
<tr>
<td>519153</td>
<td>Clutch coupling tool.</td>
</tr>
<tr>
<td>519154</td>
<td>Fuel line coupling tool.</td>
</tr>
<tr>
<td>519155</td>
<td>Chrysler fuel line disconnect tool.</td>
</tr>
<tr>
<td>519156</td>
<td>Ford heater hose disconnect tool.</td>
</tr>
<tr>
<td>519157</td>
<td>GM heater line quick connect separator.</td>
</tr>
<tr>
<td>519159</td>
<td>Oil cooler line disconnect tool.</td>
</tr>
</tbody>
</table>
Locknut Sockets

**No. 7090A**  

**No. 7157**  

**No. 7158**  

**No. 7795**  

**No. 7796**  

**No. 7270A**  

**No. 7269**  

**No. 7698**  

**No. 7913**  

**No. 7612**  
- 54 mm hex socket fits front wheel bearing adjusting nut of Toyota FJ, LN, and RN. Has 1/2" square drive end, permitting use of a torque wrench. 1/2" sq. drive. Wt., 1 lb., 15 oz.

**No. 7941**  

**No. 6006**  
- Services 1994–newer Dodge 1/2-ton 4x4 pickups with Dana 44 front axle and Dana 60 axle with vacuum disconnect front axle. Wt., 1 lb., 10 oz.

**No. 1902**  

**No. 1928**  
- Services 1990–93 Dodge truck with Dana 60 manual hubs. 3/4" sq. drive. Wt., 2 lbs., 2 oz.

**No. 1936**  

**No. 6601**  
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1984–92 Ford Ranger &amp; Bronco II with manual hubs</td>
<td>7270A</td>
<td>T86T-1197-AR</td>
<td>205-244</td>
</tr>
<tr>
<td></td>
<td>1902</td>
<td>T70T-4252-B</td>
<td>205-039</td>
</tr>
<tr>
<td>1993–95 Ford Ranger, Bronco II, and Explorer with manual hubs</td>
<td>7157</td>
<td>T83T-1197-B</td>
<td>205-192</td>
</tr>
<tr>
<td></td>
<td>1902</td>
<td>T70T-4252-B</td>
<td>205-039</td>
</tr>
<tr>
<td>1990–95 Ford Ranger, Bronco II, and Explorer with automatic hubs</td>
<td>1936</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1995–96 Ford F-series 1/2-ton trucks and full-size Bronco with manual hubs</td>
<td>7157</td>
<td>T83T-1197-B</td>
<td>205-192</td>
</tr>
<tr>
<td></td>
<td>7795</td>
<td>T95T-1197-A</td>
<td>205-348</td>
</tr>
<tr>
<td></td>
<td>7796</td>
<td>T95T-1197-B</td>
<td>205-349</td>
</tr>
<tr>
<td>1978–84 Ford F-series H.D. 3/4- and 1-ton 4WD trucks</td>
<td>7090A</td>
<td>D78T-1197-A</td>
<td>205-D001</td>
</tr>
<tr>
<td>1985 1/2–95 Ford F-series H.D. 3/4- and 1-ton Dana 50 IFS or Dana 60 front axle</td>
<td>7158</td>
<td>D85T-1197-A</td>
<td>205-D065</td>
</tr>
<tr>
<td>1985–95 Ford F-series 1/2-ton truck and full-size Bronco with Dana 28 front axle</td>
<td>7158</td>
<td>D85T-1197-A</td>
<td>205-D065</td>
</tr>
<tr>
<td>1959–85 Ford F-series 1/2- and 3/4-ton truck and full-size Bronco</td>
<td>7157</td>
<td>T83T-1197-B</td>
<td>205-192</td>
</tr>
<tr>
<td>1986–95 Ford F-series 1/2-ton truck and full-size Bronco with Dana 44 front axle</td>
<td>7270A</td>
<td>T86T-1197-AR</td>
<td>205-244</td>
</tr>
<tr>
<td>2003–newer Ford F-250, 350, 450 Super Duty w/10-1/2&quot; rear axle</td>
<td>6601</td>
<td>N/A</td>
<td>205-446</td>
</tr>
<tr>
<td>1973–81 GM 3/4- and 1-ton 4WD trucks</td>
<td>7090A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1960–90 GM 1/2-ton truck and full-size Blazer/Jimmy</td>
<td>7157</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1982–90 GM H.D. 3/4- and 1-ton trucks</td>
<td>7158</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1989–96 Tracker</td>
<td>6283</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1969–72 International 1/2-ton trucks</td>
<td>7157</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1969–90 Dodge 1/2-ton trucks with manual hubs</td>
<td>7157</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1990–93 Dodge trucks with Dana 44 automatic hubs</td>
<td>7270A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1990–93 Dodge trucks with Dana 60 manual hubs</td>
<td>1928</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1988–95 Isuzu Trooper, Rodeo, Amigo, and pickup; 1989–95 Honda Passport; and Jeep J20 pickups with Dana 60 axle</td>
<td>7698</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1982–97 Toyota trucks, models FJ, LN, RN, with 54 mm 6 pt. nuts</td>
<td>7612</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1995–2002 4WD Toyota Tacoma and 1996–2002 4WD Toyota T100 and 4Runner, all with lockout hubs</td>
<td>7941</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1997–2000 4WD Geo Tracker and Suzuki Samurai</td>
<td>7913</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Locknut Sockets**

**FW Bearing Locknut Sockets Application Chart**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1984–92 Ford Ranger &amp; Bronco II with manual hubs</td>
<td>7270A</td>
<td>T86T-1197-AR</td>
<td>205-244</td>
</tr>
<tr>
<td></td>
<td>1902</td>
<td>T70T-4252-B</td>
<td>205-039</td>
</tr>
<tr>
<td>1993–95 Ford Ranger, Bronco II, and Explorer with manual hubs</td>
<td>7157</td>
<td>T83T-1197-B</td>
<td>205-192</td>
</tr>
<tr>
<td></td>
<td>1902</td>
<td>T70T-4252-B</td>
<td>205-039</td>
</tr>
<tr>
<td>1990–95 Ford Ranger, Bronco II, and Explorer with automatic hubs</td>
<td>1936</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1995–96 Ford F-series 1/2-ton trucks and full-size Bronco with manual hubs</td>
<td>7157</td>
<td>T83T-1197-B</td>
<td>205-192</td>
</tr>
<tr>
<td></td>
<td>7795</td>
<td>T95T-1197-A</td>
<td>205-348</td>
</tr>
<tr>
<td></td>
<td>7796</td>
<td>T95T-1197-B</td>
<td>205-349</td>
</tr>
<tr>
<td>1978–84 Ford F-series H.D. 3/4- and 1-ton 4WD trucks</td>
<td>7090A</td>
<td>D78T-1197-A</td>
<td>205-D001</td>
</tr>
<tr>
<td>1985 1/2–95 Ford F-series H.D. 3/4- and 1-ton Dana 50 IFS or Dana 60 front axle</td>
<td>7158</td>
<td>D85T-1197-A</td>
<td>205-D065</td>
</tr>
<tr>
<td>1985–95 Ford F-series 1/2-ton truck and full-size Bronco with Dana 28 front axle</td>
<td>7158</td>
<td>D85T-1197-A</td>
<td>205-D065</td>
</tr>
<tr>
<td>1959–85 Ford F-series 1/2- and 3/4-ton truck and full-size Bronco</td>
<td>7157</td>
<td>T83T-1197-B</td>
<td>205-192</td>
</tr>
<tr>
<td>1986–95 Ford F-series 1/2-ton truck and full-size Bronco with Dana 44 front axle</td>
<td>7270A</td>
<td>T86T-1197-AR</td>
<td>205-244</td>
</tr>
<tr>
<td>2003–newer Ford F-250, 350, 450 Super Duty w/10-1/2&quot; rear axle</td>
<td>6601</td>
<td>N/A</td>
<td>205-446</td>
</tr>
<tr>
<td>1973–81 GM 3/4- and 1-ton 4WD trucks</td>
<td>7090A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1960–90 GM 1/2-ton truck and full-size Blazer/Jimmy</td>
<td>7157</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1982–90 GM H.D. 3/4- and 1-ton trucks</td>
<td>7158</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1989–96 Tracker</td>
<td>6283</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1969–72 International 1/2-ton trucks</td>
<td>7157</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1969–90 Dodge 1/2-ton trucks with manual hubs</td>
<td>7157</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1990–93 Dodge trucks with Dana 44 automatic hubs</td>
<td>7270A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1990–93 Dodge trucks with Dana 60 manual hubs</td>
<td>1928</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1988–95 Isuzu Trooper, Rodeo, Amigo, and pickup; 1989–95 Honda Passport; and Jeep J20 pickups with Dana 60 axle</td>
<td>7698</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1982–97 Toyota trucks, models FJ, LN, RN, with 54 mm 6 pt. nuts</td>
<td>7612</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1995–2002 4WD Toyota Tacoma and 1996–2002 4WD Toyota T100 and 4Runner, all with lockout hubs</td>
<td>7941</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1997–2000 4WD Geo Tracker and Suzuki Samurai</td>
<td>7913</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>
7-Piece Wheel Bearing Locknut Socket Set
- For use with 1/2" ratchet or breaker bar.
Set contains:
No. 519097-7 – 55 mm hex locknut socket designed for use on front wheel adjusting nuts found on Toyota models FJ, LN, and RN.
No. 519097-3 – 2-1/2" hex locknut socket fits the hex nut found on rear axles and various front axle applications on light-duty trucks.
No. 519097-2 – 2-9/16" rounded hex locknut socket works on 1990–93 Dodge trucks with Dana 60 manual hubs.
No. 519097-6 – 2-3/8" rounded hex locknut socket works on 1990–newer Ford Rangers, Bronco IIs, and Explorers with automatic locking hubs.
No. 4542 – Wheel bearing locknut socket set (7 piece).
Wt., 11 lbs., 7 oz.

Axle Nut Socket Set – FWD (7 piece)
- Extra long, 1/2" drive chrome molybdenum sockets for heavy-duty use in removing and installing axle nuts.
- Use with a ratchet, breaker bar, or torque wrench.
- Contained in a blow-molded plastic storage case.
Contents of set:
No. 4547-29 – 29 mm socket services various late model GM, Ford, and Asian imports.
No. 4547-30 – 30 mm socket services GM body styles A, J, and N, plus Asian imports.
No. 4547-32 – 32 mm socket services late model Honda and Chrysler vehicles.
No. 4547-34 – 34 mm socket services many GM mid-size vehicles.
No. 4547-35 – 35 mm socket services many GM vehicles.
No. 4547-36 – 36 mm socket services many GM, Ford, and Chrysler full-size vehicles.
No. 4547-38 – 38 mm socket services various full-size vehicles including SUVs.
No. 4547 – Axle nut socket set (7 piece).
Wt., 10 lbs., 6 oz.
Locknut Socket Set – 4WD (6 piece)

- Chrome vanadium steel sockets cover most SUV and light truck applications.
- Sockets have 1/2" square drive, allowing use of a torque wrench, ratchet, or breaker bar.

Contents of set:


No. 4543-2 – Ford 4-lug locknut socket for high-shear rotating nuts on 1985–newer F-250 and F-350 truck rear axles, and Dana 80 rear axles of Ford Super Duty trucks.

No. 4543-3 – 4-lug socket for removing and installing 4-slot front axle locknuts on 1986–newer F-Series 1/2-ton trucks, full-size Bronco with Dana 44 axle, 1984–92 Ford Ranger, and Bronco II with manual hubs. Also, Dodge trucks using Dana 44 axle with automatic hubs.


No. 4543-6 – FWD front spindle puller. Removes front spindle to access needle bearing, when lubricating and aligning front wheels. 5/8"-18 fine thread permits use with OTC No. 1155 slide hammer. Fits spindle thread sizes 2"-16, 1-5/8"-16 and 38 mm-1.5. Applications: Full-size GM, Ford, Jeep, and International pickups with Dana front axles, plus Ranger and Bronco II.

- A blow-molded plastic storage case keeps set contents organized and protected from loss.

No. 4543 – 4WD spindle nut socket set (6 piece).

Wt., 13 lbs.
1/2" Drive Locknut Socket Set

- These are not light-hearted sockets; they feature a 1/2" square drive, and can be used with an extension and torque wrench for accurate tightening.
- For use on the rounded and standard hex nuts found on the most popular light-duty trucks on the road.
- Unlike the competition, these sockets are backed by the famous OTC Lifetime Marathon Warranty® against defects in materials and workmanship.

No. 6010 – Locknut socket set. Includes one each: Nos. 6612, 6795, 6796, 6902, 6921, 6928, 6936. Wt., 12 lbs.

Set includes one each of the following:

No. 6612 – 54 mm hex locknut socket designed for use on front wheel adjusting nuts found on Toyota FJ, LN, and RN models. Wt., 1 lb., 8 oz.


No. 6921 – 2-1/2" hex locknut socket fits hex nut found on rear axles and various front axle applications on light-duty trucks. Wt., 1 lb., 8 oz.


No. 6928 – 2-9/16" rounded hex locknut socket. Works on 1990–93 Dodge trucks with Dana 60 manual hubs. Wt., 1 lb., 8 oz.


Brake Pressure Test Kit

Kit contains a complete set of fittings and gauges for pressure testing ABS and conventional brake systems on Chrysler, Ford, GM, Jeep, and import vehicles.

- Includes an organizer case

No. 7488A – Brake pressure test kit. Includes two 0–3,000 psi gauges, 16 adapter fittings, two Bosch ABS adapters, one Teves/Delco Powermaster III adapter, one Ford (Teves) adapter, one 90° elbow fitting, one 45° elbow fitting, bleeder, and instructions. Wt., 7 lbs., 10 oz.
Brake Fluid Safety Meter

Check condition of brake fluid in less than a minute!

Water can enter a brake system though microscopic holes anywhere in the system. Once inside, it can cause corrosion in system components...it can vaporize under the high heat conditions of hard braking situations...it can cause dangerous degradation of your customer’s ability to stop safely! The No. 3890 can diagnose a brake system in under a minute. It actually boils a small sample of brake fluid in the reservoir to test for water contamination.

FEATURES:
- Powered by the vehicle battery; won’t operate if connected to the wrong polarity.
- On-screen prompts lead you quickly through testing.
- You’ll find the minimum boiling (vaporizing) point along with minimum recommended levels for various types of brake fluid.
- Works on DOT 3, DOT 4, and DOT 5.1 fluids.
- No consumable test strips; buy this tool and test every vehicle that comes into your shop.

No. 3890 – Brake fluid safety meter. Wt., 2 lbs., 8 oz.

Specifications:
- Accuracy at 212°–356°F....1% typical, 3% max.
- Accuracy above 356°F....3% typical, 5% max.
- Testing Time....15–60 seconds
- Operating Temp Range....32°–122°F

Steering Wheel Holder & Pedal Depressor Kit

- This kit has two applications: 1) holds steering wheel in position for alignment adjustments, and 2) depresses brake pedal for various brake checks, including brake lamp operation.
- Rod easily slides in actuator for fast, easy installation of tool on brake pedal or steering wheel. Simply hand squeeze the actuator to accomplish fine adjustments.
- Kit includes: actuator assembly; extension rod for actuator (use when depressing brake pedal); hook assembly (hooks on steering wheel when depressing brake pedal or holding steering wheel); and flat pad (rests on front seal when holding steering wheel).

No. 4546 – Steering wheel holder and pedal depressor kit. Wt., 5 lbs., 2 oz.
No. 4546-1 – Handle and Rod. Wt., 2 lbs.
No. 4546-2 – Steering Wheel and Pedal Holder. Wt., 2 lbs., 7 oz.

One-Man Brake Bleeder Hose

- Removes air from brake system, one wheel at a time, and eliminates the need for an assistant.
- Hose easily attaches to bleeder screw, which holds hose in place and prevents leaking.
- Check valve on end of hose prevents air from entering brake system when pumping brake pedal.

No. 4599 – One-man brake bleeder hose. Wt., 5 oz.
Fluid Evacuation / Brake Bleeding Tools
- Use to bleed brake systems and remove a variety of fluid from vehicles, such as antifreeze, oil, transmission fluid, gear lube, etc.
- Quick connect locking hose adapters and ball-style on/off valve on hose prevent fluid leakage.
- Equipped with a relief valve to prevent over-pressurizing the tank.

No. 8100 – Operates by shop air or a hand pump; shipped complete with a brake bleeding hose, fluid evacuation hose, and two suction hoses (6 mm and 7 mm); 10-liter capacity tank. Wt., 10 lbs.
No. 8101 – Operates with shop air; shipped with a brake bleeding hose and fluid evacuation hose; 6-liter capacity tank. Wt., 10 lbs., 13 oz.

ABS Brake Proportioning Valve Depressor
The proportioning valve depressor works on various GM utility vehicles, vans, and pickups fitted with Kelsey Hayes anti-lock brake systems. It also works on rear-wheel anti-lock brakes.
- Two depressors work best for four-wheel anti-lock systems.

No. 7853 – ABS brake proportioning valve depressor. Wt., 4 oz

Disc Park Brake Caliper Tool Kit
This tool set is a must when you’re installing brake pads on vehicles with 4-wheel disc brakes. It works on most GM vehicles, most Ford vehicles, and imported vehicles.
- Includes tool to retract the piston on a parking brake actuator.

No. 7317A – Disc park brake caliper tool kit. Wt., 4 lbs., 5 oz.
Kit includes one each of the following:
No. 214963 – Plate.
No. 214964 – 3/8" extension.
No. 308649 – Forcing screw.
No. 308645 – Four wheel disc brake adapter tool. Fits 1-11/16" pistons on Subaru, Nissan, Datsun, and Ford Thunderbird. Wt., 5 oz.
No. 308646 – Disc brake adapter tool for GM vehicles with 1-7/8" pistons. Wt., 5 oz.
No. 308647 – Disc brake adapter tool for GM vehicles with 2-1/8" pistons. Wt., 7 oz.
No. 308648 – Disc brake adapter tool for GM vehicles with 2-1/2" pistons. Wt., 10 oz.

Disc Brake Piston Tool
- This “cube” tool rotates pistons back into brake calipers when replacing brake pads on vehicles with rear wheel disc brakes.
- Tool has 3/8" square drive, provides six drive pin configurations to fit most cars and light trucks. This updated version fits more applications than many competitors’ tools.

No. 4589 – Disc brake piston tool. Wt., 3 oz.
Universal Brake Caliper Bit Socket Set
(9 Piece)

No. 6135 – Universal brake caliper bit socket set (9 piece).

Wt., 1 lb. 8 oz.

Set includes one each of the following:
- No. 6107 – Size T40, sq. drive 3/8”
- No. 6108 – Size T45, sq. drive 3/8”
- No. 6110 – Size T50, sq. drive 3/8”
- No. 6112 – Size T60, sq. drive 1/2”
- No. 6165 – Size 1/4”, sq. drive 3/8”
- No. 6167 – Size 3/8”, sq. drive 3/8”
- No. 6175 – Size 7 mm, sq. drive 3/8”
- No. 6176 – Size 8 mm, sq. drive 3/8”
- No. 6177 – Size 10 mm, sq. drive 3/8”

Caliper Hanger Set

These hangers are designed to hold brake calipers out of your way during brake, bearing, suspension, or axle work. In doing so, they make the jobs easier and faster, and reduce possible brake hose damage.

No. 7661 – Caliper hanger set. Wt., 8 oz.

Hub Resurfacing Kit

- Fits your power drill to quickly sand rust off lug studs and rotors on the hub assembly. Sanding pads attach with Velcro™.
- For most domestic and import vehicles with either front or rear disc brakes. Includes holder and five sanding discs.
- Run at speeds of 1200 rpm or less for best results. (Do not exceed 1200 rpm).

No. 7942A – Hub resurfacing kit. Wt., 3 oz.

No. 222548 – 10 pack of replacement sanding pads for No. 7942A. Wt., 1 oz.

No. J-42450-9 – Holder only. Wt., 2 oz.

Disc Brake Pad Spreader

- Works on:
  1998–2001 Chev. Lumina
  2000–2004 Chev. Impala
  1998–2004 Buick Regal
  1998–1999 Olds Cutlass
  1998–2004 Pontiac Grand Prix
  1997–2004 Ford F-250, F-300, F-450 trucks

- Can be used on or off the vehicle during brake pad replacement to push the piston back into the caliper. Thick pushing plate (3/16”) and wide, threaded collars are designed for heavy-duty applications.

No. 6093 – Disc brake pad spreader. Wt., 2 lbs. 3 oz.
Disc Brake Pad Spreader
Disc brake pad installation is much easier when you’re using this spreader, which fits between the new pads and expands to retract the piston. This leaves your hands free to slide the caliper over the rotor. Designed to work on standard and four-piston caliper disc brakes, this tool will shorten installation time.

No. 7034 – Disc brake pad spreader. Wt., 10 oz.

Ford Brake Spring Tool
The hold-down springs on rear brake drums can now be easily removed or installed with the help of this tool – without causing damage or injuries.
- For use on 1967 to 2004 3/4- and 1-ton pickups and vans.

No. 7456 – Ford brake spring tool. Wt., 7 oz.

Ford Caliper Pin Remover
This is the damage-free way to remove brake caliper pins on 1986 to ‘88 Aerostar, Bronco, and E- and F-series pickups; 1983 to ‘88 Ranger; and 1984 to ’88 Bronco II.

No. 7299 – Ford caliper pin remover. Wt., 7 oz.

Ford Disc Brake Caliper Pin Remover
Forget those makeshift methods of disc brake caliper pin removal. With one of these tools, you can handle jobs on a variety of light-duty Ford models.

No. 7499 – Ford disc brake caliper pin remover. Wt., 8 oz.

GM W-Body Brake Bushing Service Set
Here’s the complete set for servicing seized disc-brake rear-caliper slides on GM W-body cars. It includes a bushing driver, 180 grit hone, and a 1-1/4” diameter wire brush.
- For use on 1988 to 1993 Buick Regal, Oldsmobile Cutlass Supreme, Pontiac Grand Prix; 1990 to 1993 Chevrolet Lumina sedan.


3-in-1 180° Tubing Bender
- Capable of making 180° bends in copper, brass, aluminum, and steel tubing.
- Just one tool works on three sizes of tubing: 1/4”, 5/16”, and 3/8”.

No. 6515 – 3-in-1 180° tubing bender. Wt., 1 lbs., 5 oz.
**Heavy-Duty Tubing Cutter**
- Works on tubing sizes 1/8" to 1-1/8" O.D. (3 mm to 29 mm).
- Easily cuts copper, brass, aluminum, and steel brake lines.
- Ream folds onto cutter body for storage.
- Extra cutting wheel stored under ream.

No. 6512 – Heavy-duty tubing cutter. Wt., 6 oz.

---

**Mini Tubing Cutter**
- Works on tubing sizes 1/8" to 5/8" O.D. (3 mm to 16 mm).
- Easily cuts copper, brass, aluminum, and steel brake lines in hard-to-reach places.
- Ream folds onto cutter body for storage.
- Extra cutting wheel stored under ream.

No. 6514 – Mini tubing cutter. Wt., 3 oz.

---

**Brake Drum and Rotor Remover**

Having trouble pulling brake drums off hubs? This tool is the solution for that common problem.
- For use on Mercury Villager vans and many import vehicles.
- The No. 6021 tools simply thread into the 8 mm x 1.25 holes in the drum, then are tightened simultaneously to free the hub from the drum. Then the handles are used to pull off the drum.

No. 6021 – Brake drum and rotor remover. Wt., 5 oz.

---

**Brake Tool Set (8 piece)**
- Set contains the most popular brake tools for servicing drum brakes on many import and domestic vehicles.
- Features BMC and high quality handles.
- Includes three different brake spoons to adjust most brake drums, five different brake spring tools that will service most drum brakes.

No. 6516 – Brake tool set. Wt., 3 lbs. 2 oz.

---

**GM Code Retrieval Keys**

These keys enable you to easily retrieve trouble codes from pre-OBDII GM vehicles.

**Double Flaring Tool Set with Cutter**

- Designed for steel brake lines where double flaring is required.
- Housed in a plastic blow-molded case.

**No. 6503** – Double flaring tool set with cutter. Wt., 3 lbs., 7 oz.

---

**Brake Spring Pliers and Claw**

- Effectively removes and replaces shoe return springs of drum brakes on domestic cars and trucks. Thin, narrow point provides straight, in-line pull on spring.
- Robust handle provides powerful leverage. Double-ended design. Plated steel resists corrosion.

**No. 4590** – Brake spring pliers and claw. Wt., 14 oz.

---

**Brake Spring Compressor Tool**

- Provides leverage to remove and install stubborn hold down springs of drum brakes on cars and light trucks.
- Special beveled cup end and notched design grips the retaining washers (11/16" to 7/8") used to hold the springs in place. Comfortable handle and knurled base for solid gripping.

**No. 4591** – Brake spring compressor tool. Wt. 3 oz.

---

**GM Brake Shoe Spanner and Spring Remover**

Our brake shoe spanner and spring remover tool is essential for removing the rear brake shoe retaining springs. It also removes and installs adjuster springs, and can be used to activate the brake self-adjuster mechanism.


**No. 6631** – GM brake shoe spanner and spring remover. Wt., 11 oz.
Bubble (I.S.O.) Flaring Tool Set with Cutter
- Designed for metric, steel brake lines where an ISO or bubble flare is required.
- Includes the No. 6514 tubing cutter and adapters for 4.75 mm, 6 mm, 8 mm, and 10 mm tubing.
- Housed in a plastic blow-molded case.
No. 6504 – Bubble (I.S.O.) flaring tool set with cutter.
Wt., 3 lbs., 7 oz.

Metric Double Flaring Tool Set with Cutter
- Designed for metric, steel brake lines where double flaring is required.
- Also performs 45° single flares on 4 mm, 4.75 mm, 6 mm, 8 mm, 10 mm, 12 mm, and 14 mm copper, aluminum, brass, and magnesium tubing.
- Includes the No. 6514 tubing cutter and adapters for double flaring 4 mm, 4.75 mm, 6 mm, 8 mm, and 10 mm tubing.
- Housed in a plastic blow-molded case.
No. 6506 – Metric double flaring tool set with cutter.
Wt., 3 lbs., 7 oz.

Double Flaring Tool Kit
- Designed for double or single flare in copper, aluminum, soft steel brake line, and brass tubing (to 45 degrees).
- Includes five adapters 3/16" through 1/2" (4.8 mm through 12.7 mm).
No. 4503 – Double flaring tool kit. Wt., 2 lbs., 10 oz.

Bubble (I.S.O.) Flaring Tool Kit
- Designed for crack-free bubble flares on soft steel tubing used in automotive brake systems.
- Includes four dies: 4.75, 6, 8, and 10 mm adapters.
- Forged steel yoke, flaring bar, and all the adapters needed for ISO bubble flaring.
- The most economical “Bubble” flare tool to date. Housed in a blow-molded storage.
No. 4504 – Bubble (I.S.O.) flaring tool kit. Wt., 2 lbs., 10 oz.
Master TORX® Socket Set

51-piece, professional socket set in a blow-molded case.

Hundreds of applications from front to rear on cars and trucks:
- seat belt bolts
- interior and exterior trim screws
- engine assemblies
- tail lamp lenses & assemblies
- bumpers
- headlight bezels
- door strikers & latches
- brake rotor bolts
- GM front-wheel drive front wheel bearings
- truck box liners

- Styles available: TORX bit sockets, TORX PLUS bits sockets, tamper-resistant TORX bits, and TORX sockets for external bolts.
- Made from superior S2 steel to meet or exceed torque specifications.

No. 5900A – Master TORX® socket set. 51-piece set in blow-molded case. Wt., 7 lbs.

<table>
<thead>
<tr>
<th>No.</th>
<th>Size</th>
<th>Sq. Drive</th>
</tr>
</thead>
<tbody>
<tr>
<td>5906</td>
<td>T6</td>
<td>1/4&quot;</td>
</tr>
<tr>
<td>5908</td>
<td>T8</td>
<td>1/4&quot;</td>
</tr>
<tr>
<td>6101</td>
<td>T10</td>
<td>1/4&quot;</td>
</tr>
<tr>
<td>6102</td>
<td>T15</td>
<td>1/4&quot;</td>
</tr>
<tr>
<td>6103</td>
<td>T20</td>
<td>1/4&quot;</td>
</tr>
<tr>
<td>6104</td>
<td>T25</td>
<td>1/4&quot;</td>
</tr>
<tr>
<td>6105</td>
<td>T27</td>
<td>1/4&quot;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No.</th>
<th>Size</th>
<th>Sq. Drive</th>
</tr>
</thead>
<tbody>
<tr>
<td>6106</td>
<td>T30</td>
<td>1/4&quot;</td>
</tr>
<tr>
<td>6107</td>
<td>T40</td>
<td>3/8&quot;</td>
</tr>
<tr>
<td>6108</td>
<td>T45</td>
<td>3/8&quot;</td>
</tr>
<tr>
<td>6109</td>
<td>T47</td>
<td>3/8&quot;</td>
</tr>
<tr>
<td>6110</td>
<td>T50</td>
<td>3/8&quot;</td>
</tr>
<tr>
<td>6111</td>
<td>T55</td>
<td>3/8&quot;</td>
</tr>
<tr>
<td>6112</td>
<td>T60</td>
<td>1/2&quot;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No.</th>
<th>Size</th>
<th>Sq. Drive</th>
</tr>
</thead>
<tbody>
<tr>
<td>6116</td>
<td>T60</td>
<td>1/2&quot;</td>
</tr>
</tbody>
</table>

**TORX® External Socket**

E4 to E24 (13 piece)

<table>
<thead>
<tr>
<th>No.</th>
<th>Size</th>
<th>Sq. Drive</th>
</tr>
</thead>
<tbody>
<tr>
<td>5934</td>
<td>E4</td>
<td>1/4&quot;</td>
</tr>
<tr>
<td>5935</td>
<td>E5</td>
<td>1/4&quot;</td>
</tr>
<tr>
<td>5936</td>
<td>E6</td>
<td>1/4&quot;</td>
</tr>
<tr>
<td>5937</td>
<td>E7</td>
<td>1/4&quot;</td>
</tr>
<tr>
<td>5938</td>
<td>E8</td>
<td>1/4&quot;</td>
</tr>
<tr>
<td>5939</td>
<td>E10</td>
<td>3/8&quot;</td>
</tr>
<tr>
<td>5940</td>
<td>E12</td>
<td>3/8&quot;</td>
</tr>
</tbody>
</table>

**TORX® Tamper-Resistant Bits**

TT8 to TT60 (12 piece)

<table>
<thead>
<tr>
<th>No.</th>
<th>Size</th>
<th>Hex Insert</th>
</tr>
</thead>
<tbody>
<tr>
<td>5919</td>
<td>TT8</td>
<td>1/4&quot;</td>
</tr>
<tr>
<td>5920</td>
<td>TT10</td>
<td>1/4&quot;</td>
</tr>
<tr>
<td>5921</td>
<td>TT15</td>
<td>1/4&quot;</td>
</tr>
<tr>
<td>5922</td>
<td>TT20</td>
<td>1/4&quot;</td>
</tr>
<tr>
<td>5923</td>
<td>TT25</td>
<td>1/4&quot;</td>
</tr>
<tr>
<td>5924</td>
<td>TT27</td>
<td>1/4&quot;</td>
</tr>
</tbody>
</table>

**TORX® Bit Socket Set (12 Piece)**

No. 6100 – TORX® bit socket set (12 piece).

Wt., 1 lb. 3 oz.

Set includes one each of the following:

- No. 6101 – Size T10, Sq. Drive 1/4"
- No. 6102 – Size T15, Sq. Drive 1/4"
- No. 6103 – Size T20, Sq. Drive 1/4"
- No. 6104 – Size T25, Sq. Drive 1/4"
- No. 6105 – Size T27, Sq. Drive 1/4"
- No. 6106 – Size T30, Sq. Drive 1/4"
- No. 6107 – Size T40, Sq. Drive 3/8"
- No. 6108 – Size T45, Sq. Drive 3/8"
- No. 6109 – Size T47, Sq. Drive 3/8"
- No. 6110 – Size T50, Sq. Drive 3/8"
- No. 6111 – Size T55, Sq. Drive 3/8"
- No. 6112 – Size T60, Sq. Drive 1/2"
TORX® Tamper-Resistant Bit Set (8 Piece)
No. 6145 – TORX® tamper-resistant bit set (8 piece).
Wt., 4 oz.
Set includes one each of the following:
No. 6141 – Size T10H, Hex Insert 1/4"
No. 6142 – Size T15H, Hex Insert 1/4"
No. 6143 – Size T20H, Hex Insert 1/4"
No. 6144 – Size T25H, Hex Insert 1/4"
No. 6146 – Size T27H, Hex Insert 1/4"
No. 6147 – Size T30H, Hex Insert 1/4"
No. 6148 – Size T40H, Hex Insert 1/4"
No. 6130 – Sq. Drive 1/4", Bit Holder 1/4"

TORX PLUS® Bit Socket Set (9 Piece)
No. 6180 – TORX PLUS® bit socket set (9 piece).
Wt., 11 oz.
Set includes one each of the following:
No. 6181 – Size TP10, Sq. Drive 1/4"
No. 6182 – Size TP15, Sq. Drive 1/4"
No. 6183 – Size TP20, Sq. Drive 1/4"
No. 6184 – Size TP25, Sq. Drive 1/4"
No. 6185 – Size TP27, Sq. Drive 1/4"
No. 6186 – Size TP30, Sq. Drive 1/4"
No. 6187 – Size TP40, Sq. Drive 3/8"
No. 6188 – Size TP45, Sq. Drive 3/8"
No. 6191 – Size TP50, Sq. Drive 3/8"

TORX® Socket Set
(For External Bolts; 7 Piece)
No. 6150 – TORX® socket set for external bolts (7 piece). Wt., 10 oz.
Set includes one each of the following:
No. 6151 – Size E6, Sq. Drive 1/4"
No. 6152 – Size E7, Sq. Drive 1/4"
No. 6153 – Size E8, Sq. Drive 1/4"
No. 6154 – Size E10, Sq. Drive 3/8"
No. 6155 – Size E12, Sq. Drive 3/8"
No. 6156 – Size E14, Sq. Drive 3/8"
No. 6157 – Size E16, Sq. Drive 3/8"

Universal Brake Caliper Bit Socket Set
(9 Piece)
No. 6135 – Universal brake caliper bit socket set (9 piece). Wt., 1 lb. 8 oz.
Set includes one each of the following:
No. 6107 – Size T40, Sq. Drive 3/8"
No. 6108 – Size T45, Sq. Drive 3/8"
No. 6110 – Size T50, Sq. Drive 3/8"
No. 6112 – Size T60, Sq. Drive 1/2"
No. 6155 – Size 1/4", Sq. Drive 3/8"
No. 6167 – Size 3/8", Sq. Drive 3/8"
No. 6175 – Size 7 mm, Sq. Drive 3/8"
No. 6176 – Size 8 mm, Sq. Drive 3/8"
No. 6177 – Size 10 mm, Sq. Drive 3/8"
### Hex Bit Socket Set (Fractional; 7 Piece)

No. 6160 – Hex bit socket set (Fractional; 7 piece).

Wt., 1 lb.

Set includes one each of the following:

- No. 6161 – Size Hex 1/8", Sq. Drive 3/8"
- No. 6162 – Size Hex 5/32", Sq. Drive 3/8"
- No. 6163 – Size Hex 3/16", Sq. Drive 3/8"
- No. 6164 – Size Hex 7/32", Sq. Drive 3/8"
- No. 6165 – Size Hex 1/4", Sq. Drive 3/8"
- No. 6166 – Size Hex 5/16", Sq. Drive 3/8"
- No. 6167 – Size Hex 3/8", Sq. Drive 3/8"

### Hex Bit Socket Set (Metric; 7 Piece)

No. 6170 – Hex bit socket set (Metric; 7 piece).

Wt., 1 lb.

Set includes one each of the following:

- No. 6171 – Size Hex 3 mm, Sq. Drive 3/8"
- No. 6172 – Size Hex 4 mm, Sq. Drive 3/8"
- No. 6173 – Size Hex 5 mm, Sq. Drive 3/8"
- No. 6174 – Size Hex 6 mm, Sq. Drive 3/8"
- No. 6175 – Size Hex 7 mm, Sq. Drive 3/8"
- No. 6176 – Size Hex 8 mm, Sq. Drive 3/8"
- No. 6177 – Size Hex 10 mm, Sq. Drive 3/8"

### Individually sold items.

#### TORX® Bits

- No. 5906 – Size T6, Sq. Drive 1/4"
- No. 5908 – Size T8, Sq. Drive 1/4"
- No. 6121 – Size T10, Hex Insert 1/4"
- No. 6122 – Size T15, Hex Insert 1/4"
- No. 6123 – Size T20, Hex Insert 1/4"
- No. 6124 – Size T25, Hex Insert 1/4"
- No. 6125 – Size T30, Hex Insert 1/4"
- No. 6127 – Size T40, Hex Insert 5/16"
- No. 6128 – Size T45, Hex Insert 5/16"
- No. 6114 – Size T47, Hex Insert 5/16"
- No. 6129 – Size T50, Hex Insert 5/16"
- No. 6117 – Size T55, Hex Insert 7/16"
- No. 6119 – Size T60, Hex Insert 1/2"

#### TORX PLUS® Bits

- No. 5918 – Size TP8, Sq. Drive 1/4"
- No. 6132 – Size TP10, Hex Insert 1/4"
- No. 6133 – Size TP15, Hex Insert 1/4"
- No. 6134 – Size TP20, Hex Insert 1/4"
- No. 6158 – Size TP25, Hex Insert 1/4"
- No. 6159 – Size TP27, Hex Insert 1/4"
- No. 6168 – Size TP30, Hex Insert 1/4"
- No. 6169 – Size TP40, Hex Insert 5/16"
- No. 6178 – Size TP45, Hex Insert 5/16"
- No. 6194 – Size TP50, Hex Insert 5/16"
- No. 5915 – Size TP55, Sq. Drive 3/8"
- No. 6195 – Size TP55, Hex Insert 7/16"
- No. 5916 – Size TP60, Sq. Drive 1/2"
- No. 6196 – Size TP60, Hex Insert 1/2"
TORX® Tamper-Resistant Bits
No. 5919 – Size TT8, Hex Insert 1/4"
No. 5920 – Size TT10, Hex Insert 1/4"
No. 5921 – Size TT15, Hex Insert 1/4"
No. 5922 – Size TT20, Hex Insert 1/4"
No. 5923 – Size TT25, Hex Insert 1/4"
No. 5924 – Size TT27, Hex Insert 1/4"
No. 5925 – Size TT30, Hex Insert 1/4"
No. 5926 – Size TT40, Hex Insert 3/8"
No. 5927 – Size TT45, Hex Insert 3/8"
No. 5928 – Size TT50, Hex Insert 3/8"
No. 5929 – Size TT55, Hex Insert 3/8"
No. 5930 – Size TT60, Hex Insert 1/2"
No. 6141 – Size T10H, Hex Insert 1/4"
No. 6142 – Size T15H, Hex Insert 1/4"
No. 6143 – Size T20H, Hex Insert 1/4"
No. 6144 – Size T25H, Hex Insert 1/4"
No. 6146 – Size T27H, Hex Insert 1/4"
No. 6147 – Size T30H, Hex Insert 1/4"
No. 6148 – Size T40H, Hex Insert 1/4"
No. 6149 – Size T45H, Hex Insert 5/16"

TORX® Bit Sockets
No. 6101 – Size T10, Sq. Drive 1/4"
No. 6102 – Size T15, Sq. Drive 1/4"
No. 6103 – Size T20, Sq. Drive 1/4"
No. 6104 – Size T25, Sq. Drive 1/4"
No. 6105 – Size T27, Sq. Drive 1/4"
No. 6106 – Size T30, Sq. Drive 1/4"
No. 6107 – Size T40, Sq. Drive 3/8"
No. 6108 – Size T45, Sq. Drive 3/8"
No. 6109 – Size T47, Sq. Drive 3/8"
No. 6110 – Size T50, Sq. Drive 3/8"
No. 6111 – Size T55, Sq. Drive 3/8"
No. 6112 – Size T60, Sq. Drive 1/2"

TORX PLUS® Bit Sockets
No. 6181 – Size TP10, Sq. Drive 1/4"
No. 6182 – Size TP15, Sq. Drive 1/4"
No. 6183 – Size TP20, Sq. Drive 1/4"
No. 6184 – Size TP25, Sq. Drive 1/4"
No. 6185 – Size TP27, Sq. Drive 1/4"
No. 6186 – Size TP30, Sq. Drive 1/4"
No. 6187 – Size TP40, Sq. Drive 3/8"
No. 6188 – Size TP45, Sq. Drive 3/8"
No. 6191 – Size TP50, Sq. Drive 3/8"
No. 6192 – Size TP55, Sq. Drive 3/8"
No. 6193 – Size TP60, Sq. Drive 1/2"

Bit Holders
No. 6130 – Sq. Drive 1/4", Bit Size 1/4"
No. 6131 – Sq. Drive 3/8", Bit Size 5/16"
No. 6136 – Sq. Drive 3/8", Bit Size 7/16"
No. 6113 – Sq. Drive 1/2", Bit Size 1/2"

Hex Bit Sockets (Fractional)
No. 6161 – Size Hex 1/8", Sq. Drive 3/8"
No. 6162 – Size Hex 5/32", Sq. Drive 3/8"
No. 6163 – Size Hex 3/16", Sq. Drive 3/8"
No. 6164 – Size Hex 7/32", Sq. Drive 3/8"
No. 6165 – Size Hex 1/4", Sq. Drive 3/8"
No. 6166 – Size Hex 5/16", Sq. Drive 3/8"
No. 6167 – Size Hex 3/8", Sq. Drive 3/8"

Hex Bit Sockets (Metric)
No. 6171 – Size Hex 3 mm, Sq. Drive 3/8"
No. 6172 – Size Hex 4 mm, Sq. Drive 3/8"
No. 6173 – Size Hex 5 mm, Sq. Drive 3/8"
No. 6174 – Size Hex 6 mm, Sq. Drive 3/8"
No. 6175 – Size Hex 7 mm, Sq. Drive 3/8"
No. 6176 – Size Hex 8 mm, Sq. Drive 3/8"
No. 6177 – Size Hex 10 mm, Sq. Drive 3/8"

TORX® Sockets for External Bolts
No. 5934 – Size E4, Sq. Drive 1/4"
No. 5935 – Size E5, Sq. Drive 1/4"
No. 6151 – Size E6, Sq. Drive 1/4"
No. 6152 – Size E7, Sq. Drive 1/4"
No. 6153 – Size E8, Sq. Drive 1/4"
No. 6154 – Size E10, Sq. Drive 3/8"
No. 6155 – Size E12, Sq. Drive 3/8"
No. 6156 – Size E14, Sq. Drive 3/8"
No. 6157 – Size E16, Sq. Drive 3/8"
No. 5936 – Size E18, Sq. Drive 3/8"
No. 5937 – Size E20, Sq. Drive 3/8"
No. 5938 – Size E22, Sq. Drive 1/2"
No. 5939 – Size E24, Sq. Drive 1/2"
**Ribe Key Set**
- These keys work on late model Volkswagen, Audi, Lancer, Fiat, and Lancia vehicles.
- Ribe-style bolts are used on cylinder heads, headlights, and transmission fill plugs.
- Set includes seven keys: M4, M5, M6, M7, M8, M9, and M10.

No. 4609 – Ribe key set. Wt., 1 lb., 9 oz.

**GM Seat Belt Bolt Removal Tool**
- Allows use of 1/2" impact wrench to remove the seat belt retaining bolts on most GM cars and light trucks.
- Outer collar fits over the TORX® bit to center the impact wrench and bit to the seat belt bolt, preventing damage to the bit and seat belt bolt.

No. 5901 – GM seat belt bolt removal tool. Wt., 8 oz.

**RIBE Bit Set – 24 Piece**

The bit pattern known as “RIBE” or “polydrive” is now used on most European cars and light trucks, and is fast becoming more common with U.S. manufacturers. Packaged in a metal box, this is the largest collection of RIBE bits on the market.

No. 5909 – RIBE bit set–24 piece. Wt., 8 lbs.
Retaining Ring, Snap Ring Pliers . . . 176–179
Vacuum Pumps ........................................ 179
Extractor Sets ......................................... 180
Torque Wrenches ................................. 180–181
Torque Angle, and Radio Tools .......... 181–183
Hose Service ........................................ 183
Wire Strippers, Crimpers ....................... 184
Battery Service ....................................... 184–186
Headlamp, and Mirror Tools ............... 186–187
Gland Nut, and Misc. Tools ................. 187
Chisel, Punch, and Misc. Tools .......... 188–189
Molding / Upholstery Tools ................. 190–191
Scraping Tools ....................................... 191
Prying Tools ........................................ 192–193
O-ring Picks .......................................... 193
Thread Chaser ....................................... 194
Hex Key Wrenches, and Misc. .......... 194
Adjustable, and Spanner Wrenches ........ 196–197
Stud Remover Sets ......................... 197
Driver Tools & Pullers ....................... 198–199
Oil Filter Wrenches ........................... 199–201
Strap / Chain Wrenches ..................... 202
Body Tools, Seal Puller, & Stethoscope . 203
Holding Fixtures ................................. 204
Retaining Ring Pliers

Here are a variety of retaining ring pliers, available individually or in sets, to handle many applications.

No. 7053K – Internal/external retaining ring pliers kit. Includes four 90° tips (.038” diameter), four 45° tips (.047” diameter), and eight straight tips (.047” and .070” diameter). Wt., 11 oz.

No. 15702 – Replacement tip kit. Contains 4 sets, 4 tips per set. Wt., 2 oz.

No. 7123K – Convertible retaining ring pliers kit. For internal or external rings. Contains one No. 1120 (.038” diameter) and one No. 1340 (.070” diameter) straight tip pliers. Wt., 15 oz.

No. 7125K – Convertible retaining ring pliers kit. For internal or external rings. Contains one No. 1125 (.038” diameter) and one No. 1345 (.070” diameter) 45° pliers. Wt., 15 oz.

No. 7300 – Internal, straight tip retaining ring pliers. 16” long. Wt., 2 lbs., 2 oz.

No. 7301 – External, straight tip retaining ring pliers. 16” long. Wt., 2 lbs., 2 oz.

Replacement tips (pairs):

No. 209201 – For pliers Nos. 7300 and 7301. Wt., 2 oz.

No. 222029 – 45° for pliers Nos. 7300 and 7301. Wt., 2 oz.

No. 222030 – 90° for pliers Nos. 7300 and 7301. Wt., 2 oz.

How to select the correct pliers:

1. If ring number is known, locate ring number in chart — pliers are listed in right-hand column.

2. Or, measure diameter of shaft bore and locate size in chart — pliers are in right-hand column.

<table>
<thead>
<tr>
<th>Ring Series No.</th>
<th>Size Range (Ring Size No.)</th>
<th>Bore of Shaft Dia. Range (“Inch” equiv.)</th>
<th>Pliers No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>5000</td>
<td>75</td>
<td>3/8” to 9/16”</td>
<td>1120, 1125</td>
</tr>
<tr>
<td>5001</td>
<td>106 to 200</td>
<td>1-1/16” to 2”</td>
<td>1340, 0300</td>
</tr>
<tr>
<td>5002</td>
<td>134 to 300</td>
<td>1-7/16” to 3-1/4”</td>
<td>0500</td>
</tr>
<tr>
<td>5003</td>
<td>206 to 300</td>
<td>2-1/16” to 3”</td>
<td>0500</td>
</tr>
<tr>
<td>5004</td>
<td>315 to 400</td>
<td>3-5/32” to 4”</td>
<td>7300</td>
</tr>
</tbody>
</table>
Retaining Ring Pliers Set
This set includes 12 of our most popular retaining ring pliers, in sizes for automotive applications. Tips include straight, 45°, and 90° angles in four different sizes (.038, .047, .070, and .090" diameter).
• Includes a sturdy plastic organizer box.
No. 7412K – Retaining ring pliers set. Wt., 5 lbs.

<table>
<thead>
<tr>
<th>No. 7412K includes:</th>
<th>Tool No.</th>
<th>Description</th>
<th>Ship Wt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1120</td>
<td>.038&quot; dia., straight</td>
<td>4 oz.</td>
<td></td>
</tr>
<tr>
<td>1125</td>
<td>.038&quot; dia., 45°</td>
<td>4 oz.</td>
<td></td>
</tr>
<tr>
<td>1131</td>
<td>.038&quot; dia., 90°</td>
<td>4 oz.</td>
<td></td>
</tr>
<tr>
<td>1220</td>
<td>.047&quot; dia., straight</td>
<td>4 oz.</td>
<td></td>
</tr>
<tr>
<td>1225</td>
<td>.047&quot; dia., 45°</td>
<td>4 oz.</td>
<td></td>
</tr>
<tr>
<td>1229</td>
<td>.047&quot; dia., 90°</td>
<td>4 oz.</td>
<td></td>
</tr>
<tr>
<td>1340</td>
<td>.070&quot; dia., straight</td>
<td>7 oz.</td>
<td></td>
</tr>
<tr>
<td>1345</td>
<td>.070&quot; dia., 45°</td>
<td>7 oz.</td>
<td></td>
</tr>
<tr>
<td>1349</td>
<td>.070&quot; dia., 90°</td>
<td>7 oz.</td>
<td></td>
</tr>
<tr>
<td>1560</td>
<td>.090&quot; dia., straight</td>
<td>9 oz.</td>
<td></td>
</tr>
<tr>
<td>1565</td>
<td>.090&quot; dia., 45°</td>
<td>9 oz.</td>
<td></td>
</tr>
<tr>
<td>1569</td>
<td>.090&quot; dia., 90°</td>
<td>9 oz.</td>
<td></td>
</tr>
</tbody>
</table>

All items can be purchased separately.

Snap Ring Pliers Set – Internal/External
• For internal or external snap rings; thumbscrew permits quick conversion.
• Made of heavy-gauge tempered steel.
• Includes two stainless steel handled picks.
• Contained in a blow-molded plastic storage case.
No. 4512 – Snap ring pliers set. Wt., 4 lbs., 3 oz.

<table>
<thead>
<tr>
<th>No. 4512 includes:</th>
<th>Tool No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4512-1</td>
<td>.090&quot; tip, straight pliers</td>
<td></td>
</tr>
<tr>
<td>4512-2</td>
<td>.090&quot; tip, 90° pliers</td>
<td></td>
</tr>
<tr>
<td>4512-3</td>
<td>.070&quot; tip, straight pliers</td>
<td></td>
</tr>
<tr>
<td>4512-4</td>
<td>.070&quot; tip, 90° pliers</td>
<td></td>
</tr>
<tr>
<td>4512-5</td>
<td>.047&quot; tip, straight pliers</td>
<td></td>
</tr>
<tr>
<td>4512-6</td>
<td>.047&quot; tip, 90° pliers</td>
<td></td>
</tr>
<tr>
<td>4512-7</td>
<td>.038&quot; tip, straight pliers</td>
<td></td>
</tr>
<tr>
<td>4512-8</td>
<td>.038&quot; tip, 90° pliers</td>
<td></td>
</tr>
<tr>
<td>4512-9</td>
<td>straight tip pick</td>
<td></td>
</tr>
<tr>
<td>4512-10</td>
<td>90° tip pick</td>
<td></td>
</tr>
</tbody>
</table>

Convertible Retaining Ring Pliers Set
The convertible pliers in this set can be used on automotive snap rings, in either internal or external applications.
• Includes a sturdy plastic organizer box.
No. 7888 – Convertible retaining ring pliers set. Wt., 2 lbs., 2 oz.

<table>
<thead>
<tr>
<th>No. 7888 includes:</th>
<th>Tool No.</th>
<th>Description</th>
<th>Ship Wt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1120</td>
<td>.038&quot; dia., straight</td>
<td>4 oz.</td>
<td></td>
</tr>
<tr>
<td>1125</td>
<td>.038&quot; dia., 45°</td>
<td>4 oz.</td>
<td></td>
</tr>
<tr>
<td>1220</td>
<td>.047&quot; dia., straight</td>
<td>4 oz.</td>
<td></td>
</tr>
<tr>
<td>1225</td>
<td>.047&quot; dia., 45°</td>
<td>4 oz.</td>
<td></td>
</tr>
<tr>
<td>1340</td>
<td>.070&quot; dia., straight</td>
<td>7 oz.</td>
<td></td>
</tr>
<tr>
<td>1345</td>
<td>.070&quot; dia., 45°</td>
<td>7 oz.</td>
<td></td>
</tr>
</tbody>
</table>
**Mini Snap Ring Pliers Set (4 piece)**
- Small-size pliers for work in tight areas. Service S-ring and R-ring clips, internal or external, straight or angled. Ruggedly built of heat-treated chrome molybdenum steel.
- Set includes two internal snap ring pliers (one straight, one 45°) and two external snap right pliers (one straight, one 45°).
- All pliers have .038" (1.0mm) diameter tips.
- Overall length 3"; handle length 2".

No. 4513 – Heavy-duty snap ring pliers set. Wt., 7 lbs., 3 oz.

<table>
<thead>
<tr>
<th>Tool No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4513-1</td>
<td>Internal snap ring pliers</td>
</tr>
<tr>
<td>4513-2</td>
<td>External snap ring pliers</td>
</tr>
<tr>
<td>4513-3</td>
<td>(2) .12&quot; (3 mm) straight tip</td>
</tr>
<tr>
<td>4513-4</td>
<td>(2) .12&quot; (3 mm) 45° tips</td>
</tr>
<tr>
<td>4513-5</td>
<td>(2) .12&quot; (3 mm) 90° tips</td>
</tr>
<tr>
<td>4513-6</td>
<td>4 tip retaining screws</td>
</tr>
</tbody>
</table>

**Horseshoe Lock Ring Pliers**
This ruggedly built pliers is designed to spread and remove horseshoe lock rings used on hydraulic brakes, differentials, transmissions, and CV joints.
- Handles are 8" long.

No. 714 – Horseshoe lock ring pliers. Wt., 8 oz.
Retaining Ring Pliers
An ideal tool for any transmission shop, this 13" long pliers with a maximum spread of 2.5" features replaceable tips and a spring-return handle.
No. 7410 – Retaining ring pliers with replaceable tips.
Wt., 1 lb., 5 oz.
No. 214903 – Set of replacement tips. Wt., 2 oz.

Fluid Evacuation / Brake Bleeding Tools
• Use to bleed brake systems and remove a variety of fluid from vehicles, such as antifreeze, oil, transmission fluid, gear lube, etc.
• Quick connect locking hose adapters and ball-style on/off valve on hose prevent fluid leakage.
• Equipped with a relief valve to prevent over-pressurizing the tank.
No. 8100 – Operates by shop air or a hand pump; shipped complete with a brake bleeding hose, fluid evacuation hose, and two suction hoses (6 mm and 7 mm); 10-liter capacity tank. Wt., 10 lbs.
No. 8101 – Operates with shop air; shipped with a brake bleeding hose and fluid evacuation hose; 6-liter capacity tank. Wt., 10 lbs., 13 oz.

Deluxe Metal Vacuum Pump
With this multipurpose pump, vacuum testing and brake bleeding are one-person operations. Made of die cast metal, the repairable pump will develop and hold about 25" of mercury vacuum. It comes with all the components needed to help speed you through most brake jobs.
• Includes an easy-to-read gauge (inch and mm graduations), reservoir jar, transfer and storage lids, rubber cup adapter, brake-bleeding adapters, tubing, and carrying case.
No. 7559 – Deluxe metal vacuum pump.
Wt., 3 lbs., 12 oz.

Vacuum / Pressure Pump Kit
• Hand pump may be set to create vacuum or pressure.
• Gauge on pump reads 0–30 in. Hg (0 to -1 BAR) vacuum; 0–60 psi (0–4 BAR) pressure.
• Includes an assortment of fittings and hoses to adapt to most components that need to be tested.
• Includes brake fluid reservoir for bleeding brake systems.
No. 4752 – Vacuum/pressure pump kit.
Wt., 4 lbs., 4 oz.
GENERAL PURPOSE TOOLS

Stud, Screw Extractor & Torque Wrenches

Combination Stud Extractor and Drill Bit Set
• Removes bolts and screws up to 5/8” diameter.
• Set contains:
  – Five left-handed stud extractors: 5/64”, 7/64”, 5/32”, 1/4”, and 19/64”.
  – Five left-handed cobalt drill bits: 5/64”, 7/64”, 5/32”, 1/4”, and 19/64”.
No. 4545 – Combination stud extractor and drill bit set. Wt., 13 oz.

Fingertip Ratchet Bit and Socket Kit (29 piece)
• Two fingertip ratchets (three-positions: forward, lock, reverse). One bit driver; one socket driver with quick release.
• 13-piece, 1/4” drive sockets. SAE: 1/4”, 9/32”, 5/16”, 11/32”, 3/8”, 7/16”. Metric: 6 mm, 7 mm, 8 mm, 9 mm, 10 mm, 12 mm, 13 mm.
• 14-piece, 4.5, 6.5 slotted bits, #1 and #2 Phillips bits TORX: T10, T15, T20, T25, T27, T30; Tamper resistant T10, T15, T20, T25.
No. 5910 – Fingertip ratchet bit and socket kit (29 piece). Wt., 1 lb.

Screw Extractor Set
• Removes broken studs and bolts.
• Includes ten guide bushings, five drill bits and five screw extractors with extractor nuts.
• Drill bits are left handed to help removal.
No. 4651 – Screw extractor set. Wt., 1 lbs., 7 oz.

Accutorq™ Clikker Torque Wrenches
These precision torque wrenches make a loud click when you’ve reached the torque setting. They feature ratcheting heads, all-metal construction, permanently roll-marked scales, and soft-grip rubber handles that enable you to firmly grasp the wrench for right- or left-hand torquing.
• Includes molded plastic case.
• One-year warranty.
No. 7375 – 150–750 in. lbs. Accutorq Clikker torque wrench. Wt., 2 lbs., 8 oz.
No. 7379 – 100–600 ft. lbs. Accutorq Clikker torque wrench. Wt., 14 lbs.
Torque Multipliers
These 4:1 ratio torque multipliers provide the power to tighten threaded fasteners in a number of truck and tractor repair operations.

No. 5073 – 1,000 lb. capacity torque multiplier. Has 1/2" square drive and 3/4" square drive output. Includes 14" extension handle. Wt., 7 lbs.

No. 5074 – 2,000 lb. capacity torque multiplier. Has 3/4" square drive and 1" square drive output. Includes 18" extension handle. Wt., 14 lbs.

Accutorq™ Dial Torque Wrench
This torque wrench features a large, easy-to-read dial scale with memory needle, and has chrome-plated steel surrounding the bezel to protect the scale, lens, and needle.
- Meets all federal specifications.
- Includes molded plastic case.
- One-year warranty.

No. 7380 – Accutorq™ dial torque wrench. Wt., 1 lb., 12 oz.

Torque Angle Gauge
Many manufacturers specify a torque angle procedure for tightening fasteners and head bolts because it helps ensure more accurate tightening. This torque angle gauge, featuring an easy-to-read gauge, will provide a precise reading.
- Accommodates a 1/2" drive torque wrench.

No. 7415 – Torque angle gauge. Wt., 2 oz.

Torque Angle Meter
This meter simply connects to any standard 1/2" socket extension and measures angle rotation, electronically! Clip unit to socket extension and enter desired angle. No support arm to connect between each fastener, fast and accurate to use. Unit will beep and flash when desired angle is reached. 0-199 degree capability, +/- 1% accuracy.

No. 3559 – Torque angle meter. Wt., 11 oz.

Magnetic Parts Tray
- Rectangular, stainless steel tray is 9-1/2" x 5-1/2" and 1-1/4" deep. Holds tools and small metal parts, so they don't get lost or misplaced during repair work.
- Two heavy-duty magnets on bottom of tray, with non-marring contact pads, securely hold tray to metal objects such as a tool box, air cleaner cover, frame rail, fender, etc.

No. 4490 – Magnetic parts tray. Wt., 1 lb., 11 oz.
Air Bag Release Tool Kit

- Use to remove the air bag module from the steering wheel.
- Work on many GM, Ford and Mercedes Benz vehicles.

Applications:
Ford 2000-2004 Taurus/Sable, 1999-2003 Windstar Van,
GM 1999-2005 Chevrolet Impala, Lumina, Monte Carlo, Venture, Pontiac Bonneville,
Grand Prix, Montana, Buick LeSabre, Century, Regal, Olds Intrigue, Cadillac Eldorado, Deville, STS, SLS.
Mercedes Benz Models 107,123, 124, 126, 129, 140, 163, 164, 170, 201, 202, 203, 208, 209, 210, 211, 215, 219, 220, 221 and 463.

No. 5945 – Air bag release tool kit. Wt., 2 lbs.

Deluxe Radio and Antenna Service Kit

- Eleven-piece kit in molded case.
- Universal antenna wrench.
- Ford radio removal tool.
- Deep sockets to remove and install the tamper-proof radio nuts from many GM, Chrysler, and other aftermarket radios.
- Antenna nut sockets cover most import and domestic antenna nuts.


Euro Radio Removal Tool Kit

- Includes the popular tools needed to remove the radio from the dash on the following European vehicles: BMW, VW, Audi, and Mercedes-Benz.
- Easily removes the radio without damaging the radio or the dash panel.


Deluxe European Radio Tool Set

- 18-piece set of tools used to remove radios on most European vehicles sold in the U.S. and Europe.
- Quickly and easily removes the radio from the dash without damage to the radio or dash.

Replacement Parts

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>4715-1</td>
<td>Removal Keys (4 pieces)</td>
<td>Audi, Becker, Mercedes-Benz, VW</td>
</tr>
<tr>
<td>4715-2</td>
<td>Removal Keys (2 pieces)</td>
<td>Becker, Mercedes-Benz, Porsche</td>
</tr>
<tr>
<td>4715-3</td>
<td>Removal Keys (2 pieces)</td>
<td>VW</td>
</tr>
<tr>
<td>4715-4</td>
<td>Removal Keys (2 pieces)</td>
<td>Skoda</td>
</tr>
<tr>
<td>4715-5</td>
<td>Removal Keys (2 pieces)</td>
<td>Becker</td>
</tr>
<tr>
<td>4715-6</td>
<td>Pentagon Wrench</td>
<td>BMW</td>
</tr>
<tr>
<td>4715-7</td>
<td>Bent U-hook (2 pieces)</td>
<td>Blaupunkt</td>
</tr>
<tr>
<td>4715-8</td>
<td>U-hook (2 pieces)</td>
<td>Audi, Blaupunkt, Ford, Grundig, VW</td>
</tr>
<tr>
<td>4715-9</td>
<td>Allen Hex Wrench</td>
<td>BMW, Opel</td>
</tr>
</tbody>
</table>

No. 4715 – Deluxe European radio tool set. Wt., 1 lbs., 3 oz.

Saturn Window Glass Socket

This specially designed socket enables you to easily remove the tricky fasteners that Saturn uses to hold window glass to the regulator in its car doors. Our tool won't cause the damage that often results from makeshift methods.

- For use on 1991 to current models.
- Accommodates a 3/8” drive ratchet and extension.

No. 7827 – Saturn window glass socket. Wt., 3 oz.
Mercedes-Benz Dashboard Service Tool Kit
- 8-piece tool kit contains:
  - (2) removal tools for ignition lock on model W126.
  - (2) removal tools for ignition locks on models W124 & W201.
  - (2) removal hooks for instrument cluster on models W107, W116, W123, W124, W126, W140, and W201.
  - Covers virtually all Mercedes-Benz models since 1992.
No. 6711 – Mercedes-Benz dashboard service tool kit. Wt., 10 oz.

Ford Radio Removal Tool Kit
These dual-purpose tools release the retaining clips of a radio faceplate so you can pull the radio from the instrument panel. For use on 1987 to current Mustang; 1988 and newer Tempo/Topaz; 1989 to current Lincoln Continental; 1990 to current Taurus/Sable, Ranger/Bronco II, Probe, Lincoln Town Car, Mark VII, Crown Victoria/Grand Marquis, Thunderbird/Cougar, F-series pickups and E-series vans; 1991 to current Explorer; 1995 to 2003 Windstar.
No. 7575 – Ford radio removal tool kit. Wt., 2 oz.

Hose Pinch-off Pliers Set (3 piece)
- Shuts off flow through vacuum, fuel, and coolant lines, etc.
- Cocking ratchet mechanism holds pivoting jaws tightly in place. Heavy-duty swivel jaws pivot to ensure parallel pinching.
- These three tools are available separately:
  - No. 4510-8 – 8" tool for small hoses and tight areas
  - No. 4510-10 – 10" tool for radiator and vacuum lines
  - No. 4510-12 – 12" tool for radiator and vacuum lines
No. 4510 – Set of three pinch-off pliers. Wt., 2 lbs., 11 oz.

Hose Cutter – “Guillotine”
- Hooks and cuts plastic lines and rubber hoses from 1/8" to 1" diameter. Simply hook hose in V-shaped end, and squeeze handle to cut. Compound mechanical leverage provides power. Spring-loaded blade returns to open position after use, so blade is not exposed.
- Linear design hook reaches and cuts hoses in tight areas.
- Replacement steel cutter blade No. 4511-1 is available.
No. 4511 – Hose cutter tool. Wt., 8 oz.
No. 4511-1 – Replacement blades. Wt., 2 oz.

Straight-Blade Hose Cutter
- Cuts rubber hoses ranging from 1/4" to 1-1/2".
- Simply place hose in tool and squeeze handle to cut.
- Replacement steel cutter blade No. 4509-1 is available.
No. 4509 – Straight blade hose cutter. Wt., 5 oz.

Rubber Hose Pinch-off Pliers
These pliers keep rubber fuel and water lines clamped tightly when you’re servicing engine components. The grip pads provide a damage-free method of shutting off flow without having to drain the hoses. Pivoting jaws and locking ratchet provide a tight grip in just about any position.
No. 7655 – Hose pinch-off pliers. Wt., 13 oz.
GENERAL PURPOSE TOOLS

Pliers, Crimpers & Puller

**Angle-Tip Relay Pliers**
- Designed to remove and install relays, which are usually located in confined, hard-to-reach areas.
- Specially coated tips offer a solid grip on the relay.

No. 4493 – Angle-tip relay pliers. Wt., 10 oz.

**Ratcheting Terminal Crimper**
- Heavy-gauge steel crimping tool designed for insulated wire terminals.
- Ratcheting action crimps terminal to correct tightness on the wire, making crimping fast and easy.
- For wire sizes: AWG 22–18 (0.6 mm–1.0 mm) red terminal; AWG 16–14 (1.3 mm –1.6 mm) blue terminal; AWG 12–10 (2.0 mm–2.6 mm) yellow terminal.
- Insulated handles with compound mechanical leverage for power.

No. 4497 – Ratcheting terminal crimper. Wt., 1 lb., 3 oz.

**7-in-1 Wire Stripper and Crimper**
- Strips insulation off electrical wires ranging from 10 AWG—22 AWG (0.6mm—2.6mm) in diameter. Pliers on tip of jaw for looping or grabbing wire in tight places.
- Heat-treated steel jaws cut solid or multi-strand wire.
- Screw cutter shears screws clean, with no thread clean-up required. Works on machine screw sizes 4-40, 5-40, 6-32, 8-32, 10-24, and 10-32.
- Crimps insulated and non-insulated wire terminals, 7mm—8mm spark plug wire connectors.

No. 4498 – 7-in-1 wire stripper and crimper. Wt., 8 oz.

**Wire Stripper and Cutter**
- Only 6” in length. Clean size separations and markings allow ease of use in tight areas.
- Strips insulation off of electrical wires ranging from 10 AWG—22 AWG (0.6mm—2.6mm) in diameter. Heat-treated steel construction with durable grips.
- Spring-loaded jaws stay open for ease of use, and lock for storage; gripping area at tip of jaws for working in tight areas; wire cutter at base of jaws.

No. 4499 – Wire stripper and cutter. Wt., 5 oz.

**Battery Terminal Puller**
- Designed to remove the battery cable clamp from the post without causing damage to the battery.
- Spring-loaded sharp jaws get under the clamp for a secure grip.

No. 4611 – Battery terminal puller. Wt., 14 oz.
3-Way Battery Post Cleaner
• Steel blades quickly clean top-post battery terminals and cable clamps; cleaners are marked “positive” and “negative.”
• Ream is tapered to clean both positive and negative battery cable clamps.
No. 4612 – 3-Way battery post cleaner. Wt., 6 oz.

Battery Pliers
• Serrated jaws firmly grip the battery terminal nut or bolt.
• Offset handles allow access in hard-to-reach areas.
• Works on both top-post and side-post battery terminals.
No. 4613 – Battery pliers. Wt., 10 oz.

Side Terminal Battery Wrench
• Designed for use on GM side-terminal batteries, or any 5/16” hex head battery bolt.
• 5/16”, 6 point, box end, 5-1/2” long, ratcheting wrench; insulated handle.
No. 4614 – Side-terminal battery wrench. Wt., 5 oz.

Long-Side Terminal Battery Wrench
• Designed for use on GM side-terminal batteries, or any 5/16” hex head battery bolt.
• Long handle allows access to hard-to-reach battery terminal bolts.
• 5/16”, 6 point, box end, 10” long, ratcheting wrench; insulated handle.
No. 4615 – Long-side terminal battery wrench. Wt., 8 oz.

Battery Terminal Wrench – 10mm
• Designed for use on 10 mm battery terminal bolts found on many import and domestic vehicles.
• 10 mm, 12 pt., box-end ratcheting wrench; 5-1/2” long with insulated handle.
No. 4616 – Battery terminal wrench - 10 mm. Wt., 3 oz.

Side Terminal Battery Brush
• Designed to clean corrosion from side post batteries.
• One brush used to clean battery terminals; other brush used to clean battery cable ends.
• Plastic handle resists battery acid.
No. 4617 – Side terminal battery brush. Wt., 3 oz.
GENERAL PURPOSE TOOLS

Battery Service

Battery Brush
• Cleans dirt and corrosion from positive and negative battery posts and cable clamps.
• Plastic case resists battery acid and most cleaning solvents.
No. 4618 – Battery brush. Wt., 3 oz.

Battery Carrier
• Use to lift and install most top post and side terminal batteries.
• Designed to transfer lifting force to a secure hold on the battery; teeth on jaws offer a secure grip.
• Vinyl strap resists battery acid and will not conduct electricity.
No. 4620 – Battery carrier. Wt., 14 oz.

Professional Battery Hydrometer
• Displays a battery’s specific gravity on an easy-to-read float; scale ranges from 1.100 to 1.300.
• Thermometer indicates what must be added or subtracted from the float reading to arrive at an accurate specific gravity reading for each battery cell.
• Flexible tip offers easy access to the battery cells while the battery is still in the vehicle.
No. 4619 – Professional battery hydrometer. Wt., 6 oz.

Two-Liter Battery Filler
• Replenish battery water the easy way! The fill nozzle on this container has an automatic shut-off that prevents overfilling; the handle on the side of the container makes the job a snap. Container holds up to two liters of distilled water.
No. 4621 – Two-liter battery filler. Wt., 1 lb.

Battery Cable Cutter
• Designed to cut copper battery cable and aluminum electrical cable. IMPORTANT: Do not cut steel cable; damage to blades will occur.
• Precision-ground cutting blades provide a clean, square cut.
• 7" long handle gives extra leverage when cutting thick cable.
No. 4622 – Battery cable cutter. Wt., 1 lb. 2 oz.

Ford Headlamp Alignment Tool
• Use to adjust aerodynamic headlamps with rear mounted adjuster on Fords.
• 4 mm hex with one-way roller clutch for precise adjustments.
• Long, ratcheting handle for easy access.
No. 4689 – Ford headlamp alignment tool. Wt., 7 oz.
Ford Mirror Removal Tool
Save shop labor time and cost by allowing mirror to be removed without damaging or removing the mirror assembly.

Works on these outside door mirrors:
- 1997–2002 Windstar
- 1998–2004 Crown Vic, Grand Marq, Marauder, Taurus, Sable, Mustang, Town Car
- 2001–2004 Escape
- 2002–2004 Thunderbird
- 1996–2004 Explorer
- 1997–2004 Mountaineer
- 1998–2004 Expedition, Navigator, F-150
- 2001–2004 Escape
- 2002–2004 Thunderbird
- 1996–2004 Explorer
- 1997–2004 Mountaineer
- 1998–2004 Expedition, Navigator, F-150
- 1999–2004 E-Series van
- 2000–2004 LS
- 2001–2004 Explorer Sport, Explorer Sport Trac
- 2003–2004 Aviator
- 1999–2004 Dual arm mirror used on Excursion, Super Crew (F-250–F-550), F-650, F-750
- Also works on 1999 and newer Ford interior / rearview mirrors that have the detachable (screwless) mount.

No. 8200 – Ford mirror removal tool. Wt., 4 oz.

Gland Nut Wrench
This wrench is fully adjustable to fit hydraulic cylinders on vehicles having gland nuts from 1" to 3-3/4" in diameter. It also reverses to work on either 1/4" or 7/32" pinholes.
- Accommodates a 1/2" drive ratchet.

No. 7463 – Gland nut wrench. Wt., 10 oz.
No. 215128 – Replacement pin. Wt., 1 oz.

Adjustable Gland Nut Wrench
Here’s a wrench designed to fit hydraulic cylinders on most farm and construction equipment. It fits gland nuts from 2" to 6" diameter pin to pin. And it’s reversible to fit 1/4" and 5/16" diameter pinholes.
- Accommodates a 3/4" drive ratchet or breaker bar.

No. 1266 – Adjustable gland nut wrench. Wt., 2 lbs., 3 oz.
No. 204928 – Replacement pin. Wt., 1 oz.

Euro Door Handle Kit
- This kit contains the tools needed to service most door hinges and door handles on Audi, Mercedes-Benz, Porsche, and Volkswagen vehicles.
- Kit includes: A ratchet wrench with three 12-point bits (4 mm, 8 mm, 10 mm), one T40 and one T45 TORX® bit; a T30 TORX® long handled driver; and a T20 TORX® T-handle driver.
- T30 driver, 14" long; T20 driver, 9-1/2" long; hex ratchet, 9-1/2" long.

No. 6785 – Euro door handle kit. Wt., 15 oz.
Spot Weld Cutter Set
- Use with electric drill or air drill to cut 5/16" and 3/8" spot welds.
- Cutter bits have cutting teeth on each end.
- Replacement kit No. 4485-1 consists of (3) 5/16" cutter bits; (3) 3/8" cutter bits; and (4) centering tips.
No. 4485 – Spot weld cutter set. Wt., 5 oz.

Exhaust Hanger Pliers
Many cars and trucks have rubber blocks supporting their exhaust system hanger brackets. These pliers will enable you to quickly and easily remove those push-through brackets from their hangers. These pliers feature a two-position slip joint for use on many sizes of hanger blocks.
No. 7677 – Exhaust hanger pliers. Wt., 1 lb., 5 oz.

Universal C-Frame Nut Splitter
- Forged and heat-treated frame with offset handle works where ordinary nut splitters may fail. Smooth action cracks nuts without damaging bolt threads.
- Chisel rotates to line up parallel to bolt. Splits non-heat-treated nuts of 7/16" (11 mm) through 3/4" (19 mm) diameter. Tool is 6-3/4" in length.
No. 4576 – Universal C-frame nut splitter. Wt., 1 lb., 8 oz.

Punch and Chisel Set (16 piece)
- Durable set of heat-treated chrome vanadium steel punches and chisels. Storage tray included.
Contents of set, available separately:
3 – Cold chisels (with gauge): 3/8" x 5-1/2"; 1/2" x 6"; 5/8" x 6-1/2"
2 – Center punches: 1/8" x 5"; 3/16" x 6"
5 – Pin punches: 3/32" x 4-1/4"; 1/8" x 4-3/4"; 5/32" x 5"; 3/16" x 5-1/4"; 1/4" x 5-3/4"
5 – Taper punches: 3/32" x 5-1/4"; 1/8" x 5-3/4"; 5/32" x 6"; 3/16" x 6-1/4"; 1/4" x 6-3/4"
1 – Chisel gauge
No. 4600 – Punch and chisel set (16 piece). Wt., 2 lbs., 11 oz.

Brass Punch Set (2 piece)
- Two large, brass non-sparking punches. Ideal for use near precision parts or in locations where sparks from ferrous metal could be hazardous.
- Includes an 8" punch (5/8" hex, tapered to 3/8") and 10" straight punch (3/4" dia., chamfered at both ends).
No. 4602 – Brass punch set. Wt., 2 lbs., 3 oz.
Steering Wheel Holder & Pedal Depressor Kit
- This kit has two applications: 1) holds steering wheel in position for alignment adjustments, and 2) depresses brake pedal for various brake checks, including brake lamp operation.
- Rod easily slides in actuator for fast, easy installation of tool on brake pedal or steering wheel.Simply hand squeeze the actuator to accomplish fine adjustments.
- Kit includes: actuator assembly; extension rod for actuator (use when depressing brake pedal); hook assembly (hooks on steering wheel when depressing brake pedal or holding steering wheel); and flat pad (rests on front seal when holding steering wheel).

No. 4546 – Steering wheel holder and pedal depressor kit. Wt., 5 lbs., 2 oz.
4546-1 – Handle and Rod. Wt., 2 lbs.
4546-2 – Steering wheel and pedal holder. Wt., 2 lbs., 3 oz.

Interchangeable Punch and Chisel Set
- Handle allows easy grip and protects hand from being hit by hammer.
- 12 punches and chisels:
  1 cape chisel: 1/4" wide blade
  5 flat chisels: 1/2", 5/8", 3/4", 7/8", and 1" wide blades
  2 taper punches: 1/8" and 1/4" diameter
  2 pin punches: 3/16" and 1/4" diameter
  2 center punches: 1/8" and 3/16" diameter
- Double-locking ball detent holds punch or chisel securely in the driver handle.

No. 4605 – Interchangeable punch and chisel set. Wt., 4 lbs., 7 oz.

Interchangeable Autobody Forming and Punch Kit
Includes:
4605-1 – Drive handle
4756-1 – Small curve tool
4756-2 – Cross curve tool
4756-3 – Rounded ball-peen tool
4756-4 – One-sided flat blade tool
4756-5 – Curve blade tool
4756-6 – Pointed ball-peen tool
4756-7 – Angle face tool
4756-8 – Flat blade tool
4756-9 – Square face tool
4756-10 – Angle groove tool
4756-11 – Round face tool

No. 4756 – Interchangeable autobody forming and punch kit. Wt., 4 lbs., 13 oz.
GENERAL PURPOSE TOOLS
Drivers & Misc. Tools

Impact Drivers
• Loosens hard-to-turn screws, bolts or nuts.
• Handle design prevents possibility of hitting hand with hammer when striking impact driver.
• Bit holder has 3/8" drive (No. 4608), 1/2" (No. 4607) drive, and 5/16" hex for Phillips and flat screwdriver bits.
• Includes eight screwdriver bits:
  - No. 2 Phillips bit, 1-3/8" long with 5/16" hex
  - No. 2 Phillips bit, 3-1/8" long with 5/16" hex
  - No. 3 Phillips bit, 1-3/8" long with 5/16" hex
  - No. 3 Phillips bit, 3-1/8" long with 5/16" hex
  - 5/16" wide x 1-3/8" long with 5/16" hex slotted bit
  - 5/16" wide x 3-1/8" long with 5/16" hex slotted bit
  - 3/8" wide x 1-3/8" long with 5/16" hex slotted bit
  - 3/8" wide x 3-1/8" long with 5/16" hex slotted bit

No. 4607 – 1/2" impact driver. Wt., 2 lbs., 4 oz.
No. 4608 – 3/8" impact driver. Wt., 2 lbs., 4 oz.

Brass Hammer and Punch Set
• Brass-head hammer and punches are ideal to use where sparks from ferrous metals would be hazardous, or where precision metal parts could be damaged by steel tools.
• Hammer head weighs 24 oz.; brass drift punch is 10" x 3/4" diameter; brass tapered punch is 8" x 5/8" hex tapered to 3/8" diameter point.

No. 4606 – Brass hammer and punch set. Wt., 4 lbs., 2 oz.

Trim Fastener and Molding Removal Set
• Set includes five different sizes and styles of tools that allow easy removal of trim fasteners, moldings, and wheel hubs.
• Tools are made of plastic to prevent damage to trim, moldings, alloy wheels, or vehicle paint.
• Can be used on trim fasteners and moldings inside, or outside, the vehicle.

No. 4489 – Trim fastener and molding removal set. Wt., 13 oz.

Mercedes-Benz Molding Removal Kit
• 3-piece kit designed to save time for the shop when servicing M-B vehicle interiors.
• Works on/in virtually all Mercedes-Benz.
• No. 6789 along with the No. 4489 set cover most vehicle interiors on the road today.

No. 6789 – Mercedes-Benz molding removal kit. Wt., 12 oz.
5-Piece E-Clip Tool Set
• Dual operation tool: one end of tool releases e-clip; other end of tool installs e-clip.
• Tools fit four sizes of e-clips: 6 mm, 7 mm, 8 mm, and 9 mm.
• Each tool easily locks into handle provided.
No. 4492 – 5-piece E-clip tool set. Wt., 10 oz.

Door Panel & Upholstery Tool Set
Heavy-duty door panel and upholstery tools:
No. 4549-1 – removes window and door handle clips, and upholstery tucking.
No. 4549-2 – V-notched door panel clip removal tool.
No. 4549-3 – U-notched door panel clip removal tool.
No. 4549 – Door panel and upholstery tool set – 3-piece. Wt., 1 lb.

Small Door Panel & Upholstery Tool Set
Heavy-duty tools with stainless steel blades used for removing small door panels and upholstery clips:
No. 4551-1 – U-notched tool
No. 4551-2 – V-notched tool
No. 4551 – Small door panel and upholstery tool set. Wt., 8 oz.

Putty Knife Set
Heavy-duty stainless steel, precision ground, and polished. Blades taper at tip to provide great flexibility and blade action. Ergonomic, two-component plastic handles provide a non-slip grip.
• Packaged in a storage tray. Includes three flexible blade knives: 1-1/4", 2", and 3".
No. 4552-1 – Large putty knife.
No. 4552-2 – Medium putty knife.
No. 4552-3 – Small putty knife.
No. 4552 – Putty knife set. Wt., 13 oz.

Scraper Set
Scraper feature polished, heat-treated, stiff, stainless steel blades. Handles are ergonomic two-component plastic and feature a non-slip grip and steel bolstered end.
• Packaged in a storage tray. Includes: 1-1/4" straight blade, 1-1/4" bent blade, and 2" straight blade.
No. 4550-1 – Medium scraper.
No. 4550-2 – Small scraper.
No. 4550-3 – Angled scraper.
No. 4550 – Scraper set. Wt., 1 lb., 2 oz.
**Handled Pry Bars**

Finally, a heavy-duty pry bar made of tempered square steel that you can hit without damaging the handle.

- Black chrome striking cap allows hitting the bar without damage to the handle.
- Ergonomic handle – dual durometer composite handle for user comfort; reduces hand fatigue.
- Polished tip with black oxide finish.
- Long-life finish resists rust and wear during use.
- OTC Marathon Lifetime Warranty.

**No. 8203** – 3-piece handled pry bar set in gray molded tray. Includes 12", 18", and 24" sizes. Wt., 3 lbs.

**No. 8206** – 6-piece handled pry bar set in gray molded tray. Includes 8", 12", 18", 24", 32" and 36" sizes. Wt., 6 lbs., 10 oz.

**No. 8208** – 8" handled pry bar. Wt., 8 oz.

**No. 8212** – 12" handled pry bar. Wt., 10 oz.

**No. 8218** – 18" handled pry bar. Wt., 1 lb.

**No. 8224** – 24" handled pry bar. Wt., 1 lbs., 4 oz.

**No. 8232** – 32" handled pry bar. Wt., 1 lbs., 12 oz.

**No. 8236** – 36" handled pry bar. Wt., 2 lbs., 2 oz.

**No. 8245** – 45" handled pry bar. Wt., 5 lbs.

**No. 8245S** – 45" handled pry bar with straight blade. Wt., 5 lbs.

**Jimmy Bars**

We’ve forged these bars from chrome alloy steel, then heat-treated them to resist bending and breaking.

**No. 7166** – 5/8" diameter, 18" long. Wt., 1 lb., 8 oz.

**No. 7167** – 3/4" diameter, 24" long. Wt., 2 lbs., 10 oz.

**No. 7168** – 7/8" diameter, 30" long. Wt., 4 lbs., 7 oz.

**No. 7420** – 7/8" diameter, 46" long. Wt., 8 lbs.

**No. 7421** – 1" diameter, 54" long. Wt., 11 lbs., 3 oz.
Rolling Head Pry Bars
You'll have a lot of leverage using one of these rolling head pry bars. The long, tapered body will also serve as an aligning drift.
No. 7162 – Pry bar; 6" long. Wt., 3 oz.
No. 7163 – Pry bar; 12" long. Wt., 10 oz.
No. 7164 – Pry bar; 16" long. Wt., 1 lb, 8 oz.
No. 7165 – Pry bar; 18" long. Wt., 2 lbs., 7 oz.

Pry Pac
Three pry bars in one economical pack. You get 12" and 18" rolling head pry bars and a 24" jimmy bar.
• Heat-treated chrome alloy steel.
No. 7171 – Pry pac. Wt., 6 lbs., 13 oz.

Mini Pick and Hook Set – 4-Piece
• Sturdy stainless steel points and shafts designed for marking, removing o-rings, accessing snap rings, and performing other tasks. Assorted angle tips allow you to reach awkward locations.
• Knurled shaft design enhances finger control for delicate jobs.
No. 4515 – Mini pick and hook set. Wt., 5 oz.

O-Ring / Oil Seal Pick
Here's an extremely handy tool that makes quick work of oil seal and o-ring removal and installation.
No. 7312 – O-ring/oil seal pick. Wt., 2 oz.

O-Ring / Oil Seal Pick Set
Fishing a stubborn o-ring or oil seal out of its seat is easy if you have this pair of picks in your toolbox.
No. 7103 – O-ring/oil seal pick set. Wt., 7 oz.

Mirror and Magnet Set
• Handles telescope from 6-1/2" to 25". Swivel heads allow access to tight areas.
• Large, rectangular swivel mirror is 2" x 3-1/2", and is attached to one telescoping handle; small mirror is 1-1/4" in diameter, and is interchangeable with magnets on the other handle.
• Magnets can lift up to 8 lbs.
No. 4650 – Mirror and magnet set. Wt., 13 oz.
Differential Housing Spreader
Here’s a tool that eases the job of removing or installing differential ring-gear assemblies on Dana axle models 30 through 70. It’s a heavy-duty device using mechanical screw power to spread the housing. It helps prevent the component damage that often results from the use of homemade devices.

No. 7071 – Differential housing spreader. Wt., 34 lbs.

Universal Outside Thread Chaser
Damaged bolt or nut threads can be an annoying, costly problem—unless you have one of our thread chasers. It will quickly restore threads to near original condition without the use of expensive thread-cutting equipment.

• Replaceable V-pads and dies.
• 1-1/4” to 5” O.D.

No. 7402 – Thread chaser with 6 dies: threads per inch - 4, 5, 6, 7, 7-1/2, 8, 9, 10, 11, 11-1/2, 12, 14, 16, 18, 20, and 24. Wt., 2 lbs., 13 oz.

No. 216884 – Standard die set. Includes 6 dies, in the sizes listed above. Wt., 3 oz.

No. 202817 – Metric die set. Includes three dies: 1 mm-1.25 mm-1.5 mm-1.75 mm, 2 mm-2.5 mm-3.0 mm-3.5 mm; 4 mm pitch dies. Wt., 3 oz.

No. 206803 – V-pad. Wt., 10 oz.

Hex Key Wrenches
Allen head cap screws are everywhere, which makes a set of these wrenches a necessity.

• They’re extra long for added leverage and accessibility.
• Meets ANSI specs.

No. 7365 – Plastic pouch containing wrench Nos. 7345 through 7354. Wt., 15 oz.

Metric Hex Key Wrench Set
These long-arm hex key wrenches provide added leverage and accessibility.

• Rust-resistant black oxide finish.
• There are 9 sizes, from 1.5 mm to 10 mm.

• Available separately: 12 mm, 14 mm, 17 mm, and 19 mm.

No. 7334 – Metric hex key set in plastic pouch. Sizes: 1.5 mm, 2 mm, 2.5 mm, 3 mm, 4 mm, 5 mm, 6 mm, 8 mm, and 10 mm. Wt., 15 oz.
**Windshield Wiper Puller**
- Removes wiper arms on many foreign and domestic cars and light trucks.
- Will not damage wiper arm or hood cowling during removal.
- Simply place puller feet under wiper arm and tighten forcing screw against wiper shaft.

No. 4676 – Windshield wiper puller. Wt., 4 oz.

**Metric/SAE T-Handle Motorcycle Kit**
- 7-piece metric tool kit with ball point and hex key ends for motorcycles, autos, and diesel trucks contains adapters: 1.5 mm, 2.0 mm, 2.5 mm, 3.0 mm, 4.0 mm, 5.0 mm, 6.0 mm, and one driver handle/holder.
- Combines low-torque handle with key storage!

No. 4710 – Metric/SAE T-handle motorcycle kit. Wt., 15 oz.

**Motorcycle / ATV Chain Tension Puller**
- Tool is designed to work on drive chains found on motorcycles and all-terrain vehicles (ATVs). Fits the following size chains: 428, 520, 525, 528, and 530.
- Tool jaws fit in chain link ends. Tightening the forcing screw pulls the jaws together to hold the chain for easy removal or installation of the chain connector or master link.

No. 4758 – Motorcycle/ATV chain tension puller. Wt., 13 oz.

**Universal Pulley Holder**
- Universal design fits many different size pulleys having slots or holes, such as camshaft pulleys or crankshaft pulleys.
- Wrench is adjustable from 1-1/2" to 8-5/8"; four different size step pins are interchangeable.
- Long handle enables technician to easily hold the pulley when tightening or loosening retaining bolts.

No. 4754 – Universal pulley holder. Wt., 4 lbs., 15 oz.
Giant Adjustable Wrenches

The really big jobs call for really big tools. These wrenches will handle 42 bolt sizes from 1-3/8" to 4-3/4". Together, both wrenches weigh just 41 lbs., but can replace over 1,000 lbs. of fixed-size wrenches.

No. 7640 – Giant adjustable wrench. Rated to withstand 2,000 ft. lbs. of torque. Wt., 10 lbs. 10 oz.

No. 7641 – Giant adjustable wrench. Rated to withstand 5,000 ft. lbs. of torque. Wt., 30 lbs. 5 oz.

<table>
<thead>
<tr>
<th>Order No.</th>
<th>Nut / Bolt Size</th>
<th>Increments of Jaw Adjustment</th>
<th>Lgth.</th>
<th>Head Thickness</th>
<th>Wt. (lbs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7640</td>
<td>1-3/8&quot; to 2-7/8&quot;</td>
<td>1/8&quot;</td>
<td>24&quot;</td>
<td>7/8&quot;</td>
<td>10.6</td>
</tr>
<tr>
<td>7641</td>
<td>2-3/4&quot; to 4-3/4&quot;</td>
<td>1/8&quot;</td>
<td>36&quot;</td>
<td>1-1/8&quot;</td>
<td>30.3</td>
</tr>
</tbody>
</table>

Fed. Spec.: GG-W-631B

Heavy-Duty Wiper Arm Puller

• Designed to remove aluminum wiper arm from the steel stud that often galvanizes, locking the arm and stud together.
• Investment cast design is strong, easier to use, and saves time.
• Live center and more precise alignment save labor. Works on these and many other vehicles: Jeep Liberty, Grand Cherokee, Dodge Caravan, Stratus, Ram Diesels, Dakota & PT Cruiser, Chrysler LHS, Town & Country, Saturn Vue Buick Rendezvous, Cadillac CTS, Ford Focus, Ford Windstar, Honda Civic, Odyssey Toyota Camry.

No. 6676 – Heavy-duty wiper arm puller. Wt., 12 oz.

Variable Pin Spanner Wrench

• Universal design fits many different types of pulleys having slots or holes, including camshaft pulleys and crankshaft pulleys.
• Wrench is adjustable from 1-1/4 inch to 5 inches; works with a 1/2 inch ratchet or breaker bar.

Replacement Parts:
No. 526908-1 – 3.5 mm pin
No. 526908-2 – 4 mm pin
No. 526908-3 – 4.5 mm pin
No. 526908-4 – 5 mm pin
No. 526908-5 – 6 mm pin
No. 526908-6 – 7 mm pin
No. 526908-7 – 10 mm pin
No. 526908-8 – Handle

No. 6613 – Variable pin spanner wrench. Wt., 2 lbs.
Adjustable Spanner Wrench
This tool is ideal for adjusting pillow block bearings. It also works well on International model “M” water pumps and on all International power-takeoff units.
- This wrench adjusts from 1/2” to 2-3/4”.
No. 7246 – Adjustable spanner wrench. 9-1/4” long.
Wt., 11 oz.

Adjustable Hook Spanner Wrench
Here’s a tool that’s needed wherever turret adjusting nuts or packing gland nuts are used.
- Capacity is 1-1/2” to 4”.
- Handle is 24” long, 11/16” diameter.
No. 885 – Adjustable hook spanner wrench. Wt., 3 lbs., 2 oz.

Heavy-Duty Adjustable Hook Spanner Wrench
Some jobs require beefier tools. Here’s a wrench to fill that need. It’s drop-forged and features extra heavy construction and a 3/4” thick, 11-position hook jaw that’s capable of gripping fasteners from 4-3/4” to 12-3/4” O.D.
- Handle is 25-3/4” long and 15/16” in diameter.
No. 7309 – Heavy-duty adjustable hook spanner wrench. Wt., 13 lbs., 7 oz.

Adjustable Hook Spanner Wrenches
These pieces will replace many fixed-size wrenches needed to service industrial tractors and other equipment.
- Their drop-forged jaws adjust to 11 positions for a capacity of 4-3/4” to 12-3/4” O.D.
- Handle is 24” long and 1” in diameter.
No. 7307 – Spanner wrench with one 3/8” thick jaw.
Wt., 5 lbs., 15 oz.
No. 7308 – Spanner wrench with two interchangeable jaws: one 3/8” thick, one 3/4” thick. Wt., 11 lbs., 7 oz.

Stud Remover Sets
These metric and SAE, 4-piece, stud remover sets offer the best professional extractors available. Designed and tested to reach studs in difficult work areas.
- Housed in a blow-molded storage case.
No. 6986-1 – 1/4” stud remover  No. 6986-2 – 5/16” stud remover
No. 6986-3 – 3/8” stud remover  No. 6986-4 – 7/16” stud remover
No. 6986 – SAE stud remover set. 3/8” drive for 1/4” and 5/16” stud sizes, and 1/2” drive for 3/8” and 7/16” stud sizes. Wt., 1 lb., 2 oz.
No. 6987-6 – 6 mm stud remover
No. 6987-8 – 8 mm stud remover
No. 6987-10 – 10 mm stud remover
No. 6987-12 – 12 mm stud remover
No. 6987 – Metric stud remover set. 3/8” drive for 6 mm and 8 mm stud sizes, and 1/2” drive for 10 mm & 12 mm stud sizes. Wt., 1 lb., 2 oz.
**GENERAL PURPOSE TOOLS**

**Drivers & Pullers**

---

**Bearing Race and Seal Driver Set (10 piece)**

- This aluminum constructed set permits installation of tapered bearing races and seals without damage to the component or housing.
- Tapered side of driver is used to install races. Invert the driver to the flat side to install seals.
- Set is housed in a blow-molded plastic storage case.

No. 4507 – Bearing race and seal driver set (10 piece).
Wt., 4 lbs., 2 oz.

---

**Metric Bushing Driver Set**

- 14-piece tool kit for motorcycles, Asian and European vehicles contains adapters: 10-12 mm, 14-16 mm, 15-17 mm, 16-18 mm, 18-20 mm, 20-22 mm, 22-24 mm, 25-27 mm, 28-30 mm, 30-36 mm, 35-40 mm, 36-42 mm; one small driver handle; one medium driver handle; one large driver handle.
- Aluminum construction won’t mar the bushing or affect bushing tolerance, which is critical for efficient operation of the engine, transmission, and hubs.

No. 4407 – Metric bushing driver set.
Wt., 2 lbs.

---

**Large Gear and Pulley Puller**

Using this tool, you can easily remove a wide range of gears, pulleys, or other parts that have tapped holes.

- The puller will spread from 2" to 7-3/4". Its block is 8-1/4" wide, and its forcing screw is 3/4"-16 x 11-5/8" long.
- Accommodates any cap screws up to 1/2" diameter.

No. 522 – Large gear and pulley puller.
Wt., 4 lbs., 8 oz.

---

**Gear and Pulley Pullers**

These tools are perfect for removing timing gears, fan pulleys, harmonic balancers, and many other parts having tapped holes.

- Each puller will spread from 1-1/2" to 4-1/4". The puller blocks are 4-7/8" wide.
- Both include two hex head cap screws, 3/8"-16 x 3" long.

No. 7392 – Puller with 13" long screw.
Wt., 2 lbs., 4 oz.

No. 7393 – Puller with 5-1/2" long screw.
Wt., 1 lb., 8 oz.
“Custom-made” Driver Tools

Now you can have the proper-size driver for nearly any automotive seal, bearing, or bushing installation job. These sets include discs and handles, spacers and drivers.

- Discs range from 1/2" to 4-1/2" in diameter, in 1/16" increments.

No. 27793 – Starter set. Includes a handle and discs (5/8" to 2" diameter) specially selected to provide the driver sizes usually needed in automotive service. Includes plastic storage box. Wt., 4 lbs., 2 oz.

No. 27794 – Basic set. Includes two handle sizes and 41 discs, ranging from 1/2" to 3" diameter along with plastic storage box and insert. Wt., 22 lbs., 13 oz.

No. 27795 – Big-job set for servicing large components. Includes a handle and 24 discs, ranging from 3-1/16" to 4-1/2" diameter. Wt., 48 lbs., 3 oz.

No. 27796 – Intermediate set. Includes a handle and 25 discs, ranging from 2" to 3-1/2" diameter. Wt., 27 lbs., 7 oz.

No. 27797 – Master set. Includes three handle sizes and 65 discs, ranging from 1/2" to 4-1/2" diameter. Wt., 80 lbs.

No. 27810 – Tool organizer board for holding all components in No. 27797 master set. Wt., 6 lbs., 13 oz.

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>No. Description</th>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>10012*</td>
<td>Cap Screw</td>
<td>27507*</td>
<td>Disc, 1-1/2&quot; dia.</td>
<td>27532</td>
</tr>
<tr>
<td>10020*</td>
<td>Cap Screw</td>
<td>27508</td>
<td>Disc, 1-9/16&quot; dia.</td>
<td>27533</td>
</tr>
<tr>
<td>10854*</td>
<td>Cap Screw</td>
<td>27509</td>
<td>Disc, 1-5/8&quot; dia.</td>
<td>27534</td>
</tr>
<tr>
<td>10855*</td>
<td>Cap Screw</td>
<td>27510</td>
<td>Disc, 1-11/16&quot; dia.</td>
<td>27535</td>
</tr>
<tr>
<td>12001*</td>
<td>Cap Screw</td>
<td>27511*</td>
<td>Disc, 1-3/4&quot; dia.</td>
<td>27536</td>
</tr>
<tr>
<td>27487</td>
<td>Small Handle</td>
<td>27512</td>
<td>Disc, 1-13/16&quot; dia.</td>
<td>27537</td>
</tr>
<tr>
<td>27488</td>
<td>Medium Handle</td>
<td>27513*</td>
<td>Disc, 1-7/8&quot; dia.</td>
<td>27538</td>
</tr>
<tr>
<td>27489</td>
<td>Large Handle</td>
<td>27514</td>
<td>Disc, 1-15/16&quot; dia.</td>
<td>27539</td>
</tr>
<tr>
<td>27490</td>
<td>Extension Tube</td>
<td>27515*</td>
<td>Disc, 2&quot; dia.</td>
<td>27540</td>
</tr>
<tr>
<td>27491</td>
<td>Disc, 1/2&quot; dia.</td>
<td>27516</td>
<td>Disc, 2-1/16&quot; dia.</td>
<td>27541</td>
</tr>
<tr>
<td>27492</td>
<td>Disc, 9/16&quot; dia.</td>
<td>27517</td>
<td>Disc, 2-1/8&quot; dia.</td>
<td>27542</td>
</tr>
<tr>
<td>27493*</td>
<td>Disc, 5/8&quot; dia.</td>
<td>27518</td>
<td>Disc, 2-3/16&quot; dia.</td>
<td>27543</td>
</tr>
<tr>
<td>27494</td>
<td>Disc, 11/16&quot; dia.</td>
<td>27519</td>
<td>Disc, 2-1/4&quot; dia.</td>
<td>27544</td>
</tr>
<tr>
<td>27495*</td>
<td>Disc, 3/4&quot; dia.</td>
<td>27520</td>
<td>Disc, 2-5/16&quot; dia.</td>
<td>27545</td>
</tr>
<tr>
<td>27496</td>
<td>Disc, 13/16&quot; dia.</td>
<td>27521</td>
<td>Disc, 2-3/8&quot; dia.</td>
<td>27546</td>
</tr>
<tr>
<td>27497*</td>
<td>Disc, 7/8&quot; dia.</td>
<td>27522</td>
<td>Disc, 2-7/16&quot; dia.</td>
<td>27547</td>
</tr>
<tr>
<td>27498</td>
<td>Disc, 15/16&quot; dia.</td>
<td>27523</td>
<td>Disc, 2-1/2&quot; dia.</td>
<td>27548</td>
</tr>
<tr>
<td>27499*</td>
<td>Disc, 1&quot; dia.</td>
<td>27524</td>
<td>Disc, 2-9/16&quot; dia.</td>
<td>27549</td>
</tr>
<tr>
<td>27500</td>
<td>Disc, 1-1/16&quot; dia.</td>
<td>27525</td>
<td>Disc, 2-5/8&quot; dia.</td>
<td>27550</td>
</tr>
<tr>
<td>27501*</td>
<td>Disc, 1-1/8&quot; dia.</td>
<td>27526</td>
<td>Disc, 2-11/16&quot; dia.</td>
<td>27551</td>
</tr>
<tr>
<td>27502</td>
<td>Disc, 1-3/16&quot; dia.</td>
<td>27527</td>
<td>Disc, 2-3/4&quot; dia.</td>
<td>27552</td>
</tr>
<tr>
<td>27503*</td>
<td>Disc, 1-1/4&quot; dia.</td>
<td>27528</td>
<td>Disc, 2-13/16&quot; dia.</td>
<td>27553</td>
</tr>
<tr>
<td>27504</td>
<td>Disc, 1-5/16&quot; dia.</td>
<td>27529</td>
<td>Disc, 2-7/8&quot; dia.</td>
<td>27554</td>
</tr>
<tr>
<td>27505*</td>
<td>Disc, 1-3/8&quot; dia.</td>
<td>27530</td>
<td>Disc, 2-15/16&quot; dia.</td>
<td>27555</td>
</tr>
<tr>
<td>27506</td>
<td>Disc, 1-7/16&quot; dia.</td>
<td>27531</td>
<td>Disc, 3&quot; dia.</td>
<td>7350*</td>
</tr>
</tbody>
</table>

NOTE: All discs are 1/2" thick. * Included in set No. 27793.

GM Oil Filter Wrench


- This is a required tool to remove the oil filter cap from the oil pan to access the filter cartridge.

No. 6901 – GM oil filter wrench (74mm, 15 flutes). Wt., 9 oz.

Similar to Kent-Moore No. J-29142.
**Ford/Mazda 2.3L Oil Socket**
- Oil socket designed at 76.5 mm to fit new 2.3L 4-cylinder engines.
- Works on Mazda 3, Mazda 5, Mazda 6, Ford Fusion, & Mercury Milan 2.3L 4-cylinder engines.

No. 6903 – Ford/Mazda 2.3L oil socket. Wt., 4 oz.

**Hyundai / Kia 3.3L V6 Oil Socket**
- Works on 2006 Hyundai Sonata 3.3L V6 engine and soon to be released new models of Hyundai and Kia.
- Oil socket designed at 88.22mm to fit new 3.3L 6-cylinder engines.

No. 6904 – Hyundai / Kia 3.3L V6 oil socket. Wt., 4 oz.

**Subaru Oil Filter Socket**
- Works on 2003–newer Subaru vehicles having the 2.5L, 4-cylinder, turbo engine.
- Socket fits between the exhaust manifold and the oil filter for easy removal and installation of the filter.

No. 6905 – Subaru oil filter socket. Wt., 4 oz.

**Euro/GM Oil Socket Kit**
Popular oil filter wrenches for the GM, BMW, Audi, and VW. High quality, 3/8" drive, forged sockets designed to last a lifetime.

3-piece oil socket kit contains:
- 27 mm socket for the Cadillac STS 3.2L V6 and the Mercedes-Benz 1.8L I4.
- 32 mm socket for the 2.2L GM Ecotec and Saabs.
- 36 mm for the BMW M52, M60, M62, M70, & M73 engines; M-B OM604, 605, & 606 engines; VW/Audi VR6 engine.

No. 6784 – Euro/GM oil socket kit. Wt., 1 lbs., 5 oz.

**Heavy-Duty Oil Filter Wrenches**
- Fit filters ranging from 4-1/8" to 5-21/32" (104 mm to 144 mm) in diameter.
- Feature a 1-1/2" wide steel band that can stand up to the high torque needed to remove filters from trucks, tractors, and other heavy equipment.
- Use with a 1/2" drive ratchet or breaker bar.

No. 4555 – Heavy-duty oil filter wrench. Fits filters ranging from 4-1/8" to 4-21/32" (104 mm to 118 mm) in diameter. Wt., 1 lb., 6 oz.

No. 4556 – Heavy-duty oil filter wrench. Fits filters ranging from 4-21/32" to 5-5/32" (118 mm to 131 mm) in diameter. Wt., 1 lb., 6 oz.

No. 4557 – Heavy-duty oil filter wrench. Fits filters ranging from 5-5/32" to 5-21/32" (131 mm to 144 mm) in diameter. Wt., 1 lb. 7 oz.
Swivel Handle Oil Filter Wrenches
- Fit filters ranging from 2-7/8" to 4-3/8" (73 mm to 111 mm) in diameter.
- Feature a 1" wide stainless steel band for positive grip on the filter; swivel handle makes it easy to turn filters in hard-to-reach areas.

No. 4565 – Swivel handle oil filter wrench. Fits filters ranging from 2-7/8" to 3-3/8" (73 mm to 85 mm) in diameter. Wt., 13 oz.
No. 4566 – Swivel handle oil filter wrench. Fits filters ranging from 3-3/8" to 3-3/4" (85 mm to 95 mm) in diameter. Wt., 13 oz.
No. 4567 – Swivel handle oil filter wrench. Fits filters ranging from 3-3/4" to 4-3/8" (95 mm to 111 mm) in diameter. Wt., 13 oz.

Adjustable Oil Filter Pliers
- Forged jaws with sure-grip teeth grab the filter for easy removal.
- Slip-joint ratchet and lock mechanism allows a secure grip on filter diameters of 2-1/4" to 7" (57 mm to 178 mm).

No. 4560 – Small adjustable oil filter pliers. Pliers is 13-1/2" long; fits filters ranging from 2-1/4" to 5" (57 mm to 127 mm) in diameter. Wt., 1 lb., 3 oz.
No. 4561 – Large adjustable oil filter pliers. Pliers is 18" long; fits filters ranging from 3-3/4" to 7" (95 mm to 178 mm) in diameter. Wt., 3 lbs., 4 oz.
No. 4562 – Adjustable oil filter pliers set. Includes small pliers: 13-1/2" long and fits filters ranging from 2-1/4" to 5" (57 mm to 127 mm) in diameter. Large pliers: 18" long and fits filters ranging from 3-3/4" to 7" (95 mm to 178 mm) in diameter. Wt., 4 lbs., 7 oz.

3-Leg Oil Filter Wrench
- Fits filters ranging from 2-1/2" to 5-1/4" (65 mm to 135 mm) in diameter.
- To turn the tool, use a 1/2" ratchet in the ratchet drive or a 13/16" wrench on the nut.
- Knurled legs provide extra gripping power.

No. 4568 – 3-Leg oil filter wrench. Wt., 1 lb., 6 oz.

Universal Filter Wrench
This filter wrench will stand up to the job of removing nearly any spin-on filter (up to 6"). Universal design permits use on most vehicles. The tough 2" wide nylon strap holds firmly. In fact, the more leverage applied, the tighter it grips.
- Accommodates a 3/8" drive ratchet.

No. 7062A – Universal filter wrench. Wt., 10 oz.
### Strap & Chain Wrenches

**Grooved Pulley Strap Wrench**
- Use to hold a grooved pulley when servicing alternators, water pumps, power steering pumps, etc. Also may be used to rotate the camshaft or crankshaft for engine service.
- Holds tighter than a standard strap wrench.
- **No. 4475** – Grooved pulley strap wrench. Wt., 10 oz.

**Multipurpose Strap Wrench**
- You’ll find many uses for this heavy-duty strap wrench. The 53" long nylon strap won’t mar precision surfaces of shafts, pulleys, or other components. It’s especially useful on small engine pulleys. Special head design self-tightens the strap as force is applied.
- Lightweight, with 12" long handle.
- **No. 7206** – Strap wrench. Wt., 1 lb.
- **No. 305085** – Replacement strap. Wt., 1 oz.

**Ratcheting Chain Wrench – 12”**
- Works on many different-shaped objects, such as square, round, hexagon, oval, etc.
- Handle is 12" long; chain grips objects ranging from 1/2" to 4-1/2" O.D.
- **No. 6968** – Ratcheting chain wrench – 12". Wt., 2 lb., 8 oz.
- **No. 516941** – Replacement chain for 6968. Wt., 10 oz.

**Ratcheting Chain Wrench – 24”**
- Ratcheting action makes it possible to re-grip without removing wrench.
- Handles parts of most any shape... round, square, hexagon, or octagon.
- Handle is 24" long; chain grips objects ranging from 3" to 6-1/2" O.D.
- **No. 6969** – Ratcheting chain wrench – 24". Wt., 4 lb., 8 oz.
- **No. 516942** – Replacement chain for 6969. Wt., 13 oz.

**Ratcheting Chain Wrenches**
- This multi-purpose tool will grip parts of nearly any shape. It features a ratcheting head design that lets you turn in either direction without removing wrench from the work.
- **No. 7400** – Chain wrench, 13" handle with capacity from 1/2" to 4-3/4" O.D. Wt., 2 lbs., 5 oz.
- **No. 7401** – Chain wrench, 19" handle with capacity from 3" to 6-3/4" O.D. Wt., 5 lbs., 3 oz.
- **No. 209199** – Replacement chain for 7400. Wt., 12 oz.
- **No. 209200** – Replacement chain for 7401. Wt., 1 lb., 13 oz.
**Body and Fender Dent Puller**

Often, the biggest time-consuming part of dent removal is the removal and installation of interior panels and upholstery. This tool eliminates those steps. Simply drill a hole at the base of the dent and thread in the tool's self-tapping screw. A few sharp blows of the slide hammer will pull the dent out.

- Puller is 17" long with Pyralin handle grip.
- Replaceable self-tapping screw. Instructions included.

**No. 898A** – Body and fender dent puller. Wt., 2 lbs., 8 oz.
**No. 104427** – Replacement screw. Wt., 2 oz.

---

**Professional Style Seal Puller**

- Designed to remove oil and grease seals when servicing cars, SUVs, and light trucks without damaging the housing or bearing.
- Hook tips in two sizes and professional handle design allows removal of hard-to-get-at seals by getting under them.
- The tool is 12" long and the hook tip is double-secured (versus competitors’ designs), for durability.
- An extra blade is included, and additional replacements (No. 4508-1) may be ordered.

**No. 4508** – Professional style seal puller. Wt., 1 lb.
**No. 4508-1** – Replacement blade for 4508. Wt., 4 oz.

---

**Mechanic’s Stethoscope**

- Quick and accurate way to locate vehicle noise.
- Spring diaphragm on end of hose amplifies noise.
- Includes two hose ends: long rod helps pinpoint noises in hard-to-access areas; short adapter helps locate noise in a broader area of the vehicle.

**No. 4491** – Mechanic’s stethoscope. Wt., 8 oz.
**Bench-Mounted Holding Fixture**

Here’s a helpful device that enables you to securely hold and rotate small engines, transmissions, and other components while you’re working on them.

- This holding fixture will handle pieces weighing up to 250 lbs., and it offers 360° of rotation with positive stops at 90° increments.
- Three sides of the mounted unit remain fully exposed.

**No. 7020** – Bench fixture.
Wt., 10 lbs., 13 oz.

**No. 34607** – Base assembly only.
Wt., 2 lbs., 8 oz.

---

**Transmission Adapter Kit**

Converts your OTC engine stand into a transmission service stand.

- Kit replaces the adjustable arms of the stand to hold and position the transmission at workbench height for repair.
- The transmission is held with three sides fully exposed for working convenience, and can be rotated a full 360° for complete access to all parts.
- Comes complete with mounting hardware. Adapter is for use on No. 1726 and No. 1735 engine stands.

**No. 7118** – Transmission adapter kit.
Wt., 10 lbs., 5 oz.
Quick Finder Index...

Puller “How-to” Information .............. 206–207
Puller Safety Tips ......................... 207
Protective Blankets ....................... 207
Mechanical “Grip-O-Matic” Pullers ........ 208
Hydraulic “Grip-O-Matic” Pullers ........ 209
Mechanical Push-Pullers ................... 209
Hydraulic Push-Pullers ..................... 210
Pulling Attachments ....................... 211
Puller Adapters ......................... 211–212
Slide Hammer Pullers ..................... 213–214
Bearing Pullers ......................... 214–215
Puller Sets ....................... 215–222
You can solve the 3 basic pulling problems...

The first thing you have to do is identify exactly what your particular pulling problem is. Once you recognize the problem, you can go on to select the right tool to solve it.

How to select the “RIGHT” puller

1: Determine the type of puller or puller combination. Which puller type is best for “getting a grip” on the part? Is a combination of puller types required?

2: Determine the “REACH” needed. The puller you select must have a “reach” equal to or larger than the corresponding sizes of the part.

3: Determine the “SPREAD” needed. The width of the part to be pulled will determine the “spread” required.

4: Estimate the force required. A puller with the correct “reach” and “spread” will usually have enough power. When in doubt, always use the next larger size. More power may be needed for rusted parts, or when the “area of resistance” is large.

The tools to use when pulling something off a shaft:

Jaw-type puller, either manual or hydraulic. (For extra force and convenience use a hydraulic puller.) Both are available in 2- or 3-jaw versions and are used to grip the outer circumference of an attachment.

Bearing pulling attachment. Provides “knife-like” edges to get behind the component, or when there isn’t a good gripping area on the part to be pulled.

Push-Puller® with attachments. External-internal adapters can thread directly into tapped holes on a component. The splitter gets behind the component to prevent damage to the part.

Slide hammer puller with selected attachments for multiple light-duty pulling tasks.

A variety of OTC adapters can be used to protect a shaft, bridge a hole, thread into tapped holes, or assist installation.

The tools to use when pulling something out of a hole:

Internal pulling attachments have narrow jaws which extend through the center of the part to be pulled. They provide a straight pull and avoid damage to housings. Designed for use with Push-Pullers or slide hammer pullers.

Push-Puller® in combination with internal pulling attachment. Both mechanical and hydraulically powered versions are available.

Here a slide hammer puller is combined with an internal pulling attachment. Ideal for removing parts from blind holes, especially when there is no housing to brace puller legs against.

When there is a shaft to bear against, a forcing screw of the correct size may be used in combination with an internal pulling attachment.

The tools to use when pulling a shaft out of something:

Push-Puller® with threaded adapter. Use a mechanical or hydraulic puller, depending on the size of the shaft to be pulled.

When the housing lacks sufficient surface for the puller legs to bear against, a pulling attachment may be used to provide support.

Slide hammer puller with threaded adapter – either external-internal or internal can be used.

Internal adapters are fastened to the external threaded end of the shaft to pull while pushing against the housing.

External-internal adapters are threaded into the shaft to pull it while pushing against the housing.
Your pulling system exerts tons of force. You must respect this force, and observe safety precautions at all times.

⚠️ Caution
It is impossible to predict the exact force required for every pulling job: setup requirements and the size, shape, and condition of the parts being pulled vary a great deal. In addition, the OTC Pulling System is so versatile, it is possible that components in a pulling setup may have different tonnage ratings. The lowest “capacity” component, then, determines the capacity of the setup. For example: When an accessory with a 1-ton capacity is used with a 10-ton capacity puller, the setup can be used only at a force of one ton.

These tools should be used only by trained personnel familiar with them. Always wear eye protection during a job, since work parts, or the pulling tool itself, may break and parts may fly. It is recommended to cover the work with an OTC Protective Blanket or use a shield while force is being applied. If you are at all unsure which tool or attachment to select, contact Technical Services.

A Few Easy Tips to Remember
Wear safety glasses at all times! You have only one set of eyes, so protect them from possible flying parts.

Keep your pulling tools in shape! Clean and lubricate the puller’s forcing screw frequently, from threads to tip, to ensure long service life and correct operation.

Cover work with a protective blanket! With high forces being exerted on the part being pulled, breakage may sometimes result. By covering the work with a protective blanket, the user reduces the danger of flying parts.

Apply force gradually! The component should give a little at a time. Do not try to speed up removal by using an impact wrench on the puller screw.

Use the right size puller! If you have applied maximum force and the part has not moved, go to a larger capacity puller. Resist sledging.

Protective Blankets
Think of them as “security blankets.” They wrap around pulling, pressing, and other high-force jobs to protect you and your employees from work-related injuries as much as possible. They’re made of high tensile, tear resistant ballistic nylon – similar to military flak jackets – that, when tested, withstood the shattering of a neck-down grade 8 bolt without any visible damage.

NOTE: Always reduce the force from the workpiece prior to removing the blanket. Protective blankets may afford protection from injuries to users and others should part breakage occur. Because of the variety of situations that require guarding, it is the user’s responsibility to determine the best method of protection.

No. 1230PB – Protective blanket. 12" x 30". Wt., 2 lbs., 3 oz.
No. 2036PB – Protective blanket. 20" x 36". Wt., 3 lbs.
No. 2860PB – Protective blanket. 28" x 60". Wt., 7 lbs.
OTC has developed the most complete line of gear and bearing pullers, enabling you to remove and install parts for fast, effective repairs. The pullers are forged from quality steel, heat treated, and subjected to rigorous tests which exceed their rated capacity.

**W**ARNING
Wear approved eye protection when using pullers. See page 207 for protective blankets for your pulling jobs.

### Mechanical Grip-O-Matic® Pullers

<table>
<thead>
<tr>
<th>Tool No.</th>
<th>MAX. Reach</th>
<th>MAX. Spread</th>
<th>Screw Size</th>
<th>JAW Thickness</th>
<th>Width</th>
<th>Capacity, Style, and Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1020</td>
<td>2-1/8&quot;</td>
<td>3-1/4&quot;</td>
<td>5/16&quot;–24 x 3-7/8&quot;</td>
<td>9/64&quot;</td>
<td>1/4&quot;</td>
<td>1-Ton, 2-Jaw; 5 oz.</td>
</tr>
<tr>
<td>1021</td>
<td>2-1/8&quot;</td>
<td>3-1/4&quot;</td>
<td>5/16&quot;–24 x 3-7/8&quot;</td>
<td>9/64&quot;</td>
<td>1/4&quot;</td>
<td>1-Ton, 3-Jaw; 8 oz.</td>
</tr>
<tr>
<td>1022</td>
<td>3-1/4&quot;</td>
<td>4&quot;</td>
<td>3/8&quot;–24 x 4-7/8&quot;</td>
<td>Upper 3/16&quot;</td>
<td>Lower 1/8&quot;</td>
<td>2-ton, 2-Jaw; 14 oz. (Reversible Jaws)</td>
</tr>
<tr>
<td>1023</td>
<td>3-1/4&quot;</td>
<td>4-3/4&quot;</td>
<td>3/8&quot;–24 x 4-7/8&quot;</td>
<td>Upper 3/16&quot;</td>
<td>Lower 1/8&quot;</td>
<td>2-ton, 2-Jaw; 14 oz. (Reversible Jaws)</td>
</tr>
<tr>
<td>1024</td>
<td>3-1/4&quot;</td>
<td>6&quot;</td>
<td>9/16&quot;–20 x 6-15/16&quot;</td>
<td>Upper 5/16&quot;</td>
<td>Lower 1/4&quot;</td>
<td>5-Ton, 2-Jaw; 1 lb., 12 oz. (Reversible Jaws)</td>
</tr>
<tr>
<td>1025</td>
<td>5-1/2&quot;</td>
<td>6&quot;</td>
<td>9/16&quot;–20 x 6-15/16&quot;</td>
<td>Upper 5/16&quot;</td>
<td>Lower 1/4&quot;</td>
<td>5-Ton, Long 2-Jaw; 2 lbs. (Reversible Jaws)</td>
</tr>
<tr>
<td>1026</td>
<td>5-1/2&quot;</td>
<td>7&quot;</td>
<td>9/16&quot;–20 x 6-15/16&quot;</td>
<td>Upper 5/16&quot;</td>
<td>Lower 3/8&quot;</td>
<td>5-Ton, 2/3-Jaw; 2 lbs., 12 oz. (Reversible Jaws)</td>
</tr>
<tr>
<td>1027</td>
<td>5-1/2&quot;</td>
<td>7&quot;</td>
<td>9/16&quot;–20 x 6-15/16&quot;</td>
<td>Upper 5/16&quot;</td>
<td>Lower 3/8&quot;</td>
<td>5-Ton, Long 2/3-Jaw; 3 lbs., 10 oz. (Rev. Jaws)</td>
</tr>
<tr>
<td>1035</td>
<td>5&quot;</td>
<td>9&quot;</td>
<td>11/16&quot;–18 x 9&quot;</td>
<td>Upper 5/16&quot;</td>
<td>Lower 11/32&quot;</td>
<td>7-Ton, 2-Jaw; 4 lbs., 8 oz. (Reversible Jaws)</td>
</tr>
<tr>
<td>1036</td>
<td>8-3/4&quot;</td>
<td>9-1/2&quot;</td>
<td>11/16&quot;–18 x 9&quot;</td>
<td>11/32&quot;</td>
<td>1&quot;</td>
<td>7-Ton, Long 2-Jaw; 5 lbs., 6 oz.</td>
</tr>
<tr>
<td>1037</td>
<td>8-3/4&quot;</td>
<td>11&quot;</td>
<td>11/16&quot;–18 x 9&quot;</td>
<td>11/32&quot;</td>
<td>1&quot;</td>
<td>7-Ton, Long 2/3-Jaw; 8 lbs., 2 oz.</td>
</tr>
<tr>
<td>1038</td>
<td>11&quot;</td>
<td>12&quot;</td>
<td>13/16&quot;–16 x 12&quot;</td>
<td>9/16&quot;</td>
<td>1&quot;</td>
<td>13-Ton, 2-Jaw; 10 lbs., 13 oz.</td>
</tr>
<tr>
<td>1039</td>
<td>11&quot;</td>
<td>12&quot;</td>
<td>13/16&quot;–16 x 12&quot;</td>
<td>9/16&quot;</td>
<td>1&quot;</td>
<td>13-Ton, 2/3-Jaw; 16 lbs., 4 oz.</td>
</tr>
<tr>
<td>1040</td>
<td>15-1/4&quot;</td>
<td>15-1/2&quot;</td>
<td>13/16&quot;–16 x 12&quot;</td>
<td>9/16&quot;</td>
<td>1&quot;</td>
<td>13-Ton, Long 2-Jaw; 13 lbs.</td>
</tr>
<tr>
<td>1041</td>
<td>15-1/4&quot;</td>
<td>17&quot;</td>
<td>13/16&quot;–16 x 12&quot;</td>
<td>9/16&quot;</td>
<td>1&quot;</td>
<td>13-Ton, Long 2/3-Jaw; 18 lbs., 12 oz.</td>
</tr>
<tr>
<td>1042</td>
<td>14-1/2&quot;</td>
<td>14&quot;</td>
<td>1&quot;–14 x 13/2&quot;</td>
<td>13/16&quot;</td>
<td>1-9/32&quot;</td>
<td>17-1/2-Ton, 2-Jaw; 23 lbs.</td>
</tr>
<tr>
<td>1043</td>
<td>14-1/2&quot;</td>
<td>14&quot;</td>
<td>1&quot;–14 x 13-1/2&quot;</td>
<td>13/16&quot;</td>
<td>1-9/32&quot;</td>
<td>17-1/2-Ton, 3-Jaw; 33 lbs.</td>
</tr>
<tr>
<td>1044</td>
<td>18-3/4&quot;</td>
<td>16&quot;</td>
<td>1&quot;–14 x 13-1/2&quot;</td>
<td>13/16&quot;</td>
<td>1-9/32&quot;</td>
<td>17-1/2-Ton, Long 2-Jaw; 26 lbs.</td>
</tr>
<tr>
<td>1045</td>
<td>18-3/4&quot;</td>
<td>16&quot;</td>
<td>1&quot;–14 x 13-1/2&quot;</td>
<td>13/16&quot;</td>
<td>1-9/32&quot;</td>
<td>17-1/2-Ton, Long 3-Jaw; 37 lbs.</td>
</tr>
<tr>
<td>1046</td>
<td>15-1/2&quot;</td>
<td>18&quot;</td>
<td>1-1/4&quot;–12 x 15-15/16&quot;</td>
<td>1-1/6&quot;</td>
<td>1-1/2&quot;</td>
<td>25-Ton, 2-Jaw; 37 lbs., 8 oz.</td>
</tr>
<tr>
<td>1047</td>
<td>15-1/2&quot;</td>
<td>18&quot;</td>
<td>1-1/4&quot;–12 x 15-15/16&quot;</td>
<td>1-1/6&quot;</td>
<td>1-1/2&quot;</td>
<td>25-Ton, 3-Jaw; 54 lbs.</td>
</tr>
<tr>
<td>1048</td>
<td>22-1/4&quot;</td>
<td>20&quot;</td>
<td>1-1/4&quot;–12 x 15-15/16&quot;</td>
<td>1-1/6&quot;</td>
<td>1-1/2&quot;</td>
<td>25-Ton, Long 2-Jaw; 42 lbs., 12 oz.</td>
</tr>
<tr>
<td>1050</td>
<td>22-1/4&quot;</td>
<td>20&quot;</td>
<td>1-1/4&quot;–12 x 15-15/16&quot;</td>
<td>1-1/6&quot;</td>
<td>1-1/2&quot;</td>
<td>25-Ton, Long 3-Jaw; 60 lbs.</td>
</tr>
</tbody>
</table>
Hydraulic Grip-O-Matic® Puller

No. 1065-1080 Available in 17-1/2 to 50-ton capacities. Reliable single-acting Power Twin ram is matched with a versatile 2-jaw or 3-jaw puller. Lightweight ram can be used in other applications. You also get an adjusting screw, speed crank, and coupler where applicable. Hydraulic pump is not included; see index for pump listings.

<table>
<thead>
<tr>
<th>Tool No.</th>
<th>MAX. Reach</th>
<th>Spread &amp; JAW Thickness &amp; Width</th>
<th>Screw Size &amp; Crank No.</th>
<th>Style and Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1065</td>
<td>11-1/2&quot;</td>
<td>16&quot;</td>
<td>17-1/2 Ton, No. 4120</td>
<td>13/16&quot; x 1-9/32&quot;, 1&quot; x 20&quot; x 24814</td>
</tr>
<tr>
<td>1064</td>
<td>11-1/2&quot;</td>
<td>16&quot;</td>
<td>N/A</td>
<td>13/16&quot; x 1-9/32&quot;, No. 24814</td>
</tr>
<tr>
<td>1067</td>
<td>11-1/2&quot;</td>
<td>20&quot;</td>
<td>17-1/2 Ton, No. 4120</td>
<td>13/16&quot; x 1-9/32&quot;, No. 24814</td>
</tr>
<tr>
<td>1066</td>
<td>11-1/2&quot;</td>
<td>20&quot;</td>
<td>N/A</td>
<td>13/16&quot; x 1-9/32&quot;, No. 24814</td>
</tr>
<tr>
<td>1073</td>
<td>19-7/16&quot;</td>
<td>26&quot;</td>
<td>30-Ton, No. 4121</td>
<td>1-1/8&quot; x 1-5/8&quot;, No. 27198</td>
</tr>
<tr>
<td>1072</td>
<td>19-7/16&quot;</td>
<td>26&quot;</td>
<td>N/A</td>
<td>1-1/8&quot; x 1-5/8&quot;, No. 27198</td>
</tr>
<tr>
<td>1075</td>
<td>19-7/16&quot;</td>
<td>34&quot;</td>
<td>30-Ton, No. 4121</td>
<td>1-1/8&quot; x 1-5/8&quot;, No. 27198</td>
</tr>
<tr>
<td>1074</td>
<td>19-7/16&quot;</td>
<td>34&quot;</td>
<td>N/A</td>
<td>1-1/8&quot; x 1-5/8&quot;, No. 27198</td>
</tr>
<tr>
<td>1080</td>
<td>19-7/16&quot;</td>
<td>44&quot;</td>
<td>N/A</td>
<td>1-1/8&quot; x 1-5/8&quot;, No. 27198</td>
</tr>
</tbody>
</table>

Push-Pullers®

No. 927 – 10-Ton Capacity Can be used with No. 1123 bearing pulling attachment or No. 679 pulley pulling attachment. May also be used with Nos. 1150, 1151, 1152, or 1153 internal pulling attachments.

No. 938 – 17-1/2 Ton Capacity Can be used with Nos. 1124 and 1130 bearing pulling attachments or Nos. 679 and 680 pulley pulling attachments. May also be used with Nos. 1150, 1151, 1153, 1165, or 1166 internal pulling attachments.

No. 939 – 30-Ton Capacity Can be used with Nos. 1126 and 1127 bearing pulling attachments or No. 680 pulley pulling attachment (two 8012 adapters are required to connect 680 to puller). Can be used with No. 1165 internal pulling attachment.

---

<table>
<thead>
<tr>
<th>Tool No.</th>
<th>MAX. Reach</th>
<th>Spread &amp; Screw Size</th>
<th>Notes / Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>927</td>
<td>8-1/4&quot;</td>
<td>2-1/8&quot; – 7-1/4&quot;</td>
<td>3/4&quot;–16 x 12&quot;, 1/2&quot; of forcing screw tip end is threaded 5/8&quot;–18. No. 1100 legs and No. 24827 leg ends included. Wt., 7 lbs.</td>
</tr>
</tbody>
</table>

Extra Legs (pair) for No. 927 Push-Puller (Reach equals leg length plus 1-1/2" with leg end caps.)

<table>
<thead>
<tr>
<th>Tool No.</th>
<th>Leg Length &amp; Wt.</th>
<th>Tool No.</th>
<th>Leg Length &amp; Wt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1103</td>
<td>4-3/4&quot; 1 lb.</td>
<td>1102</td>
<td>11-3/4&quot; 3 lbs., 4 oz.</td>
</tr>
<tr>
<td>1100</td>
<td>6-3/4&quot; 1 lb., 8 oz.</td>
<td>1101</td>
<td>15-3/4&quot; 3 lbs., 4 oz.</td>
</tr>
<tr>
<td>938</td>
<td>11-1/2&quot; 3-1/8&quot;–11-3/4&quot; 1&quot;–14 x 13-1/4&quot;</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Extra Legs (pair) for No. 938 Push-Puller (Reach equals leg length plus 2" with leg end caps.)

<table>
<thead>
<tr>
<th>Tool No.</th>
<th>Leg Length &amp; Wt.</th>
<th>Tool No.</th>
<th>Leg Length &amp; Wt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1107</td>
<td>4-1/2&quot; 2 lbs., 8 oz.</td>
<td>1105</td>
<td>22-1/2&quot; 9 lbs.</td>
</tr>
<tr>
<td>1106</td>
<td>9-1/2&quot; 4 lbs., 8 oz.</td>
<td>1108</td>
<td>30&quot; 11-1/2 lbs.</td>
</tr>
<tr>
<td>1104</td>
<td>16-1/2&quot; 6 lbs., 8 oz.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>939</td>
<td>10-1/2&quot; 7&quot;–16-1/4&quot; 1-1/2&quot;–12 x 17-1/4&quot;</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Extra Legs (pair) for No. 939 Push-Puller (Reach equals leg length plus 2-5/8" with leg end caps.)

<table>
<thead>
<tr>
<th>Tool No.</th>
<th>Leg Length &amp; Wt.</th>
<th>Tool No.</th>
<th>Leg Length &amp; Wt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1109</td>
<td>8&quot; 8 lbs.</td>
<td>1111</td>
<td>28&quot; 22 lbs.</td>
</tr>
<tr>
<td>1110</td>
<td>18&quot; 15 lbs.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Hydraulic Push-Puller**

**No. 1062, 1063 – 17-1/2” Ton Capacity** Can be used with Nos. 1124 and 1130 bearing pulling attachments or No. 680 pulley pulling attachment. May also be used with No. 1154 internal pulling attachment. Ends of legs are threaded 5/8"–18. Usable reach: 11-5/8”.

<table>
<thead>
<tr>
<th>Tool No.</th>
<th>MAX. Reach</th>
<th>MAX. Spread</th>
<th>Screw Size</th>
<th>Notes / Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1063</td>
<td>18-1/2”</td>
<td>5-3/4”–11-3/4”</td>
<td>1-9/16 x 20”</td>
<td>Puller with No. 1104 legs, No. 24827 leg ends, No. 4120 hyd. ram, No. 32118 adjusting screw, and No. 24614 adjusting crank. 39 lbs.</td>
</tr>
<tr>
<td>1062</td>
<td>18-1/2”</td>
<td>5-3/4”–11-3/4”</td>
<td>1-1/8 x 20”</td>
<td>Puller only. 22 lbs.</td>
</tr>
</tbody>
</table>

**Extra Legs (pair) for No. 1062, 1063 (Reach equals leg length plus 2” with leg end caps.)**

<table>
<thead>
<tr>
<th>Tool No.</th>
<th>Leg Length &amp; Wt.</th>
<th>Tool No.</th>
<th>Leg Length &amp; Wt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1107</td>
<td>4-1/2” 2 lbs., 8 oz.</td>
<td>1105</td>
<td>22-1/2” 9 lbs.</td>
</tr>
<tr>
<td>1106</td>
<td>9-1/2” 4 lbs., 8 oz.</td>
<td>1108</td>
<td>30” 11-1/2 lbs.</td>
</tr>
<tr>
<td>1104</td>
<td>16-1/2” 6 lbs., 8 oz.</td>
<td></td>
<td>Note: 3/4”–14 thread on leg upper end.</td>
</tr>
</tbody>
</table>

**No. 1070, 1071 – 30-Ton Capacity** Can be used with Nos. 1126 and 1127 bearing pulling attachments or No. 680 pulley pulling attachment (two No. 8012 adapters are required to connect No. 680 to puller). Also may be used with No. 1166 internal pulling attachment. Ends of legs are threaded 1”–14. Usable reach: 12-1/8”.

<table>
<thead>
<tr>
<th>Tool No.</th>
<th>MAX. Reach</th>
<th>MAX. Spread</th>
<th>Screw Size</th>
<th>Notes / Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1071</td>
<td>20-1/2”</td>
<td>7”–16-1/4”</td>
<td>1-1/4”–7 x 24”</td>
<td>Puller with No. 1110 legs, No. 28390 leg ends, No. 4121 hyd. ram, No. 34758 adjusting screw, and No. 27198 adjusting crank. 90 lbs.</td>
</tr>
<tr>
<td>1070</td>
<td>20-1/2”</td>
<td>7”–16-1/4”</td>
<td>1-1/4”–7 x 24”</td>
<td>Puller only. 56 lbs.</td>
</tr>
</tbody>
</table>

**Extra Legs (pair) for No. 1070, 1071 (Reach equals leg length plus 2½” with leg end caps.)**

<table>
<thead>
<tr>
<th>Tool No.</th>
<th>Leg Length &amp; Wt.</th>
<th>Tool No.</th>
<th>Leg Length &amp; Wt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1109</td>
<td>13” 8 lbs.</td>
<td>1111</td>
<td>28” 22 lbs.</td>
</tr>
<tr>
<td>1110</td>
<td>18” 15 lbs.</td>
<td>Note: 1”–14 thread on both ends of legs</td>
<td></td>
</tr>
</tbody>
</table>

**No. 1076 – 50-Ton Capacity** Can be used with Nos. 1128 and 1129 bearing pulling attachments. Ends of legs are threaded 1-1/4”–12. Usable reach: 13-3/8”. See pages 211–212 to order threaded adapters for use with these pullers.

<table>
<thead>
<tr>
<th>Tool No.</th>
<th>MAX. Reach</th>
<th>MAX. Spread</th>
<th>Screw Size</th>
<th>Notes / Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1076</td>
<td>24”</td>
<td>8-1/2”–20-1/2”</td>
<td>1-5/8”–5-1/2” x 30-38”</td>
<td>Puller only. 106 lbs.</td>
</tr>
</tbody>
</table>

**Extra Legs (pair) for No. 1076 (Reach equals leg length.) Note: 1-1/4”–12 thd. on both leg ends.**

<table>
<thead>
<tr>
<th>Tool No.</th>
<th>Leg Length &amp; Wt.</th>
<th>Tool No.</th>
<th>Leg Length &amp; Wt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1112</td>
<td>24” 34 lbs.</td>
<td>1113</td>
<td>34” 47 lbs.</td>
</tr>
</tbody>
</table>

**Bearing Splitters**

**No. 1121-1130** These versatile accessories feature “knife-like” edges which are easily placed behind the part to secure a gripping surface, even when clearances are extremely limited. When used with an OTC Grip-O-Matic® puller, puller jaws grip attachment’s outer edge; when used with a Push-Puller, puller legs are threaded into the attachment’s two tapped holes.

<table>
<thead>
<tr>
<th>Tool No.</th>
<th>MAX. Spread</th>
<th>MIN. Spread</th>
<th>A</th>
<th>B</th>
<th>Weight</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>1121</td>
<td>15/16”</td>
<td>1/4”</td>
<td>15/16”–18</td>
<td>1-11/16”</td>
<td>12 oz.</td>
<td>Use with puller Nos. 1020, 1022, &amp; 1023.</td>
</tr>
<tr>
<td>1122</td>
<td>2”</td>
<td>1/8”</td>
<td>3/8”–16”</td>
<td>2-7/16”</td>
<td>1 lb., 4 oz.</td>
<td>Use with puller Nos. 1024, 1025, 1026, 1027, 7392, &amp; 7393.</td>
</tr>
<tr>
<td>1123</td>
<td>4-5/8”</td>
<td>1/2”</td>
<td>5/8”–18”</td>
<td>4-3/8”</td>
<td>5 lbs.</td>
<td>Use with puller Nos. 1035, 1036, 1037, 1038, &amp; 927.</td>
</tr>
<tr>
<td>1124</td>
<td>5-3/4”</td>
<td>1/2”</td>
<td>5/8”–18”</td>
<td>6”</td>
<td>12 lbs.</td>
<td>Use with puller Nos. 1035, 1040, 1041, 1042, 1065, 1063, &amp; 938.</td>
</tr>
<tr>
<td>1130</td>
<td>9”</td>
<td>1/2”</td>
<td>5/8”–18”</td>
<td>6”</td>
<td>12 lbs., 9 oz.</td>
<td>Use with puller Nos. 1035, 1040, 1041, 1042, 1065,1063, &amp; 938.</td>
</tr>
<tr>
<td>1126</td>
<td>8”</td>
<td>5/6”</td>
<td>1”–14”</td>
<td>7-1/8”</td>
<td>19 lbs., 12 oz.</td>
<td>Use with puller Nos. 1047, 1043, &amp; 939.</td>
</tr>
<tr>
<td>1128</td>
<td>12-7/8”</td>
<td>5”</td>
<td>1-3/4”–12</td>
<td>13”</td>
<td>100 lbs.</td>
<td>Use with puller Nos. 1073, 1079.</td>
</tr>
</tbody>
</table>

A = Thread of tapped hole in adapter. B = Distance between adjusting screws.
### Pulley Pulling Attachments

Attachment clamps down into V-groove to distribute load. Use with Grip-O-Matic® pullers or Push-Pullers.

<table>
<thead>
<tr>
<th>Tool No.</th>
<th>MAX. Spread</th>
<th>MIN. Spread</th>
<th>A</th>
<th>B</th>
<th>Weight</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>679</td>
<td>5-7/8&quot;</td>
<td>1-3/4&quot;</td>
<td>5/8&quot;–18</td>
<td>6&quot;</td>
<td>4 lbs., 4 oz.</td>
<td>Use with puller Nos. 1035, 1036, 1037, 1038, and 927.</td>
</tr>
</tbody>
</table>

### Internal Pulling Attachments

Approved by leading bearing manufacturers, OTC’s internal pulling attachments remove bearing cups, oil seals, bushings, and other parts from blind holes quickly and easily. Each attachment is designed for use with a corresponding Push-Puller or slide hammer assembly.

<table>
<thead>
<tr>
<th>Tool No.</th>
<th>JAW Spread</th>
<th>Reach</th>
<th>A</th>
<th>B</th>
<th>Weight</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>1153</td>
<td>1-1/2&quot;–5&quot;</td>
<td>2-1/8&quot;</td>
<td>1&quot;–14</td>
<td>5/8&quot;–18</td>
<td>4 lbs., 4 oz.</td>
<td>Use with Nos. 927 and 938 Push-Pullers, 1155 and 1156 slide hammer pullers, or 24832 and 24833 puller screw.</td>
</tr>
<tr>
<td>1150</td>
<td>1-1/2&quot;–6&quot;</td>
<td>4&quot;</td>
<td>1&quot;–14</td>
<td>5/8&quot;–18</td>
<td>4 lbs., 4 oz.</td>
<td>Use with Nos. 927 and 938 Push-Pullers, 1155 and 1156 slide hammer pullers, or 24832 and 24833 puller screw.</td>
</tr>
<tr>
<td>1152</td>
<td>1-1/2&quot;–6&quot;</td>
<td>4&quot;</td>
<td>–</td>
<td>5/8&quot;–18</td>
<td>3 lbs., 8 oz.</td>
<td>Use with Nos. 927 and 938 Push-Pullers, 1155 and 1156 slide hammer pullers, or 24832 and 24833 puller screw.</td>
</tr>
<tr>
<td>1165</td>
<td>3&quot;–9&quot;</td>
<td>5-7/8&quot;</td>
<td>1-1/2&quot;–12</td>
<td>1&quot;–14</td>
<td>13 lbs., 8 oz.</td>
<td>Use with No. 939 Push-Puller.</td>
</tr>
<tr>
<td>1154</td>
<td>1-1/2&quot;–9&quot;</td>
<td>4&quot;</td>
<td>1&quot;–8</td>
<td>5/8&quot;–18</td>
<td>4 lbs., 8 oz.</td>
<td>Use with No. 1063 hyd. Push-Puller.</td>
</tr>
<tr>
<td>1166</td>
<td>3&quot;–9&quot;</td>
<td>5-7/8&quot;</td>
<td>1-1/4&quot;–7</td>
<td>1&quot;–14</td>
<td>13 lbs., 8 oz.</td>
<td>Use with No. 1071 hyd. Push-Puller.</td>
</tr>
</tbody>
</table>

### Puller Screws

<table>
<thead>
<tr>
<th>Tool No.</th>
<th>Length</th>
<th>Weight</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>24832</td>
<td>13-3/4&quot; long</td>
<td>1 lb.</td>
<td>Use with Nos. 1150, 1151, 1152, and 1153. Acts as a regular forcing screw when threaded directly into the block of pulling attachment.</td>
</tr>
<tr>
<td>24833</td>
<td>5-1/2&quot; long</td>
<td>6 oz.</td>
<td>Use with Nos. 1150, 1152, and 1153. Acts as a regular forcing screw when threaded directly into the block of pulling attachment.</td>
</tr>
</tbody>
</table>

### Metric Adapter Sets*

No. 8110-8140 Add metric capability to your Push-Puller legs or forcing screws! Four different sets to choose from. A storage/organizer case is included with each set.

<table>
<thead>
<tr>
<th>Tool No.</th>
<th>Internal End</th>
<th>External End</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>8111</td>
<td>5/8&quot;–18</td>
<td>M6 x 1.0</td>
<td>2-1/4&quot;</td>
</tr>
<tr>
<td>8112</td>
<td>5/8&quot;–18</td>
<td>M6 x 1.0</td>
<td>2-1/4&quot;</td>
</tr>
<tr>
<td>8113</td>
<td>5/8&quot;–18</td>
<td>M6 x 1.25</td>
<td>2-1/4&quot;</td>
</tr>
<tr>
<td>8114</td>
<td>5/8&quot;–18</td>
<td>M10 x 1.25</td>
<td>2-1/4&quot;</td>
</tr>
<tr>
<td>8115</td>
<td>5/8&quot;–18</td>
<td>M10 x 1.5</td>
<td>2-1/4&quot;</td>
</tr>
<tr>
<td>8116</td>
<td>5/8&quot;–18</td>
<td>M12 x 1.25</td>
<td>2-1/4&quot;</td>
</tr>
<tr>
<td>8117</td>
<td>5/8&quot;–18</td>
<td>M12 x 1.75</td>
<td>2-1/4&quot;</td>
</tr>
<tr>
<td>8118</td>
<td>5/8&quot;–18</td>
<td>M14 x 1.5</td>
<td>2-1/4&quot;</td>
</tr>
<tr>
<td>8119</td>
<td>5/8&quot;–18</td>
<td>M14 x 2.0</td>
<td>2-1/4&quot;</td>
</tr>
<tr>
<td>8120</td>
<td>5/8&quot;–18</td>
<td>M16 x 1.5</td>
<td>2-3/4&quot;</td>
</tr>
<tr>
<td>8121</td>
<td>5/8&quot;–18</td>
<td>M16 x 2.0</td>
<td>2-3/4&quot;</td>
</tr>
<tr>
<td>8122</td>
<td>5/8&quot;–18</td>
<td>M20 x 1.5</td>
<td>2-3/4&quot;</td>
</tr>
<tr>
<td>8123</td>
<td>5/8&quot;–18</td>
<td>M20 x 2.5</td>
<td>2-3/4&quot;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tool No.</th>
<th>Std. End</th>
<th>Metric End</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>8131</td>
<td>5/8&quot;–18</td>
<td>M6 x 1.0</td>
<td>1-5/8&quot;</td>
</tr>
<tr>
<td>8132</td>
<td>5/8&quot;–18</td>
<td>M6 x 1.25</td>
<td>1-5/8&quot;</td>
</tr>
<tr>
<td>8133</td>
<td>5/8&quot;–18</td>
<td>M10 x 1.5</td>
<td>1-5/8&quot;</td>
</tr>
<tr>
<td>8134</td>
<td>5/8&quot;–18</td>
<td>M12 x 1.75</td>
<td>1-5/8&quot;</td>
</tr>
<tr>
<td>8135</td>
<td>5/8&quot;–18</td>
<td>M14 x 2.0</td>
<td>1-5/8&quot;</td>
</tr>
<tr>
<td>8136</td>
<td>5/8&quot;–18</td>
<td>M16 x 2.0</td>
<td>1-5/8&quot;</td>
</tr>
<tr>
<td>8137</td>
<td>5/8&quot;–18</td>
<td>M20 x 2.5</td>
<td>1-5/8&quot;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tool No.</th>
<th>Female End</th>
<th>Male End</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>8141</td>
<td>1&quot;–14</td>
<td>M16 x 1.5</td>
<td>3&quot;</td>
</tr>
<tr>
<td>8142</td>
<td>1&quot;–14</td>
<td>M16 x 2.0</td>
<td>3&quot;</td>
</tr>
<tr>
<td>8143</td>
<td>1&quot;–14</td>
<td>M18 x 1.5</td>
<td>3&quot;</td>
</tr>
<tr>
<td>8144</td>
<td>1&quot;–14</td>
<td>M20 x 1.5</td>
<td>3&quot;</td>
</tr>
<tr>
<td>8145</td>
<td>1&quot;–14</td>
<td>M20 x 2.5</td>
<td>3&quot;</td>
</tr>
<tr>
<td>8146</td>
<td>1&quot;–14</td>
<td>M22 x 1.5</td>
<td>3&quot;</td>
</tr>
</tbody>
</table>
External/Internal Threaded Adapters

For use on the ends of Push-Puller legs or forcing screws when pulling shafts, bearing caps, pinions, etc.

<table>
<thead>
<tr>
<th>Tool No.</th>
<th>Internal End</th>
<th>External End</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>206437</td>
<td>1/2&quot;-20</td>
<td>5/8&quot;-18</td>
<td>2-1/4&quot;</td>
</tr>
<tr>
<td>8007</td>
<td>5/8&quot;-18</td>
<td>1/4&quot;-20</td>
<td>2-1/4&quot;</td>
</tr>
<tr>
<td>8001</td>
<td>5/8&quot;-18</td>
<td>5/16&quot;-18</td>
<td>2-1/4&quot;</td>
</tr>
<tr>
<td>8002</td>
<td>5/8&quot;-18</td>
<td>7/16&quot;-14</td>
<td>2-1/4&quot;</td>
</tr>
<tr>
<td>8003</td>
<td>5/8&quot;-18</td>
<td>7/16&quot;-20</td>
<td>2-1/4&quot;</td>
</tr>
<tr>
<td>8004</td>
<td>5/8&quot;-18</td>
<td>3/8&quot;-24</td>
<td>2-1/4&quot;</td>
</tr>
<tr>
<td>8005</td>
<td>5/8&quot;-18</td>
<td>3/8&quot;-16</td>
<td>2-1/4&quot;</td>
</tr>
<tr>
<td>8006</td>
<td>5/8&quot;-18</td>
<td>1/2&quot;-20</td>
<td>2-1/4&quot;</td>
</tr>
<tr>
<td>8007</td>
<td>5/8&quot;-18</td>
<td>1/2&quot;-13</td>
<td>2-1/4&quot;</td>
</tr>
<tr>
<td>8008</td>
<td>5/8&quot;-18</td>
<td>9/16&quot;-18</td>
<td>2-1/4&quot;</td>
</tr>
<tr>
<td>8009</td>
<td>5/8&quot;-18</td>
<td>9/16&quot;-12</td>
<td>2-1/4&quot;</td>
</tr>
<tr>
<td>8010</td>
<td>5/8&quot;-18</td>
<td>5/8&quot;-11</td>
<td>2-1/4&quot;</td>
</tr>
<tr>
<td>8013</td>
<td>5/8&quot;-18</td>
<td>3/4&quot;-16</td>
<td>2-1/4&quot;</td>
</tr>
<tr>
<td>8015</td>
<td>5/8&quot;-18</td>
<td>3/4&quot;-10</td>
<td>2-1/4&quot;</td>
</tr>
<tr>
<td>8017</td>
<td>5/8&quot;-18</td>
<td>7/8&quot;-14</td>
<td>2-1/4&quot;</td>
</tr>
<tr>
<td>8018</td>
<td>5/8&quot;-18</td>
<td>7/8&quot;-9</td>
<td>2-1/4&quot;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tool No.</th>
<th>Internal End</th>
<th>External End</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>8019</td>
<td>5/8&quot;-18</td>
<td>1&quot;-14</td>
<td>2-1/4&quot;</td>
</tr>
<tr>
<td>8022</td>
<td>5/8&quot;-18</td>
<td>1/8&quot; pipe</td>
<td>2-1/4&quot;</td>
</tr>
<tr>
<td>8012</td>
<td>1&quot;-14</td>
<td>5/8&quot;-8</td>
<td>3-3/16</td>
</tr>
<tr>
<td>8011</td>
<td>1&quot;-14</td>
<td>5/8&quot;-11</td>
<td>2-1/2&quot;</td>
</tr>
<tr>
<td>8014</td>
<td>1&quot;-14</td>
<td>3/4&quot;-16</td>
<td>2-1/2&quot;</td>
</tr>
<tr>
<td>8016</td>
<td>1&quot;-14</td>
<td>3/4&quot;-10</td>
<td>2-1/2&quot;</td>
</tr>
<tr>
<td>8020</td>
<td>1&quot;-8</td>
<td>5/8&quot;-16</td>
<td>3&quot;</td>
</tr>
<tr>
<td>8021</td>
<td>1&quot;-8</td>
<td>1&quot;-14</td>
<td>3&quot;</td>
</tr>
<tr>
<td>8023</td>
<td>1-1/4&quot;-12</td>
<td>1&quot;-14</td>
<td>4-1/2&quot;</td>
</tr>
<tr>
<td>8024</td>
<td>1-1/4&quot;-12</td>
<td>1-3/4&quot;-12</td>
<td>4-3/4&quot;</td>
</tr>
<tr>
<td>8025</td>
<td>1-1/4&quot;-7</td>
<td>5/8&quot;-18</td>
<td>4&quot;</td>
</tr>
<tr>
<td>8027</td>
<td>1-1/4&quot;-7</td>
<td>1&quot;-14</td>
<td>4&quot;</td>
</tr>
<tr>
<td>8029</td>
<td>1-5/8&quot;-5/8a</td>
<td>1&quot;-14</td>
<td>4&quot;</td>
</tr>
<tr>
<td>8028</td>
<td>1-5/8&quot;-5/8a</td>
<td>1&quot;-8</td>
<td>4&quot;</td>
</tr>
<tr>
<td>8030</td>
<td>3/4&quot;-16</td>
<td>5/8&quot;-18</td>
<td>2-1/4&quot;</td>
</tr>
</tbody>
</table>

Internal Threaded Adapter Set

For use on the ends of Push-Puller legs or forcing screws to aid in the removal and installation of shafts, axles, and housings.

No. 8044 – Internal adapters. Wt., 3 lbs.

<table>
<thead>
<tr>
<th>Tool No.</th>
<th>Internal End “A”</th>
<th>Internal End “B”</th>
</tr>
</thead>
<tbody>
<tr>
<td>8035*</td>
<td>1/2&quot;-20</td>
<td>5/8&quot;-18</td>
</tr>
<tr>
<td>8036*</td>
<td>1&quot;-14</td>
<td>1&quot;-14</td>
</tr>
<tr>
<td>8037</td>
<td>5/8&quot;-18</td>
<td>5/8&quot;-18</td>
</tr>
<tr>
<td>8038</td>
<td>5/8&quot;-18</td>
<td>3/4&quot;-16</td>
</tr>
<tr>
<td>8039</td>
<td>5/8&quot;-18</td>
<td>7/8&quot;-14</td>
</tr>
</tbody>
</table>

Step Plate Adapter Sets

Necessary for pulling and installing bearings, gears, or other parts found on hollow shafts or housings. They may be used with Grip-O-Matic® pullers and Push-Pullers®, as well as shop presses. All adapters are available separately.


<table>
<thead>
<tr>
<th>Tool No.</th>
<th>Set No.</th>
<th>Tool No.</th>
<th>Set No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>8057</td>
<td>8074</td>
<td>8058</td>
<td>8075</td>
</tr>
<tr>
<td>8059</td>
<td>8074</td>
<td>8060</td>
<td>8075</td>
</tr>
<tr>
<td>8061</td>
<td>8074</td>
<td>8062</td>
<td>8075</td>
</tr>
<tr>
<td>8063</td>
<td>8074</td>
<td>8064</td>
<td>8075</td>
</tr>
<tr>
<td>8065</td>
<td>8074</td>
<td>8066</td>
<td>8075</td>
</tr>
<tr>
<td>8067</td>
<td>8075</td>
<td>8068</td>
<td>8075</td>
</tr>
<tr>
<td>8069</td>
<td>8075</td>
<td>8070</td>
<td>8075</td>
</tr>
<tr>
<td>8071</td>
<td>8075</td>
<td>8072</td>
<td>8075</td>
</tr>
<tr>
<td>8073</td>
<td>8075</td>
<td>8074</td>
<td>8076</td>
</tr>
</tbody>
</table>

Shaft Protector Set

Designed to protect shaft centers from distortion when extreme pressures are applied with either Grip-O-Matic® pullers or Push-Pullers. Shaft protectors are available separately.

No. 8056 – Shaft protectors. Wt., 1 lb., 2 oz.
Reversible-Jaw Slide Hammer Pullers

Here are two extremely versatile pullers, which will accomplish many pulling jobs involving gears, bearings, outer races, grease retainers, oil seals, etc. Either two or three puller jaws may be used to handle "inside" pulling jobs such as bearing cups and outer races, as well as regular "outside" pulling jobs. The basic slide hammer unit can be removed and used independently. The No. 1177 slide hammer puller has a 5 lb. hammer, and the No. 1176 has a 2-1/2 lb. hammer.

No. 1176 – Puller with 2-1/2 lb. hammer, 2-way and 3-way head, 27" long. Wt., 8 lbs.
No. 1177 – Same as 1176, except has a 5 lb. hammer. Wt., 10 lbs., 8 oz.

Slide Hammer Pullers with Cup Pulling Attachments

These pullers combine a basic slide hammer unit with a No. 1152 internal pulling attachment (described on page 211). Ideal for removing bearing cups, outer races, and oil seals from blind holes. Upon removal of the internal pulling attachment, the basic slide hammer unit, which has a 5/8"–18 threaded end, may be used with various adapters for a multitude of pulling jobs.

No. 1157 – Slide hammer puller, consisting of an 1152 internal pulling attachment and an 1156 basic slide hammer unit with a 2-1/2 lb. hammer. Wt., 9 lbs., 12 oz.
No. 1158 – Slide hammer puller (not shown), consisting of an 1152 internal pulling attachment and an 1155 basic slide hammer unit with a 5 lb. hammer. Wt., 12 lbs., 4 oz.

Basic Slide Hammer Units

May be used with an OTC internal pulling attachment (page 211), or with internal or external-internal threaded adapters (page 212).

No. 1155 – Basic slide hammer unit is 24" long with a 5 lb. hammer and a 5/8"–18 threaded end. Wt., 7 lbs., 4 oz.
No. 1156 – Basic slide hammer unit is 24" long with a 2-1/2 lb. hammer and a 5/8"–18 threaded end. Wt., 4 lbs., 12 oz. (not shown)
No. 6501 – Basic slide hammer unit is 17" long with a 1-3/4 lb. hammer and a 1/2-20 threaded end. Wt., 3 lbs.

Pilot Bearing Pullers

These very versatile pullers are built specially for inside pulling jobs, and particularly for removing flywheel pilot bearings on automobiles, trucks, and tractors. Also very practical for pulling motor, generator, and magneto bearings.

<table>
<thead>
<tr>
<th>Tool No.</th>
<th>Reach</th>
<th>I.D. Spread Min.</th>
<th>Overall Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>1170</td>
<td>3/4&quot;</td>
<td>1/2&quot;</td>
<td>27&quot;</td>
</tr>
<tr>
<td>1171</td>
<td>1&quot;</td>
<td>7/8&quot;</td>
<td>28&quot;</td>
</tr>
<tr>
<td>1172</td>
<td>1-3/4&quot;</td>
<td>1/2&quot;</td>
<td>28&quot;</td>
</tr>
</tbody>
</table>

Special Slide Hammer Puller

Ideal for pulling jobs in very close quarters, as in removal of small-bore bushings, bearings, oil seals, etc. Internal pulling attachment has a jaw spread of 1/2" to 1-3/8", adjusted by turning the slide hammer handle. Handle end has a 1/2"–20 thread.

No. 1173 – Slide hammer puller with head assembly. Wt., 3 lbs., 8 oz.
No. 1174 – Head assembly only. Wt., 10 oz.

Slide Hammer Puller

Just 8-1/2" long to fit into tight spots, but its 1-1/2 pound hammer gives you a little extra muscle for stubborn jobs. It’s perfect for pulling injector nozzles. The shank is threaded 1/2"–20 and has a 5/8"–18 threaded adapter included. Works with many OTC pulling attachments.

No. 5028 – Slide hammer puller. Wt., 2 lbs.
Grip Wrench Adapters & Bearing Pullers

**Grip Wrench Adapters**
For grip wrenches using single- or double-lead thread adjusting screw. Adapter threads onto a slide hammer with a 5/8”–18 thread. Grip wrench threads onto a 7/16”–14 end of adapter for pulling use.

- **No. 205378** – Grip wrench adapter with single lead thread. Wt., 4 oz.
- **No. 218875** – Grip wrench adapter with double lead thread. Wt., 4 oz.

**Differential Bearing Pullers**
For removing differential side carrier bearings on a wide variety of passenger cars and light trucks. Use with step plate adapter Nos. 8060, 8061, 8063, and 8064. (Step plate adapters are not included with 1028 or 1031. See page 212.)

- **No. 1028** – Puller with a 3-1/2” maximum reach, 1-1/4” to 4-1/2” spread. Primarily for servicing Ford products. Wt., 1 lb., 13 oz.
- **No. 1031** – Puller with a 3-1/4” maximum reach, 6” maximum spread. For servicing most General Motors, American Motors, and Chrysler products. Wt., 2 lbs.

**OTC “GripLock” Pullers**
Manufactured to our rigorous specifications to ensure the quality professionals expect from OTC

- Pressure bearing yoke cap holds jaws in place for ease of setup - in any orientation.
- 2 or 3 Jaw application.
- Both External and Internal Pulling Action.
- “Live Center” action forcing screw.
- Professional finished for long lasting durability...

- **No. 464** – Puller with a 4” maximum reach, 3” to 4” spread. Wt., 3 lb., 4 oz.
- **No. 465** – Puller with a 7” maximum reach, 3” to 7” spread. Wt., 7 lb., 13 oz.

**Differential Side Bearing Pullers**
- Use to remove differential side carrier bearing. Works on a wide variety of cars and light-duty trucks.
- Includes four step plate adapters to fit carrier bearings.
- Reach: 1-5/8”. Spread: 2-5/8” to 3-3/8”. Forcing screw is 3/4”-16 mm x 6-11/16” lg.

Set includes:
- **Part No.** 4520-1 Forcing Screw / Cross Block Assembly
- **Part No.** 4520-2 Puller Jaws / Pins (set of two each)
- **Part No.** 4520-3 Puller Jaws Retaining Yoke
- **Part No.** 4520-4 Step Plate Adapters (set of four)

Diff. 1/16” – 1-11/32” diameter 1-1/8” – 1-1/2” diameter 1-1/4” – 1-5/8” diameter 1-1/8” – 1-3/4” diameter

- **No. 4520** – Differential side bearing puller. Wt., 4 lbs., 10 oz.

---

**Ten-Pound Slide Hammer Puller**
This heavy-duty slide hammer puller gets tough with those really stuck parts. It has all the features of our smaller versions – heat treated, 24” long, and a 5/8”–18 threaded end to adapt to any of OTC’s pulling attachments. The difference is the ten-pound hammer that gives you the extra muscle for really stubborn pulling jobs.

- **No. 7703** – Ten-pound slide hammer puller. Wt., 12 lbs., 5 oz.

**Sliding Hammers**
- **No. 22185** – 2-1/2 lb. sliding hammer.
- **No. 34331** – 5 lb. sliding hammer.

**Grip Wrench Adapters**
For grip wrenches using single- or double-lead thread adjusting screw. Adapter threads onto a slide hammer with a 5/8”–18 thread. Grip wrench threads onto a 7/16”–14 end of adapter for pulling use.

- **No. 205378** – Grip wrench adapter with single lead thread. Wt., 4 oz.
- **No. 218875** – Grip wrench adapter with double lead thread. Wt., 4 oz.
**Multipurpose Puller Set**

This assortment of puller tools gives you a wide range of job versatility. You get a 5 lb. slide hammer puller, hub puller, two sizes of OTC Grip-O-Matic® jaw-type pullers, a bearing pulling attachment, plus a cross-bar gear and pulley puller, all contained in a handy plastic storage case.

**No. 1181 – Multi-purpose puller set. Wt., 25 lbs.**

<table>
<thead>
<tr>
<th>Set No. 1181 consists of:</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 1177</td>
</tr>
<tr>
<td>7208A</td>
</tr>
<tr>
<td>1023</td>
</tr>
<tr>
<td>1027</td>
</tr>
<tr>
<td>7393</td>
</tr>
<tr>
<td>1122</td>
</tr>
</tbody>
</table>

**Cone-type Puller**

Reversible jaws permit handling of both internal and external pulling jobs. The 2-way/3-way head permits assembly of puller to suit the job at hand. Turning the cone on the puller head securely locks its jaws on the part to be removed.

**Pulser reach:** 2-7/8"  
**2-jaw spread:**  
- Inside: 1-1/2" to 4-1/2"  
- Outside: 3/4" to 5"  
**3-jaw spread:**  
- Inside: 1-1/2" to 4-3/4"  
- Outside: 1" to 4-1/2"  

**No. 1184 – Cone-type puller. Wt., 2 lbs., 6 oz.**

**Bearing Cup Remover**

Ideal for servicing hubs on today’s popular front-wheel-drive small cars. The cone holds the jaws in place during pulling. No. 7136 is perfect for pulling internal bearing cups, seals, bushings, etc. Jaw spread: 15/16" to 3-1/4", reach to 3-1/2". Use with any slide hammer having a 5/8"–18 thread (OTC No. 1155 or No. 1156 or the No. 927 Push-Puller).

**No. 6542 – Universal bearing cup remover. Wt., 1 lb., 8 oz.**

**Pilot Bearing Pullers**

Designed to pull flywheel pilot bearings in close quarters where a slide hammer cannot be used. Operates on many models with engine in chassis.

**No. 7318 – Pilot bearing puller. Capacity: 1/2" to 1-1/2". I.D. reach: 3/4". Wt., 3 lbs., 7 oz.**  
**No. 7319 – Pilot bearing puller. Capacity: 7/8" to 2". I.D. reach: 1". Wt., 3 lbs., 8 oz.**

**“Silver Slapper” 8-Way Slide Hammer Puller Set**

You can pull flange-type rear axles, stubborn oil seals and bearings, and other press-fit parts. Jaws can be set up for 2/3-way internal or external pulling jobs.

**No. 1179 – 8-way slide hammer puller set with a 5 lb. hammer and attachments. Wt., 12 lbs.**

<table>
<thead>
<tr>
<th>Set No. 1179 consists of:</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 1155</td>
</tr>
<tr>
<td>7372</td>
</tr>
<tr>
<td>24544</td>
</tr>
<tr>
<td>24545</td>
</tr>
<tr>
<td>27241</td>
</tr>
<tr>
<td>27315</td>
</tr>
<tr>
<td>34698</td>
</tr>
<tr>
<td>205378</td>
</tr>
<tr>
<td>205377</td>
</tr>
</tbody>
</table>
Rear Axle Puller Set
The tools you need for flange-type rear axle and bearing removal on most late model passenger cars and light trucks. Set includes the No. 7374 rear axle pulling plate and a 5 lb. slide hammer. The axle bearing pullers, used with the slide hammer, make short work of removing semi-floating rear axle bearings.

No. 7792 – Rear axle puller set. Wt., 11 lbs., 4 oz.

Set No. 7792 consists of:

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>7374</td>
<td>Rear axle pulling plate with a 5 lb. slide hammer.</td>
</tr>
<tr>
<td>7495</td>
<td>Rear axle bearing puller. Fits a min. bearing tube I.D. of 1&quot; and a max. axle tube I.D. of 1-7/8&quot;.</td>
</tr>
<tr>
<td>7496</td>
<td>Rear axle bearing puller. Fits min. bearing tube I.D. of 5/16&quot; and max. axle tube I.D. of 2-3/8&quot;.</td>
</tr>
<tr>
<td>7497</td>
<td>Rear axle bearing puller. Fits min. bearing tube I.D. of 1-3/8&quot; and max. axle tube I.D. of 2-7/8&quot;.</td>
</tr>
<tr>
<td>27315</td>
<td>Puller hook for use with 5 lb. slide hammer in set. Removes oil seals, bearings, etc.</td>
</tr>
</tbody>
</table>

9-Way Slide Hammer Puller Set
Pulls flange type rear axles and most front wheel drive hubs.
• Internal and external jaws provide a variety of combinations to pull bearings, gears and seals.
• Two and three way cross blocks and cone provide the perfect jaw configuration for most jobs.
• Set also includes a grip wrench adapter and a dent puller attachment for sheet metal or other unique pulling requirements.

No. 4579 – 9-Way Slide Hammer Set.

8-Way and 10-Way Slide Hammer Puller Sets
Our two most popular slide hammer puller sets—the Silver Slapper and the Silver Slapper Plus—now come packaged in a convenient plastic, blow-molded carrying/storage case. They’re the same great sets with the same versatile pullers and attachments, now made even better with the addition of an organizer case. Or, if you already own either our No. 1179 or No. 1189 puller sets, we offer the plastic case separately. The case will hold either set.

No. 7947 – Eight-way slide hammer puller set. Same contents as No. 1179 Silver Slapper set, but includes plastic carrying/storage case. Wt., 19 lbs.

No. 7948 – Ten-way slide hammer puller set. Same contents as No. 1189 Silver Slapper Plus set, but includes plastic carrying / storage case. Wt., 25 lbs.

No. 63106 – Puller storage case. Blow-molded plastic. Wt., 7 lbs.

Slide Hammer Puller Set
This useful set contains OTC’s popular No. 1176 reversible-jaw slide hammer puller, plus an assortment of special jaws and adapters. You get all the versatility of the No. 1176 (described fully on page 213), plus attachments for pulling various size pilot bearings, oil seals, bushings, timing gears, harmonic balancers, and other tightly fitted parts!

No. 1178 – Slide hammer puller set. Wt., 10 lbs., 3 oz.

No. 1178 set consists of:

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1176</td>
<td>Reversible-jaw slide hammer puller with 2-1/2 lb. hammer</td>
</tr>
<tr>
<td>44195</td>
<td>Medium jaw (3 incl.)</td>
</tr>
<tr>
<td>32054</td>
<td>Pilot bearing jaw (3 incl.)</td>
</tr>
<tr>
<td>44148</td>
<td>Long jaw (3 incl.)</td>
</tr>
<tr>
<td>27315</td>
<td>Puller hook. Removes oil seals, bearings, etc.</td>
</tr>
<tr>
<td>27241</td>
<td>2-way cross head</td>
</tr>
</tbody>
</table>
Blind Hole Puller Set
This set provides a complete selection of expanding collets ranging in size from 5/16" to 1-3/4". Collet is placed through bore of part to be removed, then expanded with actuator pin so that lips of collet secure a positive grip for pulling. Force is exerted by means of a forcing screw and a bridge assembly or a slide hammer. Individual pieces can be ordered separately.

No. 981 – Blind hole puller set. Wt., 21 lbs.

Set No. 981 consists of:

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>No.</th>
<th>Description</th>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>24835</td>
<td>Forcing screw</td>
<td>28253</td>
<td>Actuator pin, 3/16&quot; dia., for use w/collets 33858-33862</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24836</td>
<td>Forcing screw nut</td>
<td>28256</td>
<td>Actuator pin, 1/2&quot; dia., for use with collets 33863-33865</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22185</td>
<td>2-1/2 lb. hammer</td>
<td>28323</td>
<td>Metal box (not shown)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>208627</td>
<td>Shank and tee bar assembly</td>
<td>33856</td>
<td>Collet 5/16&quot; to 3/8&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28250</td>
<td>Actuator pin, 1/8&quot; dia., for use with collets 33856 &amp; 33857</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Blind Hole Bearing Puller Set
- For pulling jobs requiring an internal pull.
- Set includes four collets, which fit a wide range of applications. Select the appropriate sized collet by comparing it with the application. Insert the collet, expand it to fit the hole, then attach the slide hammer.
- Four collet sizes: 7/16" to 1/2", 9/16" to 11/16", 5/8" to 1", and 1" to 1-1/4".
- Set includes a 2-1/2 lb. slide hammer with a T-handle.
- Housed in a blow-molded plastic storage case.

No. 4581 – Blind hole bearing puller set. Wt., 7 lbs., 2 oz.

A/C Clutch Pulley Puller Set
- For removal of stubborn air conditioning clutch pulleys. Also can be used on many alternator, generator, power steering, and crankshaft pulleys, harmonic balancers, and fiber timing gears.
- Set includes drop-forged components: one 3/4"-16 x 5" live center forcing screw, 5-1/2" crossbar with 3 spread settings, two pairs of jaws, and a clamp bolt.
- Spread: 3" to 5"; Reach: 1" to 5".
- Includes a blow-molded plastic case.

No. 4536 – A/C clutch pulley puller set. Wt., 4 lbs., 11 oz.

Multipurpose Bearing and Pulley Puller Set
- For a wide range of pulling jobs, including: bearings, alternators, generators, power steering and crankshaft pulleys, timing gears, and harmonic balancers.
- Set includes drop-forged components, which can be used in a variety of combinations.

Contents of Set:
- 2 – Forcing Screws (live center): 3/4"-16 x 6-11/16" & 3/4"-16 x 5"
- 2 – Cross-bar Yokes: 3 pin-hole @ 3-1/4" to 5-1/2", 2 pin-hole @ 2-3/8" to 3-3/8"
- 2 – Clamp Bolts
- 1 – Pair of Jaw Pins with Ball Spring
- 3 – Pairs of Capped Bolts
- Spread: 3" to 5", Reach: 1" to 2-1/4"
- Housed in a blow-molded plastic storage case.

No. 4534 – Multipurpose bearing and pulley puller set. Wt., 8 lbs., 2 oz.
**Lock-on, Jaw-type Puller Set**
Components can be assembled to create several versatile puller versions for both internal and external pulling tasks. The puller head is turned to securely lock the jaws onto the part being removed. Both a 2-way and 3-way puller head are included, plus three long-reach and three short-reach puller jaws. Plastic storage box included. Easily removes gears, bearings, timing gears, harmonic balancers, and other press-fitted parts.


---

**10-Ton Capacity Push-Puller Set**
Contains three popular OTC bar-type pullers in one versatile set, packed in a handy plastic storage case. Tools included permit damage-free pulling of gears, bearings, harmonic balancers, and other parts having tapped holes. Ideal for servicing heavy-duty trucks, off-road construction equipment, and machinery.


**Set No. 1180 consists of:**

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>927</td>
<td>10-ton Push-Puller, 8-3/8&quot; reach, 2-1/8&quot; to 7-1/4&quot; spread. 6-3/4&quot; puller legs. Other leg sizes are available separately. (See pages 209–210.)</td>
</tr>
<tr>
<td>522</td>
<td>Gear and pulley puller; spread range when used with 1/2&quot; cap screws: 2&quot; to 7-3/4&quot;. Cap screws not included.</td>
</tr>
<tr>
<td>7393</td>
<td>Gear and pulley puller with standard 5-1/2&quot; forcing screw, plus special 13&quot; forcing screw. Includes two hex head cap screws, 3/8&quot;–16 x 3&quot; long. Special range: 1-1/2&quot; to 4-1/4&quot;.</td>
</tr>
</tbody>
</table>

---

**Bearing Splitter Combo Set**
This combo pack contains four of OTC’s most popular bearing splitters, plus a pulley pulling attachment. A rugged organizer case is included, enabling you to keep the tools together for instant use.

Set No. 1183 consists of:

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1121</td>
<td>Bearing splitter. Has 15/16&quot; max. spread and 1/4&quot; min. spread.</td>
</tr>
<tr>
<td>1122</td>
<td>Bearing splitter. Has 2&quot; max. spread and 1/8&quot; min. spread.</td>
</tr>
<tr>
<td>1123</td>
<td>Bearing splitter. Has 4-5/8&quot; max. spread and 1/2&quot; min. spread.</td>
</tr>
<tr>
<td>1130</td>
<td>Bearing splitter. Has 9&quot; max. spread and 1/2&quot; min. spread.</td>
</tr>
<tr>
<td>679</td>
<td>Pulley pulling attachment with a 5-7/8&quot; max. and 1-3/4&quot; min. spread</td>
</tr>
</tbody>
</table>

No. 1183 – Bearing splitter combo set. Wt., 30 lbs., 5 oz.
No. 62885 – Organizer case only (for 1183). Wt. 5 lbs., 5 oz.

---

**5-Ton Bar-type Puller/Bearing Separator Set**
- This combination set includes our two most popular bearing “splitters” (2” and 3”), four sets of hex push-puller legs, and a bar-type puller head with a 9/16" forcing screw. Separator tools are used with bar puller and legs for a wide variety of pulling jobs.
- The 5" puller cross-bar with a 6-1/4" forcing screw and each of the bearing separators may be used separately or in combination with other pullers or tools.
- A blow-molded plastic storage case keeps set contents organized and protected from loss.

No. 4518 – Bearing separator/bar-type puller set. Wt., 10 lbs., 8 oz.
Flange-Type Puller Combination
Two specialty pullers in one box. You get a flange-type puller for removal of harmonic balancers, timing gears, and other parts with two or three tapped holes. You also get a steering wheel, pulley, and flywheel puller.

No. 525 – Flange-type puller combination. Includes flange-type puller and steering wheel puller with four sets of cap screws. Wt., 5 lbs., 8 oz.

Flange-Type Puller
Heavy-duty flange puller features a live center forcing screw. Includes two live center forcing screw tips and two sets of commonly used automotive bolts. Puller will work on bolt circles from 1-1/2" to 4-1/4". Three cap screws, 3/8-24 x 3" long, and three cap screws, 3/8-16 x 3" long.

No. 6930 – Flange-type puller. Wt., 3 lbs., 4 oz.

7-Ton Capacity Four-In-One™ Puller Set
With the parts included in the PA7, you can quickly assemble a 2/3-jaw puller with standard or long reach. 7-ton capacity, the max. reach of 8-3/4", and max. spread of 11" make it ideal for hundreds of pulling jobs.


Flange-Type Puller Set
Covers almost every car, pick-up, SUV, and small engine. Capable of handling almost every two- or three-way bolt pull possible. For use on a variety of jobs: harmonic balancers, steering wheels, crankshaft pulleys, and gears. Storage tray and detailed application chart included. Slotted holes in puller flange permit cap screws to be positioned to handle bolt circles from 1-1/2" to 4-1/4".

Includes three each of the following washer head bolts (Grade 8):
- M8 x 1.25 x 90 mm
- 1/4-28 UNF x 3"
- 5/16-24 UNF x 3"
- 3/8-24 UNF x 1.5"
- Special Stepped Bolts – 1990 & newer GM 3300–3800 V-6 crankshaft pulleys

No. 6294 – Flange-type puller set. Wt., 7 lbs., 4 oz.
17-1/2 Ton Capacity Puller Set

This puller set gives you the versatility you want and the tonnage capacity you need to tackle parts removal and installation on many models of cars, trucks, tractors, power shovels, road building machinery, etc. Maintenance operations involving the removal and replacement of gears, bearings, wheels, and other press-fit parts can be done with ease.

No. 1677 – 17-1/2 ton capacity puller set. Wt., 65 lbs.
No. 1621 – Board (3' x 4') for storing No. 1677 set (not included with set). Wt., 37 lbs.

<table>
<thead>
<tr>
<th>No. 1677</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>938</td>
<td>Push-Puller w/ 9-1/2&quot; legs</td>
</tr>
<tr>
<td>1104</td>
<td>16-1/2&quot; legs for 938 (pr.)</td>
</tr>
<tr>
<td>1024</td>
<td>2-jaw puller</td>
</tr>
<tr>
<td>1036</td>
<td>2-jaw puller</td>
</tr>
<tr>
<td>1039</td>
<td>2-jaw puller</td>
</tr>
<tr>
<td>1130</td>
<td>Bearing splitter</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No. Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>927 Push-Puller w/ 6-3/4&quot; legs</td>
</tr>
<tr>
<td>1101 16-1/2&quot; legs for 927 (pr.)</td>
</tr>
<tr>
<td>1024 2-jaw puller</td>
</tr>
<tr>
<td>1036 2-jaw puller</td>
</tr>
<tr>
<td>1039 2-jaw puller</td>
</tr>
<tr>
<td>1039 2-jaw puller</td>
</tr>
<tr>
<td>1130 Bearing splitter</td>
</tr>
</tbody>
</table>

13-Ton Capacity Puller Set

This versatile 13-ton capacity puller set removes gears, bearings, shafts, pinions, bearing outer races, and other tightly fitted parts. The set includes a Push-Puller, Grip-O-Matic® pullers, bearing pulling attachments, specialized pullers, and many accessories. You can work on all makes and models of cars and light trucks with this set.

No. 1675 – 13-ton capacity puller set. Wt., 74 lbs.
No. 1620 – Board (3' x 4') for storing No. 1675 set (not included with set). Wt., 40 lbs.

<table>
<thead>
<tr>
<th>No. 1675</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>927</td>
<td>Push-Puller w/ 6-3/4&quot; legs</td>
</tr>
<tr>
<td>1101</td>
<td>15-3/4&quot; legs for 927 (pr.)</td>
</tr>
<tr>
<td>1022</td>
<td>2-jaw puller</td>
</tr>
<tr>
<td>1024</td>
<td>2-jaw puller</td>
</tr>
<tr>
<td>1035</td>
<td>2-jaw puller</td>
</tr>
<tr>
<td>1039</td>
<td>2-jaw puller</td>
</tr>
<tr>
<td>7392</td>
<td>Gear and pulley puller</td>
</tr>
<tr>
<td>7403</td>
<td>Steering wheel puller</td>
</tr>
<tr>
<td>1170</td>
<td>Pilot bearing puller</td>
</tr>
<tr>
<td>1177</td>
<td>Slide hammer puller</td>
</tr>
<tr>
<td>7311A</td>
<td>Pitman arm puller</td>
</tr>
<tr>
<td>1112</td>
<td>Bearing splitter</td>
</tr>
<tr>
<td>1113</td>
<td>Bearing splitter</td>
</tr>
<tr>
<td>1114</td>
<td>Bearing cup pulling attach.</td>
</tr>
<tr>
<td>1115</td>
<td>Bearing splitter</td>
</tr>
<tr>
<td>1116</td>
<td>Bearing splitter</td>
</tr>
</tbody>
</table>

Strong Box Puller Set

Here's a set of pullers that gives you almost unheard of versatility. You get eight pullers, five attachments, and extra puller jaws. They enable you to pull gears, bearings, pulleys, wheels, and more on cars and light trucks. All these tools are contained in a rugged, lockable metal storage cabinet you can either mount on a wall or stand on a work bench, so they are handy when you need them. Just imagine the jobs you can do with this set!

No. 1676 – Strong box puller set. Wt., 85 lbs.
No. 18886 – Storage box only. 29-1/2" wide x 25-3/4" high x 10" deep. Wt., 47 lbs.
Hydraulic Puller Sets

17-1/2, 30-, and 50-Ton Capacity – Individual items in the sets are fully described elsewhere in this catalog... consult index.

No. 1688 – 17-1/2 ton capacity hydraulic puller set. Wt., 139 lbs.
No. 1690 – 50-ton capacity hydraulic puller set. Wt., 576 lbs.

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Set 1688</th>
<th>Set 1689</th>
<th>Set 1690</th>
</tr>
</thead>
<tbody>
<tr>
<td>4002</td>
<td>Single stage hydraulic hand pump assy.</td>
<td>●</td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>4120</td>
<td>17-1/2 ton ram with threaded insert</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4121</td>
<td>30-ton ram with threaded insert</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4122</td>
<td>50-ton ram with threaded insert</td>
<td></td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>24815</td>
<td>Tee adapter</td>
<td>●</td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>9650</td>
<td>Pressure gauge</td>
<td>●</td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>9767</td>
<td>Hydraulic hose – 6 foot</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>9798</td>
<td>Hose half coupler with dust cap</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>1062</td>
<td>17-1/2 ton Push-Puller with 16-1/2&quot; legs</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1066</td>
<td>17-1/2 ton 3-jaw hydraulic puller</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1070</td>
<td>30-ton hydraulic Push-Puller with 18&quot; legs</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1074</td>
<td>30-ton 3-jaw hydraulic puller</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1076</td>
<td>50-ton hydraulic Push-Puller with 24&quot; legs</td>
<td>○</td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>1080</td>
<td>50-ton 3-jaw hydraulic puller</td>
<td>○</td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>1105</td>
<td>Puller leg – 22-1/2&quot;</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1111</td>
<td>28&quot; legs for No. 1070</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1113</td>
<td>34&quot; legs for No. 1076</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1127</td>
<td>Bearing pulling attachment</td>
<td>●</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>1130</td>
<td>Bearing pulling attachment</td>
<td>●</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>1154</td>
<td>Bearing cup pulling attachment</td>
<td>●</td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>1166</td>
<td>Bearing cup pulling attachment</td>
<td>●</td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>201454</td>
<td>Pushing adapter</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24814</td>
<td>Speed crank</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27198</td>
<td>Speed crank</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28228</td>
<td>Pushing adapter</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28229</td>
<td>Ram cap</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28230</td>
<td>Ram cap for No. 1076</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>29595</td>
<td>Speed crank</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32118</td>
<td>Ram adjusting screw</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32698</td>
<td>Adjusting screw</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>34510</td>
<td>Pushing adapter</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>34755</td>
<td>Pushing adapter</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>34758</td>
<td>Adjusting screw</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>41226</td>
<td>2-way head for No. 1074</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>41224</td>
<td>2-way head for No. 1066</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50449</td>
<td>2-way head for No. 1080</td>
<td>○</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8020</td>
<td>1&quot;–8 F. x 5/8&quot;–18 M. threaded adpt.</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8023</td>
<td>1-1/4&quot;–12 F. x 1&quot;–14 M. threaded adpt. (2)</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8028</td>
<td>1-5/8&quot;–5-1/2 F. x 1&quot;–8 M. threaded adpt.</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8029</td>
<td>1-5/8&quot;–5-1/2 F. x 1&quot;–14 M. threaded adpt.</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8036</td>
<td>Female thd. adpt. 1&quot;–14 x 1&quot;–14 (2)</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8038</td>
<td>Female thd. adpt. 5/8&quot;–18 x 3/4&quot;–16 (2)</td>
<td>●</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Hydraulic Puller Sets

**No. 1679** – 17-1/2 ton hydraulic puller set. Wt., 238 lbs.

**No. 1680** – 17-1/2 ton hyd. farm implement service set. Wt., 186 lbs.

**No. 1681** – 17-1/2 ton and 30-ton hydraulic puller set. Wt., 543 lbs.

**No. 1682** – 17-1/2 ton, 30-ton, & 50-ton master puller set. Wt., 1260 lbs.

**No. 1683** – 17-1/2 ton & 50-ton hydraulic construction equipment service set. Wt., 821 lbs.

### Tool Set Description

<table>
<thead>
<tr>
<th>Tool No.</th>
<th>Description</th>
<th>Set 1679</th>
<th>Set 1680</th>
<th>Set 1681</th>
<th>Set 1682</th>
<th>Set 1683</th>
</tr>
</thead>
<tbody>
<tr>
<td>41226</td>
<td>30-ton 2-jaw puller head</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>43892</td>
<td>Long jaws for No. 1037 (3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1041</td>
<td>Combination 2/3-jaw puller</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30902</td>
<td>Long jaws for No. 1041 (3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1170</td>
<td>Pilot bearing puller</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1176</td>
<td>Slide hammer puller</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7392</td>
<td>Gear and pulley puller</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24833</td>
<td>Short forcing screw for No. 7392</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8005</td>
<td>5/8&quot;–18 F x 3/8&quot;–16 M threaded adapter (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8006</td>
<td>5/8&quot;–18 F x 1/2&quot;–20 M threaded adapter (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8007</td>
<td>5/8&quot;–18 F x 1/2&quot;–13 M threaded adapter (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8010</td>
<td>5/8&quot;–18 F x 5/8&quot;–11 M threaded adapter (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8013</td>
<td>5/8&quot;–18 F x 3/4&quot;–16 M threaded adapter (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8015</td>
<td>5/8&quot;–18 F x 3/4&quot;–10 M threaded adapter (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8017</td>
<td>5/8&quot;–16 F x 7/8&quot;–14 M threaded adapter (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8016</td>
<td>5/8&quot;–16 F x 7/8&quot;–9 M threaded adapter (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8019</td>
<td>5/8&quot;–18 F x 1&quot;–14 M threaded adapter (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8020</td>
<td>1&quot;–8 F x 5/8&quot;–18 M threaded adapter (1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8021</td>
<td>1&quot;–8 F x 1&quot;–14 M threaded adapter (1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8022</td>
<td>1&quot;–14 F x 5/8&quot;–18 M threaded adapter (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8025</td>
<td>1&quot;–14&quot;/7 F x 5/8&quot;–18 M threaded adapter (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8027</td>
<td>1&quot;–14&quot;/7 F x 1&quot;–14 M threaded adapter (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8023</td>
<td>1&quot;–14&quot;/12 F x 1&quot;–14 M threaded adapter (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8024</td>
<td>1&quot;–14&quot;/12 F x 1-3/4&quot;–12 M threaded adapter (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8028</td>
<td>1-5/8&quot;–5/12 F x 1&quot;–8 M threaded adapter (1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8029</td>
<td>1-5/8&quot;–5/12 F x 1&quot;–14 M threaded adapter (1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8036</td>
<td>1-1/4 F x 1&quot;–14 F threaded adapter (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8038</td>
<td>5/8&quot;–18 F x 3/4&quot;–16 F threaded adapter (2)</td>
<td>(2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8056</td>
<td>Shaft protector set</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8075</td>
<td>Step plate adapter set</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8076</td>
<td>Step plate adapter set</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>879</td>
<td>Pulley pulling attachment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>680</td>
<td>Pulley pulling attachment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8044</td>
<td>Internal threaded adapter set</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10215</td>
<td>Hex nut 3/4&quot;–16 (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1154</td>
<td>Bearing cup pulling attachment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32136</td>
<td>Long jaws for No. 1154 (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1166</td>
<td>Bearing cup pulling attachment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>34479</td>
<td>Reducing adapter for use with No. 1166</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1122</td>
<td>Bearing splitter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1123</td>
<td>Bearing splitter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1126</td>
<td>Bearing splitter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1127</td>
<td>Bearing splitter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1128</td>
<td>Bearing splitter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1130</td>
<td>Bearing splitter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24814</td>
<td>Speed crank</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24815</td>
<td>Tee adapter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24829</td>
<td>Short bolt (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24832</td>
<td>Special puller forcing screw</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27198</td>
<td>Speed crank</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29595</td>
<td>Speed crank</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28220</td>
<td>Ram cap</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28229</td>
<td>Ram cap</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28330</td>
<td>Ram cap</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32118</td>
<td>Ram adjusting screw</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32698</td>
<td>Ram adjusting screw</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>34758</td>
<td>Ram adjusting screw</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>34510</td>
<td>Pushing adapter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>34755</td>
<td>Pushing adapter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>201923</td>
<td>Pushing adapter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Sleeve Pullers & Installers . . . . . . . 224–225
Diesel Engine Tools . . . . . . . . . . . . . 226–230
Truck Clutch Tools . . . . . . . . . . . . . 231–232
U-Joint Tools . . . . . . . . . . . . . . . . . . 233
Wheel Bearing Locknut Sockets . . . 234–236
Lug Nut Tools . . . . . . . . . . . . . . . . . . 236
King Pin/Anchor Pin Press . . . . . . . . . . . 237
Brake & Steering Tools . . . . . . . . . . . . . 237–241
Suspension Tools . . . . . . . . . . . . . . . . . 238
Transmission Tools . . . . . . . . . . . . . . . . . 241–243
Fuel & Injector Service . . . . . . . . . . . . . 243–245
Diesel Injection Nozzle Testers . . . 246–248

**Heavy-Duty Class 4 – 8 Trucks**

<table>
<thead>
<tr>
<th>Category</th>
<th>Class</th>
<th>GVWR2</th>
<th>Representative Vehicles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium</td>
<td>4</td>
<td>62 - 71 kN (14,001 - 16,000 lbs.)</td>
<td>city cargo van, beverage delivery truck, wrecker, school bus</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>71 - 87 kN (16,001 - 19,500 lbs.)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>87 - 116 kN (19,501 - 26,000 lbs.)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>116 - 147 kN (26,001 - 33,000 lbs.)</td>
<td></td>
</tr>
<tr>
<td>Heavy</td>
<td>8</td>
<td>147 kN and over (33,00 lbs. and over)</td>
<td>truck tractor, concrete mixer, dump truck, fire truck, city transit bus</td>
</tr>
</tbody>
</table>
Sleeve Puller / Installer Sets

These sets work on a wide array of truck, bus, and tractor engines, as well as those in other vehicles. They'll handle wet and dry sleeves – and you won't need to remove head studs. Save time, effort, and money.

- Choice of two sets: manual or 17-1/2 ton hydraulic powered.
- Wide range of adapter plates available to fit most engines.

Manual Sleeve Puller Set

This manually operated, screw-powered device removes cylinder sleeves from most truck, bus, and tractor engines. Adapter plates (not included in the set) accommodate a wide range of bore sizes. See application chart on next page. The puller enables one technician to handle sleeve-pulling tasks.

Not recommended for Mack engines (use No. 1202 set).

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>24824</td>
<td>Thrust washer</td>
</tr>
<tr>
<td>37592</td>
<td>Three-way head</td>
</tr>
<tr>
<td>27908</td>
<td>13&quot; risers (3 required)</td>
</tr>
<tr>
<td>22205</td>
<td>Forcing nut</td>
</tr>
<tr>
<td>208675</td>
<td>Swivel assembly</td>
</tr>
<tr>
<td>10088</td>
<td>Cap screws, hex hd. (3)</td>
</tr>
<tr>
<td>10586</td>
<td>Flat washers (3)</td>
</tr>
<tr>
<td>11466</td>
<td>Thrust bearing</td>
</tr>
<tr>
<td>32976</td>
<td>Pulling screw</td>
</tr>
</tbody>
</table>


Installing Conversion Kit for 1200 Set

Permits the No. 1200 sleeve puller to handle both removing and installing operations. Use plate Nos. 1253–1256 for installing, and plate Nos. 1219–1250 for removing. Plates are not included with kit.

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>33769</td>
<td>Screw extension</td>
</tr>
<tr>
<td>41291</td>
<td>Installing bar</td>
</tr>
<tr>
<td>302340</td>
<td>Yoke assembly</td>
</tr>
</tbody>
</table>


17-1/2 Ton Hydraulic Sleeve Puller Set

Removes and installs sleeves of many makes and models of trucks, buses, and tractors. See chart at left and on next page.

Contents of Set No. 1202:

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>37592</td>
<td>Three-way head</td>
<td>27908</td>
<td>13&quot; risers (3 req'd)</td>
</tr>
<tr>
<td>33769</td>
<td>Screw extension</td>
<td>41291</td>
<td>Installing bar</td>
</tr>
<tr>
<td>302402</td>
<td>Speed nut</td>
<td>10221</td>
<td>Hex safety nut</td>
</tr>
<tr>
<td>302340</td>
<td>Yoke assembly</td>
<td>208675</td>
<td>Swivel assembly</td>
</tr>
<tr>
<td>10088</td>
<td>Cap screws, hex hd. (3)</td>
<td>10586</td>
<td>Flat washers (3)</td>
</tr>
<tr>
<td>32976</td>
<td>Pulling screw</td>
<td>21714</td>
<td>Insert</td>
</tr>
<tr>
<td>4180</td>
<td>Hyd. ram/pump assy.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

No. 1202 – 17-1/2 ton hydraulic sleeve puller set. Wt., 86 lbs.

No. 1203 – Sleeve puller without hydraulic assembly. Wt., 45 lbs., 10 oz.
Universal Puller for Wet-Type Sleeves
This tool will remove cylinder sleeves faster than ordinary pullers because it requires very little setup time. Cone adjustment positions the puller jaws quickly, locking bar is tightened. To aid in breaking “frozen” sleeves loose, adjustable bridge is positioned on the cylinder block and the bearing-mounted forcing nut is tightened. Next, bridge is removed and slide hammer assembly is attached. With a few sharp hammer blows, sleeve is pulled. In most cases, job time will average less than two minutes per cylinder. The puller features a 5 lb. slide hammer to help bust loose even the most stubborn sleeves.

- Special adapters are unnecessary.
- Adjustable jaws fit sleeves 3" to 6-1/2" in diameter.

No. 1205 – Sleeve puller with 5 lb. slide hammer assembly. Wt., 20 lbs., 10 oz.
No. 1204 – Sleeve puller without 5 lb. slide-hammer assembly. Wt., 14 lbs.

Sleeve Removal Plates
Designed to work with set Nos. 1200, 1202, and 1203, these removal plates fit the full spectrum of cylinder sleeve sizes. Determine engine bore size (“A” dimension) and O.D. of sleeve to be pulled (“B” dimension). Then consult chart to the right.

Sleeve Installation Plates
Each of these dry-sleeve installation plates covers a range of bore sizes. Their reversible design makes both sides usable. The plates work with our manual or 17-1/2 ton hydraulic puller/installers (Nos. 1200, 1202, and 1203). Check chart at right to ensure correct sleeve selection.

Blank Sleeve Remover Plates
These sleeve puller blanks supplement the sleeve puller plates listed above. Should a standard plate be unavailable, you can machine these blanks to the required bore size.
- Includes instructions.

Oil Seal and Wear Ring Installer
This two-piece tool makes the difficult job of correctly installing the rear crankshaft seal and wear ring on most Navistar DT-360 and DT-466 engines thru 1996 an easy task. Bolt the adapter to the crankshaft and wrench the component home.
- Eliminates damage to seals or wear ring that can occur when driving them into place.

No. 5022 – Oil seal and wear ring installer for 5.0” dia. seals (ZTSE4749 for 6.5” dia.). Wt., 32 lbs.
Cylinder Liner Height Gauge with Hold-Down Bar

This set lets you meet those exacting specifications necessary for optimum diesel engine performance. It accurately measures cylinder bore flatness and depth. The hold-down bar correctly seats the liner for accurate measurement of liner protrusion. The easy-to-read dial is in .001 inch graduations, 1.000" range.

No. 7106 – Cylinder liner height gauge with hold-down bar, in plastic case. Wt., 7 lbs., 7 oz.

Diesel Glow Plug Removal Tool

• Removes damaged, stuck-in glow plugs on diesel engines without having to remove cylinder head, saving hours of service time!
• When glow plug tip is melted and plug cannot be removed without breaking it off, this tool is the only answer.
• Tool includes 10 mm and 12 mm split nuts that provide added threads for pulling. One of three furnished spacers is installed under split nut to give a solid base for extraction without breaking glow plug off. Split nut is held with a wrench as the glow plug is unscrewed from the head.
• Services diesels in popular 3/4- and 1-ton pickups. Comes in a plastic storage case.

No. 6005 – Includes 10 mm x 1.00 mm and 12 mm x 1.25 mm split nuts, three spacers (3/16", 1/4", 5/16"), plastic storage/organizer case, and instructions. Wt., 5 oz.

Diesel Compression Tester with Adapters

This easy-to-use compression tester is designed for light- and medium-duty diesel engines equipped with glow plugs. A dual-reading gauge, featuring a push-button release valve, measures compression to 1000 PSI and 7000 kPa. The hose end has quick disconnect fittings. The tester comes with glow plug and nozzle adapters in a handy storage case.

Tester services these engines:
• Cummins B and C
• Navistar DT466/DT360
• Ford/Navistar 6.9L & 7.3L
• Detroit 6.2L & 6.5L
• Hino diesel and Mitsubishi Fuso truck engines

No. 5020 – Diesel compression tester with adapters. Wt., 7 lbs., 13 oz.
No. 5021 – Universal diesel engine compression gauge. Wt., 1 lb., 8 oz.
No. 304802 – Replacement gauge. Wt., 8 oz.
Ford Diesel Compression Test Adapter
• Use with OTC No. 5021 diesel engine compression gauge.
• Works on 2003-2006 Ford vans and trucks—with 6.0L diesel engines.
6660 – Ford diesel compression test adapter. Wt., 7 oz.

Ford Diesel Compression Test Adapter
• Use with OTC No. 5021 diesel engine compression gauge.
• Works on 2003-2006 Ford vans and trucks—with 6.0L diesel engines.
6660 – Ford diesel compression test adapter. Wt., 7 oz.

Ford 5-pin Connector Harness for Glow Plug Testing
• Provides an easy way to check glow plug resistance without having to remove the valve cover of 1994-98 Ford trucks and vans with 7.3L DIT (direct-injected turbocharged) diesel engine.
• Use with any standard digital volt ohmmeter to check glow plug resistance.
No. 6088 – Ford 5-pin connector harness for glow plug testing. Wt., 4 oz.

Ford 9-pin Connector Harness for Glow Plug Testing
• Permits testing glow plug resistance without having to remove the valve cover of 1998-1/2–2003 Ford trucks and vans with 7.3L DIT (direct-injected turbocharged) diesel engines.
• Use with any standard digital volt ohmmeter to check glow plug resistance.
No. 6099 – Ford 9-pin connector harness for glow plug testing. Wt., 8 oz.

Ford Oil Line Disconnect Tool
• Use to disconnect the high-pressure oil rail supply line from the fuel rail when removing fuel injectors.
No. 6594 – Ford oil line disconnect tool. Wt., 5 oz.

High Pressure Oil Line Disconnect Tool
• Use to disconnect the high pressure oil line from the cylinder head.
• Works on 1998 - 2003 Ford vans and trucks with 7.3L direct-injected, turbo-charged (DIT) diesel engines.
No. 6595 – High pressure oil line disconnect tool. Wt., 3 oz.

Ford Injector Remover/Installer Kit
• Removes and installs injectors without damaging the injector or cylinder head.
No. 6067 – Ford injector remover/installer kit. Wt., 6 oz.
HEAVY-DUTY TOOLS
Diesel Injector & Fuel Tools

Detroit Diesel Injector Socket
Because of their location, some injectors are difficult to remove or install. But with this 30 mm socket, you’ll be able to attach a 3/8" square-drive tool or 7/8" wrench. The socket fits injectors snugly to provide a good grip and avoid damage.
• Works on 6.2L and 6.5L engines.
No. 5060 – Detroit Diesel injector socket. Wt., 8 oz.

GM Injection Pump Wrench Set
• Use to loosen or tighten injection pump retaining bolts whenever pump timing adjustment or pump service is required. Services 1996–2000 GM full-size 2- and 4-wheel drive trucks, vans, and Suburbans with 6.5L diesel engine.
• Two specially bent wrenches are needed, due to the location of the throttle, cruise control, T.V. cable bracket, cooling system crossover pipe and bracket, and the thermostat housing.
• Wrenches are 15 mm, 12-point, double box-end type.
No. 6087 – GM injection pump wrench set. Wt., 1 lb.

Cummins Diesel Fuel Injector Remover Kit
• Kit contains a fuel injector connector tube remover and fuel injector puller. The fuel injector connector tube must be removed before pulling the injector, or both will be damaged.
• Application: 1998-1/2–2002 Dodge pickups and vans with 5.9L 24-valve Cummins diesel turbo engine.
No. 6069 – Cummins diesel fuel injector remover kit. Wt., 8 oz.

Master Cummins Diesel Fuel Injection Test Kit
• Includes the fittings and gauge needed to check fuel pressure, fuel volume, and fuel restrictions from the delivery pump to the injection pump.
Contents:
No. 518501 – Special quick-disconnect banjo fitting (M14 x 1.5 external).
No. 7915 – Two fuel injection quick-coupler adapters.
No. 7426 – Quick-disconnect banjo fitting (M12 x 1.5 external).
No. 223336 – Gauge assembly.
No. 6082 – Fuel volume test adapter.
No. 6078 – Diesel fuel inlet restriction test adapter.
No. 6080 – Master Cummins diesel fuel injection test kit. Wt., 5 lbs.
Cummins Diesel Fuel Volume Test Adapter
- Use to perform fuel volume test on fuel transfer pump. Fuel volume is as important as fuel pressure. Pump may pass pressure test, but fail volume test. Fitting is threaded into transfer pump, and No. 6082 is attached to the barbed end. The end of the 2 ft. tubing is placed into a container for fuel to be measured.
No. 6082 – Cummins diesel fuel volume test adapter. Wt., 3 oz.

Cummins Diesel Fuel Inlet Restriction Test Adapter
- Adapter is used to perform a vacuum test on the transfer pump; excessive vacuum reading indicates a fuel inlet restriction.
No. 6078 – Cummins diesel fuel inlet restriction test adapter. Wt., 1 lb., 3 oz.

Special Quick-Disconnect Banjo Fitting
- Adapter fitting (M14 x 1.5 male) is used to check fuel pressure from the delivery pump to the injection pump. Use with gauge assembly of OTC set No. 6079.
- Has quick-connect Schrader valve on end of fitting for safety and ease of hook-up to gauge. Included in OTC kit No. 6080.
No. 518501 – Special quick-disconnect banjo fitting. Wt., 3 oz.

Cummins Engine Barring Tool
Need to manually rotate an engine? This tool makes the job easy. Just insert the tool into the flywheel housing until it engages the ring gear. Then attach a 1/2" square drive ratchet or breaker bar and turn. The tool’s load-bearing collar provides friction-free operation while rotating the tool in the housing.
- Works on Cummins B and C series diesel engines and 5.9L diesels used in Dodge pickups.
No. 7471A – Cummins engine barring tool. Wt., 11 oz.

Cummins Engine Turning Tool
This tool makes easy work of manually rotating a Cummins 855 cubic inch engine. It’s essential hardware when you’re bringing pistons to top dead center to adjust injector timing.
No. 7161 – Cummins engine turning tool. Wt., 4 lbs., 5 oz.
**Compressor Drive-Gear Coupling Puller**

Here’s the solution for removing the coupling from the Cummins Compact and Bendix air compressors found on many Cummins 855 cubic inch engines. The split collet design fits over the coupling, and mechanical force does the work.

- Works on compressors with 1-3/4" O.D. shaft.

**No. 7119** – Compressor drive-gear coupling puller. Wt., 2 lbs., 7 oz.

---

**Cummins Drive-Pulley Tool Set**

This two-piece set is designed to remove and install the drive pulley on Cummins NH and NTC 855 cubic inch engines. The 7120B remover simply bolts into the tapped holes for pulling. The 7120A installer threads onto the pulley accessory drive shaft for easy installation.

**No. 7120** – Cummins drive-pulley tool set. Wt., 5 lbs., 5 oz.

**No. 7120A** – Drive-pulley installer. Wt., 2 lbs., 3 oz.

**No. 7120B** – Drive-pulley remover. Wt., 3 lbs.

---

**Cummins Water Pump Pulley Tool**

This heavy-duty tool is designed to remove or install water pump pulleys on Cummins L10 and M11 engines, 1991 and newer. The installer has a rugged thrust bearing that allows for friction-free pulley installation without damaging pump components.

**No. 5071** – Cummins water pump pulley tool. Wt., 2 lbs., 4 oz.

---

**Charged Air Cooler Tester**

This is the easy way to find air leaks in the charged air cooler systems used on class 7 & 8 truck engines. The tester features a large 2-1/2", 0-60 PSI pressure gauge, regulator and relief valve, and two safety cables. It also has quick disconnect air fittings that attach to a 3", 3-1/2", or 4" cooler hose.

**No. 5039** – Charged air cooler tester. Wt., 7 lbs., 6 oz.

---

**Cummins Diesel Injector Timing Kit**

Measures static timing on Cummins J, K, N, NH, V-12, N-14, and L-10 series diesel engines. With this tool you can determine the injector push tube travel in relation to piston travel. Tool is installed with one dial indicator in the injector bore and the other on the injector push tube. Turn the engine over manually to find top dead center. By checking the gauges, you can determine if timing is within factory specifications, then make adjustments to the cam followers.

**No. 7470** – Cummins diesel injector timing kit. Wt., 15 lbs.
Truck Clutch Alignment Shafts
These 10-spline clutch alignment shafts are available in the three most popular sizes: 1-1/2", 1-3/4", 2" O.D., and are designed for use on heavy-duty single, two-plate, push/pull, manual, and self-adjust clutches. The shafts are constructed of lightweight fiberglass-reinforced nylon that won’t hang up in clutch disc splines. Yet, they’re rugged and will easily support the weight of heavy pressure plates.

No. 5070 – Truck clutch alignment shaft. 1-1/2" O.D., 30 mm pilot. Wt., 10 oz.
No. 7072A – Truck clutch alignment shaft. 1-1/2" O.D., 1" pilot, 10 splines, 3.25" long. Similar to Ford 308-D001 (D79T-7550-A). Wt., 10 oz.
No. 7074A – Truck clutch alignment shaft. 2" O.D., 1-1/4" pilot. 10 splines, 3.6" long. Similar to Ford 308-D003 (D79T-7550-C). Wt., 13 oz.
No. 5029 – Clutch alignment shaft. 2" O.D., 1-1/4" pilot. 10 splines, 7.3" long. Similar to Ford 308-D011 (D93T-7550-B). Wt., 1 lb.

Clutch-Adjusting Wrench
This clutch-adjusting wrench will solve the difficult, time-consuming job of internally adjusting heavy-duty Spicer clutches. Using this wrench is much quicker and easier than makeshift methods such as pry bars, which often result in component damage, poor job performance, or extra downtime.

No. 7028 – Clutch-adjusting wrench. Wt., 1 lb., 8 oz.

Self-Adjusting Clutch Rotating Tool
This handy tool replaces the self-adjuster mechanism on Spicer self-adjusting clutches, allowing you to manually adjust them with a wrench or socket.
• 3/4" hex drive.
No. 5044 – Self-adjusting clutch rotating tool. Wt., 7 oz.

Truck Clutch Adjustment Set
The gauges in this set enable you to check the adjustment of pull-type, heavy-duty clutches, ensuring their correct operation. One gauge checks the amount of free play between the yoke and the bearing’s wear pad. The other gauge lets you determine the amount of travel between the release bearing and transmission bearing cap.

No. 5035 – Truck clutch adjustment set. Wt., 1 lb., 8 oz.
No. 5034 – Clutch pedal free play gauge. Wt., 1 lb., 4 oz.
No. 5033 – Release bearing travel gauge. Wt., 4 oz.
Clutch Service Set
Here’s an ideal companion set to the No. 5015 clutch handler. Designed for Spicer heavy-duty clutches, the nine tools in this set help with a variety of jobs, from clutch installation and removal to flywheel drive-pin installation to clutch adjustment.

- Includes handy plastic carrying case.

No. 5043 – Clutch service set.
Wt., 15 lbs., 13 oz.

---

Clutch Release Tool
- Permits removal of the shipping blocks from new clutch assemblies.

No. 5046 – Clutch release tool. Wt., 3 lbs., 10 oz.

---

Drive Pin Installing Tool
- Enables precise alignment and installation of the spacer plate drive pins on a pot-type 14” flywheel.
- Ensures free action of clutch assembly.

No. 5045 – Drive pin installing tool. Wt., 3 lbs.

---

Pilot Bearing Pullers
These tools make quick work of pulling stubborn, rusted pilot bearings. No. 5048 fits 1-1/4” I.D. bearings, and No. 5049 fits 1” I.D. bearings. The puller’s forcing screw expands the jaws inside the bearing and simultaneously pushes against the crankshaft.

No. 5048 – Pilot bearing puller for 1-1/4” I.D.
Wt., 1 lb., 3 oz.

No. 5049 – Pilot bearing puller for 1” I.D.
Wt., 1 lb., 3 oz.

---

Differential Housing Spreader
Removing and installing differential ring gear assemblies is typically a difficult, time-consuming chore – that is, unless you’re using this differential housing spreader. This device uses mechanical screw power to spread the housing, allowing easy removal of the differential assembly while eliminating damage often caused by makeshift methods.
- Works on Dana axle models 30 through 70.

No. 7071 – Differential housing spreader.
Wt., 34 lbs.
U-Joint Puller
This service tool easily removes stubborn, corroded bearings without damaging U-joint components, even in limited space. The tool applies up to 7 tons of force to separate yoke assemblies and remove bearings. Far superior to sledgehammer methods.
- Includes plastic storage box, No. 1036 2-jaw puller, and instructions.
No. 7057 – U-joint puller. Wt., 16 lbs., 3 oz.

Heavy-Duty U-Joint Puller
The ideal tool for disassembling drivelines.
- May be used with up to a one-inch impact wrench.
- Quickly and easily removes sealed U-joint cups without the need for hammering or heat.
- Will not damage the driveshaft, yoke, bearing cups, or joints.
- Fits practically all Class 7 and 8 trucks, including:
  - Spicer driveline 1610, 1710, 1760, 1810, 1880
  - Spicer SPL 140, 170, and 250 "Life Series"
  - Meritor (Rockwell) 16N, 17N, 18N, 1710
  - Meritor RPL 20 and 25 "Permalube" Series
No. 5190 – Heavy-duty universal joint puller. Wt., 11.4 lbs.

Heavy-Duty Bearing Cup Installer
Quickly and easily installs bearing cups on Dana/Spicer SPL “Life Series” quick-disconnect universal joints.
- Three individual adapters press bearings to the manufacturer’s recommended depths.
- Adapters fit Spicer SPL 140, 170, and 250 series drivelines.
No. 5191 – Heavy-duty bearing cup installer. Wt., 18 lbs.

Heavy-Duty Bearing Cup Installer
Quickly and easily installs bearing cups on bolt-retained universal joints. Fits series 1610 to 1880 and nearly all other heavy-duty truck and machine type u-joints with bolt-retained bearing cups.
- Automatically aligns bearing cups during installation.
- Eliminates the possibility of damage to the needle bearing.
No. 5192 – Heavy-duty bearing cup installer. Wt., 1 lb., 11 oz.

U-Joint Tool
Designed for a 1/2" impact wrench, this U-joint tool removes even the most stubborn U-joints with ease. It’s compact and easily set up, making it ideal for service calls. And it can be used at different angles and in tight places, eliminating those damaging makeshift methods. The puller’s legs have holes for bolt storage.
- Bolts included: 5/16"-24 x 1-1/2", 3/8"-24 x 1-1/2", 7/16"-20 x 1-1/2", M8-1.25 mm x 35 mm.
- Works on most Dana Spicer and Meritor U-joints – except Spicer’s Life series model SPL250X.
No. 7490 – U-joint tool. Wt., 10 lbs., 7 oz.
Wheel bearing locknuts are easy to remove or install with these specially designed sockets. They’re made of high-strength steel and resist rounding out.

NOTE: Sockets are designed for use with 3/4” square-drive manual tools only. Impact tool use voids sockets’ warranty.

1902 – Similar to Ford No. 205-039 (T70T-4252-B)
1904 – Similar to Ford No. 205-040 (T70T-4252-D)
1905 – Similar to Ford No. 205-041 (T70T-4252-E)
1910 – Similar to Ford No. 205-042 (T70T-4252-K)
1928 – Similar to Ford No. 205-043 (T70T-4252-W)

Measure from flat to flat to determine size of locknut, then consult chart to find the correct socket.

**Measure from flat to flat to determine size of locknut, then consult chart to select a socket. Warranty is void if tool is subjected to impact wrench use.**

* Fits special “rounded” hex nut found on Dana axles of some Ford trucks.
* Depth of locknut sockets is 5”.

<table>
<thead>
<tr>
<th>Socket No.</th>
<th>Opening Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1901</td>
<td>2-3/32” (6 pt.)</td>
</tr>
<tr>
<td>1920</td>
<td>2-1/4” (6 pt.)</td>
</tr>
<tr>
<td>1902</td>
<td>2-3/8” (6 pt.)</td>
</tr>
<tr>
<td>1936*</td>
<td>2-3/8” (6 pt.)</td>
</tr>
<tr>
<td>1962*</td>
<td>2-9/16” (8 pt.)</td>
</tr>
<tr>
<td>1905</td>
<td>2-9/16” (8 pt.)</td>
</tr>
<tr>
<td>1928*</td>
<td>2-9/16” (8 pt.)</td>
</tr>
<tr>
<td>1922</td>
<td>2-5/8” (6 pt.)</td>
</tr>
<tr>
<td>1923</td>
<td>2-3/4” (6 pt.)</td>
</tr>
<tr>
<td>1937</td>
<td>2-3/4” (8 pt.)</td>
</tr>
<tr>
<td>1932</td>
<td>2-7/8” (6 pt.)</td>
</tr>
<tr>
<td>1933</td>
<td>2-7/8” (8 pt.)</td>
</tr>
<tr>
<td>1906</td>
<td>3” (6 pt.)</td>
</tr>
<tr>
<td>1907</td>
<td>3” (8 pt.)</td>
</tr>
<tr>
<td>1934</td>
<td>3-1/8” (6 pt.)</td>
</tr>
<tr>
<td>1935</td>
<td>3-1/8” (8 pt.)</td>
</tr>
<tr>
<td>1908</td>
<td>3-1/4” (6 pt.)</td>
</tr>
<tr>
<td>1909</td>
<td>3-1/4” (8 pt.)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Socket No.</th>
<th>Opening Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1924</td>
<td>3-3/8” (8 pt.)</td>
</tr>
<tr>
<td>1910</td>
<td>3-1/2” (6 pt.)</td>
</tr>
<tr>
<td>1911</td>
<td>3-1/2” (8 pt.)</td>
</tr>
<tr>
<td>1925</td>
<td>3-3/4” (8 pt.)</td>
</tr>
<tr>
<td>1926</td>
<td>3-3/4” (6 pt.)</td>
</tr>
<tr>
<td>1927</td>
<td>3-13/16” (6 pt.)</td>
</tr>
<tr>
<td>1912</td>
<td>3-7/8” (8 pt.)</td>
</tr>
<tr>
<td>1913</td>
<td>3-7/8” (8 pt.)</td>
</tr>
<tr>
<td>1914</td>
<td>4” (6 pt.)</td>
</tr>
<tr>
<td>1915</td>
<td>4-1/8” (6 pt.)</td>
</tr>
<tr>
<td>1940</td>
<td>4-1/8” (8 pt.)</td>
</tr>
<tr>
<td>1916</td>
<td>4-3/8” (6 pt.)</td>
</tr>
<tr>
<td>1917</td>
<td>4-3/8” (8 pt.)</td>
</tr>
<tr>
<td>1938</td>
<td>4-1/2” (6 pt.)</td>
</tr>
<tr>
<td>1941</td>
<td>4-13/16” (8 pt.)</td>
</tr>
<tr>
<td>1918</td>
<td>4-7/8” (6 pt.)</td>
</tr>
<tr>
<td>1919</td>
<td>4-7/8” (8 pt.)</td>
</tr>
<tr>
<td>1939</td>
<td>5-1/4” (6 pt.)</td>
</tr>
<tr>
<td>7795</td>
<td>2-1/2” (6 pt.)</td>
</tr>
<tr>
<td>7796</td>
<td>2-3/4” (6 pt.)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Socket No.</th>
<th>Opening Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950M</td>
<td>54 mm (6 pt.)</td>
</tr>
<tr>
<td>1951M</td>
<td>55 mm (6 pt.)</td>
</tr>
<tr>
<td>1952M</td>
<td>60 mm (6 pt.)</td>
</tr>
<tr>
<td>1953M</td>
<td>70 mm (6 pt.)</td>
</tr>
<tr>
<td>1954M</td>
<td>71 mm (6 pt.)</td>
</tr>
<tr>
<td>1955M</td>
<td>80 mm (6 pt.)</td>
</tr>
<tr>
<td>1956M</td>
<td>82 mm (8 pt.)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Socket No.</th>
<th>Opening Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1957M</td>
<td>90 mm (8 pt.)</td>
</tr>
<tr>
<td>1958M</td>
<td>94 mm (8 pt.)</td>
</tr>
<tr>
<td>1952M</td>
<td>100 mm (8 pt.)</td>
</tr>
<tr>
<td>1959M</td>
<td>106 mm (8 pt.)</td>
</tr>
<tr>
<td>1960M</td>
<td>110 mm (8 pt.)</td>
</tr>
<tr>
<td>1961M</td>
<td>120 mm (8 pt.)</td>
</tr>
</tbody>
</table>

**Metric Truck Wheel Bearing Locknut Sockets**

**Truck Wheel Bearing Locknut Sockets (6-pt.)**

**No. 9850 – 21 wheel bearing locknut sockets with tool board. Wt., 54 lbs., 7 oz.**

**No. 62908 – Display board only. Wt., 5 lbs., 7 oz.**

<table>
<thead>
<tr>
<th>No. Qty. Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1901 1 Locknut socket (2-3/32&quot;)</td>
</tr>
<tr>
<td>1902 1 Locknut socket (2-3/8&quot;)</td>
</tr>
<tr>
<td>1904 1 Locknut socket (2-9/16&quot;)</td>
</tr>
<tr>
<td>1906 1 Locknut socket (3&quot;)</td>
</tr>
<tr>
<td>1908 1 Locknut socket (3-1/4&quot;)</td>
</tr>
<tr>
<td>1910 1 Locknut socket (3-1/2&quot;)</td>
</tr>
<tr>
<td>1912 1 Locknut socket (3-7/8&quot;)</td>
</tr>
<tr>
<td>1914 1 Locknut socket (4&quot;)</td>
</tr>
<tr>
<td>1915 1 Locknut socket (4-1/8&quot;)</td>
</tr>
<tr>
<td>1916 1 Locknut socket (4-3/8&quot;)</td>
</tr>
<tr>
<td>1918 1 Locknut socket (4-7/8&quot;)</td>
</tr>
<tr>
<td>1920 1 Locknut socket (2-1/4&quot;)</td>
</tr>
<tr>
<td>1921 1 Locknut socket (2-1/2&quot;)</td>
</tr>
<tr>
<td>1922 1 Locknut socket (2-5/8&quot;)</td>
</tr>
<tr>
<td>1923 1 Locknut socket (2-3/4&quot;)</td>
</tr>
<tr>
<td>1926 1 Locknut socket (3-3/4&quot;)</td>
</tr>
<tr>
<td>1928 1 Lknut. skt. (2-9/16” rounded)</td>
</tr>
<tr>
<td>1932 1 Locknut socket (2-7/8&quot;)</td>
</tr>
<tr>
<td>1934 1 Locknut socket (3-1/8&quot;)</td>
</tr>
<tr>
<td>1936 1 Lknut. skt. (2-3/8” rounded)</td>
</tr>
<tr>
<td>1939 1 Locknut socket (5-1/4&quot;)</td>
</tr>
</tbody>
</table>
Wheel Bearing Locknut Sockets (8 pt.)

<table>
<thead>
<tr>
<th>No.</th>
<th>Qty.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1903</td>
<td>1</td>
<td>Locknut socket (2-3/8&quot;)</td>
</tr>
<tr>
<td>1905</td>
<td>1</td>
<td>Locknut socket (2-9/16&quot;)</td>
</tr>
<tr>
<td>1907</td>
<td>1</td>
<td>Locknut socket (3&quot;)</td>
</tr>
<tr>
<td>1909</td>
<td>1</td>
<td>Locknut socket (3-1/4&quot;)</td>
</tr>
<tr>
<td>1911</td>
<td>1</td>
<td>Locknut socket (3-1/2&quot;)</td>
</tr>
<tr>
<td>1913</td>
<td>1</td>
<td>Locknut socket (3-7/8&quot;)</td>
</tr>
</tbody>
</table>

No. 9851 – 18 wheel bearing locknut sockets (8 pt.) with tool board. Wt., 53 lbs., 14 oz.

No. 62909 – Display board only. Wt., 6 lbs., 11 oz.

Wheel Bearing Locknut Sockets

• A selection of popular sizes in 6- or 8-point.

No. 9852 – 12 wheel bearing locknut sockets and tool board. Wt., 34 lbs., 4 oz.

No. 62910 – Display board only. Wt., 5 lbs., 3 oz.

Wheel Bearing Locknut Sockets (8 pt.)

<table>
<thead>
<tr>
<th>No.</th>
<th>Qty.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1904</td>
<td>1</td>
<td>Locknut skt. (2-9/16&quot; hex)</td>
</tr>
<tr>
<td>1908</td>
<td>1</td>
<td>Locknut skt. (3-1/4&quot; hex)</td>
</tr>
<tr>
<td>1909</td>
<td>1</td>
<td>Locknut skt. (3-1/4&quot; 8 pt.)</td>
</tr>
<tr>
<td>1910</td>
<td>1</td>
<td>Locknut skt. (3-1/2&quot; hex)</td>
</tr>
<tr>
<td>1913</td>
<td>1</td>
<td>Locknut skt. (3-7/8&quot; 8 pt.)</td>
</tr>
<tr>
<td>1914</td>
<td>1</td>
<td>Locknut socket (4&quot; hex)</td>
</tr>
<tr>
<td>1915</td>
<td>1</td>
<td>Locknut skt. (4-1/8&quot; hex)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No.</th>
<th>Qty.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1917</td>
<td>1</td>
<td>Locknut socket (4-3/8&quot;)</td>
</tr>
<tr>
<td>1919</td>
<td>1</td>
<td>Locknut socket (4-7/8&quot;)</td>
</tr>
<tr>
<td>1924</td>
<td>1</td>
<td>Locknut socket (3-3/4&quot;)</td>
</tr>
<tr>
<td>1925</td>
<td>1</td>
<td>Locknut socket (3-13/16&quot;)</td>
</tr>
<tr>
<td>1929</td>
<td>1</td>
<td>Locknut socket (2-5/8&quot;)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No.</th>
<th>Qty.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1930</td>
<td>1</td>
<td>Locknut socket (2-7/8&quot;)</td>
</tr>
<tr>
<td>1931</td>
<td>1</td>
<td>Locknut socket (3-5/8&quot;)</td>
</tr>
<tr>
<td>1933</td>
<td>1</td>
<td>Locknut socket (2-7/8&quot;)</td>
</tr>
<tr>
<td>1935</td>
<td>1</td>
<td>Locknut socket (3-1/8&quot;)</td>
</tr>
</tbody>
</table>

Budd Wheel Sockets

• Metric sizes for Isuzu, Hino, Mitsubishi Fuso, and import trucks; fit front and rear axle wheels.

• 1-1/2" hex Budd wheel socket for American-made trucks with dual rear wheels.

These sockets work on the import truck Budd wheels. Their extra deep design lets you remove both nut and stud with just the one socket. Usable with a 1" square drive impact wrench.


No. 1945A – 35 mm hex socket with 17 mm sq. Wt., 2 lbs.
No. 1946A – 38 mm hex socket with 20 mm sq. Wt., 2 lbs., 8 oz.
No. 1947A – 41 mm hex socket with 21 mm sq. Wt., 2 lbs., 14 oz.
No. 1948A – 33 mm hex Budd wheel socket. For Mack Midliners, White Volvo, and other import trucks w/dual rear wheels. Wt., 1 lb., 8 oz.
No. 1949A – 1-1/2" hex Budd with 13/16" square wheel socket. For American-made trucks with dual rear wheels. Wt., 2 lbs., 8 oz.
HEAVY-DUTY TOOLS
Locknut, Lug, Hubcap Tools

**Truck Pinion Sockets**
We’ve designed and built these sockets to have the correct clearance for yoke and locknut assemblies on a variety of truck transmissions and differentials. The sockets have 3" of usable depth and are 4" long. Using the right tools saves time and effort, eliminating the need to destroy standard sockets by grinding them down to fit tight pinion clearances.


**No. 1981** – Socket only, not included in set. Wt., 3 lbs., 10 oz.

**No. 62911** – Tool board only. Wt. 2 lbs.

<table>
<thead>
<tr>
<th>Socket No.</th>
<th>Opening Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1975</td>
<td>2&quot; (6 pt.)</td>
</tr>
<tr>
<td>1976</td>
<td>2-1/8&quot; (6 pt.)</td>
</tr>
<tr>
<td>1977</td>
<td>2-1/4&quot; (6 pt.)</td>
</tr>
<tr>
<td>1978</td>
<td>2-3/8&quot; (6 pt.)</td>
</tr>
<tr>
<td>1979</td>
<td>2-5/8&quot; (6 pt.)</td>
</tr>
<tr>
<td>1980</td>
<td>2-3/4&quot; (6 pt.)</td>
</tr>
<tr>
<td>1981</td>
<td>2-1/2&quot; (6 pt.)</td>
</tr>
</tbody>
</table>

**“Major Persuader” Pry Bar Merchandiser**
- Displays five of OTC’s biggest pry bars on a bright, eye-level merchandiser.
- Display measures 16"w x 18"d x 64"h.
- Includes 5 pry bars: two 30", two 46", and one 54" in length.

**No. 9901** – Heavy-duty pry bar merchandiser display. Wt., 40 lbs.

<table>
<thead>
<tr>
<th>Bar No.</th>
<th>Qty.</th>
<th>Desc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>7168</td>
<td>2</td>
<td>30&quot; jimmy bar</td>
</tr>
<tr>
<td>7420</td>
<td>2</td>
<td>46&quot; jimmy bar</td>
</tr>
<tr>
<td>7421</td>
<td>1</td>
<td>54&quot; jimmy bar</td>
</tr>
</tbody>
</table>

**Lug Nut Cap Remover**
Chrome-plated lug nut caps found on many heavy-duty trucks and trailers can be tough to remove, and they’re easily damaged if you pry them off or use an ordinary cap remover. This tool avoids those problems. It is ruggedly built and features specially coated jaws that won’t slip off the caps, no matter how much squeezing force you apply.
- Features cushioned handles.

**No. 5047** – Lug nut cap remover. Wt., 13 oz.

**Hubcap Installer**
Truckers like chrome, and many of them accent their truck’s drive axle with chrome hubcaps designed to snugly fit around the axle-shaft bolts. Unfortunately for service shops, these hubcaps are often tricky to install without causing damage. That’s where our hubcap installer comes in handy. Constructed of high-density polyethylene, this tool guides the cap into place over the axle nuts, protecting it from unwanted and costly dents.

**No. 5059** – Hubcap installer. Wt., 1 lb.
**Heavy-Duty Power Steering Pump Analyzer**

- There is only one way to troubleshoot problem components in a heavy-duty power steering system: a flow and pressure reading meter. OTC’s new No. 5079 measures both: 1 to 10 gallons oil flow and up to 3,000 psi of pressure.
- When connected in line, this universal analyzer will isolate the failed components in just minutes. There is no wasted time as in trial and error methods.
- The set is complete with high pressure hoses, 9/16"-18 standard fittings, and quick disconnect couplers to handle Eaton/Vickers, TRW, Ross, and Shepard power steering systems.

No. 5079 – Heavy-duty power steering pump analyzer. Wt., 6 lbs.

---

**Kingpin & Brake Anchor Pin Pusher**

With this pin remover, hydraulic force and precision tooling replace torch-and-hammer methods for getting the job done quickly and easily. Five special collars and two pins allow this unit to work on both straight and tapered kingpins and accommodates sizes from 7/8” to 2” in diameter and up to 11-1/4” long. The tool delivers 30 tons of hydraulic force to push out even the most corroded kingpins. A job that could consume the better part of a day is done in minutes. The anchor pin can be removed quickly by using the special adapter installed in the pusher’s base block and the unit positioned over the brake’s spider.

- Works on many models of trucks and buses.
- 27-1/2" high x 8-1/2" wide. • 30-ton capacity.
- Set includes No. 4002 hydraulic hand pump, No. 9767 hose, No. 9798 hose-half coupler, No. 4121 Power Twin 30-ton ram, and No. 29424 anchor pin adapter.

No. 4240 – Complete kingpin and anchor pin pusher set with hydraulics. Wt., 114 lbs.
No. 4241 – King- and anchor-pin pusher with anchor pin adapter without hydraulics. Wt., 59 lbs., 3 oz.
No. 29424 – Anchor pin adapter only. Wt., 1 lb., 12 oz.

---

**Mack Kingpin Socket**

Here is a socket that makes life a little easier for anyone who works on Mack trucks. Designed for 1/2" square drive ratchet or breaker bar, the socket fits the slotted adjusting screw in tapered kingpins used on most Mack front axles (12,000 to 20,000 lbs.).

No. 5053 – Mack kingpin socket. Wt., 13 oz.

---

**Truck Tie Rod Socket**

Designed to withstand the force of a 3/4” drive impact wrench, this rugged socket makes truck tie-rod end removal quick and simple.

- Works on inner and outer tie rod ends on 12,000 to 16,000 lb. truck axles.

No. 5068 – Truck tie rod socket. Wt., 3 lbs., 4 oz.
**HEAVY-DUTY TOOLS**

**Steering, Brake, and Suspension Service**

---

**Truck Front Leaf Spring, Pin, and Bushing Service Set**
- Delivers 10 tons of hydraulic force to remove and install truck front spring eye bushing assemblies quickly and easily.
- Services bushings with diameters from 1-1/4" through 1-7/8", and pin diameters from 7/8" through 1-1/8". Handles all popular OE and aftermarket components, including Horton pin and bushing assemblies.
- Service bushing assemblies, in many cases, without removing leaf spring hangers and spring assemblies from the vehicle.
- All accessories are included except the hydraulic hand pump, which must be purchased separately.
- **No. 5080** – Truck front leaf spring, pin, & bushing service set.
  Wt., 20 lbs. 8 oz.

---

**Hub Oil Seal Puller**
- Eliminates bearing and hub damage that can occur when a punch and hammer is used to remove the seal.
- Extra long 28" handle provides leverage, unique pulling head design quickly and easily removes the seal in one piece.
- Built from the highest quality heat-treated steel.
- Removes hub seals on trailer and truck axles, including truck steering axles.
- **No. 5085** – Hub oil seal puller.
  Wt., 6 lbs., 12 oz.

---

**Hendrickson Primaax Quick Alignment Socket**
- Hendrickson – Approved tool.
- Used to adjust axle alignment on the Primaax air suspension.
- Works on Primaax models 230, 460, and 690 rear suspensions.
- **No. 1767** – Hendrickson Primaax quick alignment socket.
  Wt., 3 lbs., 8 oz.

---

**Tie Rod Socket for Medium-Duty Trucks**
- Services GM-, Ford-, and Chrysler-built 1-ton 2WD and 4WD trucks.
- Also works on medium-duty Class 2 through Class 6 trucks.
- Use with a 1/2" drive impact wrench to easily remove the tie rod ends from the tie rod.
- **No. 6080** – Tie rod socket for medium-duty trucks.
  Wt., 1 lb., 13 oz.
Universal Bearing Cup Installer
This handy, adjustable tool is designed to install wheel-bearing cups in a wide range of heavy-duty axles. Simply adjust and lock the jaws to the cup I.D., slip on the new cup, set it in the bore, and drive it in with a hammer. The tool helps eliminate the damage caused by makeshift methods.
- Works on axles from 11,000 to 50,000 lb. capacity.
- Adjusts to fit 3-5/8" to 6-1/2" O.D. bearing cups, which adds up to as many as 30 individual drivers.
No. 7180 – Universal bearing cup installer. Wt., 11 lbs.
No. 52038 – Replacement jaw.
No. 207561 – Replacement retaining spring.

Slack Adjuster Pullers
These pullers will yank even the most corroded slack adjuster off the S-cam—and do so in just a fraction of the time needed with “heat and beat” methods. Plus, they won’t damage components. Both pullers have a rugged forcing screw and cast steel body. Puller No. 5055 fits many manual types, and the No. 5056 works on Rockwell, Haldex, Gunite, and Bendix automatic adjusters.
No. 5055 – Manual slack adjuster puller. Wt., 5 lbs.
No. 5056 – Automatic slack adjuster puller. Wt., 6 lbs.

Air Brake Service Kit
This kit has the tools needed to remove slack adjusters and push-rod clevis pins used in the S-cam brake systems of class 7 and 8 vehicles.
- Works on manual or automatic slack adjusters.
- Includes Nos. 5055 and 5056 slack adjuster pullers, 5057 brake clevis pin press, and a plastic storage case.
No. 5054 – Air brake service kit. Wt., 14 lbs., 10 oz.

Clevis Pin Press
Removing corroded clevis pins from a brake air-chamber pushrod can be a maddening and time-consuming task—unless you’re using our clevis pin press. This handy screw-operated tool applies the force just where it’s needed. The pin is easily removed from its hole without damaging nearby components.
No. 5057 – Clevis pin press. Wt., 1 lb., 13 oz.

Slack Check
This tool enables you to quickly check the brake adjustment on class 7 and 8 trucks and trailers having S-cam brakes. It features a sturdy, four-position handle to provide the leverage you need at the proper angle.
- Works on manual or automatic slack adjusters.
No. 5052 – Slack check. Wt., 1 lb., 3 oz.

Heavy-Duty Anchor Pin Press
With this rugged C-frame press, you can easily remove stubborn and rusted brake anchor pins from spyders on heavy-duty vehicles. Mechanical screw power does the job quickly and efficiently.
- Works on brake pins up to 1-1/4" in diameter.
No. 7248 – Heavy-duty anchor pin press. Wt., 9 lbs., 6 oz.

Similar to Ford 205-026 (T74P-4635-C)
Brake Anchor Pin and Bushing Service Set
With the No. 5038, there’s no need to remove the bearing hub assembly just to replace the pins and bushings on 16-1/2" S-cam trailer and tractor “Q” brake systems. Much less complicated and time consuming!
- Special tooling and our C-frame press get you past the hub assembly, so you can do the job quickly and professionally without damaging other parts.
- Includes everything needed for removal and replacement.
- Tooling is available separately for the tech who already owns the 7248 C-frame press.
No. 5038 – Brake anchor pin and bushing service set includes C-frame press and tooling in a plastic storage case. Wt., 13 lbs., 9 oz.

Axle-Stud Cone Pliers
Now you can easily remove the tapered cone from studs used on the rear axles of medium and heavy-duty trucks. This specially designed tool gives you the leverage needed to expand the cone and remove it from the stud for axle removal.
No. 7077 – Axle stud cone pliers. Wt., 13 oz.

Heavy-Duty Brake Spring Pliers
Save time and effort when removing and installing return springs on the brake shoes of heavy-duty vehicles. This specially designed pliers works for hydraulic wedge-type and “S” cam air brakes. Its 26-1/4" length gives you the leverage to do the job more easily, and the huge jaw opening accommodates even the widest brake shoes.
No. 7069A – Heavy-duty brake spring pliers with “S” cam and wedge-type replaceable tips. Wt., 4 lbs., 8 oz.
No. 202621 – Wedge-type replacement tip. Wt., 2 oz.
No. 204141 – “S” cam replacement tip. Wt., 2 oz.

Truck Brake Spring Pliers
- Designed to remove and install the brake shoe return springs on medium-duty and heavy-duty drum brakes.
No. 4592 – Truck Brake Spring Pliers. Wt., 2 lbs., 13 oz.
No. 4592-1 – Replacement tip.

S-Cam Air Brake Spring Tool
- Eliminate makeshift, unsafe methods of unhooking and reconnecting retaining springs when replacing brake shoes on heavy-duty tractors and trailers.
- Simply hook the retaining spring loop and press down. Lever action against the axle makes the job a snap!
No. 5081 – S cam air brake spring tool. Wt., 1 lb., 6-oz.
No. 314548 – Replacement hook kit. Wt., .5 lb.
Hydraulic Brake Spring Tool
Here’s a tool to remove and install the return springs in Lucas Girling hydraulic brake systems. The tool’s machined tip cradles the return spring securely, and its sliding fulcrum gives you all the leverage needed to do the job. A knurled handle helps prevent slipping.


No. 7462 – Hydraulic brake spring tool.
Wt., 10 oz.

Lucas Rear Brake Adjusting Tool
If you’re working on a lot of medium-duty hydraulic brake systems, you need our adjusting tool. It enables you to easily adjust Lucas Girling hydraulic brake systems (popular in Ford F700, F800, and F900 series). The tool’s offset design and extra handle length get the job done quickly.

No. 5072 – Lucas rear brake adjusting tool.
Wt., 1 lb., 2 oz.

Truck Transmission Bearing Service Set
The set is designed to help you remove input shaft bearings and countershaft bearings, in both the main and auxiliary boxes of heavy-duty Fuller transmissions. It will also remove end yokes from 1600/1610–1810 series transmissions. The puller delivers 10 tons of mechanical power — essential force for working on big gearboxes.

- Works on Fuller twin-countershaft transmissions: 125, 600, 660, 900, 9500, 1100, 12500, 12600, 13000, 14600, 15600, and 8600 series, 910–913, 915, and 9513.

No. 7070A – Truck transmission bearing service set.
Wt., 14 lbs., 3 oz.
No. 7075 – Transmission output shaft end yoke remover only. Wt., 4 lbs., 3 oz.
No. 7207 – Collet only. Wt., 4 lbs., 13 oz.

Transmission Timing Block Sets
These sets enable one-man installation of front and rear countershaft bearings on Fuller twin-countershaft transmissions. The set positions the upper countershaft, yet lets you slide it aside to insert the main shaft. When the main shaft is in place and timing marks line up, turn the tool vertically to engage and position the countershaft to main shaft.

No. 7108 – Timing block set for Fuller RTO 610/613 transmissions. Wt., 1 lb., 2 oz.
No. 7109 – Timing block set for Fuller RT and RTO 910, 915, 9513, 12509, 12510, 12513, and 12515 transmissions. Wt., 1 lb., 12 oz.
HEAVY-DUTY TOOLS
Transmission Service Tools

**Bearing Puller Set**
This puller set, designed for use with our No. 7070A transmission service set (sold separately), is designed to remove front countershaft and input shaft bearings on Fuller RT, RTO 610/613 twin countershaft transmissions.
No. 205776 – Bearing puller set. Wt., 2 lbs., 10 oz.

**Bearing Puller Set**
When teamed with our No. 7070A puller, this puller set will remove front and rear countershaft bearings from the main case of Eaton® Fuller® 2 Series Roadranger® transmissions.
• Includes pulling collet, sleeve, and a pair of puller legs.
No. 5051 – Bearing puller set. Wt., 3 lbs., 12 oz.

**Timing Tool**
• Designed to support the main-case upper countershaft during transmission assembly and timing.
• Works on Eaton Fuller® 2 Series Roadranger® transmissions.
No. 5063 – Timing tool. Wt., 2 lbs., 5 oz.

**Countershaft Pushing Tool**
Replacing rear countershaft bearing snap rings in Eaton Fuller transmissions? With this tool, you can easily move the countershaft rearward to expose the snap ring.
• Works on Eaton® Fuller® Roadranger® transmissions (series 2, 5, 6, and 7).
No. 5064 – Countershaft pushing tool. Wt., 4 lbs., 11 oz.

**Countershaft Bearing Driver**
• Eases the task of installing a main-case countershaft bearing.
• Works on Eaton® Fuller® 2 Series Roadranger® transmissions.
No. 5065 – Countershaft bearing driver. Wt., 3 lbs., 14 oz.

**Bearing Driver**
This tool is designed to install the bearing on 2" diameter input shafts used in Eaton® Fuller® Roadranger® transmissions.
No. 5066 – Bearing driver. Wt., 5 lbs., 6 oz.

**70 mm Hex Socket**
Attach this heavy-duty socket to your 3/4" drive ratchet or breaker bar, and you’ll be able to easily remove the end-yoke locknut on Eaton® Fuller® 2 Series Roadranger® transmissions.
No. 1982M – 70 mm hex socket. Wt., 3 lbs., 13 oz.
**Auxiliary Countershaft Shim Tool**
When you’re working on Eaton® Fuller® 2 Series Roadranger® transmissions, this tool holds the auxiliary countershaft in place while you set the bearing end play.

- Includes a support strap for .100 and .125 shim settings, and metric and standard mounting bolts.

No. 5062 – Auxiliary countershaft shim tool.
Wt., 3 lbs., 13 oz.

---

**Cummins® Injector Puller**
This helpful puller will handle a variety of injectors found in Cummins engines: mechanical L-10, PDT, and PTD top-stop 855NH. Its two-jaw design firmly grips the injector while it is being removed by the slide hammer.

- Includes storage case and special adapter for pulling STC injectors.

No. 5042 – Cummins injector puller.
Wt., 6 lbs.

---

**Cummins® Injector Remover/ Installer**
This is our best tool for removing or installing fuel injectors on Cummins L10 and N14 Celect electronically controlled engines. The large slide hammer and pin-type pulling adapter easily—and safely—handle injector jobs.

- Includes storage case.
- Two installing adapters help prevent damage to an injector’s electronic solenoid.

No. 5040 – Cummins injector remover/installer.
Wt., 7 lbs., 1 oz.

---

**Cummins® Fuel Injector Puller Adapter**
When combined with our No. 5028 injector puller or a slide hammer with a 1/2”–20 threaded shaft, this adapter gives you an easy, damage-free way to remove fuel injectors from Cummins B and C series engines.

No. 217793 – Cummins fuel injector puller adapter for B and C series engines with 12 mm x 1.5 injector threads. Wt., 5 oz.
No. 215844 – Cummins fuel injector puller adapter for B and C series engines with 14 mm x 1.5 injector threads. Wt., 5 oz.

---

**Mack Fuel Injector Nozzle Tool**
Here’s a handy tool for removing or installing injector nozzles on Mack E-6 4 VH and E-9 4 VH four-valve engines. The puller threads directly into the nozzle holder, and mechanical screw power does the pulling while a cylindrical guide holds the injector steady.

- Includes gauge to ensure correct injector depth during installation.

No. 7455 – Mack fuel injector nozzle tool.
Wt., 2 lbs., 2 oz.
Caterpillar Fuel Injector Nozzle Puller
We’ve designed this nozzle puller to remove pencil nozzles on Cat engines. The tool applies straight, even pulling power through a bridge assembly and mechanical forcing screw. The job is done quickly — and without damage.
• Works on Caterpillar 1100/3208 diesel engines.
No. 7117 – Caterpillar fuel injector nozzle puller.
Wt., 1 lb., 13 oz.

Fuel Injector Nozzle Puller
We’ve designed this puller to remove the pencil-type fuel injector nozzles used in many agricultural and construction engines. The slide hammer action gives a straight, even pull without damaging components.
• Works on Case, Caterpillar, GM, John Deere, Waukesha, and White diesel engines.
No. 7121 – Fuel injector nozzle puller.
Wt., 2 lbs., 5 oz.

Slide Hammer Puller
The No. 5028 slide hammer is just 8-1/2" long to fit into tight spots, but its 1-1/2 pound hammer gives you a little extra muscle for stubborn jobs. It's perfect for pulling injector nozzles. The shank is threaded 1/2" –20 and has a 5/8" –18 threaded adapter included. Works with many OTC pulling attachments.
No. 5028 – Slide hammer puller.
Wt., 2 lbs.

Ford Fuel Injector Puller Adapter
Designed to work with the No. 5028 slide-hammer puller, this adapter removes injectors from Ford 6.6L and 7.8L diesel engines without damage.
• Slide-hammer threads are 1/2" x 20. Threaded end for injector is 14 mm x 1.5.
No. 218163 – Ford fuel injector puller adapter.
Wt., 3 oz.

Bosch Nozzle Socket
Here’s a helpful multipurpose tool for removing or installing injector nozzles. You use the inner socket to hold the nozzle stationary, and the outer socket to loosen or tighten the nozzle’s gland nut.
• Works on Bosch KDEL 21 mm injector nozzles used in John Deere engines.
No. 7458 – Bosch nozzle socket. Wt., 11 oz.
Fuel Injector Pump Rotating Tool
Maximum fuel economy requires precise injector timing. The tool securely grips the front of the fuel injection pump so you can rotate it while fine-tuning the system.
• Works on Stanadyne rotary fuel pumps found on International's 6.9 and 7.3 liter engines.
No. 7461 – Fuel injection pump rotating tool. Wt., 1 lb., 14 oz.

Diesel Fuel Line Wrenches
Fuel line nuts are often hard to reach, but these unique 3/8" square-drive tools solve that problem. With them, you can loosen or tighten fuel lines at the fuel injector nozzle or fuel injection pump without damaging the nut.
No. 7453A – Fuel line wrench, 2.6" long. For International DT466 and 9L diesel engines. Fits 19 mm fuel line nuts. Wt., 4 oz.
No. 7460 – Fuel line wrench, 2.6" long. For International 6.9L and 7.3L diesel engines. Fits 5/8" hex nut. Wt., 5 oz.

Injector Seat Cleaner
Carbon buildup on an injector seat surface prevents proper seating of new injectors. With this tool, you’ll be able to clear away carbon deposits and avoid seating problems.
• Works on 6.9L and 7.3L Ford/Navistar diesels.
• Thread size is 24 mm x 2-6g.
No. 5023 – Injector seat cleaner. Wt., 10 oz.

Injector Sleeve Set
Here are the ideal tools for removing and installing the injector sleeves of International DT466 engines. The removing tool threads onto a slide hammer with 5/8" - 18 threads to remove sleeves quickly. The installer seats new sleeves equally fast, without damage.
No. 5024 – Injector sleeve set. Wt., 1 lb., 8 oz.

Calibration Fluid
• For use in diesel injection pump testers and injector nozzle testers, such as our Nos. 4200 Nozlrater and No. 4210 Nozlrater II.
• 1 gallon
No. 208629 – Calibration fluid. Wt., 7 lbs.
Nozlrater Diesel Injector Nozzle Tester

Here is the ultimate tool for diagnosing a number of problems that affect diesel fuel injector nozzles. The Nozlrater tester enables you to check for leakage, pop-off pressure, spray pattern, and chatter. This tool will accommodate a wide range of injectors. We also offer adapters so you can troubleshoot nozzles used in popular automotive, agricultural, and construction engines. Nozlrater features a rugged, lightweight reservoir that holds 7/10 of a gallon of fuel. It is equipped with a replaceable 2-micron filter. The large, dual-scale, high-pressure gauge is protected by a guard and includes an indicator needle to record maximum pressure reached. The tester is light enough to be easily carried for field use. Or you can bench-mount it, using the holes in its base.

• Not designed for Cummins or Detroit injectors.

No. 4200 – Nozlrater diesel injector nozzle tester.
5000 PSI maximum pressure capacity.
Wt., 15 lbs., 10 oz.

No. 17169 – Replacement filter.
Wt., 1 oz.

No. 11565 – Gauge.
Wt., 10 oz.

Nozzle Tester Manifold/Adapter Sets

These adapter sets expand our No. 4200 Nozlrater to troubleshoot a wide range of diesel engine injector nozzles.

No. 4202 – Adapters for servicing Audi, GM, Mercedes-Benz, Nissan/Datsun, Toyota, and VW Rabbit diesel engines.
Wt., 2 lbs., 14 oz.

No. 4203 – Manifold/adapter set. Tests Caterpillar high- and low-pressure, capsule-type nozzles, and high-pressure, pencil-type nozzles on 1100 and 3200 series engines. Complete with Nos. 39870 and 206168 adapters, low-pressure gauge (up to 1,000 PSI), cap plug and mounting brackets.
Wt., 6 lbs., 13 oz.

---

**Specifications**

- Overall width: 5-3/4"
- Overall length (includes handle): 26"
- Overall height: 11-1/4"
- Weight (empty): 15 lbs., 10 oz.
- Max. pressure: 5000 PSI (350 bar)
- Max. reservoir capacity: 0.692 gal. of diesel fuel (160 cu. in.)
- Usable reservoir capacity: 0.628 gal. of diesel fuel (145 cu. in.)
- Outlet port: For 3/8" tube
- Gauge: Calibrated 0–5000 PSI (350 bar)
- Gauge connection: 1/4" NPT internal
- Stroke of piston: 1/2" dia. piston 3/4"
- Volume per full stroke: 0.147 cu. in. (2.4 cc)
- Intake filter: 2 micron

---

**No. 4203 optional adapters**

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>209197</td>
<td>Adapter to convert the Nozlrater 4203 for testing other high-pressure, pencil-type nozzles with adapters in the 4201 set.</td>
</tr>
<tr>
<td>207036</td>
<td>Straight adapter for pencil-type nozzles on 3300 and 3406-B.</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>36352</td>
<td>Fuel line assy., 9/16&quot;-18 R.H. thd. with 24° on pipe.</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td></td>
</tr>
<tr>
<td>23617</td>
<td>90° adapter, 9/16&quot;-18 external R.H. thd. (Ermeto 24°) to 9/16&quot;-18 internal R.H. thd. (Ermeto 24°).</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td></td>
</tr>
<tr>
<td>23621</td>
<td>Straight adapter, 9/16&quot;-18 external R.H. thd. (Ermeto 24°) to 1/2&quot;-20 external L.H. thd. (60° seat).</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td></td>
</tr>
<tr>
<td>23622</td>
<td>Adapter nut, 12 X 1.5 mm internal R.H. thd. to 1/2&quot;-20 internal L.H. thd.</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td></td>
</tr>
<tr>
<td>201917</td>
<td>Adapter nut, 9/16&quot;-18 internal R.H. thd. to 1/2&quot;-20 internal L.H. thd.</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td></td>
</tr>
<tr>
<td>23693</td>
<td>Straight adapter, 1/2&quot;-20 external L.H. thd. (Ermeto 24° &amp; 90° seat) to 9/16&quot;-18 external R.H. thd. (Ermeto 24°).</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td></td>
</tr>
</tbody>
</table>
### Nozzle-Tester Adapter Set

This is our universal adapter set for testing injection nozzles on the most popular automotive, agricultural, and construction diesel engines. The set has 17 adapters that connect to our No. 4200 Nozlrater testing unit.

- Includes handy metal storage box.
- 23622—used on 1989–95 Cummins 5.9L, 1983–94 Ford 6.9L and 7.3L.
- 23623—used on 1996–2000 Cummins 5.9L and Navistar 6.6L and 7.8L

### No. 4201 – Nozzle-tester adapter set.
Wt., 4 lbs., 2 oz.

#### No. 4201 Application Chart

<table>
<thead>
<tr>
<th>Adapter No.</th>
<th>Description</th>
<th>Lt. Truck</th>
<th>Nh. Engine</th>
<th>John Deere</th>
<th>Other &amp; Allied</th>
<th>White</th>
<th>Mack</th>
<th>Caterpillar Pencil &amp; Other</th>
<th>Drill</th>
<th>GM Autos</th>
<th>Auto &amp; Mercedes</th>
<th>Mercedes &amp; Magirus Truck</th>
</tr>
</thead>
<tbody>
<tr>
<td>36352</td>
<td>Fuel line assembly, 9/16&quot;–18 R.H. thd. with 24° on pipe.</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>23622</td>
<td>Adapter nut, 12 X 1.5 mm internal R.H. thd. to 1/2&quot;–20 internal L.H. thd.</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>23623</td>
<td>Adapter nut, 14 X 1.5 mm internal R.H. thd. to 1/2&quot;–20 internal L.H. thd.</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>23624</td>
<td>Adapter nut, 18 X 1.5 mm internal R.H. thd. to 1/2&quot;–20 internal L.H. thd.</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>201917</td>
<td>Adapter nut, 9/16&quot;–18 mm internal R.H. thd. to 1/2&quot;–20 internal L.H. thd.</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>23626</td>
<td>Adapter nut, 3/4&quot;–16 mm internal R.H. thd. to 1/2&quot;–20 internal L.H. thd.</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>201912</td>
<td>Adapter nut, 3/4&quot;–16 mm internal R.H. thd. to 1/2&quot;–20 internal L.H. thd.</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>201913</td>
<td>Adapter nut, 9/16&quot;–24 mm internal R.H. thd. to 1/2&quot;–20 internal L.H. thd.</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>23693</td>
<td>Straight adapter, 1/2&quot;–20 external L.H. thd. (Ermeto 24° &amp; 90° seat) to 9/16&quot;–18 mm external R.H. thd. (Ermeto 24°).</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>23692</td>
<td>Straight adapter, 3/8&quot;–24 external R.H. thd. to 9/16&quot;–18 external R.H. thd. (internal Ermeto 24°).</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>23617</td>
<td>90° adapter, 9/16&quot;–18 external R.H. thd. (Ermeto 24°) to 9/16&quot;–18 internal R.H. thd. (Ermeto 24°).</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>23621</td>
<td>Straight adapter, 9/16&quot;–18 external R.H. thd. (Ermeto 24°) to 1/2&quot;–20 external L.H. thd. (60° seat).</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>208370</td>
<td>Banjo adapter, 9/16&quot;–18 external R.H. thd. (24° seat).</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>201916</td>
<td>Adapter, 9/16&quot;–18 mm external R.H. thd. to 9/16&quot;–18 mm internal R.H. thd. ferrule.</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>208369</td>
<td>90° adapter, 9/16&quot;–18 mm external R.H. thd. to 9/16&quot;–18 mm internal R.H. thd.</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>38279</td>
<td>Straight adapter, 14 X 1.5 mm external R.H. thd. (Ermeto 24°) to 9/16&quot;–18 mm external R.H. thd. (internal Ermeto 24°).</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>43468</td>
<td>Straight adapter, 1/2&quot;–20 mm external R.H. thd. (Ermeto 24°) to 9/16&quot;–18 mm external R.H. thd. (internal Ermeto 24°).</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
</tbody>
</table>

#### Additional Accessories Available (not included in 4201 Set)

| 44026       | Straight adapter, 9/16"–18 mm R.H. thd. (Ermeto 24°) to Caterpillar 1100 & 3300 series pencil nozzle. | * | * | * | * | * | * |
| 201920      | Adapter nut, 14 X 1.5 mm external thd. to 9/16"–18 internal R.H. thd. Connects OTC 4200 Nozlrater to other fittings used in the industry. | * | * | * | * | * | * |
| 309277      | Adapter nut, 14 X 1.5 mm internal thread For use only on Mack 4-valve diesels. (E5 & E9) | * | * | * | * | * | * |
Nozlrater® II Injector Nozzle Tester

The No. 4210 tests the small injector nozzles used in smaller car and light-truck engines. It enables you to diagnose leakage, pop-off pressure, spray pattern, and chatter. It has a .68-gallon reservoir and is equipped with a replaceable 2-micron filter. It delivers 1cc of fuel per stroke and won’t flood small nozzles. The unit is light enough to be easily carried for field use, or you can bench-mount it.

- Includes fittings, fuel line, and 5,000 PSI (350 bar) gauge.
- Works on nozzles from Audi, GM, Mercedes-Benz, Nissan/Datsun, Toyota, and VW Rabbit diesels.

No. 4210 – Nozlrater II injector nozzle tester.
Wt. 13 lbs., 15 oz.
No. 17169 – Replacement filter. Wt., 1 oz.
No. 303292 – Gauge. Wt., 6 oz.

Accessory Fittings (for use with, but not included with, No. 4210 Nozlrater® II)

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>303570</td>
<td>Fuel line used on nozzles with 90° horizontal inlets. 1/2¬20 internal R.H. thread to 1/2¬20 external L.H. thread (60° seat).</td>
</tr>
<tr>
<td>23624</td>
<td>Adapter nut, 18 X 1.5 mm internal R.H. thread to 1/2¬20 internal L.H. thread.</td>
</tr>
<tr>
<td>201917</td>
<td>Adapter nut, 9/16¬18 internal R.H. thread to 1/2¬20 L.H. internal thread.</td>
</tr>
<tr>
<td>23626</td>
<td>Adapter nut, 5/8¬18 internal R.H. thread to 1/2¬20 internal L.H. thread.</td>
</tr>
<tr>
<td>201912</td>
<td>Adapter R.H. thd. to 1/2¬20 internal L.H. thread.</td>
</tr>
<tr>
<td>201913</td>
<td>Adapter nut, 9/16¬24 internal R.H. thread to 1/2¬20 internal L.H. thread.</td>
</tr>
<tr>
<td>208384</td>
<td>Used to adapt standard fuel lines to the following adapters.</td>
</tr>
<tr>
<td>23693</td>
<td>Straight adapter, 1/2¬20 external L.H. thread (Ermeto 24° and 90° seat) to 9/16¬18 external R.H. thread (Ermeto 24°).</td>
</tr>
<tr>
<td>201916</td>
<td>Adapter, 9/16¬18 external R.H. thread to 9/16¬18 internal R.H. thread ferrule.</td>
</tr>
<tr>
<td>38279</td>
<td>Straight adapter, 14 X 1.5 mm external R.H. thread (external 60° seat) to 9/16¬18 external R.H. thread (internal Ermeto 24°).</td>
</tr>
<tr>
<td>43468</td>
<td>Straight adapter, 1/2¬20 external R.H. thread (Ermeto 24°) to 9/16¬18 external R.H. thread (internal Ermeto 24°).</td>
</tr>
<tr>
<td>44026</td>
<td>Straight adapter, 9/16¬18 external R.H. thread (Ermeto 24°) to Caterpillar 1100 &amp; 3200 series pencil nozzle.</td>
</tr>
</tbody>
</table>
For more than 75 years, automotive service professionals have depended on the quality and durability of OTC’s heavy-duty tools and shop equipment.

OTC’s full range of tools and equipment has been designed for the professional service technician and represents the highest standard in quality and reliability. Engineered in the U.S.A. and backed by a Lifetime Marathon Warranty, OTC-branded tools and equipment set the standard by which all other tools and equipment are measured.

In addition to offering “the right tool for every job,” OTC also offers “the right line of tools for every budget!”

OTC’s Stinger line of products is designed for the cost-conscious shop owner who still wants the reliability of an OTC product. Since being introduced in 2000, Stinger products have become recognized for their value and performance. Competitively priced, Stinger products carry a two-year limited warranty.

- Power Train Lifts ......................... 250
- Transmission Jacks / Accessories ... 251–253
- Truck and Trailer Lifts ................. 253–254
- Truck Ramps ............................... 255
- Air Under-Axle Jacks .................... 255–256
- Service Jacks & Accessories .......... 257–259
- Wheel Step ................................ 258
- Jack Stands & Underhoist Stands .... 259–260
- Clutch & Flywheel Handler ............ 261
- Brake Drum Dolly ......................... 262
- Truck Wheel Dollies & Levers ......... 262–263
- Blade Buddy®, Fork Lift Jack ......... 264
- Transfer Tanker ......................... 264
- Oil Filter Crushers ....................... 265–266
- Engine Stands & Holding Fixture ... 267–269
- Engine Support Bar ..................... 268
- Car Dollies ................................. 270
- Floor Cranes & Accessories .......... 270–273
- Shop Presses & Accessories .......... 274–281
- Protective Blankets ...................... 280
- Bottle Jacks ................................. 282
- Collision Repair Sets .................... 283
- Pumps, Rams, Accessories .......... 286–300
- Bushing Service Tools ................. 300–305
- Hydraulic Flow Tester .................. 305
- Stinger Transmission Jacks .......... 306–307
- Stinger Under-Axle Jack ............... 308
- Stinger Dual Wheel Dolly .............. 308
- Stinger Service Jacks .................... 309–311
- Stinger ATV Lift & Easy Roller ....... 312
- Stinger Fork Lift Jack .................... 312
- Stinger Drum Dolly ....................... 313
- Stinger Floor Cranes ...................... 314
- Stinger Engine Stands ................... 315
- Stinger Stands and Bottle Jacks ...... 315–317
- Stinger Pumps and Rams ............... 318
- Stinger Collision Repair Sets ......... 319
- Stinger Wheel Step ....................... 319
- ANSI/ASME PALD Summary .......... 320
Power Train Lift – 1,250 lb. Capacity
- For easy removal and installation of engine/transaxle assemblies on FWD vehicles. Also handy for pulling rear ends, leaf springs, and more.
- Your shop air supply is the only thing you need to get the precise control offered by this OTC power train lift.
- Width between wooden support blocks is adjustable from 0–29". Load is secured with a tough nylon strap.
- Covered by OTC Lifetime Marathon Warranty®.

No. 1585 – Power train lift with tilting plate. Wt., 303 lbs.
No. 215324 – Universal transmission adapter for No. 1585. Wt., 33 lbs.
No. 61243 – Replacement reservoir.

2,500 lb. Capacity Power Train Lift
This lift will handle engine and transmission assemblies, gas tanks, drive axle assemblies, engine / transaxle assemblies, electric bus batteries, and more.
- Scissors-type design allows access to all four sides of a component.
- Powered by a quiet, 110V 14 amp. electric/hydraulic pump.
- Smooth, steady lifting and lowering motion controlled by hand-held remote.
- Width between wooden support blocks is adjustable from 0–29". Load is secured with a tough nylon strap.
- Lifting range is from 29" to 80".
- Two patent pending, independent, adjusting screws tilt the table ±15° side-to-side, or fore-and-aft, and ensure maximum stability of the table in any position.
- Larger casters accommodate heavy loads.

No. 1595 – 2,500 lb. capacity power train lift. Wt. 525 lbs.
2,200 lb. Capacity Low-Lift Transmission Jack

- The 8-1/4” low height is perfect for aerodynamic trucks with low ground clearance.
- Special mounting adapter fits popular Eaton® Fuller® RoadRanger® transmissions used on nearly all Class 7 and 8 heavy-duty trucks. Mounting plate angle is adjusted with the turn of a wrench.
- Degree of tilt: 20° back, 15° forward, 12° side-to-side.
- Swiveling pump handle permits ease of operation in restricted working spaces. Fast-acting pump quickly raises lifting arm.

No. 5019 – Low-lift transmission jack. Includes No. 220492 adapter for Eaton® Fuller® RoadRanger® transmissions (also available separately). Wt., 330 lbs.

<table>
<thead>
<tr>
<th>Model</th>
<th>Capacity (tons)</th>
<th>Overall Length</th>
<th>Overall Width</th>
<th>Max. Height</th>
<th>Min. Height</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>5019</td>
<td>1.1</td>
<td>52”</td>
<td>32-1/2”</td>
<td>36-1/2”</td>
<td>8-1/4”</td>
<td>330 lbs.</td>
</tr>
</tbody>
</table>

Air-Assisted 2,000 lb. Capacity High-Lift Transmission Jack...for Trucks and Buses

- For shops with in-ground or above-the-floor vehicle hoists. Covered by OTC Lifetime Marathon Warranty®.
- Low height of 41-1/2” allows transmission to be rolled out from under bus or other vehicle’s frame; a clearance problem with competitors’ jacks.
- Metered, foot-operated air pump allows effortless lifting of the transmission into place, controlling the load precisely during removal and installation.
- Operation is twice as fast as competitive jacks powered by a hand pump, and it costs less!
- A dedicated adapter that fits the popular Allison 500 and 600 series automatic transmissions is included with No. 5078. (Adapter is also available separately as No. 314729.)
- Safety bypass prevents damage caused by a system overload.

No. 5078 – High-lift transmission jack with air-assist. Wt., 254 lbs.

<table>
<thead>
<tr>
<th>Model</th>
<th>Max. Load Capacity</th>
<th>Overall Height (low pos.)</th>
<th>Max. Height</th>
<th>Max. Forward Tilt</th>
<th>Max. Backward Tilt</th>
<th>Max. Side Tilt (either side)</th>
<th>Leg Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>5078</td>
<td>2,000 lbs.</td>
<td>41-1/2”</td>
<td>65”</td>
<td>50°</td>
<td>38°</td>
<td>14°</td>
<td>46”</td>
</tr>
</tbody>
</table>

Accessories for No. 5019 and No. 5078 Jacks


No. 49611 – Eaton® Fuller® RoadRanger® auxiliary housing adapter. Bolts directly to the countershaft bearing caps to provide a stable platform for removing and installing the auxiliary housing. Wt., 11 lbs., 13 oz.

No. 305811 – AdjustaGrip® mounting arm (one only). Each arm has five points of adjustment, permitting its attachment to the normal mounting holes of the component. Wt., 3 lbs., 11 oz.

No. 220492 – Eaton® Fuller® Road Ranger® transmission adapter. Wt., 22 lbs.

No. 528150 – Eaton® “Lightning” adapter. Used with the No. 5019 transmission jack. Wt., 12 lbs.

No. 314729 – Allison 500/600 series automatic transmission adapter used with No. 5078 transmission jack. Wt., 39 lbs., 4 oz.
SHOP EQUIPMENT

Transmission Jacks & Fuel Tank Handler

Air-Assisted 1,000 lb. Capacity
High-Lift Transmission Jack

- Unique foot pedal design gives you complete control over the air-driven first stage to rapidly raise the mounting head to the transmission; second stage is hydraulically actuated — permitting precise operator control during removal and installation.
- Transmission mounting head features four ratcheting brackets that adjust to fit a wide range of transmissions. Four-wheel base with locking swivel casters provides stability and portability.
- Safety bypass prevents damage caused by a system overload.
- Carries OTC Lifetime Marathon Warranty®.

No. 1728 – 1,000 lb. air/hydraulic transmission jack. Wt. 117 lbs.

No. 1728-19 – Replacement air valve. Wt., 2 lbs.

<table>
<thead>
<tr>
<th>Model</th>
<th>Max. Load Capacity</th>
<th>Overall Height (low pos.)</th>
<th>Max. Height</th>
<th>Max. Forward Tilt</th>
<th>Max. Backward Tilt</th>
<th>Max. Side Tilt (either side)</th>
<th>Leg Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>1728</td>
<td>1,000 lbs.</td>
<td>34-1/2&quot;</td>
<td>75&quot;</td>
<td>50°</td>
<td>20°</td>
<td>10°</td>
<td>41&quot;</td>
</tr>
</tbody>
</table>

Transmission Jack Mounting Adapter Set

- Used with No. 1728 transmission jack. Ideal for use on larger standard transmissions with irregularly shaped oil pans.
- Four adjustable arms help stabilize transmissions that have rounded bottom surfaces.

No. 223196 – Mounting adapter set of (4). Wt., 12 lbs., 6 oz.

Fuel Tank Handler

- Provides safe and efficient handling of fuel tanks. Adjustable from 24" to 38" horizontally, and 7" to 11" vertically, to service tanks up to 40 gallons.
- Universal adapter plate fits all OTC, Stinger, and virtually all competitive transmission jacks in the market.
- Patent-pending gearing mechanism ensures equal extension of lift arms to ensure load is properly balanced over jack.
- Four adjustable support risers can be individually adjusted to ensure a perfect fit to any fuel tank design.
- Cross-link polyethylene foam pads protect tank from damage.

No. 1758 – Fuel tank handler. Wt., 32 lbs.

Transmission Jack Adapters

No. 310355 – Reducer adapter. Needed when using adapter Nos. 61968, 61516, and 51085. Wt., 2 lbs.

No. 61968 – Universal transmission adapter. Must be used with reducer adapter No. 310355. Wt., 33 lbs.

No. 51085 – Transfer case adapter for New Process 4WD transfer cases. Must be used with reducer adapter No. 310355 and universal transmission adapter No. 61968. Wt., 8 lbs., 3 oz.

No. 61516 – Transmission jack adapter for GM 125/440 and Ford E4OD transmissions. Must be used with reducer adapter No. 310355 and universal transmission adapter No. 61968. Wt., 15 lbs.

...adapters for earlier model No. 1789 Economy High-Lift Transmission Jack.
1,000 lb. Capacity High-Lift Transmission Jack

• Universal mounting head provides wide fore and aft tilt range, making alignment of transmission easier.

• Foot pump and pedal release mechanism of No. 1791 gives precise control when positioning or removing a transmission.

• Adjustable nylon tie-down strap safely secures load.

• Two-stage hydraulic cylinder design speeds lifting of transmission into position for installing.

• Carries OTC’s Lifetime Marathon Warranty®.

No. 1791 – High-lift transmission jack with foot pump.
Wt., 118 lbs.

No. 1792 – Same features and construction as No. 1791, except it has a hand-operated integral hydraulic pump. Handle is conveniently located for precise control when removing or replacing a transmission.

<table>
<thead>
<tr>
<th>Model</th>
<th>Max. Load Capacity</th>
<th>Overall Height (low pos.)</th>
<th>Max. Height</th>
<th>Max. Forward Tilt</th>
<th>Max. Backward Tilt</th>
<th>Max. Side Tilt (either side)</th>
<th>Leg Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>1791</td>
<td>1,000 lbs.</td>
<td>36&quot;</td>
<td>73-1/2&quot;</td>
<td>50°</td>
<td>38°</td>
<td>14°</td>
<td>40&quot;</td>
</tr>
<tr>
<td>1792</td>
<td>1,000 lbs.</td>
<td>36&quot;</td>
<td>73-1/2&quot;</td>
<td>50°</td>
<td>38°</td>
<td>14°</td>
<td>40&quot;</td>
</tr>
</tbody>
</table>

Mobile Vehicle Lift System

• Mobile, tandem system is air-operated to handle your class 7 and 8 tractor lifting needs. No need to waste time re-blocking and making additional lifts for the clearance you need for under-vehicle service. Roll the system to the vehicle anywhere in the shop or outside on a level surface.

• Unique design provides lift from the tires, not the frame or axle members. Ideal for situations where limited ground clearance or a lack of clear access complicates lifting.

• Single controller operates both sides of the system for a smooth, level lift up to two full feet from the bottom of the tires to the ground. Units can double as support stands when retention pin is inserted.

• Covered by OTC Lifetime Marathon Warranty®.

No. 1520 – Lifting system. **Includes two lifts.** Wt., 1,080 lbs.

<table>
<thead>
<tr>
<th>Specifications</th>
<th>1520</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>10-tons (20,000 lbs.) (pair)</td>
</tr>
<tr>
<td>Air pressure</td>
<td>150 PSI</td>
</tr>
<tr>
<td>Lifting range</td>
<td>0&quot;-24&quot;</td>
</tr>
<tr>
<td>Saddle width</td>
<td>19-1/2&quot;–24&quot; dia. rim sizes</td>
</tr>
<tr>
<td>Height</td>
<td>53-1/4&quot;</td>
</tr>
<tr>
<td>Width</td>
<td>41-1/2&quot;</td>
</tr>
<tr>
<td>Length</td>
<td>39-1/2&quot;</td>
</tr>
</tbody>
</table>
10-Ton Capacity Air Lift Jack
for Trucks and Trailers

- Just roll it under a load, adjust the lifting saddles, connect an air line, and actuate. That’s all it takes to lift the end of a truck or trailer. Lifting range is 13” to 52” with a 14” reach.
- Develops 10 tons of lift at 200 PSI air pressure. An automatic mechanical safety catch engages in five height positions; it must be manually released to lower the load.
- Two large swivel casters and pneumatic tires make it easy to maneuver, even on loose gravel.
- Covered by OTC Marathon Lifetime Warranty®.

No. 1590 – Air lift. Wt., 697 lbs.

<table>
<thead>
<tr>
<th>Specifications</th>
<th>1590</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>10 tons (at 200 PSI air)</td>
</tr>
<tr>
<td>Air pressure</td>
<td>100–200 PSI</td>
</tr>
<tr>
<td>Lifting range</td>
<td>13”–52”</td>
</tr>
<tr>
<td>Saddle width</td>
<td>29”–41-3/4”</td>
</tr>
<tr>
<td>Height</td>
<td>67-1/2”</td>
</tr>
<tr>
<td>Width</td>
<td>41”</td>
</tr>
<tr>
<td>Length</td>
<td>36”</td>
</tr>
<tr>
<td>Distance from lift arm to floor support</td>
<td>12-1/2”</td>
</tr>
</tbody>
</table>

10-Ton Capacity Combination Air Lift Jack and Support Stand

- Commonly used in pairs, these air-operated units are perfect for heavy-duty lifting jobs.
- Remote actuating valve and an 8 ft. air hose give you control from a distance.
- Can be used as a support stand, as well as a lift, thanks to an innovative internal design.
- Wide range of height adjustment and durable, free-rolling wheels make the jack easy to maneuver and position where it’s needed.
- Covered by OTC Lifetime Marathon Warranty®.

No. 1591A – Combination air lift jack and support stand. Wt., 179 lbs.

<table>
<thead>
<tr>
<th>Specifications</th>
<th>1591A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>10 tons (at 200 PSI air)</td>
</tr>
<tr>
<td>Minimum height (unpinned, no extension)</td>
<td>19-1/2”</td>
</tr>
<tr>
<td>Maximum height (pinned in top hole, with extension)</td>
<td>49-1/4”</td>
</tr>
<tr>
<td>Stroke</td>
<td>10-7/8”</td>
</tr>
</tbody>
</table>

Tractor Lift Kits

- When used with an air lift jack, these kits will raise the front end of Freightliner 120 series cab-over and conventional tractors utilizing air dam plastic bumpers and low-profile farings. Applies to 1988 through 2002 class 7 and 8 vehicles.
- Kits include extension tube and frame lifting bracket.

No. 222337 – Tractor lift kit for No. 1591A air lift jack. Wt., 61 lbs.

No. 222338 – Tractor lift kit for No. 1590 air lift jack. Wt., 54 lbs.
20-Ton Truck Ramps
- Long, retractable T-handle enhances mobility.
- Non-skid rubber matting prevents slippage during use.
- Durable, heavy-duty rubber wheels.
- Capacity per pair is 20 tons
- Covered by OTC Lifetime Marathon Warranty®.

No. 5268 – 20-ton truck ramps handle up to 10" tread width. Wt., 230 lbs./pair

No. 5269 – Wide 20-ton truck ramps handle up to 16" tread width. Wt., 312 lbs./pair

<table>
<thead>
<tr>
<th>Model</th>
<th>Frame Height</th>
<th>Frame Width</th>
<th>Frame Length</th>
<th>Wheel Diameter</th>
<th>Handle Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>5268</td>
<td>9-1/4&quot; (23.5 cm)</td>
<td>13-1/2&quot; (34.29 cm)</td>
<td>47&quot; (119.38 cm)</td>
<td>5&quot; (12.7 cm)</td>
<td>33&quot; (83.82 cm)</td>
</tr>
<tr>
<td>5269</td>
<td>9-1/4&quot; (23.5 cm)</td>
<td>18-1/4&quot; (46.36 cm)</td>
<td>47&quot; (119.38 cm)</td>
<td>5&quot; (12.7 cm)</td>
<td>33&quot; (83.82 cm)</td>
</tr>
</tbody>
</table>

25-Ton Capacity Under-Axle Jack and Accessories
- Self-retracting, air-driven ram uses standard shop air.
- Release valve automatically applies air to retract ram.
- Low 8" minimum working height enables jack to get under any truck in the shop.
- Positioning jack is easy, even under vehicles with set-back axles, thanks to a 53" handle that locks into any of three positions, from vertical to horizontal.
- Maximum lift is 21" when used with the 3" lifting extension.
- Covered by the OTC Lifetime Marathon Warranty®. Exceeds ANSI PALD standards.


No. 220972 – Replacement lifting extension for 5012A, 3" long and has a 1" diameter. Wt., 3 lbs., 4 oz.

No. 215009* – In-line oil lubricator. Add to air line to meter precise flow of lubricant to air motor. Has 1/4" NPT fitting. Wt., 8 oz.

<table>
<thead>
<tr>
<th>Specifications</th>
<th>5012A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lifting range, screw retracted</td>
<td>8&quot; min. height</td>
</tr>
<tr>
<td></td>
<td>13-1/8&quot; max. height</td>
</tr>
<tr>
<td>Lifting range, screw extended</td>
<td>12-7/8&quot; min. height</td>
</tr>
<tr>
<td></td>
<td>18&quot; max. height</td>
</tr>
<tr>
<td>Cylinder stroke</td>
<td>5-1/8&quot;</td>
</tr>
<tr>
<td>Extended screw length</td>
<td>4-7/8&quot;</td>
</tr>
<tr>
<td>PSI range</td>
<td>100–200</td>
</tr>
</tbody>
</table>

*Not included, order separately. Prevents harmful contamination caused by moisture in the air line!
SHOP EQUIPMENT

Under-Axle Jacks

3-Stage Under-Axle Jack

Three-stage lift capacity – 71.5-, 38.5-, and 22-tons. Ideal for lifting loaded trailers, buses, and other Class 7 and 8 vehicles.

- Piston and cylinders are made from chromium molybdenum vanadium steel for durability and then liquid nitrated to prevent rust and seizing.
- Features a high load-approach speed.
- Self-retracting, air-driven cylinder eliminates manual lowering.
- 4-position handle: horizontal, 45 degrees, vertical, or collapsed.
- 7-inch minimum height for low clearance vehicles.
- Comes complete with a 3-15/16 in. (100 mm) lifting extension.
- Complies with ASME / PALD test requirements.

No. 5093A – 3-stage under-axle jack. Wt., 165 lbs.

Specifications: No. 5093A

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Handle length</td>
</tr>
<tr>
<td>B</td>
<td>Frame length</td>
</tr>
<tr>
<td>C</td>
<td>Min. height</td>
</tr>
<tr>
<td>D</td>
<td>Lifting height/capacity</td>
</tr>
<tr>
<td>E</td>
<td>Lifting height/capacity</td>
</tr>
<tr>
<td>F</td>
<td>Frame width</td>
</tr>
<tr>
<td>G</td>
<td>Frame width incl. wheels</td>
</tr>
<tr>
<td>H</td>
<td>Standard extensions</td>
</tr>
<tr>
<td>I</td>
<td>Standard extensions</td>
</tr>
</tbody>
</table>

Portable Under-Axle Jack (27.5-/11-Ton)

Ideal for roadside service – ultra low weight and integrated design – no loose tubes, handles, or valves.

- Portable – only 65 lbs.
- User friendly - control valve, steering, and carrying handle integrated into one function.
- Built-in safety valve to prevent overloading.
- Complies with ASME / PALD and CE standards.
- Hard chrome-plated piston rods for long life.
- Manually operated dead man's control.
- Comes with two extensions: 2" and 3-7/8".

No. 5225 – Portable under-axle jack. Wt., 65 lbs.

Specifications: No. 5225

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Handle length</td>
</tr>
<tr>
<td>B</td>
<td>Frame length</td>
</tr>
<tr>
<td>C</td>
<td>Min. height</td>
</tr>
<tr>
<td>D</td>
<td>Lifting height/capacity</td>
</tr>
<tr>
<td>E</td>
<td>Lifting height/capacity</td>
</tr>
<tr>
<td>F</td>
<td>Frame width</td>
</tr>
<tr>
<td>G</td>
<td>Frame width incl. wheels</td>
</tr>
<tr>
<td>H</td>
<td>Standard extensions</td>
</tr>
<tr>
<td>I</td>
<td>Standard extensions</td>
</tr>
</tbody>
</table>

No. 539288 – Transit locking device offers an option for safe storage in service trucks or in the workshop.

No. 539287 – 17-5/8" extension handle.
SHOP EQUIPMENT

Service Jacks

6-Ton and 10-Ton
Air/Hydraulic Service Jacks

- Bring the versatility of air-assist operation to your shop’s lifting tasks. The 10-ton model can also be operated manually, when shop air is not available.
- Huge front wheels mounted in bearings provide trouble-free service life. Rugged steel frame members.
- Rear swivel casters make spotting the jack easy. Spring-loaded handle may be locked in three positions, from horizontal to vertical.

No. 5106 – 6-ton air/hydraulic service jack.
OTC Lifetime Marathon Warranty®. Wt., 294 lbs.

No. 5110 – 10-ton air/hydraulic service jack.
OTC Lifetime Marathon Warranty®. Wt., 410 lbs.

<table>
<thead>
<tr>
<th>Specifications</th>
<th>No. 5106</th>
<th>No. 5110</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>6 ton</td>
<td>10 ton</td>
</tr>
<tr>
<td>Air pressure</td>
<td>90–175 PSI</td>
<td>90–175 PSI</td>
</tr>
<tr>
<td>Lifting range</td>
<td>4-3/4&quot; to 23-1/4&quot;</td>
<td>6-1/2&quot; to 26-5/8&quot;</td>
</tr>
<tr>
<td>Saddle dia.</td>
<td>7&quot;</td>
<td>7-3/8&quot;</td>
</tr>
<tr>
<td>Overall reach</td>
<td>87&quot;</td>
<td>93&quot;</td>
</tr>
<tr>
<td>Frame height</td>
<td>8&quot;</td>
<td>9-3/4&quot;</td>
</tr>
<tr>
<td>Handle length</td>
<td>45&quot;</td>
<td>46&quot;</td>
</tr>
</tbody>
</table>

4-Ton, 10-Ton, and 20-Ton
Hydraulic Service Jacks

- Built of the highest quality heavy gauge steel, these jacks feature precision hydraulics for a lifetime of hard work.
- Low-profile stance and extended height add to versatility. They lift everything from cars to trucks to heavy-duty commercial vehicles. Huge metal wheels and swivel casters roll effortlessly on internal bearings.
- Either the foot pedal or jack handle may be used for pumping action. Counter-balanced, spring-assisted handle has a three-position lock.
- OTC Lifetime Marathon Warranty®.

No. 5007 – 4-ton service jack. Wt., 212 lbs.
No. 5008 – 10-ton service jack. Wt., 356 lbs.
No. 5009 – 20-ton service jack. Wt., 531 lbs.

<table>
<thead>
<tr>
<th>Specifications</th>
<th>No. 5007</th>
<th>No. 5008</th>
<th>No. 5009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>4 ton</td>
<td>10 ton</td>
<td>20 ton</td>
</tr>
<tr>
<td>Lifting range</td>
<td>5-1/2&quot; to 26-1/2&quot;</td>
<td>7&quot; to 25-1/2&quot;</td>
<td>7-1/2&quot; to 26-1/4&quot;</td>
</tr>
<tr>
<td>Saddle</td>
<td>7-7/8&quot; dia.</td>
<td>9&quot; dia.</td>
<td>9-1/4&quot; sq.</td>
</tr>
<tr>
<td>Overall reach</td>
<td>58&quot;</td>
<td>66&quot;</td>
<td>69&quot;</td>
</tr>
<tr>
<td>Frame height</td>
<td>5-1/2&quot;</td>
<td>7&quot;</td>
<td>10-1/4&quot;</td>
</tr>
<tr>
<td>Handle length</td>
<td>40&quot;</td>
<td>40&quot;</td>
<td>40&quot;</td>
</tr>
</tbody>
</table>
2- & 3-Ton Service Jacks
Unique, innovative design featuring...
• Ergonomic handle for user comfort and easy mobility.
• CE marked – ASME/PALD tested.
• Minimum clearance of 3" (2-Ton).
• Tensile and virtually indestructible to usual impact, and bending stress.
• Demonstrate exceptional resistance to wear and tear.
• Will not damage garage floors, do not rust, and are quiet in operation.

No. 5202 – Two-ton service jack. Wt., 71 lbs.
No. 5203 – Three-ton service jack. Wt., 110 lbs.

Polyamide wheels are superior to cast wheels due to their high mechanical strength and durability.

Heavy-Duty Wheel Step
• Tire-mounted wheel step provides quick, easy access to under-hood components.
• Fits heavy-duty vehicles (Class 7/8).
• Installs in seconds; adjusts to fit 22-1/2" to 24" wheel sizes and folds for easy storage.
• 300 pound capacity.
• Non-skid platform surface.

No. 1734A – Heavy-duty wheel step. Wt., 14 lbs.

<table>
<thead>
<tr>
<th>Model</th>
<th>Capacity (tons)</th>
<th>Overall Length</th>
<th>Overall Width</th>
<th>Min. Height</th>
<th>Max. Height</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>5202</td>
<td>2-Ton</td>
<td>34-5/8&quot;</td>
<td>14-3/6&quot;</td>
<td>3&quot;</td>
<td>18-1/4&quot;</td>
<td>71 lbs</td>
</tr>
<tr>
<td>5203</td>
<td>3-Ton</td>
<td>45-3/4&quot;</td>
<td>14-3/6&quot;</td>
<td>5-1/2&quot;</td>
<td>20-3/4&quot;</td>
<td>110 lbs</td>
</tr>
</tbody>
</table>
2-Ton Service Jack
- The strongest jack frame in its class; features flanged edges, both top and bottom, to resist twisting.
- Sealed cylinder prevents contamination of hydraulic system.
- Conforms to ANSI PALD Part 10. Carries OTC Lifetime Marathon Warranty®.

No. 1525 – 2-ton service jack. Wt., 105 lbs.

Nylon Wheel Kit
- Can be used on OTC service jack Nos. 1525, 1717, and 1739.
- Nylon wheels will not damage the epoxy paint coating found on many shop floors.

No. 530097 – Nylon wheel kit. Wt., 4 lbs.

Jack Replacement Saddles
- Can be used on OTC service jack Nos. 1525, 1717, and 1739.
- The stem on this saddle will fit jack lift arms measuring 1" diameter. Bushing included will enable this saddle to also be used on jack lift arms of 1-5/32" diameter.
- Form-fitted saddle top is made of rubber to prevent damage to the finish of the undercarriage.

No. 529219 – Jack replacement saddles. Wt., 5 lbs.

Aluminum Racing Jack
Lifts two tons and weighs only 43 lbs.!
- Five pumps to max. height – 18".
- Low profile – 3-1/2" – makes it perfect for ground hugging, high performance cars.
- Includes side-mounted handles for quick and easy carrying.
- Made from aircraft-grade aluminum.
- Two-piece, 45" long handle snaps together for quick setup.
- Removable, rubber saddle pad protects vehicle and prevents slipping.

No. 1532 – 2-ton aluminum racing jack. Wt. 43 lbs.

Aluminum Jack Stands
- 2-ton capacity. • 10-1/4" min. height.
- 15-1/4" max. height.
- The pair weighs only 11 lbs.!
- Made from aircraft-grade aluminum.

No. 1582 – A pair of 2-ton aluminum jack stands. Wt. 11 lbs.

2-Ton Racing Jack Pack
No. 1533 – 2-ton racing jack pack. Includes 2-ton aluminum racing jack and a pair of 2-ton aluminum jack stands. Wt. 54 lbs.
SHOP EQUIPMENT

Jack Stands

3-Ton and 6-Ton Capacity Ratcheting Jack Stands

- These jack stands feature a formed steel frame for strength and long life, and rolled base edges that resist sinking into soft ground or asphalt.
- Recessed column saddle for acceptance of vehicle panel rail (pinch weld).
- Dual purpose handle serves as carrying handle and column release.
- Investment cast rack bar for long life strength.
- Covered by OTC Lifetime Marathon Warranty®.

No. 1733 – Pair of 3-ton jack stands. Height range of 12-1/2" to 18-1/2". Wt., 20 lbs., 1 oz.

No. 1736 – Pair of 6-ton jack stands. Height range of 15-1/2" to 24-1/2". Wt., 44 lbs., 4 oz.

12-Ton Capacity Low and High Jack Stands

- Spun steel base won’t dig or sink into asphalt or sand. Covered by OTC Lifetime Marathon Warranty®.

No. 1778A – 12-ton low jack stand. One only. Height range of 19" to 29-1/2". Wt., 32 lbs., 8 oz.

No. 1779A – 12-ton high jack stand. One only. Height range of 33-3/4" to 44-1/4". Wt., 40 lbs., 8 oz.

No. 53871 – Extension tube for low jack stand. Wt., 8 lbs., 8 oz.

No. 53872 – Extension tube for high jack stand. Wt., 16 lbs.

Heavy-Duty 20-Ton Capacity Adjustable Support

- Designed for the really big service jobs. Rugged steel construction, and large 15-1/2" square base will satisfy support requirements up to 40,000 lbs.
- Features include 4-point adjustment. Height range is 15-1/4" to 24". Saddle diameter is 6".
- Covered by OTC Lifetime Marathon Warranty®.

No. 1783 – Adjustable support stand. One only. Wt., 54 lbs.

10-Ton Capacity Ratcheting Jack Stands (pair)

- These ratcheting jack stands are highest quality steel and factory tested to ANSI PALD standards.
- The form-fit saddle design and 12" x 14" base ensures stability.
- Height range is 20" to 31-1/2".

No. 1774B – 10-ton capacity ratcheting jack stands (pair) Wt., 82 lbs.

4,000 lb. Capacity Underhoist Tripod Stand

- Ideal for undercar maintenance. An ACME take-up screw precisely positions and secures the support stand in place.
- Height range of 65-3/4" to 74-5/8".

No. 1781A – Tripod stand. Wt., 28 lbs.
**Shop Equipment**

**Clutch Lifts**

**Truck Clutch and Flywheel Handler – Low Clearance**

- Open stance for ease of access to the work. Unique, patented linkage design raises the load from horizontal to vertical as the pump is cycled. This eliminates any lifting of the clutch by the operator.
- Handles 14" and 15-1/2" clutch assemblies weighing up to 250 lbs. Swivel casters provide easy maneuverability. Includes a 2" splined shaft with a 1-1/4" pilot to aid in alignment.
- 360° swivel head.
- Minimum height of 15" allows access below side faring.
- When raised, centerline of clutch will be 38-1/4" off floor.
- Floor space is 32-3/8" long by 24-1/2" at widest point.
- Makes the task an easy, one-person job.

**No. 5018** – Truck clutch handler – low clearance.

Wt., 125 lbs.

**Optional Accessories:**

**No. 516160** – Flywheel handling attachment for use on No. 5018 only. Wt., 5 lbs., 11 oz.

**No. 515686** – Splined shaft, 1-3/4" dia. with 1-1/4" pilot. Wt., 5 lbs., 7 oz.

**No. 516159** – Splined shaft, 1-3/4" dia. with 1" pilot. Needed for clutch service on some Navistar 466 series engines. Wt., 5 lbs., 7 oz.

**No. 506981** – Replacement handle.

---

**Truck Clutch and Flywheel Handler**

- Handles 14" and 15-1/2" clutch assemblies weighing up to 150 lbs. Lifting range of 9" to 37". Swivel casters provide easy maneuverability. Includes a 2" spline shaft with a 1-1/4" pilot to aid in alignment.
- Makes the task an easy, one-person job.
- Covered by OTC Lifetime Marathon Warranty®.

**No. 5015A** – Clutch and flywheel handler.

Wt., 95 lbs., 3 oz.

**No. 218174** – Flywheel handling attachment for use on No. 5015 only. Wt., 5 lbs., 13 oz.

**No. 48625** – Optional splined shaft, 1-3/4" dia. with a 1-1/4" pilot. Wt., 5 lbs., 7 oz.

**No. 440533** – Optional splined shaft, 1-3/4" dia. with a 1" pilot. Needed for clutch service on some Navistar 466 series engines. Wt., 5 lbs., 7 oz.

**No. 314386** – Optional 1-3/4" dia. alignment shaft extension. Used for 2-plate clutch of Navistar 466 series engine. Wt., 2 lbs., 12 oz.

**No. 207050** – Replacement swivel caster wheel.

**No. 310945** – Replacement bottle jack assembly.
Back Buddy™ II
Takes the strain and pain out of wheel-end work, enabling mechanics to easily—and safely—remove, transport, service, and install heavy truck brake drums and hub assemblies.

- Fast-motion ratcheting jack with a 14" vertical lift.
- Floor space dimensions are 24" by 34" and total height is 49".
- Pneumatic rear tires roll smoothly across any shop floor.
- Tilting mechanism to achieve the exact angle necessary for precise reassembly.
- Fold-down handle for open access to the work area.
- Onboard lube tray and toolbox.
- An array of optional adapter sets capable of grabbing almost any truck hub assembly or brake drum, inboard or outboard.

No. 513926 – 10 stud inboard hub & drum assemblies – 335 mm
No. 513927 – 10 hole outboard drums – 3/4" thick back plates
No. 5090 – Back Buddy™ II. Wt., 115 lbs.

**Truck Hub / Brake Drum Adapter Sets (sold separately)**
- No. 513926 – 10 stud inboard hub & drum assemblies – 335 mm
- No. 513927 – 10 hole outboard drums – 3/4" thick back plates
- No. 513925 – 5 & 6 spoke wheels
- No. 514644 – 8 stud inboard hub & drum assemblies
- No. 514645 – 8 hole outboard drums
- No. 514646 – 6 stud inboard hub & drum assemblies
- No. 514647 – 6 hole outboard drums
- No. 514648 – Humvee/Hummer geared hubs

Brake Drum Dolly
- Removes, installs, and transports truck brake drums without physically to lift them.
- Works on all 15" and 16-1/2" drums found on most class 7 and 8 tractor and trailer brake systems.
- 5" height adjustment (13" to 18") aids installation.
- Heavy-gauge steel construction, 10" pneumatic tires, and telescoping, adjustable handle, which adjusts from 37" to 55".
- OTC Lifetime Marathon Warranty®.

No. 5017 – Brake drum dolly. Wt., 52 lbs.

Easy Lever Wheel Dollies
Gives technicians the leverage they need to easily remove or install truck tire-and-wheel assemblies.

- Heavy-duty construction capable of toting 300 pounds.
- Onboard rollers that make stud-hole alignment a snap.
- Spring-loaded kickstand for handy parking.
- Rugged tubular steel construction.
- Two models that, together, can accommodate tire diameters from 24 to 48 inches.

No. 5095A – Easy Lever wheel dolly. With a width of 22", this dolly handles tire diameters of 24" to 36". Wt., 20 lbs.
No. 5096A – Heavy-duty Easy Lever wheel dolly. With a width of 26", this dolly handles tire diameters of 36" to 48". Wt., 20 lbs.
Wheel Mate™
Enables truck technicians to easily remove, install, rotate, and transport single tire-wheel assemblies.
- Internal ratcheting jack with 14 inches of vertical travel — almost a foot higher than conventional dollies.
- U-shaped chassis that provides close, unhindered access to work area.
- A design that accommodates — and securely holds — almost any truck wheel, including wide-based singles, without restraining chains.
- Heavy-duty ball-bearing wheels mounted under ball-bearing swivel casters for maximum maneuverability.
- Foot-operated wheel lock.
- Rugged structural steel tubing construction that meets the demands of the toughest shop environments.

No. 5100 – Wheel Mate™. Wt., 120 lbs.

Truck Dual Wheel Dolly
- Remove, transport, and replace dual wheel and tire assemblies without strain or struggle. 1,500 lb. capacity and 3-1/2" swivel casters provide easy maneuverability.
- No. 1770A hydraulic jack provides 0 to 5" of lift and tilts wheel assembly 4° to prevent damage to wheel seal.
- Floor space is 45" by 41".
- Includes a 6' support chain to hold load in place.

No. 1770A – Truck dual wheel dolly. Wt., 165 lbs.

High-Lift Dual Wheel Dolly
- Effortless air-powered hydraulic lift system for a variety of applications.
- 1,500 lb. capacity.
- 0 to 42" lifting range.
- Six-inch lateral adjustment.
- Tilt adjustment of +15º to -8º ensures easy alignment.
- Features four swivel casters, two locking, for enhanced mobility.

No. 5105 – High-lift dual wheel dolly. Wt., 360 lbs.

Wheel Tipper
This heavy-duty wheel tipper makes handling those hard-to-manage truck tires easy, in or out of the shop. To use the wheel tipper, simply deflate the tire and break the bead, then hook the wheel tipper to the rim of the wheel. With both hands on the wheel tipper, pull it towards you.
- Designed for both aluminum and steel wheels.
- Reduces back strain when tilting deflated wheel assemblies for maintenance – won’t damage wheel rim.

No. 5082 – Wheel tipper. Wt., 7 lbs.
Blade Buddy™
Handles cutting edges on plows and motor graders.

- Replacing the cutting edges of front, wing, or underbody plows is now done with speed and ease. GREATLY reduces the risk of back injury and the workers’ comp claims which can result.
- One person can bring heavy, awkward cutting edges to the plow and raise them into position easily with the built-in, 4-ton capacity hydraulic jack. Handles cutting edges from three to 12 feet in length, weighing as much as 140 lbs.

No. 5083 – Blade Buddy. Wt., 80 lbs.

Specifications:  

<table>
<thead>
<tr>
<th>Specifications</th>
<th>No. 5083</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum cradle height</td>
<td>5-1/4”</td>
</tr>
<tr>
<td>Maximum cradle height</td>
<td>19”</td>
</tr>
<tr>
<td>Floor space</td>
<td>24-1/2” x 41”</td>
</tr>
</tbody>
</table>

No. 223171 – Cutting edge extension adapter. This 60” extension bolts onto the Blade Buddy. Accommodates a 10-ft. or 12-ft. long cutting edge and up to three 4-ft. pieces. Wt., 40 lbs.

4-Ton Capacity Fork Lift Jack

- 8,000 lb. capacity with a low starting height of 2-1/4”.
- Two-position lift pad permits handling of all lift truck configurations with flat or edged surfaces.
- Minimum low lift: 2-1/4”. Maximum high lift: 16”.
- Features include high-quality seals, chrome-plated internal components, and high-strength steel construction.

No. 5014 – 4-ton fork lift jack. Wt., 68 lbs.

Transfer Tanker

- Draining oil from a large displacement engine and getting it to your bulk storage container is a snap with OTC’s Transfer Tanker on your team.
- Used oil is collected in a reservoir, and then rolls smoothly on 4” free-wheeling casters to your storage location.
- Pump moves five gallons a minute through the 8-foot transfer hose to the a 15-gallon reservoir.
- Handle is removable for easy storage.
- Screen attached to reservoir allows assembly to be stored on its side.
- Can also be used for transferring antifreeze.

No. 5077 – Low profile Transfer Tanker is only 7-1/2” from floor to top of reservoir. Comes equipped with an electric pump (No. 528093). Wt., 49 lbs.

No. 5097 – Low profile Transfer Tanker is only 7-1/2” from floor to top of reservoir. Comes equipped with a pneumatic pump (No. 529966). Wt., 49 lbs.
10-Ton Capacity, Air-operated Automotive Oil Filter Crusher

- Crushes up to four automotive filters (3-7/8" dia. x 9" high) at one time, in approximately 20 seconds. Engineered and built for dependable operation. Covered by OTC Lifetime Marathon Warranty®.
- 100% air operation eliminates electrical connections. Generous size of crushing chamber easily accommodates the largest automotive spin-on filters.
- Includes mounting stand. No wall mounting or time consuming installation required.

No. 1821 – Oil filter crusher. Wt., 245 lbs.

Why crush your used oil filters?

- EPA standards for landfills and hazardous waste are becoming tougher and tougher…crushing filters and collecting the used oil helps your firm comply to avoid a fine and a negative image.
- Crushing eliminates the need for costly TCLP testing of wastes, which may otherwise be necessary for disposal in a landfill.
- Reducing the size of the filter helps reduce your trash removal costs. In some locations, crushed filters can be recycled as scrap metal.

25-Ton Capacity Press Accessory Automotive Oil Filter Crusher

- Works with any 25-ton or smaller shop press, removing 95% of the oil from pre-drained filters.
- Crushes most filters to just 1/4 of their original size. Works on most automotive and light truck filters, up to 6" long and 4" in diameter. Covered by OTC Lifetime Marathon Warranty®.


25-Ton Capacity Automotive Oil Filter Crusher

- Crushes most automotive and light truck filters up to 6" long.
- Automatic cycle feature: load the filter, push a button, and walk away. Includes air/hydraulic pump that works on standard shop air. No electrical components needed.
- Removes 95% of the residual oil from a pre-drained filter, and crushes filter to 1/6 of original size. Covered by OTC Lifetime Marathon Warranty®.

No. 1875 – Oil filter crusher with air/hydraulic pump. Wt., 104 lbs.
No. 1876 – Optional floor stand for No. 1875. Wt., 40 lbs.
25-Ton Capacity
Heavy-Duty Oil Filter Crusher

- Handles the big filters (up to 6" dia. and 12-1/2" long) found in trucks, construction equipment, farm implements, etc. May also be used for automotive and light truck filters. It does it all!
- Crushes filters to 1/4 of original size, removing up to 95% of filter’s oil capacity. Automatic cycle feature: load the filter, push a button, and walk away.
- Air/hydraulic pump works on standard shop air (requires 9 CFM at 100 psi). Special valving returns ram automatically at the end of each cycle. No electrical connections needed.
- Built-in floor stand (completely assembled). Whole unit requires just 5 square feet of floor space.
- Covered by OTC Lifetime Marathon Warranty®.

No. 1877 – Oil filter crusher with stand. Wt., 242 lbs.

25-Ton Capacity High-Speed
Heavy-Duty/Automotive Oil Filter Crusher

- Automotive and heavy-duty filters up to 15-1/4" long and 6" diameter are crushed in approximately 8 to 16 seconds. Filters are reduced to 20% of original size, with 95% of residual oil removed.
- Automatic cycle feature lets you load the filter, push a button, and walk away.
- Air/hydraulic pump works on standard shop air (requires 9 CFM at 100 psi). Special valving returns ram automatically at the end of each cycle. No electrical connections needed.
- Built-in floor stand (completely assembled). Whole unit requires just 5 square feet of floor space.
- Covered by OTC Lifetime Marathon Warranty®.

No. 1896 – Oil filter crusher. Shipped assembled. Wt., 363 lbs.

Note: Crushing times are approximate; crushing times may vary depending on air pressure available, size of filter, type of filter, etc.

Oil Filter Crusher Comparison Chart

<table>
<thead>
<tr>
<th>No.</th>
<th>Tonnage</th>
<th>Pump</th>
<th>Crushing Time</th>
<th>% Oil Removed</th>
<th>Filter Size</th>
<th>Stand Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1821</td>
<td>10-ton</td>
<td>Air</td>
<td>20 Seconds</td>
<td>95%</td>
<td>Chamber: 8&quot; x 8&quot; x 9&quot; H.</td>
<td>18\frac{1}{2}&quot; W x 24&quot; D x 63\frac{1}{2}&quot; H</td>
</tr>
<tr>
<td>1875</td>
<td>25-ton</td>
<td>Air/Hyd.</td>
<td>49 Seconds</td>
<td>95%</td>
<td>4\frac{1}{2}&quot; Dia. - 6&quot; Long</td>
<td>18\frac{1}{2}&quot; W x 24&quot; D x 63\frac{1}{2}&quot; H</td>
</tr>
<tr>
<td>1877</td>
<td>25-ton</td>
<td>Air/Hyd.</td>
<td>80 Seconds</td>
<td>95%</td>
<td>6&quot; Dia. - 12\frac{1}{2}&quot; Long</td>
<td>18\frac{1}{2}&quot; W x 30&quot; D x 74\frac{1}{2}&quot; H</td>
</tr>
<tr>
<td>1896</td>
<td>25-ton</td>
<td>Elec./Hyd.</td>
<td>16 Seconds</td>
<td>95%</td>
<td>6&quot; Dia. - 15\frac{1}{4}&quot; Long</td>
<td>27&quot; W x 30&quot; D x 78&quot; H</td>
</tr>
</tbody>
</table>
1,000 lb. Capacity Engine Stand
- A timesaver for passenger car and light truck engine rebuilding or repair. Four adjustable attachment arms make engine mounting fast and easy.
- Engine can be rotated a full 360° with a turn of the handle; a locking pin secures the work in any of eight positions.
- Two rear wheels lock tightly to anchor the stand in place.
- Easy one-bolt disassembly for transport of stand.
- Covered by OTC Lifetime Marathon Warranty®.

No. 1726 – Engine stand. Wt., 96 lbs.
No. 60796 – Drip pan (ABS material) for No. 1726. Wt., 3 lbs., 3 oz.

<table>
<thead>
<tr>
<th>Model</th>
<th>Capacity</th>
<th>Height To Center Line</th>
<th>Wheel Length</th>
<th>Width</th>
<th>Wheel Diameter</th>
<th>Front Wheels</th>
<th>Back Wheels</th>
<th>Handle Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>1726</td>
<td>1,000 lbs.</td>
<td>28°</td>
<td>46&quot;</td>
<td>35-1/2&quot;</td>
<td>3-1/2&quot;</td>
<td>Swivel Caster</td>
<td>Fixed</td>
<td>24&quot;</td>
</tr>
</tbody>
</table>

Bench-Mounted Holding Fixture
Holds and positions small engines, transmissions, rear axle differentials, etc., leaving both hands free for work! With load correctly positioned, any component weighing 250 lbs. or less may be safely rotated 360° with positive stops at 90° increments. Movable arms can be removed when not in use.

No. 7020 – Bench-mounted holding fixture. Wt., 10 lbs., 13 oz.
No. 34607 – Base assembly. Wt., 2 lbs., 8 oz.

2,000 lb. Capacity Heavy-Duty Motor-Rotor® Repair Stand
- Handles a wide variety of engines, transmissions, torque converters, and rear axles from trucks, tractors, and construction machinery.
- Twin-post design, featuring laterally adjustable, 3-position outboard support; provides an extremely stable work-holding unit.
- The 50:1 ratio gearbox allows full rotation of mounted unit with just a turn of the crank and locks in position. Easily maneuvered when loaded.
- Locking rear wheels anchor stand in position.
- Covered by OTC Lifetime Marathon Warranty®.

**Engine Support Bars**

Unique, innovative design featuring...

- Cutting edge, patent pending design self-centers load to prevent tipping on inclined surfaces.
- Smooth sliding legs adjust easily to different vehicle widths.
- PVC-coated support legs don’t scratch vehicle surfaces.
- “Quick Connect” third-point bar (No.1725) makes setup a snap.
- Spinner handle enables lightning fast adjustment.

**No. 1723** – Engine support bar (2-Point), 500 lb. capacity. Wt., 37 lbs.

**No. 1725** – Engine support bar (3-Point), 700 lb. capacity. Wt., 53 lbs

---

**6,000 lb. Capacity Revolver® Diesel Engine Stand...handles the Big Ones!**

- Rotating even a 6,000 lb. diesel engine is easy; a 96:1 ratio worm and gear set does the job. The crank handle can be locked in any position. Covered by OTC Lifetime Marathon Warranty®.
- Integral 12-ton jack raises the work to provide the swing radius needed for clearance. Two front wheels and two rear casters provide mobility.
- Universal adapter assembly permits use with a wide variety of mounting plates for Caterpillar, Cummins, Mack, IH, and Detroit in-line or “V” series diesel engines, as well as Allison transmissions.

**No. 1750A** – Revolver diesel engine stand with No. 205061 universal engine adapter assembly. Wt., 722 lbs.

**No. 1750** – Engine stand without universal engine adapter assembly. Wt., 626 lbs.
Revolver® Engine Adapter Plates

You can order only those plates you need for the engines you work on. The universal adapter assembly is required for mounting all plates to the stand.

No. 205061 – Universal Adapter Plate Assembly. Included with 1750A engine stand. (Must be used with all plates below.) Wt., 110 lbs.

**Detroit Diesel**
- No. 52871* – For coach 6V and 8V series 71 Detroit Diesel. Wt., 55 lbs.
- No. 218504* – For Detroit series 60 in-line 6-cylinder engines. Wt., 38 lbs.

**Detroit Allison**
- No. 208160* – Allison transmission mounting plate for transmission Nos. AT500, MT600, MT 6-speed, VH, VS, and V730. Wt., 26 lbs., 13 oz.
- No. 61373* – Allison transmission adapter plate for transmission series HT-750, CLBT, HT-740D, CR/DR, and HT-750CT. Wt., 42 lbs.

**Cummins**
- No. 61405* – For Cummins L-10 and M11 series engines. Plate attaches to the left side of engine for complete teardown. Wt., 85 lbs.

**Caterpillar**
- No. 218098* – For Caterpillar engines: Nos. 1673, 1674, 1693, 3306, & 3406 in-line 6 cylinder. Wt., 41 lbs.
- No. 217687* – For Caterpillar 3114, 3116, and 3176 in-line 6 cylinder and C12 engines. Wt., 48 lbs., 3 oz.

**Mack**
- No. 205101* – For Mack engines: All 672, 673, 675, & 711 series in-line 6 cyl. Wt., 68 lbs.
- No. 206629* – For Mack engines: V8 1000, E6, & E7 in-line 6 cyl. Wt., 42 lbs., 13 oz.
- No. 528854* – For Mack E3, E5, & Midliner. Wt., 50 lbs.
- No. 528858* – For Mack 685, and 868. Wt., 62 lbs.

**International Harvester**
- No. 206386* – For International Harvester engines: DT-466, DT-360, DT408, and 530 in-line 6 cylinder; DV-550, MV-404, MV-446, V304, V345, V392, 4-152, 4-196, 4-194; 9.0 liter and T444E V8; and Ford 6.9L and 7.3L DIT. Wt., 61 lbs., 13 oz.
- No. 528855* – For IH 900 & 400 Series. Wt., 59 lbs.
- No. 528857* – For IH BC144, BD154, CC200, D155A, D179, D239, D310, D361. Wt., 41 lbs.
- No. 528867* – For International 1313. Wt., 40 lbs.
- No. 528868* – For International VT365. Wt., 30 lbs.

**Ford**
- No. 61681* – For mounting Ford 6.6L/7.8L engines. Wt., 63 lbs.
- No. 206386* – For Ford 7.3 engines. Wt., 60 lbs.

**Volvo**
- No. 528853* – For Volvo TD67 and TD71 engines. Wt., 49 lbs.

**Isuzu**
- No. 528855* – For Isuzu HE1-TC. Wt., 38 lbs.

**John Deere**
- No. 528859* – For JD 400 and 500 engines. Wt., 132 lbs.
- No. 528860* – For JD 300 engines. Wt., 39 lbs.
- No. 528861* – For JD Powertech 4.5L & 6.8L. Wt., 40 lbs.
- No. 528862* – For JD Powertech 2.4L & 3.0L. Wt., 23 lbs.
- No. 528863* – For JD 995 V6, must be used with 528859.

**Case**
- No. 528865* – For Case 148 & 207 series & 251 to 504 series.

*NOTE: Must be used with No. 205061 univ. adpt. plate assembly. Each engine mounting plate includes all the necessary hardware and an engine application chart.
Car Dolly (pair)
- Innovative patent-pending design — clamps directly to pinch welds to prevent slippage during use.
- Independent units eliminate the need to adjust dolly width for different vehicle designs.
- Each unit has an independently adjustable threaded lift saddle with rubber pads to protect the vehicle frame.
- Universal design for use on all vehicle types without additional adapters.
- Provides easy movement of FWD vehicle after removal of drive train.
- The material on the 5" casters is polypropene.
- Each unit has 1,800 lbs. capacity (3,600 lbs., pair) with low height of 9" and high of 14".
- May be used with or without tires on vehicle.

No. 1572 – Car dolly (pair). Wt., 85 lbs.

1,000 lb. Capacity Mobile Floor Crane
- Innovative “auto-lock” positioning system allows you to raise boom by hand into any position without using the hydraulic pump. Covered by OTC Lifetime Marathon Warranty®.
- Hydraulic jacking power provides fast engine removal and replacement; tele-scopic boom extension reaches even the engines in vehicles with protruding energy-absorbing bumpers.

No. 1807 – 1,000 lb. capacity fixed-leg crane with hydraulic lifting jack, grab hook and safety eye hook for lifting chain (chain not included). Wt., 194 lbs.

<table>
<thead>
<tr>
<th>Specifications</th>
<th>1807</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Maximum capacity, boom extended 600 lbs.</td>
</tr>
<tr>
<td>B</td>
<td>Max. capacity, boom in center 750 lbs.</td>
</tr>
<tr>
<td>C</td>
<td>Maximum capacity, boom retracted 1,000 lbs.</td>
</tr>
<tr>
<td>D</td>
<td>Maximum boom height, boom extended 112&quot;</td>
</tr>
<tr>
<td>E</td>
<td>Minimum boom height, boom extended 23&quot;</td>
</tr>
<tr>
<td>F</td>
<td>Effective boom reach (extended) 51-1/2&quot;</td>
</tr>
<tr>
<td>G</td>
<td>Effective boom reach (retracted) 40-1/2&quot;</td>
</tr>
<tr>
<td>H</td>
<td>Overall length 65-1/2&quot;</td>
</tr>
<tr>
<td>J</td>
<td>Overall height, boom horizontal 64-1/2&quot;</td>
</tr>
<tr>
<td>K</td>
<td>Outside leg width (fixed) 32&quot;</td>
</tr>
<tr>
<td>L</td>
<td>Inside leg length (fixed) 54-3/4&quot;</td>
</tr>
<tr>
<td>M</td>
<td>Leg height 5-3/4&quot;</td>
</tr>
</tbody>
</table>
**SHOP EQUIPMENT**

**Floor Cranes**

### 2,200 lb. Capacity Mobile Floor Crane

- The “auto-lock” positioning feature allows you to lift the boom into position without using the hydraulic pump. Telescoping boom provides extra reach (65-1/2") and height (127").
- A full “metric ton” of lifting power at a very attractive price.

**Specifications 1815**

- **A** Maximum capacity, boom extended: 1,300 lbs.
- **B** Maximum capacity, boom in center: 1,700 lbs.
- **C** Maximum capacity, boom retracted: 2,200 lbs.
- **D** Minimum boom height, boom extended: 127".
- **E** Effective boom reach, boom retracted: 21".
- **F** Effective boom reach, boom extended: 65-1/2".
- **G** Effective boom reach, boom retracted: 42-1/2".
- **H** Overall length: 83-1/2".
- **J** Overall height, boom horizontal: 69".
- **K** Outside leg width: 40".
- **L** Inside leg length: 67".
- **M** Leg height: 6"

**No. 1815 – 2,200 lb. capacity fixed-leg crane with hydraulic lifting jack. Lifting chain not included. Wt., 429 lbs.**

---

### 2,200 and 4,400 lb. Capacity

**Heavy-Duty Floor Cranes**

- To conserve valuable floor space, crane folds into a compact package for storage.
- For “close-in” work, leg spread adjusts to clear vehicle’s wheels, telescoping boom extension gives additional reach. Roller bearing mounted wheels and steering dolly provide ease of mobility.
- A two-speed hydraulic hand pump provides fast boom travel; descent of boom is under precise control of operator.

**Specifications 1819, 1820**

- **A** Maximum capacity, boom retracted: 2,200 lbs., 4,400 lbs.
- **B** Maximum capacity, boom extended: 1,650 lbs., 3,300 lbs.
- **C** Overall length: 83" (1819), 89" (1820).
- **D** Overall height, boom horizontal: 80" (1819), 82" (1820).
- **E** Minimum throat width: 24" (1819), 25" (1820).
- **F** Inside leg length: 54" (1819), 57-1/2" (1820).
- **G** Effective boom reach (retracted): 33" (1819), 35-1/2" (1820).
- **H** Effective boom reach (extended): 48" (1819), 50-1/2" (1820).
- **J** Inside leg width (3-position): 48" (1819), 52-1/2" (1820).
- **K** Leg height: 8" (1819), 9-1/2" (1820).
- **L** Dolly wheel diameter: 5" (1819), 5" (1820).
- **M** Wheel diameter: 6" (1819), 8" (1820).
- **N** Floor space folded: 1819: 27" x 36", 1820: 31" x 42".

**No. 1819 – 2,200 lb. capacity crane. Has hydraulic hand pump and 16-7/8" lifting chain. Wt., 454 lbs.**

**No. 1820 – 4,400 lb. capacity crane. Has hydraulic hand pump and 18-3/8" lifting chain. Wt., 618 lbs.**
SHOP EQUIPMENT

Floor Cranes

6,000 lb. Capacity
Heavy-Duty Mobile Floor Cranes

- Three boom positions give capacities of 4,000, 5,000, and 6,000 lbs. to handle the biggest engines, and often the transmission right along with the engine! Usable reach is almost 92".
- Boom swivels for vertical and lateral positioning; legs extend to straddle the biggest tires.

No. 1814 – 6,000 lb. capacity crane with electric/ hydraulic pump (115V) with remote motor control. Wt., 1,250 lbs.

No. 1813 – 6,000 lb. capacity crane with two-speed hydraulic hand pump. Wt., 1,215 lbs.

<table>
<thead>
<tr>
<th>Boom Capacity (lbs.) Description</th>
<th>Extended 4,000</th>
<th>Centered 5,000</th>
<th>Retracted 6,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Maximum boom height</td>
<td>161-7/8&quot;</td>
<td>150-11/16&quot;</td>
<td>139-1/2&quot;</td>
</tr>
<tr>
<td>B Minimum boom height</td>
<td>87&quot;</td>
<td>87&quot;</td>
<td>87&quot;</td>
</tr>
<tr>
<td>C Overall height (boom horizontal)</td>
<td>129-1/8&quot;</td>
<td>113-7/8&quot;</td>
<td>98-1/4&quot;</td>
</tr>
<tr>
<td>D Inside leg length</td>
<td>91-11/16&quot;</td>
<td>76-1/8&quot;</td>
<td>43-1/4&quot;</td>
</tr>
<tr>
<td>E Effective boom horizontal reach</td>
<td>94-1/4&quot;</td>
<td>78-3/4&quot;</td>
<td>63-1/4&quot;</td>
</tr>
<tr>
<td>F Outside leg width**</td>
<td>59-3/4&quot;</td>
<td>57-3/4&quot;</td>
<td>55-3/4&quot;</td>
</tr>
<tr>
<td>G Inside leg width</td>
<td>36&quot;</td>
<td>31&quot;</td>
<td>26&quot;</td>
</tr>
<tr>
<td>H Leg height</td>
<td>9-1/16&quot;</td>
<td>9-1/16&quot;</td>
<td>9-1/16&quot;</td>
</tr>
<tr>
<td>J Wheel diameter</td>
<td>5&quot;</td>
<td>5&quot;</td>
<td>5&quot;</td>
</tr>
<tr>
<td>K Dolly wheel diameter</td>
<td>5&quot;</td>
<td>5&quot;</td>
<td>5&quot;</td>
</tr>
</tbody>
</table>

* Legs in storage position: 80-7/8"** Legs in storage position: 53-1/2"*

Load-Rotor® Positioning Slings

- Use with a floor crane. Engine, transmission, or other component is tilted or leveled by turning sling’s 5/8” hex drive end with a common speed handle and socket.
- Makes engine removal and installation a snap, even in close quarters.
- For use with floor cranes only; not to be used with overhead hoists or lifts.

No. 1805 – 2,000 lb. capacity Load-Rotor®. Has 56-1/2" long chain (1/4") and hook assembly with forged swiveling hook on each end. Pair of special lifting brackets included. Wt., 11 lbs., 13 oz.

No. 1806 – 4,000 lb. capacity Load-Rotor®. Has 65-3/4" long chain (5/16") and hook assembly with forged hook on each end. Pair of special lifting brackets included. Wt., 27 lbs.

Lifting Brackets

- Attach directly to component for easy lifting; will take 1/2” diameter bolts.

No. 7100 – Pair of lifting brackets, 4,000 lb. capacity. Wt., 3 lbs., 3 oz.
Load-Rotor® Positioning Sling

- Carriage on main support beam moved by turning lead screw manually or with air-powered tools. This permits fine adjustment of the tilt angle of component being lifted.
- Spreader bar adjustment secured with locking bolts.
- OTC Lifetime Marathon Warranty®.

No. 1812 – 6,000 lb. capacity Load-Rotor® positioning sling. Distance between hooks is 30” to 46”. Chain grade is 80. Wt., 69 lbs.

No. 1822 – 10,000 lb. capacity Load-Rotor® positioning sling. Distance between hooks is 36” to 56”. Chain grade is 80. Wt., 117 lbs.

Lifting Chains for Floor Cranes

- For use with floor cranes only; not recommended for overhead hoists or lifts.

No. 38839 – 1/4” steel chain, 56-1/2” long, 2,000 lb. capacity. Has safety hook on both ends. Use with No. 205049. Wt., 4 lbs., 10 oz.

No. 38840 – 5/16” steel chain, 65-3/4” long, 4,000 lb. capacity. Has safety hook on both ends. Use with No. 205050. Wt., 5 lbs.

No. 31609 – 1/4” steel chain, 56-1/2” long, 2,000 lb. capacity. With swiveling safety hooks on both ends. Use with No. 1805. Wt., 3 lbs.

No. 31800 – 5/16” steel chain, 65-3/4” long, 4,000 lb. capacity. With swiveling safety hooks on both ends. Use with No. 1806. Wt., 5 lbs.

Alloy Chains for Overhead Lifts and Hoists

No. 302249 – 3/8” alloy chain, 28-3/8” long, 6,000 lb. capacity. With safety hook on one end. Wt., 7 lbs.

No. 302941 – 5/16” alloy chain, 26-13/16” long, 4,000 lb. capacity. With safety hook on one end. Use on No. 1812. Wt., 6 lbs.

No. 533473 – 9/32” grade 80 alloy chain, 60” long, 3,000 lb. capacity. With safety hook on both ends. Wt., 8 lbs., 10 oz.

No. 533474 – 5/16” grade 80 alloy chain, 71” long, 5,000 lb. capacity. With safety hook on both ends. Wt., 14 lbs.

Heavy-Duty Adjustable Slings

- For lifting and positioning engines, transmissions, etc. Each chain can be adjusted independently for length; plate design enables chain to be “short-hooked” for correct tilt.

No. 205049 – 2,000 lb. capacity sling with 1/4” chain, 56” long. Wt., 7 lbs., 3 oz.

No. 205050 – 4,000 lb. capacity sling with 5/16” chain, 65” long. Wt., 10 lbs., 10 oz.

No. 38841 – Plate only, use with any 1/4” or 5/16” alloy steel chain. Wt., 2 lbs., 2 oz.
10-Ton Capacity Bench Press

- Ideal for hundreds of small pressing jobs, including the repair of electric motors and armatures, and the removal and installation of gears, bearings, and other press-fit parts.
- Provides a 15-3/8" x 22" working area. Hydraulic power is supplied by a No. 4004 two-speed OTC hydraulic hand pump, complete with hose and fittings.
- OTC 10-ton single-acting hydraulic ram has a 10-1/8" stroke.
- Press bench space is 7-1/4" x 25-1/4"; overall height is 33-3/4".

No. 1884 – Bench press.
Wt., 91 lbs.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>H</th>
<th>Bench Space</th>
</tr>
</thead>
</table>

10-Ton Capacity Press

- Adjustable press bed height of 6" to 36" with a width between the uprights of 22" to handle bulky pressing jobs.
- No. 4004 two-speed hydraulic hand pump, complete with hose and fittings.
- OTC 10-ton hydraulic ram has a 10-1/8" stroke.
- Press floor space is 28" x 25-1/4".

No. 1887 – Floor press.
Wt., 171 lbs.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>Floor Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>68-1/2&quot;</td>
<td>28&quot;</td>
<td>18&quot;</td>
<td>11&quot;</td>
<td>6&quot;–36&quot;</td>
<td>6&quot;</td>
<td>22&quot;</td>
<td>4&quot;</td>
<td>28&quot; x 25-1/4&quot;</td>
</tr>
</tbody>
</table>

10-Ton Capacity Press Accessory Set

- Adapters and accessories are attached to the ram’s forcing screw or used on the press bed to support the work.
- Set includes:
  (A ) No. 201923 ram pushing adapter with a 1/2" dia. shank.
  (B) No. 201454 ram pushing adapter with a 3/4" dia. shank.
  (C) No. 34806 V-pushing adapter.
  (D) No. 1890 V-blocks (pair).

16-1/2 Ton Capacity Bench Press

This innovative press integrates all the hydraulic elements within the chassis. The compact and functional design saves workshop space and ensures protection during transport.

- Workbench adjustable for height.
- Automatic spring return piston.
- Pressure gauge with damper to extend its working life—positioned at eye level for easy reading.
- Includes set of two V-blocks and legs with bolt-holes for fixing to bench.

No. 5230 – 16-1/2 ton capacity bench press.
Wt., 170 lbs.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>J</th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td>37&quot;</td>
<td>16-1/2&quot;</td>
<td>23-7/8&quot;</td>
<td>9-1/2&quot;</td>
<td>5-7/8&quot;—17-5/8&quot;</td>
<td>6&quot;</td>
<td>19-5/8&quot;</td>
<td>4-3/4&quot;</td>
<td>5-1/2&quot;</td>
<td>3&quot;</td>
</tr>
</tbody>
</table>

17-1/2 Ton Capacity Heavy-Duty “Open Throat” Press

- Ram head moves side to side for off-center pressing; ram-to-work distance is adjusted by a forcing screw that is extended or retracted by a speed crank.
- “Open-throat” frame extensions make handling of bulky jobs possible outside of the press frame.
- This press does not have a lifting mechanism. If a lifting mechanism is needed, order No. 211407.
- Covered by OTC Lifetime Marathon Warranty®.


No. 211407 – Lifting mechanism.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>J</th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td>64&quot;</td>
<td>28&quot;</td>
<td>28&quot;</td>
<td>17-7/8&quot;</td>
<td>34-1/8&quot;</td>
<td>3-1/8&quot;</td>
<td>20&quot;</td>
<td>4-1/4&quot;</td>
<td>5&quot;</td>
<td>4-1/8&quot;</td>
</tr>
</tbody>
</table>

17-1/2 Ton Press Accessory Set

- Adapters and accessories attach to ram’s forcing screw or are used on press bed to support work.
- Set includes
  (A) No. 1123 bearing pulling attachment.
  (B) No. 201923 ram pushing adapter with a 1/2" dia. shank.
  (C) No. 201454 ram pushing adapter with a 3/4" dia. shank.
  (D) No. 34806 V-pushing adapter.
  (E) No. 1890 V-blocks (pair).


17-1/2 Ton Press Accessory Sets

No. 8075 – Step plate adapter set. Wt., 5 lbs., 5 oz.
No. 8076 – Step plate adapter set. Wt., 10 lbs., 6 oz.
No. 1888 – V-throat press plate. Dimensions are 9-1/4" x 10" and 3/4" thick. Wt., 17 lbs.
See page 212 for sizes of step plate adapters in sets.
Hydraulic Bottle Jack Presses

- All bottle jacks have an overload valve built into them.

No. 1823 – 12-ton capacity press with a Stinger bottle jack. Wt., 221 lbs.

No. 1823A – 12-ton capacity press with an OTC bottle jack. Wt., 221 lbs.


Press Specifications

<table>
<thead>
<tr>
<th>OTC No.</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>J</th>
</tr>
</thead>
<tbody>
<tr>
<td>1823</td>
<td>72&quot;</td>
<td>2&quot; – 42&quot;</td>
<td>28-3/4&quot;</td>
<td>28&quot;</td>
<td>4-3/8&quot;</td>
</tr>
<tr>
<td>1823A</td>
<td>72&quot;</td>
<td>2&quot; – 37&quot;</td>
<td>37-1/2&quot;</td>
<td>28&quot;</td>
<td>7-3/8&quot;</td>
</tr>
</tbody>
</table>

Bottle Jack Specifications

<table>
<thead>
<tr>
<th>OTC No.</th>
<th>No. of Pump Strokes to Extend Piston 1 inch</th>
<th>Height with Screw Ext.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1823</td>
<td>17</td>
<td>18-7/8&quot;</td>
</tr>
<tr>
<td>1823A</td>
<td>19</td>
<td>19&quot;</td>
</tr>
<tr>
<td>1824</td>
<td>33</td>
<td>20-3/16&quot;</td>
</tr>
<tr>
<td>1824A</td>
<td>30</td>
<td>20-1/2&quot;</td>
</tr>
</tbody>
</table>

Accessory Set for Bottle Jack Presses

No. 1879 – Accessory set for 12-ton and 20-ton bottle jack presses. Includes (A) No. 1890 9" long V-block set; (B) No. 215703 1-1/2" dia. V-pushing adapter; (C) No. 309119 3/4" dia. pushing adapter; (D) No. 309120 1" dia. pushing adapter. Wt., 33 lbs., 8 oz.

25-Ton Capacity Shop Presses

- Tough, economical press is ideal for pressing rear axle bearings, piston pins, and much more.

- Large 30" x 46" work area under ram makes positioning of even bulky work easy. Press bed is easily raised and lowered by a dependable lifting mechanism. Choice of model with hand- or air-driven hydraulic pump.

No. 1833 – 25-ton press, complete with No. 4002 hydraulic hand pump; No. 9652 gauge; No. 24815 tee; No. 9767 hose (1/4" ID x 6'); hydraulic ram No. 51426 with 6-1/4" stroke; and 42733-WH2 pump mounting bracket. Wt., 464 lbs.

No. 1834 – 25-ton press, complete with air-driven No. 4020 hydraulic pump; No. 9652 gauge; No. 24815 tee; No. 9768 hose (1/4" ID x 8') and hydraulic ram with 6-1/4" stroke. Wt., 440 lbs.

<table>
<thead>
<tr>
<th>OTC No.</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>J</th>
<th>Floor Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>1833</td>
<td>69-1/2&quot;</td>
<td>40-1/2&quot;</td>
<td>28&quot;</td>
<td>5-3/4&quot; – 46&quot;</td>
<td>4&quot;</td>
<td>30&quot;</td>
<td>5-1/2&quot;</td>
<td>6-1/2</td>
<td>41-1/2 x 28&quot;</td>
</tr>
<tr>
<td>1834</td>
<td>69-1/2&quot;</td>
<td>40-1/2&quot;</td>
<td>28&quot;</td>
<td>5-3/4&quot; – 46&quot;</td>
<td>4&quot;</td>
<td>30&quot;</td>
<td>5-1/2&quot;</td>
<td>6-1/2</td>
<td>41-1/2 x 28&quot;</td>
</tr>
</tbody>
</table>
25-Ton Capacity Heavy-Duty
“Open Throat” Press

• “Open throat” feature enables ram to be positioned outside of press frame for fast axle bearing removal and installation, as well as other tasks. Rugged press is covered by OTC Lifetime Marathon Warranty®.

• Press bed is raised or lowered with a hand crank, and a spring-return hydraulic ram is laterally adjustable for off-center work at full capacity.

No. 1826 – 25-ton press. Includes No. 4016 hydraulic hand pump; No. 52025 hydraulic ram with 14" stroke; No. 9652 gauge; No. 303563 hose (3/8" ID x 8’); and pump mounting bracket. Wt., 646 lbs.

No. 1826A – 25-ton press. Includes No. 4020 air/hydraulic hand pump; equipped the same as 1826.

---

Accessory Set for 25-Ton Capacity Presses

• Accessories attach to ram’s forcing screw or support work on the press bed.

• Set includes
  (A) No. 1124 bearing pulling attachment;
  (B) No. 34510 ram pushing adapter with 3/4" dia. shank;
  (C) No. 34511 ram pushing adapter with 1" dia. shank;
  (D) No. 34807 V-pushing adapter;
  (E) No. 1891 11-1/2" long V-blocks (pr.);
  (F) No. 28229 ram forcing cap;
  (G) No. 38953 threaded adapter.

No. 1881 – Press accessory set. Wt., 43 lbs.

---

Accessories for 25-Ton Capacity Presses


No. 8076 – Step plate adapter set. Set includes No. 8068, No. 8069, No. 8070, No. 8071, No. 8072, and No. 8073. Wt., 10 lbs., 6 oz.,

No. 1889 – V-throat press plate. Dimensions are 11-5/8” x 14-1/2” and 3/4” thick. Wt., 50 lbs.
55-Ton Capacity Economy Shop Presses

- Durable steel frame resists buckling and bending. Covered by OTC Lifetime Marathon Warranty®.
- Hand-operated winch and cable mechanism adjusts lower press bolster.

No. 1850 – 55-ton press. Includes No. 52457 hydraulic ram with 6-1/4” stroke; No. 4016 hydraulic hand pump; No. 9651 gauge; No. 9767 hose (1/4” ID x 6’); and pump mounting bracket. Wt., 725 lbs.

No. 1851 – Same as No. 1850 except with No. 4020 air/hydraulic pump. Wt., 698 lbs.

55-Ton Capacity Heavy-Duty Presses

- Side-to-side positioning of ram allows full capacity pressing along entire bolster length without buckling or bending. Covered by OTC Lifetime Marathon Warranty®.
- Hydraulic ram features 13” of stroke. Choice of hydraulic power units.

No. 1845 – 55-ton press. Includes single-acting ram No. 52380 with 13” stroke; No. 4044 electric/hydraulic pump; No. 9651 gauge; No. 303563 hose (3/8” ID x 8’); and pump mounting bracket. Wt., 990 lbs.

No. 1846A – Same as No. 1845 except has No. 4016 hydraulic hand pump and single-acting ram No. 65458 with 10-1/8” stroke. Wt., 911 lbs.

No. 1847 – Same as No. 1845 except has a No. 4020 air/hydraulic pump. Wt., 893 lbs.

No. 1872 – 55-ton press. Includes double-acting ram No. 51682 with 13” stroke; No. 4046 electric/hydraulic pump; No. 9651 gauge; No. 36887 hoses; and pump mounting bracket. Wt., 961 lbs.

Accessories for 55-Ton Capacity Presses


No. 8076 – Step plate adapter set. Set includes No. 8068, No. 8069, No. 8070, No. 8071, No. 8072, and No. 8073. Wt., 10 lbs., 6 oz.
Accessory Set for 55-Ton Capacity Presses

- Accessories attach to ram's forcing screw or support work on press bed.
- Set Includes
  (A) No. 1126 bearing pulling attachment;
  (B) No. 34755 ram pushing adapter with 1" dia. shank;
  (C) No. 34756 ram pushing adapter with 1-1/4" dia. shank;
  (D) No. 34808 V-pushing adapter;
  (E) No. 1892 14" long V-blocks (pr.);
  (F) No. 28230 ram forcing cap;
  (G) No. 37368 threaded adapter – for single acting only.
  (H) No. 38954 For 1872 double acting press.

No. 1882 – Press accessory set. Wt., 94 lbs.

100-Ton Capacity Economy Shop Press

- Large 35" opening between press uprights allows easy handling of large gears, shafts, sprockets, and other components serviced in truck, construction, and agricultural equipment shops. Covered by OTC Lifetime Marathon Warranty®.
- Hand-operated winch and cable mechanism gives operator precise control in adjustment of lower press bolster to any height.

No. 1854 – 100-ton press. Includes hydraulic ram No. 52434 with 10" stroke; No. 4044 electric/hydraulic pump; No. 9651 gauge; No. 9768 hose (1/4" ID x 8'); and pump mounting bracket. Wt., 1,528 lbs.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>J</th>
<th>Floor Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>86-5/8&quot;</td>
<td>47-1/2&quot;</td>
<td>28&quot;</td>
<td>17-1/2&quot;</td>
<td>9-5/8&quot;</td>
<td>49-5/8&quot;</td>
<td>8&quot;</td>
<td>5-3/8&quot;</td>
<td>10'</td>
<td>55-1/2&quot; x 28&quot;</td>
</tr>
</tbody>
</table>

Accessories for 100-Ton Capacity Presses

No. 50392 – Straightening fixtures (pr.). Wt., 192 lbs.
No. 1893 – V-blocks, 14" long (pr.). Wt., 58 lbs.
No. 21332 – Pushing adapter (must be used with reducing adapter). Wt., 4 lbs., 7 oz.
No. 36469 – V-pushing adapter (must be used with reducing adapter). Wt., 5 lbs., 9 oz.
No. 43563 – Reducing adapter (for double-acting ram). Wt., 8 lbs., 8 oz.
No. 43562 – Reducing adapter (for single-acting ram, not pictured). Wt., 3 lbs.
100- and 150-Ton Capacity Heavy-Duty
Shop Presses

- Wide open uprights allow easy positioning of bars and shafts for straightening or bending.
- Upper bolster can be lowered for convenient positioning during repetitive jobs.
- Ram head glides smoothly on rollers for easy horizontal adjustments; rugged press frame will withstand a full capacity load with the ram head in any position across the upper bolster.
- Covered by OTC Lifetime Marathon Warranty®.

No. 1857 – 100-ton press. Includes single-acting No. 52434 ram with 10” stroke; No. 4008 hydraulic hand pump; No. 9651 gauge; No. 9781 hose (3/8” ID x 10’); and pump mounting bracket. Wt., 1,740 lbs.

No. 1858 – Same as No. 1857, except has double-acting No. 51683 ram with 13” stroke; No. 61217 3-phase, 220V, 3450 rpm electric/hydraulic pump; and two No. 9769 hoses. Wt., 1,822 lbs.

No. 1858-1P – Same as No. 1858, except it has a No. 4064 2-stage, 1-phase hydraulic pump.

Accessories for 150-Ton Capacity
Shop Presses

No. 207395 – V-blocks, 14” long, (pr.). Wt., 134 lbs.

No. 44458 – Pushing adapter with 2-1/4” dia. shank. Wt., 23 lbs., 3 oz.

Protective Blankets

Think of them as “security blankets.” They wrap around pulling, pressing, and other high-force jobs to protect you and your employees from work-related injuries as much as possible. They’re made of high tensile, tear resistant ballistic nylon – similar to military flak jackets – that, when tested, withstood the shattering of a neck-down grade 8 bolt without any visible damage.

NOTE: Always reduce the force from the workpiece prior to removing the blanket. Protective blankets may afford protection from injuries to users and others should part breakage occur. Because of the variety of situations that require guarding, it is the user’s responsibility to determine the best method of protection.

No. 1230PB – Protective blanket. 12” x 30”. Wt., 2 lbs., 3 oz.

No. 2036PB – Protective blanket. 20” x 36”. Wt., 3 lbs.

No. 2860PB – Protective blanket. 28” x 60”. Wt., 7 lbs.
100- and 150-Ton Capacity
Roll-Bed® Shop Presses

- Lower press bed rolls out smoothly for easy loading and unloading of heavy work using an overhead lifting device.
- Movable ram head and remote pump control, combined with large, open work area, allow operator to easily view work from any side during the pressing operation.
- Heavy-duty, cold-rolled steel construction ensures durability to withstand loads of full-rated capacity.
- Covered by OTC Lifetime Marathon Warranty®.

No. 1865 – 100-ton press. Includes double-acting ram with 13" stroke; No. 61217 three-phase, 220V, 3450 rpm electric/hydraulic pump; No. 9651 gauge; No. 9669 hoses; and pump mounting bracket. Wt., 2,910 lbs.

No. 1865P – Same as No. 1865 except with No. 4064 Vanguard 2-stage hydraulic pump with 3-position/4-way valve and 6 ft. remote motor control (115V). Wt., 2,910 lbs.

No. 1866 – 150-ton press. Includes double-acting ram with 13" stroke; No. 61217 3-phase, 220V, 3450 rpm electric/hydraulic pump; No. 9651 gauge; No. 9770 hoses; and pump mounting bracket. Wt., 4,338 lbs.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F*</th>
<th>G</th>
<th>H</th>
<th>J</th>
<th>K</th>
<th>Floor Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>112-5/8&quot;</td>
<td>64-1/4&quot;</td>
<td>50-1/2&quot;</td>
<td>27&quot;</td>
<td>12&quot;-60&quot;</td>
<td>14-1/2-38&quot;</td>
<td>3&quot;</td>
<td>4-27-1/2</td>
<td>8&quot;</td>
<td>36-1/2&quot;</td>
<td>36&quot; x 78-1/4&quot;</td>
</tr>
</tbody>
</table>

*Lateral head movement. Frame shipped assembled.

**IMPORTANT SAFETY INFORMATION**

Certain press applications may require guarding. Because of the multitude of possible press uses, it is impossible to design a guard that will meet every customer need. The end user must provide their own guarding where the situations dictate.

SPX/OTC has protective blankets available which may afford protection from injury to users and others should part breakage occur. SPX/OTC recommends the use of these blankets for all pushing, pulling, pressing, and lifting applications. See page 280 for additional information.
**Bottle Jacks...All-American Weight Lifters**

- OTC’s industrial grade bottle jacks carry OTC Lifetime Marathon Warranty®.
- Pressure cylinder, oil reservoir, pump housing, and base are welded as one unit to resist oil leakage. Jacks can be used in vertical or horizontal positions.
- Unique valve seat design provides unequaled reliability.

<table>
<thead>
<tr>
<th>Cap. (tons)</th>
<th>Stroke</th>
<th>OTC No.</th>
<th>Retracted Height Min.</th>
<th>Length of Screw Extension</th>
<th>Height with Screw Extended</th>
<th>Pump Strokes to Extend Piston One Inch</th>
<th>Saddle Dia.</th>
<th>Base Size</th>
<th>Carry Handle</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>3-1/2&quot;</td>
<td>5112*</td>
<td>6-3/4&quot;</td>
<td>2-1/4</td>
<td>12-1/2&quot;</td>
<td>19</td>
<td>1-3/4&quot;</td>
<td>5-1/2 x 6&quot;</td>
<td>Yes</td>
<td>18 lbs.</td>
</tr>
<tr>
<td>12</td>
<td>6-1/4&quot;</td>
<td>5212</td>
<td>9-1/2&quot;</td>
<td>3-1/4</td>
<td>19&quot;</td>
<td>19</td>
<td>1-3/4&quot;</td>
<td>5-1/2 x 6&quot;</td>
<td>Yes</td>
<td>22 lbs.</td>
</tr>
<tr>
<td>20</td>
<td>5&quot;</td>
<td>5120*</td>
<td>8-1/4&quot;</td>
<td>2-1/4</td>
<td>15-1/2&quot;</td>
<td>30</td>
<td>2-1/4&quot;</td>
<td>6 x 6-3/8&quot;</td>
<td>Yes</td>
<td>26 lbs.</td>
</tr>
<tr>
<td>20</td>
<td>7-1/2&quot;</td>
<td>5220</td>
<td>10-3/4&quot;</td>
<td>2-1/4</td>
<td>20-1/2&quot;</td>
<td>30</td>
<td>2-1/4&quot;</td>
<td>6 x 6-3/8&quot;</td>
<td>Yes</td>
<td>31 lbs.</td>
</tr>
</tbody>
</table>

*Low profile models

**High Performance Bottle Jacks**

- Base, pressure cylinder, and oil reservoir form one internal part, and provide more strength and safety to these jacks.
- Piston never contacts cylinder, so pressure will be absorbed and not damage jack if vehicle tilts.
- The No. 5213T jack is telescopic, allowing for very low initial height with high lifting.

**No. 5213** – 12-ton bottle jack. Wt., 17.6 lbs.
**No. 5221** – 20-ton bottle jack. Wt., 26.6 lbs.
**No. 5213T** – 12-ton telescopic bottle jack. Wt., 37.4 lbs.
10-Ton Collision Repair Set
- Exert hydraulic force just where it’s needed to lift, spread, bend, or straighten. Handles the high-force jobs you face daily in trailer maintenance or other applications.
- Includes reliable components including 10-ton, 10-1/8” stroke hydraulic ram; air/hydraulic pumping unit; hydraulic hose; four snap-together extension tubes; extension tube coupling; serrated saddle; flat base; 90° wedge head; flex head; storage case.
- All set components are covered by OTC Lifetime Marathon Warranty®.

No. 5086 – 10-ton collision repair set. Wt., 65 lbs.

OTC Series 4- and 10-Ton Collision Repair Sets
- We’ve matched our OTC hydraulics with versatile tooling.
- Components snap together, permitting you to apply pushing, spreading, or pulling force.
- Components include: hydraulic pump, hose, and ram; ram flat base; 1/2-ton hydraulic spreader; extension tubes (4); tube coupling; ram toe; wedge head; serrated saddle; flex head; plunger toe; 90° wedge head; storage case. The case for the 10-ton set has wheels for mobility.

No. 1517A – 4-ton collision repair set. Has single-speed hydraulic hand pump and ram with 5” stroke. Wt., 40 lbs.
No. 1519A – 10-ton collision repair set. Has two-speed hydraulic hand pump and ram with 6-1/8” stroke. Wt., 75 lbs.
No. 504888 – Replacement quick coupler. Wt., 3 oz.
No. 504889 – Replacement quick coupler. Wt., 3 oz.

Single-Speed Hydraulic Hand Pump
This single-speed pump is ideal for single-acting rams. Developing up to 10,000 psi operating pressure, the pump operates horizontally or vertically in the “head down” position. Fingertip control provides instant release or pumping action. Has a built-in safety overload valve. Ideal for use with OTC single-acting rams, or similar competitors’ rams.

No. 4000 – Hand pump only. Wt., 6 lbs., 13 oz.
No. 4002 – Hand pump only. Wt., 17 lbs., 3 oz.

<table>
<thead>
<tr>
<th>Specifications</th>
<th>4000</th>
<th>4002</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. operating pressure</td>
<td>10,000 psi</td>
<td>10,000 psi</td>
</tr>
<tr>
<td>Volume per stroke</td>
<td>.069 cu. in.</td>
<td>160 cu. in.</td>
</tr>
<tr>
<td>Reservoir capacity</td>
<td>12.5 cu. in.</td>
<td>45 cu. in.</td>
</tr>
<tr>
<td>Oil port</td>
<td>1/4&quot; NPT</td>
<td>3/8&quot; NPT</td>
</tr>
</tbody>
</table>
OTC 6650 Magnetic Induction Heater

Every technician knows the hardest and most time consuming job in the repair process is parts removal — especially on vehicles with stubborn rust- caked bolts, fasteners and bonded components. With today’s razor-thin margins, inefficient parts removal can seriously erode your profitability. The sooner vehicles can be disassembled and repairs begun, the sooner you start making money.

With the OTC 6650 Magnetic Induction Heater, technicians can quickly and easily perform damage-free parts removal of all metal parts that can’t easily be accomplished with flame or other radiant heat sources. With an available power rating of 1500 watts, the OTC 6650 is ideal for mechanical repair, auto body repair and recycling facilities. It produces heat in seconds within metal objects such as body panels, nuts, bolts and pinch weld areas behind glass—without heating or damaging non-metallic objects such as glass, paint or plastic.

- Fast, effortless removal of glass, emblems, bonded body components, rusty bolts and much more.
- Flameless heat reduces the need for torches, solvents and abrasives.
- Less flame and solvents reduce potential safety hazards and insurance rates.
- Only heats metal objects, enabling it to be used in or near heat-sensitive areas.
- Wide range of heating inductors for increased versatility.
- Easy-to-read heat output meter to quickly verify induction heat.
- Output isolation transformer provides the safest possible operation.
- CE and CSA approval with UL compliance offers proof of OTC 6650 quality construction and safety design.

Focused and Flameless Heat Make Parts Removal Easy and Fast!

BOLTS
The bolt inductor produces concentrated heat in a small area for a multitude of applications. It produces temperatures in excess of 1400º F in just seconds. This concentrated heat is ideal for the heating and easy removal of seized fasteners and can also be used to remove caulk and seam sealer.

GLASS
The glass inductor produces heat in a 1” x 4” area, which is ideal for heating channels behind glass components. This inductor achieves a channel temperature of 350º F in about 30 seconds and easily accesses areas normal glass removal tools can’t. Great for encapsulated window adhesive, bonded body panels, spray-in bedliners, the glass inductor can also be used to fully cure high-build primers in just seconds, allowing them to be block-sanded quickly and efficiently, saving both labor time and abrasive costs.

BODY PANELS
The body inductor produces mild heat in flat or contoured body panels for the removal of moldings, pin stripes and vinyl graphics. The flexible, heat-resistant fiberglass blanket conforms to most body contours and includes a hand-strap for easy manipulation.
This versatile inductor also removes core support labels and VIN tags without damage.

- The bolt and glass inductors are molded using an impact-resistant, flame-retardant polymer, and molded-in, waterproof cord grip prevents HF cable from being pulled from the heating attachment.
- The body inductor edges are surged and interior is silicone coated to improve water resistance and eliminate fraying.
- Power supply has a remote start/stop input receptacle for connecting foot switch or other alternative devices.
- The OTC 6650 has a durable 8-foot long foot switch constructed from impact-resistant thermal plastic and includes a circular quick disconnect for easy, convenient servicing and storage.

For increased versatility, these other inductors can be purchased and used with the OTC 6650 Magnetic Induction Heater:

- Interior molding removal tools No. 4489
- Hail dent inductor No. 543036
- Bearing heater inductor – Available late in 2007
- Brake inductor – Coming soon!
- Exhaust inductor – Coming soon!

CONTACT YOUR OTC SUPPLIER TODAY!

Magnetic Induction Heating System

The OTC 6650 package comes with bolt inductor (542936), glass inductor (542937), body inductor (542938), foot switch (543055) and instructional CD. All inductors, with exception of the body inductor, are encapsulated in a flame-retardant polymer which provides protection against impact, abrasion, heat or other accidental damage. All inductors have an electrical interlock and/or molded strain reliefs.

Hydraulic Rams for Collision Repair Sets

These premium quality rams are designed for long, trouble-free service. Backed by a life-time warranty, they are ideal replacements for worn-out, leaky rams. They feature a special piston rod that permits their use with the snap-together components of OTC’s collision repair sets, or with most similar competitive products.

No. 4082B – 4-ton ram with 5” stroke and special piston rod end designed to fit most collision repair set components. Wt., 8 lbs., 13 oz.

No. 4083B – 10-ton ram with 6-1/8” stroke and special piston rod end designed to fit most collision repair set components. Wt., 9 lbs., 6 oz.

<table>
<thead>
<tr>
<th>OTC No.</th>
<th>Cap. in Tons</th>
<th>Stroke</th>
<th>Collapsed Height</th>
<th>Extended Height</th>
<th>Spring Return</th>
<th>Rod End Dia</th>
<th>Max. Oper. Pressure (PSI)</th>
<th>Oil Cap. (cu. in.)</th>
<th>Oil Port</th>
</tr>
</thead>
<tbody>
<tr>
<td>4082B</td>
<td>4</td>
<td>5&quot;</td>
<td>10-7/8&quot;</td>
<td>15-7/8&quot;</td>
<td>Yes</td>
<td>.874&quot;</td>
<td>8,950</td>
<td>4.97</td>
<td>1/4&quot; NPT</td>
</tr>
<tr>
<td>4083B</td>
<td>10</td>
<td>6-1/8&quot;</td>
<td>14-5/8&quot;</td>
<td>20-3/4&quot;</td>
<td>Yes</td>
<td>1.310&quot;</td>
<td>8,950</td>
<td>13.69</td>
<td>3/8&quot; NPT</td>
</tr>
</tbody>
</table>

Hydraulic Rams

These rams feature the same quality design and construction as the Nos. 4082B and 4083B hydraulic rams listed above, but have threaded ram collars and internal base threads to simplify mounting, as well as threaded piston rod ends. Ideal replacements for worn-out, leaky rams on body and frame equipment.

No. 4088A – 10-ton ram with 6-1/8” stroke. Has threaded ram collar, internal base threads, and threaded piston rod end. Wt., 11 lbs., 10 oz.

No. 4089A – 10-ton ram with 10-1/8” stroke. Has threaded ram collar, internal base threads, and threaded piston rod end. Wt., 14 lbs., 13 oz.

<table>
<thead>
<tr>
<th>OTC No.</th>
<th>Cap. in Tons</th>
<th>Stroke &quot;A&quot;</th>
<th>Oil Cap. (cu. in.)</th>
<th>Effective Ram Area (sq. in.)</th>
<th>Tons at 8,950 PSI</th>
<th>Spring Return</th>
<th>Height Collapsed &quot;B&quot;</th>
<th>Extended &quot;C&quot;</th>
<th>Piston Protrusion at Collapsed Height &quot;D&quot;</th>
<th>Diameter &quot;E&quot;</th>
<th>Piston Thread (NPT) &quot;F&quot;</th>
<th>Collar Thread (Straight) &quot;G&quot;</th>
<th>Internal Base Thread (NPSM) &quot;H&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>4088A</td>
<td>10</td>
<td>6-1/8&quot;</td>
<td>13.9</td>
<td>2.236</td>
<td>10</td>
<td>Yes</td>
<td>11-1/2&quot;</td>
<td>17-5/8&quot;</td>
<td>1-1/16&quot;</td>
<td>2-1/4&quot;</td>
<td>1-5/8&quot;</td>
<td>1-1/4&quot;</td>
<td>1-1/4&quot;-11-1/2</td>
</tr>
<tr>
<td>4089A</td>
<td>10</td>
<td>10-1/8&quot;</td>
<td>22.9</td>
<td>2.236</td>
<td>10</td>
<td>Yes</td>
<td>15-1/2&quot;</td>
<td>25-5/8&quot;</td>
<td>1-1/16&quot;</td>
<td>2-1/4&quot;</td>
<td>1-5/8&quot;</td>
<td>1-1/4&quot;</td>
<td>1-1/4&quot;-11-1/2</td>
</tr>
</tbody>
</table>

Hydraulic Ram, Pump, and Hose Set

This versatile set is usable in a wide variety of hydraulic power applications. Combines our No. 4026 air/hydraulic power unit, hose, and hose half coupler with the No. 4089A 10-ton hydraulic ram with 10-1/8” stroke. Ram has threaded collar, internal base threads, and threaded piston rod end for mounting adaptability.

2-Speed Hydraulic Hand Pump

Use with single-acting hydraulic rams. Rugged all-metal construction. Maximum handle effort is 90 lbs. Two-speed action provides rapid approach of ram piston to the work. An appropriate and economical power source for applications in which 20 cu. in. of usable oil is adequate.

**No. 4004** – 2-speed hydraulic hand pump. Wt., 6 lbs., 9 oz.

**Specifications:**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum operating pressure</td>
<td>10,000 PSI</td>
</tr>
<tr>
<td>Volume per stroke (first stage)</td>
<td>.305 cu. in.</td>
</tr>
<tr>
<td>Volume per stroke (second stage)</td>
<td>.091 cu. in.</td>
</tr>
<tr>
<td>Reservoir capacity</td>
<td>24.4 cu. in.</td>
</tr>
<tr>
<td>Oil port</td>
<td>3/8&quot; NPT</td>
</tr>
</tbody>
</table>

Air/Hydraulic Power Unit

Features a heavy-duty, one-piece, aluminum body for durability and light weight. A perfect replacement pump for body and frame straightening equipment. Performs in either vertical or horizontal positions. Has a time-tested motor design. All internal moving parts are constructed of metal, not plastic! Unique external relief valve ensures damage-free operation should oil reservoir be overfilled. Internal vent eliminates external oil leakage. Rotary-style pressure release provides superior operator control. Carries OTC’s unsurpassed Lifetime Marathon Warranty®.

**No. 4026** – Air/hydraulic power unit. Wt., 13 lbs., 8 oz.

**Specifications:**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil delivery</td>
<td>10 cu. in. of oil @ 9,500 PSI</td>
</tr>
<tr>
<td>Reservoir capacity</td>
<td>39 cu. in. (34 cu. in. usable)</td>
</tr>
<tr>
<td>Internal relief setting</td>
<td>10,000 PSI</td>
</tr>
<tr>
<td>Air operating pressure</td>
<td>40-120 PSI</td>
</tr>
<tr>
<td>Dimensions</td>
<td>16-15/16&quot; long x 6-3/8&quot; high x 5-5/8&quot; wide</td>
</tr>
</tbody>
</table>

Hydraulic Spreaders

Included as standard equipment with our collision sets, these versatile hydraulic spreader tools are also available individually. Ideal for removing dents and creases, performing straightening jobs, or for use as a clamp. Makes working in tight spots easy.

- Maximum spread is 3-1/4".

**No. 9101A** – 1/2-ton spreader with 1/4" NPT ram half coupler. Wt., 3 lbs., 11 oz.

**No. 9102** – 1/2-ton spreader with 3/8" NPT ram half coupler. Wt., 3 lbs., 11 oz.
**Automotive-Style Quick Couplers**

Precision designed and built for high pressures. Permits disconnecting hose without loss of oil.
- Ideal for use in body shop equipment applications.
- Works with OTC No. 1515 and 1513 collision repair sets.

**No. 9195** – Complete quick coupler, 1/4” NPT. Wt., 5 oz.

**No. 9196** – Complete quick coupler, 3/8” NPT. Wt., 10 oz.

---

**Single-Acting, Spring-Return Rams**

Available in capacities of 5 to 100 tons and for maximum working pressures up to 10,000 PSI; 2 to 1 safety factor on material yield; designed and tested to meet ANSI B30.1. Standard stroke lengths of 5/8” to 14-1/4”, these compact rams require a minimum of mounting space. Several of the rams feature threaded ram collars and internal base threads to simplify mounting. Also, some of the models have threaded piston rod ends. OTC’s design ensures positive, leak-resistant sealing throughout all pressure ranges, yet full piston return characteristics are maintained. Additional bearing surface has been designed into these units, to effectively resist the punishing stress exerted by off-center loads. Depending on capacity, these rams can handle a variety of bending and straightening jobs, construction maintenance applications, pressing operations, body and frame straightening, and rear housing and axle correction.

---

**Table: Single-Acting, Spring-Return Rams**

<table>
<thead>
<tr>
<th>OTC No.</th>
<th>Capacity in Tons</th>
<th>Stroke &quot;A&quot; (in)</th>
<th>Oil Cap. (cu. in.)</th>
<th>Effective Ram Area (sq. in.)</th>
<th>Tons at 10,000 PSI</th>
<th>Spring Return</th>
<th>Height Collapsed &quot;B&quot;</th>
<th>Height Extended &quot;C&quot;</th>
<th>Diameter &quot;D&quot; (N.P.T.)</th>
<th>Piston Thread</th>
<th>Collar Thread</th>
<th>Internal Base Thread</th>
<th>Wt. (lbs./oz.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4100</td>
<td>5</td>
<td>3&quot;</td>
<td>3.0</td>
<td>.994</td>
<td>4.97</td>
<td>No</td>
<td>5-11/16&quot;</td>
<td>1/4&quot;</td>
<td>1-1/2&quot;</td>
<td>7/8&quot;</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>4101</td>
<td>5</td>
<td>5-1/4&quot;</td>
<td>5.2</td>
<td>.994</td>
<td>4.97</td>
<td>Yes</td>
<td>10-1/2&quot;</td>
<td>1-5/8&quot;</td>
<td>1-1/2&quot;</td>
<td>1-1/6&quot;</td>
<td>3/4&quot;</td>
<td>1-1/2&quot;–16&quot;</td>
<td>3/4&quot;–14</td>
</tr>
<tr>
<td>4108</td>
<td>5</td>
<td>5/8&quot;</td>
<td>.62</td>
<td>.994</td>
<td>4.97</td>
<td>Yes</td>
<td>1-5/8&quot;</td>
<td>2-1/4&quot;</td>
<td>1/8&quot;</td>
<td>2-9/16&quot;x1-5/8&quot;</td>
<td>5/8&quot;</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>4103</td>
<td>10</td>
<td>2-1/8&quot;</td>
<td>.8</td>
<td>2.236</td>
<td>11.2</td>
<td>Yes</td>
<td>5-9/16&quot;</td>
<td>1-1/2&quot;</td>
<td>1-1/6&quot;</td>
<td>1-1/4&quot;</td>
<td>1-1/4&quot;</td>
<td>1-1/4&quot;–14&quot;</td>
<td>None</td>
</tr>
<tr>
<td>4104</td>
<td>10</td>
<td>6-1/8&quot;</td>
<td>13.9</td>
<td>2.236</td>
<td>11.2</td>
<td>Yes</td>
<td>11-1/2&quot;</td>
<td>17-5/8&quot;</td>
<td>1-1/6&quot;</td>
<td>2-1/4&quot;</td>
<td>1-1/4&quot;</td>
<td>2-1/4&quot;–14&quot;</td>
<td>1-1/4&quot;–11-1/2</td>
</tr>
<tr>
<td>4105</td>
<td>10</td>
<td>10-1/8&quot;</td>
<td>22.9</td>
<td>2.236</td>
<td>11.2</td>
<td>Yes</td>
<td>15-1/2&quot;</td>
<td>25-7/8&quot;</td>
<td>1-1/6&quot;</td>
<td>2-1/4&quot;</td>
<td>1-1/4&quot;</td>
<td>2-1/4&quot;–14&quot;</td>
<td>1-1/4&quot;–11-1/2</td>
</tr>
<tr>
<td>4107</td>
<td>25</td>
<td>14-1/4&quot;</td>
<td>73.5</td>
<td>5.157</td>
<td>25.8</td>
<td>Yes</td>
<td>21-3/8&quot;</td>
<td>35-5/8&quot;</td>
<td>1-7/8&quot;</td>
<td>3-3/8&quot;</td>
<td>2-3/8&quot;</td>
<td>3-5/16&quot;–12&quot;</td>
<td>2&quot;–11-1/2</td>
</tr>
<tr>
<td>4110</td>
<td>55</td>
<td>6-1/4&quot;</td>
<td>69.0</td>
<td>11.04</td>
<td>55.2</td>
<td>Yes</td>
<td>11-1/8&quot;</td>
<td>17-3/8&quot;</td>
<td>1/8&quot;</td>
<td>5&quot;</td>
<td>3-1/8&quot;</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>4115</td>
<td>100</td>
<td>6-5/8&quot;</td>
<td>137.0</td>
<td>20.62</td>
<td>103.1</td>
<td>Yes</td>
<td>13-1/4&quot;</td>
<td>19-7/8&quot;</td>
<td>1/8&quot;</td>
<td>6-1/4&quot;</td>
<td>4-1/8&quot;</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

**Aluminum Rams** (See listing on page 290)

<table>
<thead>
<tr>
<th>OTC No.</th>
<th>Capacity in Tons</th>
<th>Stroke &quot;A&quot; (in)</th>
<th>Oil Cap. (cu. in.)</th>
<th>Effective Ram Area (sq. in.)</th>
<th>Tons at 10,000 PSI</th>
<th>Spring Return</th>
<th>Height Collapsed &quot;B&quot;</th>
<th>Height Extended &quot;C&quot;</th>
<th>Diameter &quot;D&quot; (N.P.T.)</th>
<th>Piston Thread</th>
<th>Collar Thread</th>
<th>Internal Base Thread</th>
<th>Wt. (lbs./oz.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4111</td>
<td>55</td>
<td>6-1/8&quot;</td>
<td>67.6</td>
<td>11.04</td>
<td>55.2</td>
<td>Yes</td>
<td>10-3/4&quot;</td>
<td>16-7/8&quot;</td>
<td>1/4&quot;</td>
<td>5-1/4&quot;</td>
<td>3-1/8&quot;</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>4116</td>
<td>100</td>
<td>6-1/4&quot;</td>
<td>129.0</td>
<td>20.62</td>
<td>103.1</td>
<td>Yes</td>
<td>11-1/8&quot;</td>
<td>18&quot;</td>
<td>1/8&quot;</td>
<td>7-3/8&quot;</td>
<td>4-1/8&quot;</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

† No. 4100 has a piston “screw-extension” (1-1/2"), which will extend the maximum height to 10”.

See ram accessories listed on the next page. These accessories thread onto the ram’s piston rod end, collar, or into the ram base. All rams include No. 9796 3/8” NPT half coupler; oil port threads are 3/8” NPTF.
**SHOP EQUIPMENT**

### Hydraulic Rams

#### Single-Acting Ram Accessories

These versatile attachments let you “harness” OTC hydraulic force and put it to work exactly where it’s needed to handle various maintenance tasks. Accessories thread onto the ram’s piston rod end or into the ram base.

**Use with 5-ton hydraulic ram, No. 4101**

<table>
<thead>
<tr>
<th>Item</th>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>G</td>
<td>38908</td>
<td>Extension tube</td>
</tr>
</tbody>
</table>

**Use with 10-ton hydraulic rams, Nos. 4103, 4104, and 4105**

<table>
<thead>
<tr>
<th>Item</th>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>32325*</td>
<td>Ram flat base</td>
</tr>
<tr>
<td>B</td>
<td>31772</td>
<td>Serrated saddle</td>
</tr>
<tr>
<td>H</td>
<td>38909</td>
<td>Extension tube</td>
</tr>
</tbody>
</table>

*NOTE: 32325 and 25664 cannot be used on No. 4103 hydraulic ram.*

**Use with 25-ton hydraulic rams, Nos. 4106 and 4107**

<table>
<thead>
<tr>
<th>Item</th>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>25653</td>
<td>Ram flat base</td>
</tr>
<tr>
<td>F</td>
<td>31776</td>
<td>Serrated saddle with coupling</td>
</tr>
</tbody>
</table>

#### Spring-Return Hollow Center Hydraulic Rams

Ideal for push/pull applications found in off-highway, construction, mining, and other industries where heavy equipment is maintained. Center hole permits extending screws, cables, etc., straight through the ram for versatility of application. Rams withstand full “dead-end” loads. Chrome-plated piston rods resist wear, and superior packings and seals provide high cycle life without leakage. Piston head inserts are interchangeable for versatility, and tapped base mounting holes provide easy installation in fixed applications.

### Head Inserts

<table>
<thead>
<tr>
<th>For Use With</th>
<th>Threaded Insert No.</th>
<th>Inside Dia. of Plain Insert *</th>
</tr>
</thead>
<tbody>
<tr>
<td>4131</td>
<td>28632 3/4&quot;–16 **</td>
<td>49/64&quot;</td>
</tr>
<tr>
<td>4132</td>
<td>28612 2&quot;–8 **</td>
<td>1-3/64&quot;</td>
</tr>
<tr>
<td>4139</td>
<td>38904 1-1/4&quot;–7 **</td>
<td>1-19/64&quot;</td>
</tr>
<tr>
<td>4140</td>
<td>34251 1-5/8&quot;–5-1/2 **</td>
<td>2-1/8&quot;</td>
</tr>
</tbody>
</table>

* Plain insert comes standard with rams.
** Internal thread size.
SHOP EQUIPMENT

Hydraulic Rams

55- and 100-Ton Aluminum Rams

Get the strength of a steel ram but about half the weight. Easily carry these single-acting, spring-return rams around the garage, shop, or into the field for on-the-vehicle repairs. They are ideal for truck axle correction, trailer frame straightening, general vehicle maintenance, and heavy-duty lifting.


No. 4116 – 100-ton aluminum ram. 6-1/4" stroke. Wt., 64 lbs.

Ram Base

No. 208406 – Ram base. Attaches directly to bottom of ram by means of two 3/8”–16 screws, included. Serrated base provides extra support and stability. 7" square. For use on 55-ton ram only. Wt., 4 lbs., 6 oz.

Center-Hole, Power Twin® Rams

In capacities of 17-1/2, 30, 50, and 100 tons and for operating pressures up to 10,000 PSI; use these rams on Grip-O-Matic® pullers, Push-Pullers, and shop presses.

OTC’s center-hole rams are ideal for jobs that require a great deal of force and a relatively short stroke. Compared to the force it develops, each center-hole Power Twin ram is lightweight, compact, and easy to handle, permitting its use in confined quarters. Center-hole feature permits extending jacking screws, cables, puller screws, etc., straight through the ram.

Quick change inserts

For added job versatility, Power Twin rams also feature a basic head which allows the operator to change from a tapped hole to a plain hole by merely changing the head insert (held in place by a socket-head set screw). In certain applications, the use of a plain insert is desired, since it permits using a speed nut for necessary readjustment after the ram has been extended, rather than turning the screw with a speed crank.


No. 4122 – 50-ton Power Twin single-acting hydraulic ram. Complete with No. 22274 threaded ram head insert, ram attaching screws, and No. 9796 ram half coupler. Wt., 57 lbs.

No. 4130 – 100-ton Power Twin double-acting hydraulic ram. Complete with No. 24197 threaded ram head insert and two No. 9796 ram half couplers. Wt., 181 lbs.

Specifications

<table>
<thead>
<tr>
<th>OTC No.</th>
<th>Capacity (tons)</th>
<th>Pull</th>
<th>Stroke</th>
<th>Oil Capacity (cu. in.)</th>
<th>Eff. Area (sq. in.)</th>
<th>Internal PSI at Capacity</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>J</th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td>4120</td>
<td>17-1/2</td>
<td>–</td>
<td>2&quot;</td>
<td>7.06</td>
<td>3.53</td>
<td>10,000</td>
<td>6-7/8&quot;</td>
<td>1-3/4&quot;</td>
<td>1-1/16&quot;</td>
<td>1-1/2&quot;</td>
<td>1-1/2&quot;</td>
<td>3-3/4&quot;</td>
<td>5-3/4&quot;</td>
<td>–</td>
<td>–</td>
<td>11/32&quot;</td>
</tr>
<tr>
<td>4121</td>
<td>30</td>
<td>–</td>
<td>2-1/2&quot;</td>
<td>15.7</td>
<td>6.28</td>
<td>10,000</td>
<td>8-7/16&quot;</td>
<td>2-1/4&quot;</td>
<td>1-19/64&quot;</td>
<td>1-1/4&quot;–7</td>
<td>1-13/16&quot;</td>
<td>4-1/2&quot;</td>
<td>7-1/2&quot;</td>
<td>–</td>
<td>–</td>
<td>15/32&quot;</td>
</tr>
<tr>
<td>4122</td>
<td>50</td>
<td>–</td>
<td>3&quot;</td>
<td>29.4</td>
<td>9.81</td>
<td>10,000</td>
<td>10-9/16&quot;</td>
<td>2-7/8&quot;</td>
<td>1-43/64&quot;</td>
<td>1-5/8&quot;–5-1/2</td>
<td>2-3/8&quot;</td>
<td>5-7/8&quot;</td>
<td>9-3/8&quot;</td>
<td>–</td>
<td>–</td>
<td>21/32&quot;</td>
</tr>
<tr>
<td>4130</td>
<td>100</td>
<td>5</td>
<td>4-7/8&quot;</td>
<td>93.8</td>
<td>19.24&quot;</td>
<td>10,000</td>
<td>15-1/8&quot;</td>
<td>4-3/4&quot;</td>
<td>2-9/16&quot;</td>
<td>2-1/2&quot;–8</td>
<td>2-7/8&quot;</td>
<td>10-1/8&quot;</td>
<td>13-1/4&quot;</td>
<td>4&quot;</td>
<td>3/4&quot;–16</td>
<td>25/32&quot;</td>
</tr>
</tbody>
</table>

* Push side only. Passes ANSI B30.1 Static and Dynamic Tests.
### Power Twin® Ram Accessories

<table>
<thead>
<tr>
<th>Description</th>
<th>17-1/2 Ton</th>
<th>30-Ton</th>
<th>50-Ton</th>
<th>100-Ton</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed crank</td>
<td>24814</td>
<td>27198</td>
<td>29595</td>
<td>303785</td>
</tr>
<tr>
<td>Speed nut</td>
<td>302482</td>
<td>302483</td>
<td>33439</td>
<td>34136</td>
</tr>
<tr>
<td>Adjusting screw</td>
<td>32118</td>
<td>34758</td>
<td>32698</td>
<td>32699</td>
</tr>
<tr>
<td>Threaded insert</td>
<td>21669</td>
<td>21873</td>
<td>22274</td>
<td>24197</td>
</tr>
<tr>
<td>Plain-hole insert</td>
<td>21714</td>
<td>21872</td>
<td>22275</td>
<td>24196</td>
</tr>
<tr>
<td>Pushing adapter</td>
<td>201923</td>
<td>34510</td>
<td>34755</td>
<td>–</td>
</tr>
<tr>
<td>Pushing adapter</td>
<td>201454</td>
<td>34511</td>
<td>34756</td>
<td>–</td>
</tr>
<tr>
<td>Jack screw</td>
<td>24813</td>
<td>25831</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Ram cap</td>
<td>28228</td>
<td>28229</td>
<td>28230</td>
<td>–</td>
</tr>
</tbody>
</table>

### “Shorty” Rams, Single-Acting, Spring-Return

Forcing a gravity return ram to retract wastes both time and money. This OTC series of single-acting, spring-return rams eliminates that waiting. With their low collapsed height and the stroke you really need, these rams are ideal for a variety of applications. You can choose from capacities of 10 to 100 tons and strokes from 1-1/2" to 2-7/16", with the largest ram being only 7-3/8" high! Bronze-plated piston rods resist scoring, and each ram can be “dead-ended” at full capacity for maximum safety. Each “Shorty” ram has an angled coupler port (5°) for easy hook-up. So, if you’re tired of waiting for your rams to retract, these OTC “Shorty” rams are just the answer to your problems!

### Specifications

<table>
<thead>
<tr>
<th>OTC No.</th>
<th>Capacity (tons)</th>
<th>Stroke (in.)</th>
<th>Extended Height (in.)</th>
<th>Retracted Height (in.)</th>
<th>Piston Rod Dia. (in.)</th>
<th>Cyl. Eff. Area (sq. in.)</th>
<th>Int. Pressure at Capacity (PSI)</th>
<th>Tons at 10,000 PSI</th>
<th>Oil Port NPTF</th>
<th>Type Piston Return</th>
<th>WL (lbs./oz.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4141</td>
<td>10</td>
<td>1-1/2</td>
<td>5</td>
<td>3-1/2</td>
<td>1-1/2</td>
<td>2.24</td>
<td>3.4</td>
<td>8,943</td>
<td>11.2</td>
<td>3/8&quot;-18</td>
<td>Spring</td>
</tr>
<tr>
<td>4142</td>
<td>20</td>
<td>1-3/4</td>
<td>5-1/2</td>
<td>3-3/4</td>
<td>2-5/32</td>
<td>4.43</td>
<td>7.7</td>
<td>9,029</td>
<td>22.1</td>
<td>3/8&quot;-18</td>
<td>Spring</td>
</tr>
<tr>
<td>4143</td>
<td>30</td>
<td>2-7/16</td>
<td>7-1/16</td>
<td>4-5/8</td>
<td>2-1/2</td>
<td>6.49</td>
<td>15.8</td>
<td>9,243</td>
<td>32.5</td>
<td>3/8&quot;-18</td>
<td>Spring</td>
</tr>
<tr>
<td>4145</td>
<td>100</td>
<td>2-1/4</td>
<td>7-3/8</td>
<td>5-1/2</td>
<td>4-3/8</td>
<td>19.63</td>
<td>44.2</td>
<td>10,186</td>
<td>98.2</td>
<td>3/8&quot;-18</td>
<td>Spring</td>
</tr>
</tbody>
</table>
“Shorty” Ram and Pump Set

Shorty rams provide lifting or pushing force in limited working space. Visual centering of load is simplified by a concentric ring pattern on piston top.

• Single-acting, spring-return.
• Two-speed hand pump gives fast piston approach.

No. 4175 – Set includes 4143 30-ton, 2-7/16” stroke single-acting spring-return hydraulic ram; 4016 pump; 9767 hose; and 9798 hose half coupler. Wt., 52 lbs.

Air/Hydraulic Ram and Pump Sets

Ideal for applications where an air supply of 40–120 PSI is available. Internal relief valve protects hydraulic system components regardless of air pressure, and two-stage release mechanism allows fast or metered ram return.

• The perfect replacement pump for hand pumps on body and frame straightening equipment.

No. 4185 – Set includes 4104 10-ton, 6-1/8” stroke single-acting hydraulic ram; 4020 air/hydraulic pump; 9767 hose; and 9798 hose half coupler. Wt., 31 lbs.
No. 4186 – Set includes 4105 10-ton, 10-1/8” stroke single-acting hydraulic ram; 4020 air/hydraulic pump; 9767 hose; and 9798 hose half coupler. Wt., 33 lbs.

Power Twin® Ram and Pump Set

Center-hole feature permits extending adjusting screws, cables, puller screws, etc., straight through the ram.

• This spring return unit is compact and lightweight.
• Ideal for jobs having restricted working space.

No. 4180 – Set includes 4120 17-1/2 ton, 2” stroke single-acting hydraulic ram; 4002 pump; 9650 gauge; 24815 tee; 9767 hose; and 9798 hose half coupler. Wt., 39 lbs.

Specifications

<table>
<thead>
<tr>
<th>OTC Set No.</th>
<th>Capacity (tons)</th>
<th>Ram Stroke</th>
<th>Ram Collapsed Height</th>
<th>Handle Strokes to Obtain Full Ram Stroke</th>
<th>Pump Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>4175</td>
<td>30</td>
<td>2-7/16”</td>
<td>4-5/8”</td>
<td>55”</td>
<td>Two</td>
</tr>
<tr>
<td>4185</td>
<td>10</td>
<td>6-1/8”</td>
<td>11-1/2”</td>
<td>–</td>
<td>Multiple</td>
</tr>
<tr>
<td>4186</td>
<td>10</td>
<td>10-1/8”</td>
<td>15-1/4”</td>
<td>–</td>
<td>Multiple</td>
</tr>
</tbody>
</table>

* Based on 50% of the stroke being made in low-pressure stage, 50% in high-pressure stage.
Hydraulic Push-Type Ram and Pump Sets

Compact and lightweight, these ram and pump sets are ideal for use in a wide variety of lifting and pushing applications. They feature a single-acting ram with a single-speed hydraulic hand pump. Requiring a minimum of mounting space, their remote operation is facilitated by a 6-foot, high-pressure hose.

**No. 4169** – Set includes 4103 single-acting hydraulic ram, 4002 pump, 9767 hose, and 9798 hose half coupler. Wt., 28 lbs., 3 oz.

**No. 4170** – Set includes 4104 single-acting hydraulic ram, 4002 pump, 9767 hose, and 9798 hose half coupler. Wt., 34 lbs., 6 oz.

<table>
<thead>
<tr>
<th>OTC Set No.</th>
<th>Capacity (tons)</th>
<th>Cylinder Stroke</th>
<th>Cylinder Collapsed Height</th>
<th>Handle Strokes to Obtain Full Cylinder Stroke</th>
<th>Pump Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>4169</td>
<td>10</td>
<td>2-1/8&quot;</td>
<td>5-9/16&quot;</td>
<td>32</td>
<td>Single</td>
</tr>
<tr>
<td>4170</td>
<td>10</td>
<td>6-1/8&quot;</td>
<td>11-1/2&quot;</td>
<td>93</td>
<td>Single</td>
</tr>
</tbody>
</table>

See page 288 for ram specs., and this page for hand pump specs.

Single-Stage Hand Operated Pump

Ideal for operating single-acting rams. Use to power gear and bearing pullers, shop forcing presses, and in other hydraulic applications. A single-piston, single-stage type, this pump develops pressures up to 10,000 PSI. Operates horizontally or vertically with the pump head in the “down” position. Fingertip control valve provides instant release or pumping action. Features built-in overload valve. Ideal for use with Power Twin and single-acting rams. Maximum handle effort: 140 lbs.

**No. 4002** – Hand pump only. Has 55 cu. in. reservoir. Wt.,17 lbs., 3 oz.

**NOTE:** See pages 299 and 300 for optional hose and hose half couplers.
Two-Speed Hand Pump

The 4012 two-speed hand pump’s all-metal construction almost eliminates the chance of leaking, or damage to the pump from regular use or accidents. It’s the perfect pump for use with single-acting rams or combinations where 45 cu. in. of usable oil capacity will do the job. Has 2-way valve; welded steel carrying handle; automatic switching from low to high pressure mode; handle effort under 140 lbs. at 10,000 PSI; unique fill cap to prevent over-filling and over-pressurization; non-vented reservoir; fingertip control valve with 180° throw for on/off control. In other words, this pump has it all!

No. 4012 – Hand pump only. Has 55 cu. in. reservoir. Wt., 18 lbs., 6 oz.

<table>
<thead>
<tr>
<th>Pump No.</th>
<th>Maximum Pressure</th>
<th>Volume Per Stroke</th>
<th>Piston Dia.</th>
<th>Piston Stroke</th>
<th>Reservoir Capacity</th>
<th>Oil Port</th>
</tr>
</thead>
<tbody>
<tr>
<td>4012</td>
<td>1st-325 PSI</td>
<td>.662 cu. in.</td>
<td>3/8&quot;</td>
<td>13/16&quot;</td>
<td>(55 cu. in. usable)</td>
<td>3/8&quot; NPTF</td>
</tr>
<tr>
<td>2nd-10,000 PSI</td>
<td>.160 cu. in.</td>
<td>1/2&quot;</td>
<td>11/16&quot;</td>
<td>19/32&quot;</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Dualmaster Jr.® Two-Stage Hand Pumps

Here’s two-stage flexibility at a popular price! These pumps have extra-large reservoirs (125 cu. in. usable oil) and permit use with large hydraulic rams or in multiple small ram applications. Compact and lightweight, Dualmaster Jr. provides maximum flexibility with minimum effort in a portable pump. The 4016 and 4017 deliver... providing high oil volume (2.6 cu. in. per stroke) for rapid ram approach and return. Then they automatically switch at 300 PSI to the high pressure, low volume stage (.16 cu. in. per stroke) for high force applications. Both have a large, non-vented reservoir with safety relief valve to prevent over-pressurization of the reservoir. Piston stroke is 3/4", maximum handle effort is 130 lbs. at 10,000 PSI. The 4016 is equipped with a 2-way valve for use with single-acting rams. The 4017 has a 4-way valve for use with double-acting rams. Two versatile hydraulic pumps...dependable power for automotive, heavy-duty truck, agricultural, and construction maintenance needs.

No. 4016 – Pump with a 2-way valve for use with single-acting rams. Delivers 2.6 cu. in. of oil per stroke in low pressure stage. Wt., 29 lbs., 13 oz.

No. 4017 – Pump with a 4-way valve for use with double-acting rams. Delivers 2.6 cu. in. of oil per stroke in low pressure stage. Wt., 29 lbs.

<table>
<thead>
<tr>
<th>Pump No.</th>
<th>Maximum Pressure</th>
<th>Volume Per Stroke</th>
<th>Piston Dia.</th>
<th>Piston Stroke</th>
<th>Reservoir Capacity</th>
<th>Oil Port</th>
</tr>
</thead>
<tbody>
<tr>
<td>4016</td>
<td>1st stage 300 PSI</td>
<td>2.6 cu. in.</td>
<td>2&quot;</td>
<td>3/4&quot;</td>
<td>125 cu. in. usable</td>
<td>3/8&quot; NPTF</td>
</tr>
<tr>
<td>2nd stage 10,000 PSI</td>
<td>.16 cu. in.</td>
<td>1/2&quot;</td>
<td>11/32&quot;</td>
<td>19/32&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4017</td>
<td>1st stage 300 PSI</td>
<td>2.6 cu. in.</td>
<td>2&quot;</td>
<td>3/4&quot;</td>
<td>125 cu. in. usable</td>
<td>3/8&quot; NPTF</td>
</tr>
<tr>
<td>2nd stage 10,000 PSI</td>
<td>.16 cu. in.</td>
<td>1/2&quot;</td>
<td>11/32&quot;</td>
<td>19/32&quot;</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Has built-in 2-way control valve.
† Has built-in 4-way control valve.
Dualmaster® Two-Stage Hand Pumps

Our finest hand-operated power units! These fast-acting, two-stage pumps not only handle high force, high pressure requirements up to 10,000 PSI, but deliver extremely high volume at low pressure (7.35 cu. in. per stroke from 0 to 200 PSI) to quickly move the ram piston to and from the work! Pumps have a built-in relief valve, pre-set at the factory for 10,000 PSI. Maximum handle effort is 90 lbs. Two basic Dualmaster models are offered: No. 4008 for use with single-acting rams, and No. 4009 for use with double-acting rams. For information on pressure gauges, hoses, and other accessories for your Dualmaster, see pages 299 and 300.

No. 4008 – Hydraulic hand pump with No. 9584 2-position, 3-way control valve (for operating single-acting rams), and No. 4006 BL2 2-gallon reservoir with legs. Wt., 50 lbs.

No. 4009 – Hydraulic hand pump with No. 9500 3-position, 4-way control valve (for operating double-acting rams), and No. 4006 BL2 2-gallon reservoir with legs. Wt., 64 lbs., 3 oz.

### Performance Example

<table>
<thead>
<tr>
<th>Job: To fully extend an OTC 4105 ram (has 10-1/8” stroke)</th>
<th>4008/4009 Pump</th>
<th>4016 Pump</th>
<th>4002 Pump</th>
</tr>
</thead>
<tbody>
<tr>
<td>5” of ram travel is under no load, 5” is under load</td>
<td>37 strokes</td>
<td>74 strokes</td>
<td>141 strokes</td>
</tr>
</tbody>
</table>

### Air/Hydraulic Pump

With shop air as the energy source, these pumps have the power and oil capacity (80 cu. in. usable oil) to drive even the large 55-ton rams. They are ideal all-around power sources for dozens of body, frame, and alignment applications. They can be used with a variety of rams, presses, and hydraulic pullers operating at up to 10,000 PSI. An internal relief valve protects the hydraulic components regardless of hydraulic pressure. In addition, a two-stage release mechanism gives fast or metered ram return while reducing hydraulic shock.

In addition to all the features and performance characteristics of the 4020/4025, the 4021 is equipped with a 15 ft. remote control cord. The 4022 is equipped with a 2-gal. reservoir. These pumps require 9 cfm at 100 PSI air pressure at the pump.

No. 4020 – Air/hydraulic pump. Develops 10,000 PSI at 100 PSI air pressure. 3/8” NPTF oil port. 98 cu. in. usable oil capacity in plastic reservoir. Wt., 15 lbs., 3 oz.

No. 4021 – Air/hydraulic pump with a remote control actuator, 15 ft. cord. Develops 10,000 PSI at 100 PSI air pressure. 3/8” NPTF oil port. 105 cu. in. capacity plastic reservoir. Wt., 19 lbs., 3 oz.

No. 4022 – Air/hydraulic pump with a 2-gallon (442 cu. in.) plastic reservoir. Wt., 26 lbs., 3 oz.

No. 4025 – Air/hydraulic pump. Develops 10,000 PSI at 100 PSI air pressure. 3/8” NPTF oil port. 98 cu. in. usable oil capacity in metal reservoir. Wt., 14 lbs., 13 oz.

No. 213896 – Metal reservoir. 98 cu. in. usable oil capacity. Includes gasket and fasteners. Wt., 6 lbs., 2 oz.

No. 61243 – Replacement plastic reservoir for 4020 pump, 98 cu. in. usable oil capacity. Wt., 1 lb., 1 oz.

No. 33853 – Replacement gasket for 4020 pump reservoir. Wt., 1 oz.
Two-Gallon Reservoir

Increase the oil capacity of your 4020, 4021, or 4025 air/hydraulic pumps with this kit. It gives you a two-gallon reservoir and everything else needed to make those pumps ideal for large, single-acting rams or for multiple ram applications.

No. 207436 – 2-gallon reservoir kit for 4020, 4021, or 4025 air/hydraulic pumps. Includes reservoir, gasket, top mounting plate, bolts, and fittings. Gives 442 cu. in. usable oil capacity. 11-1/2" x 9-1/2" x 6-1/2". Wt., 6 lbs., 13 oz.

No. 40063-BL2 – 2-gallon (462 cu. in. usable) “standard” reservoir only for Vanguard® pumps. Size: 12-1/2" x 10-1/2" x 6-1/2" high. Wt., 9 lbs., 3 oz.

Vanguard® Two-Stage, High-Pressure Power Units

Thousands of users have put Vanguard to work in a variety of hydraulic power applications. And the reputation for trouble-free performance this pumping unit has earned is a proven, documented fact, not just a sales claim! Vanguard is a fast-acting, precision-built, two-stage pumping unit consisting of a gear pump for the low-pressure stage and an axial-piston pump for the high-pressure stage, the latter being “supercharged” by the gear pump. Vanguard delivers low volume at high pressure, yet provides high volume at low pressure for fast cylinder piston approach and return. Units feature a 10,000 PSI universal motor, which starts under full load. They are suitable for operation up to 10,000 PSI. Motor is 1-1/8 h.p., 12,000 RPM, (27 amp draw). Rated for intermittent duty.

No. 4062 – Vanguard 2-stage hydraulic pump with 2-position/ 3-way valve and 6 ft. remote motor control (115V). 2 gal. of oil supplied. Wt., 71 lbs., 10 oz.

No. 4064 – Vanguard 2-stage hydraulic pump with 3-position/ 4-way valve and 6 ft. remote motor control (115V). 2 gal. of oil supplied. Wt., 74 lbs., 7 oz.

Speed Comparison Chart

The job — Fully extend a 10-ton ram with a 10-1/8" stroke:

<table>
<thead>
<tr>
<th>Pump No.</th>
<th>5&quot; travel No load</th>
<th>5&quot; travel Under load</th>
<th>Total Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>4062 Power</td>
<td>1.5 sec.</td>
<td>12 sec.</td>
<td>13.5 sec.</td>
</tr>
<tr>
<td>4002 Hand Pump</td>
<td>141 strokes of pump handle</td>
<td>4 to 5 min.*</td>
<td></td>
</tr>
</tbody>
</table>

* Handle effort at max. pressure is 140 lbs.
Two-Stage Electric/Hydraulic Pumps
They’re called “RamRunners” and that’s just what they do...run large single- or double-acting rams for fast frame straightening, wheel alignment, etc. They deliver up to 45 cu. in./min. at max. operating pressure of 10,000 PSI. The 4044 has a 2-position/2-way valve with “advance” and “return” positions and is for use with single-acting rams. The 4046 and 4057 have a 3-position/4-way valve with “advance,” “hold,” and “return” positions; for use with double-acting or multiple single-acting rams. Nos. 4044 and 4046 are equipped with a 1/2 h.p. single-phase, 60 Hz, 115 volt thermal protected electric motor and are designed to start under load. No. 4057 has a 1-1/2 h.p. electric motor. The RamRunners also feature a 6 ft. remote control cord for “on/off” control. One gallon and two quarts of oil are supplied.

**No. 4044** – RamRunner two-stage hyd. pump with 2-position/2-way manual valve and a 6 ft. remote control cord. Supplied with one gallon and two quarts of oil. Wt., 58 lbs.

**No. 4046** – RamRunner two-stage hydraulic pump with 3-position/4-way manual valve for double-acting rams, and a 6 ft. remote control cord. Supplied with one gallon and two quarts of oil. Wt., 54 lbs.

**No. 4057** – RamRunner two-stage hydraulic pump with 3-position/4-way valve for double-acting rams, and a 6 ft. remote control cord. Supplied with one gallon and two quarts of oil. Wt., 54 lbs.

### Speed Comparison Chart
The job — Fully extend a 10-ton ram with a 10” stroke:

<table>
<thead>
<tr>
<th>Pump No.</th>
<th>5” travel</th>
<th>No load</th>
<th>5” travel</th>
<th>Under load</th>
<th>Total Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>4044</td>
<td>3 sec.</td>
<td>39 sec.</td>
<td>42 sec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4046</td>
<td>1.2 sec.</td>
<td>14 sec.</td>
<td>15.2 sec.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Oil Del.*

<table>
<thead>
<tr>
<th>Max. Press.</th>
<th>Oil Del.* (cu. in./min. @)</th>
<th>Voltage</th>
<th>Reservoir Cap.</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSI</td>
<td>0 PSI</td>
<td>100 PSI</td>
<td>10,000 PSI</td>
<td>RPM</td>
</tr>
<tr>
<td>4044</td>
<td>10,000</td>
<td>3,450</td>
<td>290</td>
<td>240</td>
</tr>
<tr>
<td>4046</td>
<td>10,000</td>
<td>3,450</td>
<td>525</td>
<td>490</td>
</tr>
</tbody>
</table>

* Typical delivery, actual flow will vary with field conditions.
** For 230 volt, please specify.

### Control Valves
**No. 9582** – This is a 2-position/3-way, lever operated, detent positioned valve for use with single-acting rams. It has “advance” and “hold” positions. Wt., 2 lbs., 5 oz.

**No. 9500** – A 3-position/4-way, lever operated, detent positioned valve for use with double-acting rams. Has “advance,” “neutral,” and “return” positions. Cylinder ports are blocked in “neutral” and pump flow is directed back to the reservoir. Wt., 4 lbs., 8 oz.
Vanguard Jr.® Two-Stage, High-Pressure Power Units

Combines compact size and light weight with 2-stage high performance. Choose from several models with electric motors and many options. Designed for operating pressures up to 10,000 PSI.

Vanguard Jr. gives you just what you need: 2-stage flexibility with high performance, and a selection of units and options that lets you tailor the pump to your needs. Refer to the performance and speed tables below, and you’ll see how these pumps cut down the time needed for almost any job.

The 2-stage operation automatically matches pump performance to the job requirements. The low-pressure, high-volume stage provides fast ram approach and return. Then at approximately 200 PSI, the high-pressure, low-volume stage takes over to handle high force requirements. These pumps are ideal for hundreds of hydraulic applications such as clamping, bending, straightening, pressing, forming, testing, pushing, and pulling. Each is equipped with a relief valve factory-set at 10,000 PSI (the maximum operating pressure of the pump). Choose from models with electric (115 or 230 volt) motors and options that include remote hand- and foot-operated motor controls, adjustable pressure regulator, and pressure switch. Vanguard Jr. starts easily under load and has been thoroughly field-tested for high cycle reliability.

Speed Comparison Chart

The job — Fully extend a 10-ton ram with a 10-1/8" stroke:

<table>
<thead>
<tr>
<th>Pump No.</th>
<th>5&quot; travel No load</th>
<th>5&quot; travel Under load</th>
<th>Total Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>4031</td>
<td>4 sec.</td>
<td>34 sec.</td>
<td>38 sec.</td>
</tr>
<tr>
<td>4002</td>
<td>141 strokes of pump handle</td>
<td>4 to 5 min.*</td>
<td></td>
</tr>
</tbody>
</table>

Universal Motor Version

And Large Reservoir Models

These all have a 10,000 PSI pump and universal motor: 1/2 h.p., 12,000 RPM, 115 or 230 volt (specify), 60/50 cycle A.C. single phase. No. 4036 has an extra-large 2-gallon (462 cu. in.) reservoir to permit full stroke of large displacement rams. Also suited for applications where several rams are used.

High Capacity Reservoir Conversion Kit

Increase the oil capacity of your No. 4031 or No. 4033 pump with this kit. It gives you a plastic reservoir and everything else needed to give you 462 cu. in. of oil.

No. 27874 – 2-gallon reservoir conversion kit. 6-1/2" x 9-1/2" x 11-1/2". Wt., 12 lbs., 13 oz.
SHOP EQUIPMENT

Hydraulic Fittings

Pressure Regulator/Check Valves and Accessories

<table>
<thead>
<tr>
<th>OTC No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9623</td>
<td>Pressure regulator valve. For remote location in a hydraulic system. Adjusts from 1,000 to 10,000 PSI. Wt.: 2 lbs., 2 oz.</td>
</tr>
<tr>
<td>9575</td>
<td>Needle valve for fine metering. Use several for controlling multiple single-acting rams simultaneously, yet independently. 3/8&quot; NPTF ports. Wt.: 1 lb., 3 oz.</td>
</tr>
<tr>
<td>9596</td>
<td>Load lowering valve. 3/8&quot; NPTF ports, 10,000 PSI max. operating pressure. Wt.: 2 lbs., 3 oz.</td>
</tr>
<tr>
<td>25017</td>
<td>Remote control hand switch, 10 ft. cord. Press for “on,” release for “off.” Wt.: 1 lb. (Replacement rocker switch only, No. 16772)</td>
</tr>
<tr>
<td>9625</td>
<td>Pressure switch. 1/4&quot; NPTF external thread. Wt.: 1 lb., 5 oz.</td>
</tr>
</tbody>
</table>

Gauges - All gauges have 1/4" NPTF threads

<table>
<thead>
<tr>
<th>OTC No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9650</td>
<td>Pressure and tonnage gauge. Four scales: 0-10,000 PSI, 0-17-1/2-ton, 0-30 ton, and 0-50 ton. 3-1/2&quot; dia. face (Dry). Wt.: 8 oz.</td>
</tr>
<tr>
<td>9651</td>
<td>Pressure and tonnage gauge. Four scales: 0-10,000 PSI, 0-55 ton, 0-75 ton, and 0-100 ton. 3-1/2&quot; dia. face (Dry). Wt.: 8 oz.</td>
</tr>
<tr>
<td>9652</td>
<td>Pressure and tonnage gauge. Four scales: 0-10,000 PSI, 0-5 ton, 0-10 ton, and 0-25 ton. 3-1/2&quot; dia. face (Dry). Wt.: 8 oz.</td>
</tr>
<tr>
<td>9653</td>
<td>Pressure gauge. Two scales: 0-10,000 PSI, and 0-689 BAR. 3-1/2&quot; dia. face. Use with any OTC pump or ram (Dry). Wt.: 8 oz.</td>
</tr>
<tr>
<td>9654</td>
<td>Pressure gauge. Two scales: 0-10,000 PSI, and 0-689 BAR. 2-1/2&quot; dia. face. Use with any OTC pump (Dry). Wt.: 5 oz.</td>
</tr>
<tr>
<td>9655</td>
<td>Pressure gauge. One scale: 0-6,000 PSI. 3-1/2&quot; dia. face (Dry). Wt.: 8 oz.</td>
</tr>
<tr>
<td>9658</td>
<td>Pressure gauge. Two scales: 0-10,000 PSI, and 0-689 BAR. 2-1/2&quot; dia. face. Gauge is filled with glycerin or silicone to dampen vibration and fluid pulsation. Use with any OTC pump or ram. Wt.: 8 oz.</td>
</tr>
<tr>
<td>9659</td>
<td>Pressure gauge. Same as 9658 except is liquid filled and has 3-1/2&quot; diameter face. Wt.: 14 oz.</td>
</tr>
</tbody>
</table>

Adapters and Fittings

<table>
<thead>
<tr>
<th>OTC No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>24815</td>
<td>Tee adapter. For installing gauge between pump and hose coupling. Has 1/4&quot; and 3/8&quot; NPTF internal and 3/8&quot; NPTF external.</td>
</tr>
<tr>
<td>25919</td>
<td>Double tee adapter. Permits use of more than one ram in series with one pump. Three 3/8&quot; NPTF ports.</td>
</tr>
</tbody>
</table>

Quick Couplers

Precision built and designed for high pressure. Permits disconnecting hose without loss of oil. 3/8" NPTF

<table>
<thead>
<tr>
<th>OTC No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9795</td>
<td>Complete quick coupler</td>
</tr>
<tr>
<td>9796</td>
<td>Ram half coupler and dust cap</td>
</tr>
<tr>
<td>9797</td>
<td>Ram half coupler dust cap only</td>
</tr>
<tr>
<td>9798</td>
<td>Hose half coupler only</td>
</tr>
<tr>
<td>9799</td>
<td>Hose half coupler dust cap only</td>
</tr>
<tr>
<td>9866</td>
<td>Hose or ram half cap</td>
</tr>
</tbody>
</table>
Hydraulic Oil

Ensure dependable performance of rams and pumps by using this high-grade, specially prepared oil. Contains foam suppressant additives; high viscosity index.

<table>
<thead>
<tr>
<th>OTC No.</th>
<th>Size</th>
<th>Viscosity</th>
<th>Recommended for use with</th>
</tr>
</thead>
<tbody>
<tr>
<td>9636</td>
<td>1 quart</td>
<td>215 SSU</td>
<td>4000, 4002, 4016, 4017, 4020, 4021, Vanguard, RamRunner and Stinger pumps</td>
</tr>
<tr>
<td>9637</td>
<td>1 gallon</td>
<td>@ 100°F</td>
<td></td>
</tr>
</tbody>
</table>

Hydraulic Hose

Lightweight, rugged hose in lengths to 20 ft. Choose from 1/4” I.D. or 3/8” I.D. high flow hose. All have 3/8” NPTF ends. Operating pressure is 10,000 PSI. Hoses comply with MHI Std. IJ100.

<table>
<thead>
<tr>
<th>OTC No.</th>
<th>Hose Length</th>
<th>Hose Inside Diameter</th>
<th>Hose Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>9767</td>
<td>6 ft.</td>
<td></td>
<td>Braid (2-ply Rating)</td>
</tr>
<tr>
<td>9768</td>
<td>8 ft.</td>
<td>1/4”</td>
<td></td>
</tr>
<tr>
<td>9769</td>
<td>10 ft.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9770</td>
<td>12 ft.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9780</td>
<td>6 ft.</td>
<td>3/8”</td>
<td>Nylon Core</td>
</tr>
<tr>
<td>9781</td>
<td>10 ft.</td>
<td>High</td>
<td>Synthetic Fiber</td>
</tr>
<tr>
<td>9782</td>
<td>20 ft.</td>
<td>Flow</td>
<td>Reinforced *</td>
</tr>
</tbody>
</table>

* Note: This hose is not recommended for use where heat or weld spatter conditions exist.

80-Ton Capacity Truck Center and End Bushing Service Equipment

For fast, easy bushing replacement on 340, 380, 440, and 450 series Hendrickson suspensions. Recommended by Hendrickson as the only correct method for bushing replacement—eliminates “torching”!

Knock off about six to eight hours when replacing center and end bushings. Center bushings, which often require more frequent service, can be replaced in under two hours, and the beam and wheels stay in place! The No. 1741 and 1742 sets include a hydraulic pump and ram to deliver up to 80 tons of force!

If center bushings are allowed to wear from lack of maintenance, the end bushings may soon fail, which can also lead to excessive tire wear. Correct bushing maintenance with one of OTC’s heavy-duty service sets can save needless parts costs and downtime.

Center Bushing Service

Two hours. That’s about what it takes to replace center bushings with this equipment. Best of all, the beam and wheels are not removed.

End Bushing Removal & Installation

This is almost as easy as center bushing replacement. Of course, the wheels have to be removed first, then the hanger tubes or end beam adapter plugs. (See page 302 for 1743 hanger tube service set and 1745 end bushing adapter service set.) After that, the procedure is much like center bushing replacement. Typically save six to eight hours because the beams are not removed from the truck.

NOTE: Hendrickson Mfg. Co. has changed the numerical designations on the following suspension models. These numerical changes DO NOT affect service procedures or tooling required to service their suspensions.

<table>
<thead>
<tr>
<th>Original Model Number</th>
<th>New Model Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>380</td>
<td>400</td>
</tr>
<tr>
<td>440</td>
<td>460</td>
</tr>
<tr>
<td>450</td>
<td>480</td>
</tr>
<tr>
<td>500</td>
<td>650</td>
</tr>
</tbody>
</table>
Basic Tooling Set

No. 1740 – This is the basic tooling set for servicing center and end beam bushings. It does not include the hydraulic pump or gauge. If you are already equipped with hydraulics, you can be replacing bushings right away! (Does not include tooling for hanger tube or end plug adapter removal.) Wt., 250 lbs.

Hendrickson Service Sets with Hydraulics

The preferred method for servicing center and end beam bushings. You get the complete No. 1740 basic set, plus OTC’s No. 4031 two-stage electric/hydraulic pump with remote hand switch, a No. 9654 pressure gauge, hose half coupler, and 80-ton single-acting ram. (Tooling for hanger tube or end plug adapter removal not included.)

No. 1742 – Hendrickson service set includes Basic Tooling Set No. 1740 plus hydraulics. Wt., 285 lbs.

The method Hendrickson recommends for suspension service. You get the No. 1740 basic set, plus OTC’s No. 4062 two-stage electric/hydraulic pump with remote hand switch, a No. 9653 pressure gauge, hose half coupler, and 80-ton single-acting ram. (Tooling for hanger tube or end plug adapter removal not included.)

No. 1741 – Hendrickson service set with hydraulics. Wt., 285 lbs.

R400 Center Bushing Adapter Set

Used with OTC’s No. 1740 suspension tool set, these adapters let you remove and install the new style R400 center bushings on Hendrickson suspensions. Set includes one No. 310248 removing adapter and one No. 310249 installing adapter.

No. 1746 – Removing/installing bushing adapter set. For R400 series Hendrickson suspensions having center bushing No. 49400 or field service center bushing No. 49600. Wt., 27 lbs., 7 oz.
End Bushing Adapter Puller Set

**No. 1745** – Set contains everything needed to remove end bushing adapter plugs in 380 thru 440 series suspensions. The plugs have to be removed prior to end bushing replacement.

The set is complete in a handy plastic case.

For use with 1740 series tooling sets (order separately). Wt., 9 lbs., 13 oz.

<table>
<thead>
<tr>
<th>Item</th>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>207025</td>
<td>Spacers (3)</td>
</tr>
<tr>
<td>B</td>
<td>302592</td>
<td>Screw (7/8”–14)</td>
</tr>
<tr>
<td>C</td>
<td>302593</td>
<td>Screw (15/16”–12)</td>
</tr>
<tr>
<td>D</td>
<td>207027</td>
<td>Screw</td>
</tr>
<tr>
<td>E</td>
<td>207026</td>
<td>Plug gauge</td>
</tr>
<tr>
<td>F</td>
<td>207030</td>
<td>Hand tap (7/8”–14)</td>
</tr>
<tr>
<td>G</td>
<td>207031</td>
<td>Hand tap (15/16”–12)</td>
</tr>
<tr>
<td>H</td>
<td>207039</td>
<td>Nut assembly</td>
</tr>
<tr>
<td>I</td>
<td>302595</td>
<td>Receiving cup</td>
</tr>
</tbody>
</table>

End Bushing Hanger Tube/ RU Series Center Bushing Service Set

**No. 1743** – Required for servicing RU340 series center bushings. The long puller screw is used to remove the beam cross tube.

The 1743 also removes end bushing hanger tube assemblies. For use with 1740 tooling (order separately). Wt., 44 lbs.

<table>
<thead>
<tr>
<th>Item</th>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>25417</td>
<td>Nut</td>
</tr>
<tr>
<td>B</td>
<td>206455</td>
<td>Removing adapter</td>
</tr>
<tr>
<td>C</td>
<td>302015</td>
<td>Receiving adapter</td>
</tr>
<tr>
<td>D</td>
<td>302119</td>
<td>Special screw</td>
</tr>
<tr>
<td>E</td>
<td>302020</td>
<td>Pulling screw</td>
</tr>
</tbody>
</table>

Bronze Center Bushing Service Set

**No. 1744** – Designed for replacing bronze center bushings on 340, 380, 440, and 460 Hendrickson suspensions. Also installs bronze center bushing grease seals. For use with 1740 series tooling set (order separately). Wt., 15 lbs., 10 oz.

<table>
<thead>
<tr>
<th>Item</th>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>28536</td>
<td>Installing adapter</td>
</tr>
<tr>
<td>B</td>
<td>28538</td>
<td>Installing adapter</td>
</tr>
<tr>
<td>C</td>
<td>302024</td>
<td>Removing/installing adapter</td>
</tr>
<tr>
<td>D</td>
<td>302025</td>
<td>Removing/installing adapter</td>
</tr>
</tbody>
</table>
Center and End Bushing Service Set

No. 1763 – This set is required for bushing service on 500 and 700 series heavy-duty suspensions. It is intended for use with a 100-ton capacity shop press. It allows replacement of center and end bushings. Wt., 39 lbs., 11 oz.

For 500 & 700 series suspensions. Use with a shop press.

<table>
<thead>
<tr>
<th>Item</th>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>208350</td>
<td>Adapter</td>
</tr>
<tr>
<td>B</td>
<td>208349</td>
<td>Adapter clamp</td>
</tr>
<tr>
<td>C</td>
<td>28541</td>
<td>Adapter</td>
</tr>
</tbody>
</table>

Bronze Center Bushing Service Set

No. 1762 – Saves hours replacing bronze center bushings on Hendrickson 500 and 700 suspensions. Use with a 100-ton capacity shop press. Wt., 17 lbs., 7 oz.

For 500 & 700 series suspensions. Use with a shop press.

<table>
<thead>
<tr>
<th>Item</th>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>204266</td>
<td>Installing adapter</td>
</tr>
<tr>
<td>B</td>
<td>38095</td>
<td>Removing adapter</td>
</tr>
</tbody>
</table>

Center and End Bushing Tool Set

No. 1764 – This set is the answer for replacing center and end bushings on Hendrickson 340 and 380/440 series suspensions. The 1764 is for use with a 100-ton or larger hydraulic press. The press plate sits on the press bolster to provide a level, cradle-like surface for the beam to rest on during pressing. Wt., 109 lbs.

For 340 and 380/440 series suspensions. Use with a shop press.

<table>
<thead>
<tr>
<th>Item</th>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>51100</td>
<td>Press plate</td>
</tr>
<tr>
<td>B</td>
<td>302032</td>
<td>Removing adapter</td>
</tr>
<tr>
<td>C</td>
<td>302031</td>
<td>Installing adapter</td>
</tr>
<tr>
<td>D</td>
<td>302030</td>
<td>Removing adapter</td>
</tr>
<tr>
<td>E</td>
<td>42052</td>
<td>Inst. adapter clamp</td>
</tr>
<tr>
<td>F</td>
<td>206459</td>
<td>Clamp plate</td>
</tr>
<tr>
<td>G</td>
<td>206457</td>
<td>Press adapter</td>
</tr>
<tr>
<td>H</td>
<td>302027</td>
<td>Removing adapter</td>
</tr>
<tr>
<td>I</td>
<td>302026</td>
<td>Installing adapter</td>
</tr>
</tbody>
</table>
End Bushing Adapter Puller Set for Hendrickson Truck Suspensions

No. 1748 – This set contains everything needed to remove end bushing adapter plugs used on 400 series and the larger 460–520 series suspensions. The plugs have to be removed prior to end bushing replacement. The set is complete in a handy plastic case. For use with 1740 series tooling sets (order separately).

Wt., 12 lbs.

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Spacers (3)</td>
</tr>
<tr>
<td>B</td>
<td>Screw (7/8&quot;–14)</td>
</tr>
<tr>
<td>C</td>
<td>Screw (15/16&quot;–12)</td>
</tr>
<tr>
<td>D</td>
<td>Screw</td>
</tr>
<tr>
<td>E</td>
<td>Plug gauge</td>
</tr>
<tr>
<td>F</td>
<td>Hand tap (7/8&quot;–14)</td>
</tr>
<tr>
<td>G</td>
<td>Hand tap (15/16&quot;–12)</td>
</tr>
<tr>
<td>H</td>
<td>Nut assembly</td>
</tr>
<tr>
<td>I</td>
<td>Receiving cup</td>
</tr>
<tr>
<td>J</td>
<td>Hand tap (M30 x 2)</td>
</tr>
<tr>
<td>K</td>
<td>Screw (M30 x 2)</td>
</tr>
</tbody>
</table>

* For use on 460–520 series adapter plugs (can be purchased separately and used with set No. 1745).

Hendrickson Bar Pin Adapter Set

Servicing bar pin end bushings used on Hendrickson equalizing beam tandem truck suspensions requires the use of special tooling. OTC’s No. 1757 adapter set is used with the beam removed from the truck, and in conjunction with OTC No. 51100 press plate and a 100-ton hydraulic shop press.

The 1757 set, which replaces the No. 1747 set, includes an adapter for installing bushings in older forged beams as well as the fabricated beams introduced in 1999.

To remove bushings, use OTC’s previously introduced No. 302030 removing adapter and No. 206457 press adapter, both of which may be ordered separately. Reinstall bushings following procedures recommended by the suspension manufacturer.

No. 1757 – Hendrickson bar pin adapter set.

Wt., 18 lbs.
Hendrickson Suspension Bar Pin End Bushing Adapter Set

Extend your No. 1741 and No. 1742 bushing service equipment sets. You can now remove and install worn end bushings on the Hendrickson new style bar pin end bushings without removing the equalizing beam from the vehicle. The No. 1749 works in conjunction with OTC’s No. 1741 and No. 1742 80-ton portable service equipment to do the job quickly, using procedures recommended by the manufacturer.

No. 1749 – Hendrickson suspension bar pin end bushing adapter set. Wt., 53 lbs.

<table>
<thead>
<tr>
<th>Item</th>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>314557</td>
<td>Receiving tube</td>
</tr>
<tr>
<td>B</td>
<td>49050</td>
<td>Installer</td>
</tr>
<tr>
<td>C</td>
<td>314556</td>
<td>Receiving adapter</td>
</tr>
<tr>
<td>D</td>
<td>314558</td>
<td>Pin</td>
</tr>
<tr>
<td>E</td>
<td>314559</td>
<td>Pin</td>
</tr>
</tbody>
</table>

Hendrickson Primaax Quick Alignment Socket

• Hendrickson – Approved tool.
• Used to adjust axle alignment on the Primaax air suspension.
• Works on Primaax models 230, 460, and 690 rear suspensions.

No. 1767 – Hendrickson Primaax quick alignment socket. Wt., 3 lbs., 8 oz.

Hydraulic Flow Testers

50 and 75 GPM hydraulic oil flow testers accurately measure oil flow, temperature, and pressures against manufacturers’ specifications.

Troubleshoot hydraulic circuits and isolate faulty components on mobile equipment, machine tools, fork lifts, agricultural and industrial tractors, and equipment (open or closed) hydraulic systems with capabilities up to 75 GPM at pressures to 5,000 PSI. Models include features such as an automatic pressure compensating load valve that lets you increase flow without affecting the pressure settings. Temperature flow and RPM readings are displayed in metric or English, and accurate to within plus or minus 2% of full scale. Each tester is protected by a safety disc, which ruptures automatically if pressures exceed the upper limits.

No. 4221 – 75 GPM hydraulic circuit tester. Comes with two pressure gauges and three 9-volt batteries. Wt., 21 lbs., 3 oz.

No. 4235 – 50 GPM hydraulic circuit tester with single liquid-filled pressure gauge. Includes two adapter unions for 3/4” NPTF fittings. Wt., 33 lbs.

Fittings, hoses, and tachometer accessories are available separately.
SHOP EQUIPMENT

Transmission Jacks

1,000 lb. Capacity
Low-Lift Transmission Jack

- Universal mounting head, with adjustable brackets, tilts front to back and side to side for easy transmission alignment.
- With a height range of 6-1/2" to 29-1/2", it is ideal for today’s ground-hugging cars.
- Safety chains hold the load securely, even while moving about the shop.
- Wide, stable wheel base with four swivel casters, and two handle grips make it easy to position under the vehicle.
- Safety overload prevents jack from being used beyond its rated capacity.
- Pump handle rotates a full 360° for use in any position.
- Flash-chromed ram inhibits rust from entering the hydraulic system.

No. 1521A – Low-lift transmission jack. Wt., 141 lbs.

<table>
<thead>
<tr>
<th>Model</th>
<th>Cap. (tons)</th>
<th>Overall Length</th>
<th>Overall Width</th>
<th>Max. Height</th>
<th>Min. Height</th>
<th>Tilt Side</th>
<th>Front</th>
<th>Back</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1521A</td>
<td>1/2</td>
<td>34-1/2&quot;</td>
<td>19-3/8&quot;</td>
<td>29-3/4&quot;</td>
<td>7-1/2&quot;</td>
<td>30°</td>
<td>60°</td>
<td>12°</td>
<td>178 lbs.</td>
</tr>
</tbody>
</table>

Heavy-Duty 2,000 lb. Capacity Low-Lift Transmission Jack...for Class 7 and 8 Trucks

- Rugged, stable unit is ideal for handling heavy transmissions. Includes adapter plate for Eaton® Fuller® RoadRanger® transmissions.
- Low profile design gets under the lowest clearance trucks, making it ideal for clutch repair work. There’s even a built-in tool tray on each side rail.
- Pump handle rotates 360° for operator convenience; ball bearing 3.5" diameter swivel casters provide easy positioning of jack.
- Safety overload system prevents use of jack beyond its rated capacity, and a safety bypass protects the hydraulic cylinder from damage. Cylinder features a chrome-plated piston for long life.

No. 1522A – Low-lift transmission jack. Includes No. 220492 adapter for Eaton® Fuller® RoadRanger® transmissions. Wt., 328 lbs.

<table>
<thead>
<tr>
<th>Model</th>
<th>Cap. (tons)</th>
<th>Overall Length</th>
<th>Overall Width</th>
<th>Max. Height</th>
<th>Min. Height</th>
<th>Tilt Side</th>
<th>Front</th>
<th>Back</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1522A</td>
<td>1</td>
<td>43-1/2&quot;</td>
<td>26&quot;</td>
<td>35-1/4&quot;</td>
<td>6-7/8&quot;</td>
<td>11°</td>
<td>24°</td>
<td>18°</td>
<td>267 lbs.</td>
</tr>
</tbody>
</table>
Air-Assisted 1,000 lb. Capacity High-Lift Transmission Jack

- Air-assist primary stage for rapidly raising the mounting head, activated by depressing foot pedal.
- Hydraulic secondary stage for precise operator control, activated by a hand pump to raise the load, and a release knob to lower the load.
- Big, easy-to-grip knobs that make mounting head adjustments simple, and a safety chain for securing the load.
- Wide leg base with 4" polyurethane swivel wheels that provide stability and easy maneuvering. (Brakes on two of the wheels.)
- Safety overload system to prevent jack from being used beyond its rated capacity.

No. 1794A – 1,000 lb. air/hydraulic transmission jack. Wt., 166 lbs., 4 oz.

<table>
<thead>
<tr>
<th>Model</th>
<th>Max. Load Capacity</th>
<th>Overall Height (low posit.)</th>
<th>Max. Height</th>
<th>Max. Forward Tilt</th>
<th>Max. Backward Tilt</th>
<th>Max. Side Tilt (either side)</th>
<th>Leg Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>1794A</td>
<td>1,000 lbs.</td>
<td>37-5/8&quot;</td>
<td>76-1/2&quot;</td>
<td>42°</td>
<td>46°</td>
<td>±12°</td>
<td>37-1/8&quot;</td>
</tr>
</tbody>
</table>

1,000 lb. Capacity High-Lift Transmission Jack

- Universal saddle tilts front to back and side to side; features adjustable corner brackets and safety chain for optimum positioning of the load.
- Flash-chromed rams inhibit rust from entering the hydraulic system.
- Foot-operated pump and lowering pedal for ease of control when positioning or removing a transmission.
- Wide leg base with 4" polyurethane swivel wheels that provide stability and easy maneuvering. (Brakes on two of the wheels.)
- Safety overload system to prevent jack from being used beyond its rated capacity.

No. 1793A – High-lift transmission jack with foot pump. Wt., 162 lbs.

<table>
<thead>
<tr>
<th>Model</th>
<th>Max. Load Capacity</th>
<th>Overall Height (low posit.)</th>
<th>Max. Height</th>
<th>Max. Forward Tilt</th>
<th>Max. Backward Tilt</th>
<th>Max. Side Tilt (either side)</th>
<th>Leg Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>1793A</td>
<td>1,000 lbs.</td>
<td>35&quot;</td>
<td>71-5/8&quot;</td>
<td>24°</td>
<td>19°</td>
<td>±20°</td>
<td>37-1/8&quot;</td>
</tr>
</tbody>
</table>
**22-Ton Capacity Under-Axle Jack**

- Self-retracting, spring return feature.
- Long 50" T-handle lets you easily position jack under vehicles with long overhangs.
- One pull of the handle activates the self-retracting 22-ton capacity ram without having to crawl underneath the vehicle. Jack has large rubber-tired wheels.
- Lifting range:
  - Screw Ext'd. – 8" min./17" max. height with adapter
  - Screw Retd. – 8" min./12-1/2" max. height
- Cylinder stroke, 4-3/4"; extended screw length, 5"; PSI range, 90–145.

**No. 1788A** – Under-axle hydraulic jack with 22-ton capacity self-retracting ram. Wt., 102 lbs.

**No. 215009** – In-line oil lubricator. Add to air line to meter precise flow of lubricant to air motor. Has 1/4" NPT fitting. Wt., 8 oz.

*Not included, order separately. Prevents harmful contamination caused by moisture in the air line!*

---

**Truck Dual Wheel Dolly**

- This 1,500 capacity dolly will remove, transport, and replace dual wheel and tire assemblies without strain or struggle. Swivel casters, 3-1/2" front and 3" rear, provide easy maneuverability.
- Floor space is 43" by 42".
- No. 1769 hydraulic jack provides over 6-1/2" of lift and tilts wheel assembly 7° to prevent damage to wheel seal.
- Includes a 6' support chain to hold load in place.

**No. 1769A** – Dual wheel dolly. Wt., 187 lbs.
SHOP EQUIPMENT

Service Jacks

5-Ton and 10-Ton Service Jacks
- A built-in safety overload prevents using the jack beyond its rated capacity.
- Convenient foot pedal speeds the lifting operation. Handle lock and release control are located on top of the handle. Handle can be locked into any position from vertical to horizontal.
- Both models have a spring-loaded 40" handle.

No. 1505B – 5-ton service jack. Wt., 232 lbs.
No. 1510B – 10-ton service jack. Wt., 412 lbs.

20-Ton Capacity Service Jack
- Low-profile stance and extended height add to versatility.
- Wheels and swivel casters feature internal bearings.
- Either the foot pedal or jack handle may be used for pumping action. Counter-balanced, spring-assisted handle has a three-position lock.

No. 1512 – 20-ton service jack. Wt., 505 lbs.

Specifications:

<table>
<thead>
<tr>
<th>Capacity</th>
<th>No. 1505B</th>
<th>No. 1510B</th>
<th>No. 1512</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lifting range</td>
<td>6&quot; to 22&quot;</td>
<td>6-1/4&quot; to 22&quot;</td>
<td>7-1/2&quot; to 24&quot;</td>
</tr>
<tr>
<td>Saddle dia.</td>
<td>5-1/8&quot;</td>
<td>6&quot;</td>
<td>7-1/2&quot;</td>
</tr>
<tr>
<td>Overall reach</td>
<td>47&quot;</td>
<td>51&quot;</td>
<td>97&quot;</td>
</tr>
<tr>
<td>Frame height</td>
<td>7-3/4&quot;</td>
<td>9-3/4&quot;</td>
<td>10-1/4&quot;</td>
</tr>
<tr>
<td>Handle Length</td>
<td>43&quot;</td>
<td>43-1/4&quot;</td>
<td>42&quot;</td>
</tr>
<tr>
<td>Floor space</td>
<td>14-3/4&quot; to 56&quot;</td>
<td>18&quot; to 60&quot;</td>
<td>18-1/8&quot; to 61-3/8&quot;</td>
</tr>
</tbody>
</table>

5-Ton and 10-Ton Air/Hydraulic Service Jacks
- Bring the versatility of air-assist operation to your shop’s lifting tasks. The 10-ton model can also be operated manually, when shop air is not available.
- Huge front wheels mounted in bearings provide trouble-free service life. Rugged steel frame members.
- Rear swivel casters make spotting the jack easy.

No. 1507A – 5-ton air/hydraulic service jack. Wt., 232 lbs.
No. 1511A – 10-ton air/hydraulic service jack. Wt., 330 lbs.

Specifications:

<table>
<thead>
<tr>
<th>Capacity</th>
<th>No. 1507A</th>
<th>No. 1511A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air pressure</td>
<td>80–120 PSI</td>
<td>80–120 PSI</td>
</tr>
<tr>
<td>Lifting range</td>
<td>5-7/8&quot; to 22&quot;</td>
<td>6-3/8&quot; to 22&quot;</td>
</tr>
<tr>
<td>Saddle dia.</td>
<td>6-5/8&quot;</td>
<td>7-3/8&quot;</td>
</tr>
<tr>
<td>Overall reach</td>
<td>87&quot;</td>
<td>90&quot;</td>
</tr>
<tr>
<td>Frame height</td>
<td>8&quot;</td>
<td>12-3/4&quot;</td>
</tr>
<tr>
<td>Handle length</td>
<td>40&quot;</td>
<td>42&quot;</td>
</tr>
</tbody>
</table>
2-1/2 Ton and 3-Ton Service Jacks

- The Stinger series 2-1/2 and 3-ton hydraulic service jacks are designed for the budget-minded shop owner, who still wants the quality of an OTC product.
- Built from select steel, these jacks can stand up to the abuse that jacks are subjected to daily. Yet, their light, compact design makes them easy and convenient to use.
- Each jack has a built-in safety overload system that prevents use beyond its rated capacity.
- With rear swivel casters, maneuvering and positioning of these jacks is an easy task.

No. 1503A – 2-1/2 ton service jack with lifting range of 5" to 20". Wt., 80 lbs., 5 oz.
No. 1504A – 3-ton service jack with lifting range of 6" to 23-1/2". Wt., 91 lbs., 5 oz.

<table>
<thead>
<tr>
<th>Specifications</th>
<th>No. 1503A</th>
<th>No. 1504A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>2-1/2 ton</td>
<td>3 ton</td>
</tr>
<tr>
<td>Lifting range</td>
<td>5&quot; to 20&quot;</td>
<td>5-3/8&quot; to 20-1/4&quot;</td>
</tr>
<tr>
<td>Saddle dia.</td>
<td>5&quot;</td>
<td>5&quot;</td>
</tr>
<tr>
<td>Overall reach</td>
<td>21&quot;</td>
<td>21&quot;</td>
</tr>
<tr>
<td>Frame height</td>
<td>6-1/4&quot;</td>
<td>6-1/4&quot;</td>
</tr>
<tr>
<td>Handle Length</td>
<td>37-1/2&quot;</td>
<td>37-1/2&quot;</td>
</tr>
<tr>
<td>Floor space</td>
<td>14&quot; x 26&quot;</td>
<td>14&quot; x 26&quot;</td>
</tr>
</tbody>
</table>

3-Ton Stinger Jack Pack

- Pack includes both a No. 1504A 3-ton hydraulic service jack and a pair of No. 1772C 3-ton ratcheting jack stands.
- The stands have a steel base for strength, self-locking ratchet handle, durable baked enamel finish, and conform to ANSI PALD-4 load rating standard. Base: 8-1/4" x 7-1/2". Height range: 11-5/8" to 17-1/8".
- Jack has a light, compact design with a 37-1/2" handle length, and a lifting range of 5" to 20-1/4".

No. 1500A – 3-ton capacity jack pack. Wt., 106 lbs., 5 oz.
Two-Speed 3-1/2 Ton Service Jack

The ideal floor jack for both a large automotive service center or a one person shop.

- Gets to the load quickly.
- One pump to load; three pumps to full height unloaded.
- Extra wide lift range – from 4” to 21”.
- A long 48” spring-loaded handle provides rapid return after each pump.
- Heavy-duty construction – rolled edges add strength and resist twisting.
- With a wheel base of 23”, the front wheels are 3-1/2” diameter and rear casters are 2-1/8”.
- Pinned 4-3/4” saddle will not lift off during use.
- 2-year limited warranty.

No. 1526 – 3-1/2 ton quick lift service jack.
Wt., 96 lbs.

SUV Jack Pack

Pack includes No. 1526, 3-1/2 ton service jack, combined with No. 1773C, 6-ton jack stands.

- One pump to load; three pumps to full height unloaded.
- Extra wide lift range – from 4” to 21”.
- 48” long, spring-loaded handle provides rapid return after each pump.
- Heavy-duty construction – rolled edges add strength and resist twisting.
- Gets to the load quickly.
- Pinned 4-3/4” rubber saddle will not lift off during use and minimizes scuffing of lifting surface.
- Stands have a steel base for strength, self-locking ratchet handle, and a durable baked enamel finish.
- 2-year limited warranty.

No. 1536 – SUV jack pack. Wt., 130 lbs.

1-1/2 Ton Racing Jack

- Dual pump pistons – just four pumps get you to maximum height of 18 inches.
- Low profile – 3-1/2 inches – makes it perfect for ground hugging, high-performance cars.
- Weighs just 42 pounds and includes side-mounted handles for quick and easy carrying.
- Aircraft-grade billet aluminum provides strength with maximum weight savings.
- Two-piece, 44-1/2” long handle quickly snaps together.
- Removable, rubber saddle pad protects vehicle and prevents slipping.
- 2-year limited warranty.

No. 1537 – 1-1/2 ton racing jack. Wt., 42 lbs.
Motorcycle / ATV Lift

- 1,500 lb. capacity.
- Large, 17" long skids will lift the largest, widest cruisers.
- Lowest clearance available, 3-1/2" at lowest level, with a lift range of 3-1/2" to 16-3/4".
- Removable handle makes for easy movement around load.
- Features also include foot pedal release, locking rear casters, automatic safety lock, and two ratcheting tie down straps for safety.
- Two-year warranty.

**No. 1545** – 1,500 lb. capacity motorcycle/ATV lift.
Wt., 74 lbs.

Easy Roller™ Vehicle Positioning System

The Stinger No. 1580 Easy Roller provides a technician with a simple and efficient method of moving a disabled vehicle around a shop environment. Just position an Easy Roller at each wheel of a vehicle weighing up to 6,000 lbs., and use the foot pedals to activate the hydraulic lift mechanisms. Within minutes, one individual can easily move the car throughout the garage. The Easy Roller fits tread widths up to 12", and the four heavy-duty casters can support up to 1,500 lbs. per unit, while, at the same time, protecting the shop floor from damage.

- Four heavy-duty phenolic casters.
- 1,500 lb. capacity per unit.
- Hydraulic lift mechanism with locking pin.
- Fits tread widths up to 12".

**No. 1580** – 1,500 lb. Easy Roller™ (sold individually).
Wt., 44 lbs.

4-Ton Capacity Fork Lift Jack

- 8,000 lb. capacity with a low starting height of 2-5/8".
- Two-position lift pad permits handling of all lift truck configurations with flat or edged surfaces.
- Minimum low lift: 2-1/4".
  Maximum high lift: 16-1/4".
- Features include high-quality seals and high-strength steel construction.
- Handle stop makes for easy maneuverability.
- 30" long handle.

**No. 1540** – 4-ton capacity fork lift jack. Wt., 73 lbs.
Brake Drum Dolly
- Removes, installs, and transports truck brake drums without physically having to lift them.
- Works on all 15" and 16-1/2" drums found on most class 7 and 8 tractor and trailer brake systems.
- 6" height adjustment aids installation.
- Heavy-gauge steel construction, 8" tires, and 36" handle.

No. 1543 – Brake drum dolly. Wt., 62 lbs.

Engine Load Leveler
- Designed to hook to a crane or hoist to handle and position large, bulky components.
- The horizontal tilt can be adjusted to compensate for off-center loads, or adjusted to a certain angle for a component being positioned.

No. 4305 – 1,500 lb. capacity engine load leveler. Wt., 15 lbs.

Engine Support Bar
- 1,100 pound capacity.
- Rubber padded support legs ensure stability during use.
- Tubular steel construction for long life.
- Adjustable width: 57" x 27".
- Features two hook assemblies for ease of use.
- Includes two 36" chain assemblies.

No. 4324 – Engine support bar. Wt., 50 lbs.
2,000 and 4,000 lb. Capacity
Folding Floor Cranes

- Both of these cranes fold up for compact storage.
- Front wheels are 3-1/2"; rear casters 5-7/8".

No. 2002 – 2000 lb. capacity crane with a reach of 24" to 36". Wt., 185 lbs.
No. 2004 – 4000 lb. capacity crane with a reach of 25" to 46". Wt., 225 lbs.

### Specifications

<table>
<thead>
<tr>
<th>Specifications</th>
<th>2002</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum capacity,</td>
<td>500 lbs.</td>
<td>1,000 lbs.</td>
</tr>
<tr>
<td>boom extended</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum capacity,</td>
<td>2,000 lbs.</td>
<td>4,000 lbs.</td>
</tr>
<tr>
<td>boom retracted</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum height,</td>
<td>94&quot;</td>
<td>104&quot;</td>
</tr>
<tr>
<td>boom extended</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effective boom reach,</td>
<td>36&quot;</td>
<td>48&quot;</td>
</tr>
<tr>
<td>boom extended</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effective boom reach,</td>
<td>24&quot;</td>
<td>26&quot;</td>
</tr>
<tr>
<td>boom retracted</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leg width @ front wheels</td>
<td>32-1/2&quot;</td>
<td>26&quot;</td>
</tr>
<tr>
<td>Leg height</td>
<td>6-1/2&quot;</td>
<td>7-3/4</td>
</tr>
<tr>
<td>Floor space folded</td>
<td>57&quot; x 38&quot;</td>
<td>16&quot; x 17-1/2&quot;</td>
</tr>
<tr>
<td>Floor space unfolded</td>
<td>70&quot; x 32&quot;</td>
<td>33&quot; x 33-1/2&quot;</td>
</tr>
</tbody>
</table>

Engine Lift Package

Combines a No. 4305 Load Leveler with a No. 2002 Stinger Crane.

- 1,500 lb. capacity.
- 2,000 lb. capacity crane folds up for compact storage, out of your way.
- Load leveler provides the flexibility you need for pulling engines.

1,000 lb. and 1,250 lb. Capacity

Engine Stands

- Heavy-duty mounting plate and adapter arms for servicing light truck and car engines.
- Fixed polyurethane back wheels; poly swivel castors on front for smooth travel.
- 24" handle makes easy work of rotating the engine 360°; hitch pin locks engine in place.
- Model 2012A has a built-in tool tray.

No. 2010A – 1,000 lb. capacity engine stand.
Wt., 51 lbs., 11 oz.

No. 2012A – 1,250 lb. capacity engine stand.
Wt., 73 lbs., 12 oz.

<table>
<thead>
<tr>
<th>Model</th>
<th>Capacity</th>
<th>Height To Center Line</th>
<th>Length</th>
<th>Width</th>
<th>Wheel Diameter</th>
<th>Front Wheels</th>
<th>Back Wheels</th>
<th>Handle Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010A</td>
<td>1,000 lbs.</td>
<td>24&quot;</td>
<td>31-1/4&quot;</td>
<td>26&quot;</td>
<td>3-1/2&quot;</td>
<td>Swivel Caster</td>
<td>Fixed</td>
<td>24&quot;</td>
</tr>
<tr>
<td>2012A</td>
<td>1,250 lbs.</td>
<td>24&quot;</td>
<td>33&quot;</td>
<td>33-3/4&quot;</td>
<td>3-1/2&quot;</td>
<td>Swivel Caster</td>
<td>Fixed</td>
<td>24&quot;</td>
</tr>
</tbody>
</table>

Ratchet-Style Jack Stands

- Formed and welded steel base for strength; self-locking ratchet handle cannot be released under load. Durable baked enamel finish resists corrosion.
- Stands conform to ANSI PALD-4 load rating standard; factory tested before shipment.

No. 1772C – Pair of 3-ton jack stands.
Base: 8-1/4" x 7-1/2". Height range: 11" to 17".
Wt., 15 lbs.

No. 1773C – Pair of 6-ton jack stands.
Base: 11-7/16" x 10". Height range: 15-3/8" to 24-1/4".
Wt., 25 lbs.

No. 1784C – Pair of 12-ton jack stands.
Base: 12-5/8" x 11-3/8". Height range: 19-1/2" to 30-3/4".
Wt., 80 lbs.
Tripod and Underhoist Stands

4,000 lb. Capacity Underhoist Tripod Stand
- Lifting height of 58-7/8" to 91-5/8"; saddle measures 3-1/4" x 3-1/4".
- 24" x 24" x 24" tripod base.

No. 2018A – Underhoist stand.
Wt., 40 lbs.

1,500 lb. Capacity Underhoist Stand
- Lifting height of 54-1/4" to 80-3/4"; saddle measures 5-1/4" x 1-1/4". 11-7/8" dia. base.

No. 2015A – Underhoist stand.
Wt., 30 lbs.

1,500 lb. Capacity Underhoist Stand with Foot Pedal
- Foot pedal actuated lifting mechanism.
- Lifting height of 54-1/4" to 80-3/4"; saddle measures 5-1/4" x 1-1/4".

Wt., 35 lbs.

Air/Hydraulic Bottle Jacks
- Compact, yet heavy-duty units designed for the truck and construction industries; in the shop, roadside, or at the job site.
- Can be operated either manually or pneumatically. Air hose can swivel in any direction of connection from air source. Minimum air pressure required is 100 psi. Safety valve prevents overloading.
- Extension screw gives added height when needed.

No. 9212B – 12-ton air-assist hydraulic bottle jack.
Wt., 31 lbs.

No. 9220B – 20-ton air-assist hydraulic bottle jack.
Wt., 42 lbs.

No. 4313A – 12-ton air-assist hydraulic bottle jack.
Wt., 29 lbs.

No. 4321B – 20-ton air-assist hydraulic bottle jack.
Wt., 45 lbs.

<table>
<thead>
<tr>
<th>Order No.</th>
<th>Cap.</th>
<th>Min. Height</th>
<th>Stroke</th>
<th>Max. Height</th>
<th>Screw/Adp.</th>
<th>Air Pressure</th>
<th>Base Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>9212B</td>
<td>12</td>
<td>9-1/2&quot;</td>
<td>5-7/8&quot;</td>
<td>18-1/2&quot;</td>
<td>3-1/8&quot;</td>
<td>100–200 psi</td>
<td>4-3/4&quot; x 8&quot;</td>
</tr>
<tr>
<td>9220B</td>
<td>20</td>
<td>9-1/2&quot;</td>
<td>5-3/8&quot;</td>
<td>18-1/4&quot;</td>
<td>3-3/8&quot;</td>
<td>100–200 psi</td>
<td>5-3/4&quot; x 8-1/2&quot;</td>
</tr>
<tr>
<td>4313A</td>
<td>12</td>
<td>9-1/2&quot;</td>
<td>6-1/8&quot;</td>
<td>18-3/8&quot;</td>
<td>2-3/4&quot;</td>
<td>100–200 psi</td>
<td>6-3/8&quot; x 7-5/8&quot;</td>
</tr>
<tr>
<td>4321B</td>
<td>20</td>
<td>9-7/16&quot;</td>
<td>5-7/8&quot;</td>
<td>17-11/16&quot;</td>
<td>2-5/16&quot;</td>
<td>100–200 psi</td>
<td>8-1/32&quot; x 7-1/16&quot;</td>
</tr>
</tbody>
</table>
Hydraulic Bottle Jacks

- OTC breaks the price barrier! A very competitively priced line of bottle jacks that offers the quality and reliability that the market has come to expect from OTC.
- Jacks can be used in vertical or horizontal positions.
- Fewer working parts, extremely smooth bearing surfaces, and close tolerances ensure long life.
- Oil bypass system prevents the lifting ram from being over-extended.

<table>
<thead>
<tr>
<th>Cap. (tons)</th>
<th>Stroke</th>
<th>OTC No.</th>
<th>Retracted Height Min.</th>
<th>Length of Screw Extension</th>
<th>Height with Screw Extended</th>
<th>Pump Strokes to Extend Piston One Inch</th>
<th>Saddle Dia.</th>
<th>Base Size</th>
<th>Carry Handle</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4-3/4&quot;</td>
<td>9005B</td>
<td>7-7/8&quot;</td>
<td>2-3/4&quot;</td>
<td>15-3/8&quot;</td>
<td>12</td>
<td>1-3/8&quot;</td>
<td>5-3/16&quot; x 3-31/32&quot;</td>
<td>No</td>
<td>8 lbs.</td>
</tr>
<tr>
<td>8</td>
<td>4-3/4&quot;</td>
<td>9008B</td>
<td>7-7/8&quot;</td>
<td>2-3/4&quot;</td>
<td>15-3/8&quot;</td>
<td>18</td>
<td>1-1/2&quot;</td>
<td>6&quot; x 3-1/2&quot;</td>
<td>Yes</td>
<td>13 lbs.</td>
</tr>
<tr>
<td>12</td>
<td>3-3/4&quot;</td>
<td>9012B*</td>
<td>6-3/4&quot;</td>
<td>3&quot;</td>
<td>13-1/2&quot;</td>
<td>26</td>
<td>1-7/8&quot;</td>
<td>6-1/2&quot; x 4-3/16&quot;</td>
<td>Yes</td>
<td>15 lbs.</td>
</tr>
<tr>
<td>12</td>
<td>5-7/8&quot;</td>
<td>9112B</td>
<td>9-1/2&quot;</td>
<td>3-1/8&quot;</td>
<td>18-1/2&quot;</td>
<td>26</td>
<td>1-7/8&quot;</td>
<td>6-1/2&quot; x 4-3/16&quot;</td>
<td>Yes</td>
<td>20 lbs.</td>
</tr>
<tr>
<td>20</td>
<td>3-3/8&quot;</td>
<td>9020B*</td>
<td>7-1/8&quot;</td>
<td>1-9/16&quot;</td>
<td>12&quot;</td>
<td>22</td>
<td>2&quot;</td>
<td>7-3/16&quot; x 5-1/16&quot;</td>
<td>Yes</td>
<td>22 lbs.</td>
</tr>
<tr>
<td>20</td>
<td>6-1/4&quot;</td>
<td>9120B</td>
<td>10-5/8&quot;</td>
<td>3-1/8&quot;</td>
<td>16-7/8&quot;</td>
<td>22</td>
<td>2&quot;</td>
<td>7-3/16&quot; x 5-1/16&quot;</td>
<td>Yes</td>
<td>30 lbs.</td>
</tr>
<tr>
<td>30</td>
<td>6-1/4&quot;</td>
<td>9030B</td>
<td>11&quot;</td>
<td>-</td>
<td>17-1/4&quot;</td>
<td>35</td>
<td>2-3/8&quot;</td>
<td>7-9/16&quot; x 5-9/16&quot;</td>
<td>Yes</td>
<td>45 lbs.</td>
</tr>
<tr>
<td>2</td>
<td>4-9/16&quot;</td>
<td>4302A</td>
<td>7-3/16&quot;</td>
<td>1-7/8&quot;</td>
<td>13-5/8&quot;</td>
<td>10</td>
<td>13/16&quot;</td>
<td>3-3/4&quot; x 3-3/8&quot;</td>
<td>No</td>
<td>5.8 lbs.</td>
</tr>
<tr>
<td>4</td>
<td>4-9/16&quot;</td>
<td>4304A</td>
<td>7-11/16&quot;</td>
<td>2-9/16&quot;</td>
<td>14-13/16&quot;</td>
<td>11</td>
<td>1-1/4&quot;</td>
<td>3-7/8&quot; x 3-9/16&quot;</td>
<td>No</td>
<td>7.4 lbs.</td>
</tr>
<tr>
<td>8</td>
<td>5-7/8&quot;</td>
<td>4308A</td>
<td>9-1/16&quot;</td>
<td>3-1/4&quot;</td>
<td>18-3/16&quot;</td>
<td>14</td>
<td>1-3/8&quot;</td>
<td>4-3/4&quot; x 4-1/16&quot;</td>
<td>Yes</td>
<td>13.2 lbs</td>
</tr>
<tr>
<td>12</td>
<td>6-1/8&quot;</td>
<td>4312A</td>
<td>9-1/4&quot;</td>
<td>3-5/16&quot;</td>
<td>18-11/16&quot;</td>
<td>18</td>
<td>1-11/16&quot;</td>
<td>5-1/4&quot; x 4-9/16&quot;</td>
<td>Yes</td>
<td>16.4 lbs</td>
</tr>
<tr>
<td>12 (shorty)</td>
<td>2-13/16&quot;</td>
<td>4314A</td>
<td>6-3/16&quot;</td>
<td>1-5/8&quot;</td>
<td>10-5/8&quot;</td>
<td>23</td>
<td>1-9/16&quot;</td>
<td>5-1/4&quot; x 5-3/8&quot;</td>
<td>Yes</td>
<td>13 lbs.</td>
</tr>
<tr>
<td>20</td>
<td>5-9/16&quot;</td>
<td>4320A</td>
<td>9-5/8&quot;</td>
<td>2-1/4&quot;</td>
<td>17-1/2&quot;</td>
<td>26</td>
<td>1-13/16&quot;</td>
<td>5-5/8&quot; x 6-1/4&quot;</td>
<td>Yes</td>
<td>24 lbs.</td>
</tr>
<tr>
<td>20 (shorty)</td>
<td>6-3/4&quot;</td>
<td>4322A</td>
<td>6-3/8&quot;</td>
<td>1-5/16&quot;</td>
<td>11-1/4&quot;</td>
<td>26</td>
<td>1-13/16&quot;</td>
<td>6&quot; x 6-1/2&quot;</td>
<td>Yes</td>
<td>18.5 lbs</td>
</tr>
<tr>
<td>32</td>
<td>6-9/16&quot;</td>
<td>4332A</td>
<td>9-15/16&quot;</td>
<td>-</td>
<td>16-1/2&quot;</td>
<td>22</td>
<td>2-1/8&quot;</td>
<td>6-5/8&quot; x 5-1/8&quot;</td>
<td>Yes</td>
<td>34.4 lbs</td>
</tr>
<tr>
<td>50</td>
<td>5&quot;</td>
<td>4350</td>
<td>9-1/2&quot;</td>
<td>-</td>
<td>14-1/2&quot;</td>
<td>40</td>
<td>3-1/4&quot;</td>
<td>7&quot; x 8-1/2&quot;</td>
<td>Yes</td>
<td>64.8 lbs</td>
</tr>
</tbody>
</table>

*Low profile models
Air/Hydraulic Pump
- 10,000 PSI air/hydraulic pump.
- Internal relief valve.
- Two-stage release mechanism.
- Pump, hold, or release load with pedal control.
- 98 cu. in. usable capacity.
- 3/8 NPT oil port.

No. 2510A – Air/hydraulic pump.
Wt., 21 lbs.

Hydraulic Rams for Collision Repair Sets
These premium quality rams are designed for long, trouble-free service. Backed by a two-year warranty, they feature a special piston rod that permits their use with the snap-together components of OTC Stinger’s new collision repair sets, or with most similar competitive products.

No. 9104A – 4-ton ram with 4" stroke and special piston rod end designed to fit most collision repair set components. Wt., 4 lbs.

No. 9110A – 10-ton ram with 6" stroke and special piston rod end designed to fit most collision repair set components. Wt., 12 lbs.

<table>
<thead>
<tr>
<th>OTC No.</th>
<th>Cap. in Tons</th>
<th>Stroke</th>
<th>Collapsed Height</th>
<th>Extended Height</th>
<th>Spring Return</th>
<th>Rod End Dia.</th>
<th>Max. Oper. Pressure (PSI)</th>
<th>Oil Cap. (cu. in)</th>
<th>Oil Port</th>
</tr>
</thead>
<tbody>
<tr>
<td>9104A</td>
<td>4</td>
<td>4&quot;</td>
<td>10-3/8&quot;</td>
<td>14-3/8&quot;</td>
<td>Yes</td>
<td>.874&quot;</td>
<td>8,950</td>
<td>4.87</td>
<td>1/4&quot; NPT</td>
</tr>
<tr>
<td>9110A</td>
<td>10</td>
<td>6&quot;</td>
<td>15&quot;</td>
<td>21&quot;</td>
<td>Yes</td>
<td>1.310&quot;</td>
<td>8,950</td>
<td>13.69</td>
<td>1/4&quot; NPT</td>
</tr>
</tbody>
</table>

Single-Speed Hydraulic Hand Pumps
These single-speed pumps are ideal for single-acting rams. Developing up to 10,000 psi operating pressure, the pumps operate horizontally or vertically in the “head down” position. Finger tip control provides instant release or pumping action. Has a built-in safety overload valve. Ideal for use with OTC Stinger single-acting rams, or similar competitive rams.

No. 9106A – Hand pump only.
Wt., 5 lbs., 10 oz.

No. 9107A – Hand pump only.
Wt., 13 lbs.

<table>
<thead>
<tr>
<th>Specifications:</th>
<th>9106A</th>
<th>9107A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum operating pressure</td>
<td>10,000 psi</td>
<td>10,000 psi</td>
</tr>
<tr>
<td>Volume per stroke</td>
<td>0.17 cu. in.</td>
<td>0.17 cu. in.</td>
</tr>
<tr>
<td>Reservoir capacity</td>
<td>18 cu. in.</td>
<td>30 cu. in.</td>
</tr>
<tr>
<td>Oil port</td>
<td>1/4&quot; NPT</td>
<td>1/4&quot; NPT</td>
</tr>
</tbody>
</table>
Stinger Series 4- and 10-Ton Collision Repair Sets

- Very competitively priced, yet high quality sets include single-speed hydraulic hand pump, hose, and ram.
- Components snap together for quick setups to apply pushing, spreading, or pulling force.
- Components include: hydraulic pump, hose, and ram; ram flat base; extension tubes (4); 1/2-ton spreader; tube coupling; ram toe; wedge head; serrated saddle; flex head; plunger toe; 90° wedge head; storage case. The case for the 10-ton set has wheels for mobility.

No. 1513A — 4-ton collision repair set. Has single-speed hydraulic hand pump and ram with 4" stroke. Wt., 40 lbs.


Passenger and Light Truck Wheel Step

- Provides quick, easy access to your vehicle’s roof for loading/unloading cargo.
- Fits passenger and light trucks.
- Installs in seconds.
- Adjusts to fit 14" to 20" wheel sizes.
- 300 pound capacity.
- Non-skid platform surface.
- Two-year warranty.

No. 1534A — Light truck wheel step. Wt., 12.5 lbs.

Low Profile Fluid Receiver

- Designed for receiving waste fluid during a wide range of repair jobs.
- Fluid capacity: 7.5 gallons.
- Constructed of polyethylene plastic for heavy-duty use—yet, only weighs 13 pounds.
- Low profile, only 5" high, it easily slides under passenger cars.
- Designed with four casters to provide efficient maneuverability.
- Suitable for cooling system repair jobs—can be used for antifreeze.
- Includes splash screen to prevent spillage and splashing.
- Two-year warranty.

No. 1577 — Low profile fluid receiver. Wt., 12 lbs., 8 oz.
Summary of ANSI/ASME PALD, Safety Standard for Portable Automotive Lifting Devices

This standard is intended as a guide to manufacturers, suppliers, purchasers, and operators of equipment, as well as governmental authorities. The following are typical test requirements:

A: Load Sustaining Test – The lift device shall hold a rated load at maximum height without dropping more than 1/8" in a minute, or more than 3/16" in 10 minutes.

B: Mobility Test – The lift device must move over a 1/2" high, 15 degree slope rise in the floor and a 1/2" drop back to the floor while traveling at 1-1/2 to 2 ft./sec. and supporting a rated load at the minimum height position. The device must not lose the load or tip over.

C: Stability Test – The lift device must be moved against a 2" high vertical rise at 90 degrees to the direction of travel, while supporting a rated load at the minimum height and moving at 1-1/2 to 2 ft./sec. The device must not lose the load or tip over when tested at the point of greatest instability.

D: Proof Load Test – The lift device shall function throughout its lift range with a proof load centrally located on the lift platform. Proof load shall be 125% of rated capacity for devices equipped with an internal relief valve, or 150% of rated load for devices with no internal relief.
# Quick Finder Index

<table>
<thead>
<tr>
<th>Category</th>
<th>Page Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recovery/Recycling Units</td>
<td>322–335</td>
</tr>
<tr>
<td>Recovery/Recycling Accessories</td>
<td>335–336</td>
</tr>
<tr>
<td>Oil Injectors</td>
<td>336</td>
</tr>
<tr>
<td>A/C Flushing</td>
<td>337</td>
</tr>
<tr>
<td>Refrigerant Identifiers</td>
<td>338</td>
</tr>
<tr>
<td>Refrigerant Leak Detectors</td>
<td>339–342</td>
</tr>
<tr>
<td>Combustible Gas Detection</td>
<td>343–344</td>
</tr>
<tr>
<td>Ultrasonic Leak Detection</td>
<td>345</td>
</tr>
<tr>
<td>UV Leak Detection</td>
<td>346</td>
</tr>
<tr>
<td>Thermometers</td>
<td>348–350</td>
</tr>
<tr>
<td>Manifolds and Hoses</td>
<td>351–356</td>
</tr>
<tr>
<td>Vacuum Pump Oil</td>
<td>357</td>
</tr>
<tr>
<td>Vacuum Pumps</td>
<td>358–361</td>
</tr>
<tr>
<td>Vacuum Gauges</td>
<td>363–364</td>
</tr>
<tr>
<td>Refrigerant Scales</td>
<td>365–366</td>
</tr>
<tr>
<td>Dial-A-Charge Charging Cylinders</td>
<td>367</td>
</tr>
<tr>
<td>Refrigerant Heater Blankets</td>
<td>368</td>
</tr>
<tr>
<td>Tubing Cutters</td>
<td>368–369</td>
</tr>
<tr>
<td>Tubing Deburring Tools</td>
<td>370</td>
</tr>
<tr>
<td>Inspection Light</td>
<td>370</td>
</tr>
<tr>
<td>A/C Clutch Tools</td>
<td>371</td>
</tr>
<tr>
<td>Fin Straighteners</td>
<td>371</td>
</tr>
<tr>
<td>A/C Valve Core Tools</td>
<td>372–373</td>
</tr>
<tr>
<td>A/C Adapters</td>
<td>373</td>
</tr>
<tr>
<td>Heat Gun</td>
<td>374</td>
</tr>
</tbody>
</table>

---

1-800-822-5561

**Robinair Technical Services**
R-134a Recovery, Recycling, Evacuation, and Recharging

The Industry’s Most Advanced Model is also The Easiest To Use!
The 342000 automates A/C service from start to finish. Using temperature probes and service hoses, it gives you a snapshot of the system’s operation — which can be printed — then verifies the refrigerant type, recovers, recycles, evacuates, and recharges. It even drains system oil once the job is finished.

Exceptional Accuracy
Electronic Scale — Scale is mounted internally and includes built-in dampening of shock loads that occur when the unit is moved over gravel or an uneven floor.

Microprocessor — Controls functions; typical evacuation time and recharge amounts are pre-programmed as defaults, but can be easily changed as needed; also signals when it’s time to drain the oil container, change the filter-drier or source tank.

Refrigerant Identifier — Can save you thousands of dollars by warning you of contaminated or mixed refrigerants. Verifies 98% purity automatically at the beginning of each job.

Unmatched Speed
6 CFM Vacuum Pump — Our CoolTech pump has the power to quickly evacuate the system prior to recharging.

Heavy-Duty Compressor — Pulls from both the high- and low-sides for fastest recovery; initial pass through the filter-drier provides single pass recycling.

Oil Injection — Lets you replace system oil in seconds through the service hoses, while the system is in a vacuum, with no other connections needed — just press a button.

All controls are at your fingertips...

Refrigerant Identifier — If contaminated refrigerant is detected, recovery is stopped to protect the unit and your shop’s refrigerant supply.

Built-in Printer — Increases customer confidence, simplifies diagnosis and provides a record of service; just press “Print” to get a hard copy of pressures/temperature, ambient conditions, and other data.

Plain Language Prompts — Clearly tells the technician what needs to be done, right down to opening service couplers, or what function the unit is currently performing. Select English, French, or Spanish; also select pounds or kilograms.

No. 342000 — CoolTech-2K R-134a recovery, recycling, evacuation, and recharging unit.

Replacement Parts
No. 34724 — Spin-On Recycling Filter-Drier
No. 16913 — Refrigerant Identification Filter
No. 34215 — Thermal Paper for Printer
No. J-45268 — Flushing Kit Adapter

Protect your investment with a heavy-duty vinyl dust cover; see page 335.
CoolTech…takes the guesswork out of A/C service!

Control panel is at optimum angle for viewing during operation; gauges are 4” diameter.

Refrigerant identifier filter is easy to reach for replacement.

Printer provides handy hard copy of vehicle operation data.

Bottle for oil injection mounts on side.

Rounded corners prevent damage to vehicle.

High impact polypropylene is impervious to chemicals commonly used in the shop environment.

Construction is lightweight and durable.

Unique “sidewinder” cabinet with large wheels and casters makes unit easy to position near the vehicle.

Back of Unit — Two temperature probes with 15’ cords are included.

Indicator light flashes after each operation is complete.

Large, high resolution display is easy to read.

Keypad is clearly marked and simple to understand following display prompts.

Handle is ergonomically located so the unit moves with less effort.

Rear door opens for access to the filter-drier.

Source tank is readily accessible.

Oil drain bottle is calibrated to show how much should be replaced.

Here’s how the 342000 simplifies A/C service...

Identification — Active flow control protects the identifier from damaging liquid refrigerant, oil, and other contaminants.

Recovery — Automatically restarts if the unit senses a rise in pressure.

Simple Maintenance — Filter-drier life is monitored by the microprocessor; when prompted, the unit automatically pumps down and evacuates the filter-drier before and after charging.

Power Charge — If the transfer of refrigerant stalls for 30 seconds, the unit goes into an automatic power charge mode, building pressure to force the charge.

Specifications

Voltage ........................................ 115V 60 Hz
Source Tank .............................. 30 or 50 lbs. (23 kg) not included
Operating Range ...................... 50° to 120° F (11° to 49° C)
Recycling Filter-Drier ............. 43 cu. in. (710 cc) spin-on
Scale Resolution ..................... 1/100 lb. (.02 kg)
Dimensions .......................... 52” H x 33” W x 20” D
(132 cm x 83.8 cm x 50.8 cm)
Weight .......................... 202 lbs. (91.63 kg) without source tank
R-134a Recovery, Recycling, Evacuation, and Recharging

Combines simple operation with superior accuracy

The CoolTech 34700Z recovers, recycles, evacuates, leak tests, and recharges R-134a quickly and accurately.

Automatic Function — With this new option, you can program the unit to recover, vacuum, leak test, charge, and then walk away without having to operate panel valves.

Vacuum Leak Test — Will monitor the vacuum level after an evacuation, and inform the technician of a possible leak in the vehicle’s A/C system.

Automatic Refrigerant Refill — With this latest advance, you never have to stop in the middle of a job to change refrigerant tanks. The unit maintains 12 to 15 pounds of refrigerant in an internal vessel, and signals when it’s time to change the supply tank, so no monitoring is required.

Automatic Air Purge — Eliminates damaging air without any monitoring of gauges or opening of valves.

Automatic Oil Drain — The unit automatically drains system oil captured during recovery, and the display reminds you to empty the bottle.

Refrigerant Charging — Has never been this easy. Select a charge mode from either the high-side, low-side, or both.

Accuracy features eliminate guesswork!

Electronic Scale — The scale weighs recovered refrigerant and charges by weight for greatest accuracy.

Internal Storage Vessel — Refrigerant is recovered into and charged out of this vessel, which is permanently mounted to the electronic scale for continuing reliability.

Internal Manifold — A Robinair exclusive, this block manifold contains all the solenoids that control refrigerant flow in and out of the unit, reducing the possibility of leaking connections and eliminating the need to operate panel valves.

No. 34700Z – CoolTech recovery/recycling unit.

Replacement Part
No. 34724 – Spin-on recycling filter-drier.

Alpha-numeric menu displays in English, French, Spanish, or Japanese

Alpha-Numeric Display — The scrolling display shows messages, so it’s clear what your choices are or what needs to be done. You can select English, French, Spanish, or Japanese, as well as pounds or kilograms.
The next generation 34700Z platform is based on the same features, reliability, and robust design as the 34700-2K plus....

**Automatic Operation** allows the technician to program the unit to recover, recycle, evacuate, leak test, recharge, and then walk away without having to operate panel valves.

**Vacuum Leak Test** will monitor the vacuum level after an evacuation and inform the technician of a possible leak in the vehicle’s A/C system.

**Programmable operation**

- English, French, Spanish, and Japanese languages built-in.

**Improved User Interface** prompts the technician all the way through a service. It is as simple as following the instructions that scroll across the display.

- Hose and power cord storage.
- Docking ports for couplers.
- Automatic oil drain with graduated bottle.
- Automatic tank refill
  Supply tank not included.
- Large pneumatic tires & casters make unit easy to position near vehicle.

**Specifications**

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>115V 60 Hz</td>
</tr>
<tr>
<td>Refrigerant Container</td>
<td>On-board 30 lb. (14 kg)</td>
</tr>
<tr>
<td>Operating Range</td>
<td>50° to 120°F (11° to 49°C)</td>
</tr>
<tr>
<td>Recycling Filter-Drier</td>
<td>43 cu. in. spin-on type</td>
</tr>
<tr>
<td>Pump Free Air Displacement</td>
<td>3.0 cfm (85 l/min)</td>
</tr>
<tr>
<td>Dimensions</td>
<td>50&quot; H x 34&quot; W x 23&quot; D</td>
</tr>
<tr>
<td></td>
<td>(127 cm x 86.4 cm x 58.4 cm)</td>
</tr>
<tr>
<td>Shipping Weight</td>
<td>235 lbs. (106.6 kg)</td>
</tr>
</tbody>
</table>

Protect your investment with a heavy-duty vinyl dust cover; see page 335.

Identifier bracket easily attaches to the 34700Z unit to mount 16900 series refrigerant identifiers.
R-134a Recovery, Recycling, Evacuation, and Recharging

The New Efficiency Standard
The 34788 recovers 95% of the refrigerant and has a charge accuracy of +/- 1/2 oz. The oil inject feature has less than 1% cross contamination.

Automatic Function — With this new option, you can program the unit to recover, vacuum, leak test, charge, and then walk away without having to operate panel valves.

Vacuum Leak Test — Will monitor the vacuum level after an evacuation, and inform the technician of a possible leak in the vehicle’s A/C system.

Automatic Refrigerant Refill — With this latest advance, you never have to stop in the middle of a job to change refrigerant tanks. The unit maintains a user selectable amount (4 to 20 lbs.) of refrigerant in an internal vessel, and signals when it’s time to change the supply tank, so no monitoring is required.

Automatic Air Purge — Eliminates damaging air without any monitoring of gauges or opening of valves.

Automatic Oil Drain — The unit automatically drains system oil captured during recovery. Graduations on the container clearly show how much oil needs to be replaced.

Refrigerant Charging — Has never been this easy. Select a charge mode from either the high-side, low- side, or both.

Accuracy features eliminate guesswork!
Electronic Scale — The scale weighs recovered refrigerant and charges by weight for greatest accuracy.
Internal Storage Vessel — Refrigerant is recovered into and charged out of this vessel, which is permanently mounted to the electronic scale for continuing reliability.
Internal Manifold — New, larger solenoids and flow paths make this model more robust than ever. The block manifold design minimizes leak points and eliminates the need to operate panel valves.
Refrigerant Management System — New and improved system displays refrigerant use and monitors remaining filter life. Prompts appear when 1/3 of filter life remains.
No. 34788 — CoolTech recovery/recycling unit.
Replacement Part
No. 34724 — Spin-on recycling filter-drier.

Alpha-numerics menu displays in English, French, Spanish, or Japanese

Alpha-Numeric Display — The scrolling display shows messages, so it’s clear what your choices are or what needs to be done. You can select English, French, Spanish, or Japanese, as well as pounds or kilograms.
ROBINAIR FLUID PRODUCTS

Recovery / Recycling

The next generation 34788 platform is based on the same features, reliability, and robust design as the 34700Z plus....

Control panel offers flat storage feature when not in use

Large, 4" diameter gauges

Two large tool storage areas

Service Prompts

Change between traditional & hybrid vehicle systems without fear of cross contamination with improved oil injection

Database expansion slot

* Optional Databases Available Soon

Vehicle

New 2X larger display makes the 34788 easier than ever to use

- Built-in storage for extra filter
- On-board storage for compressor oils

* Extra filter & bottles not included

Specifications

Voltage ............................................ 115V 60 Hz
Refrigerant Container .......................... 30 lb. (14 kg)
Operating Range ............................... 50° to 120°F (11° to 49°C)
Recycling Filter-Drier ......................... 43 cu. in. spin-on type
Pump Free Air Displacement ............... 3 cfm (85 l/min)
Dimensions ..................................... 44" H x 34" W x 23" D
.................................................. (127 cm x 86.4 cm x 58.4 cm)
Shipping Weight .............................. 235 lbs. (106.6 kg)

Protect your investment with a heavy-duty vinyl dust cover; see page 335.
R-134a Recovery, Recycling, Evacuation, and Recharging

The CoolTech 34134Z recovers, recycles, evacuates, and recharges R-134a refrigerant quickly and accurately.

- Automatic recovery/recharge by weight.
- Programmable vacuum time intervals.

**Manual Air Purge** — Removes air from the internal storage vessel. The gauges on the control panel show when to purge the air.

**Oil Drain** — The display reminds you to drain the system oil captured during recovery. Graduations on the container clearly show how much oil needs to be replaced.

**Oil Inject** — System prompts user to inject oil before charge. O-ring on oil reservoir provides visual reference on graduated container.

**Electronic Scale** — The scale is mounted internally for protection, and has a dampening mechanism that protects against impact shocks, such as movement over rough surfaces. The scale weighs recovered refrigerant, and the unit charges by weight for greatest accuracy.

**Internal Storage Vessel** — Refrigerant is recovered into and charged out of this vessel, which is permanently mounted to the electronic scale for continuing reliability.

**Internal Manifold** — Block manifold contains solenoids that control refrigerant flow, reducing the possibility of leaking connections.

**Maintenance Prompts**
- System prompts user to change vacuum pump oil when needed.
- System prompts user to change filter-drier when needed.

**Easy to Use!**

**Ergonomic Design** — The cabinet is easy to maneuver between service bays and position near the vehicle.

**Gauges** — The high- and low-side gauges are mounted at an angle that’s easy to see.

**Unit of Measure** — Select pounds or kilograms through the menu.

**No. 34134Z** — CoolTech recovery, recycling, recharging unit.

Protect your investment with a heavy-duty vinyl dust cover; see page 335.

---

**Specifications**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>115V 60 Hz</td>
</tr>
<tr>
<td>Total Amp Draw</td>
<td>8.0 amps</td>
</tr>
<tr>
<td>Refrigerant Container</td>
<td>On-board 30 lb. (14 kg) vessel (source tank not included)</td>
</tr>
<tr>
<td>Operating Range</td>
<td>50° to 120° F (11° to 49° C)</td>
</tr>
<tr>
<td>Recycling Filter-drier</td>
<td>43 cu. in. in-line (710 cc)</td>
</tr>
<tr>
<td>Pump Free Air Displacement</td>
<td>3 cfm (71 l/min.)</td>
</tr>
<tr>
<td>Dimensions</td>
<td>50” H x 34” W x 23” D (127 cm x 86.4 cm x 58.4 cm)</td>
</tr>
<tr>
<td>Shipping Weight</td>
<td>225 lbs. (102 kg)</td>
</tr>
</tbody>
</table>
International Models for R-134a, R12 Recovery, Recycling, Evacuation, and Recharging

Combines simple operation with superior accuracy the CoolTech 700 recovers, recycles, evacuates, and recharges R-134a quickly and accurately. Built in the new “sidewinder” cabinet, it combines proven technology with the latest in time-saving features.

Automatic operation means less attention is needed!

Automatic Refrigerant Refill — With this latest advance, you never have to stop in the middle of a job to change refrigerant tanks. The unit maintains 12 to 15 pounds (5.44 to 6.80 kg) of refrigerant in an internal vessel, and signals when it’s time to change the supply tank so no monitoring is required.

Automatic Air Purge — Eliminates damaging air without any monitoring of gauges or opening of valves.

Automatic Oil Drain — The unit automatically drains system oil captured during recovery, and the display reminds you to empty the bottle. Calibrations on the container clearly show you how much oil needs to be replaced. Accuracy features eliminate guesswork!

Electronic Scale — The scale is mounted internally for protection and has a dampening mechanism that protects against impact shocks, such as movement over rough surfaces. The scale weighs recovered refrigerant and charges by weight for greatest accuracy.

Internal Storage Vessel — Refrigerant is recovered into and charged out of this vessel, which is permanently mounted to the electronic scale for continuing reliability.

Internal Manifold — A Robinair exclusive, this block manifold contains all the solenoids that control refrigerant flow, reducing the possibility of leaking connections.

Ergonomic Design — The cabinet is easy to maneuver between service bays and position near the vehicle.

Large Gauges — The high- and low-side gauges are mounted at an angle that's easy to see, and they’re a full 4” (10.2 cm) in diameter.

Features that speed service
• 6 CFM vacuum pump for fast, thorough pull-down.
• Heavy-duty compressor pulls from both sides during recovery.
• Single-pass recycling meets SAE specs.
• Oil injector lets you add system oil in seconds.

No. 34711-2K — R-134A Recovery, Recycle, and Recharge.
No. 34724 — Spin-on filter.

Protect your investment with a heavy-duty vinyl dust cover; see page 335.

Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>220V – 240V 50/60 Hz</td>
</tr>
<tr>
<td>Refrigerant Container</td>
<td>On-board 30 lb. (14 kg) vessel (source tank not included)</td>
</tr>
<tr>
<td>Operating Range</td>
<td>50° to 120° F (11° to 49° C)</td>
</tr>
<tr>
<td>Recycling Filter-Drier</td>
<td>43 cu. in. spin-on type</td>
</tr>
<tr>
<td>Pump Free Air Displacement</td>
<td>3.0 cfm (85 l/m)</td>
</tr>
<tr>
<td>Dimensions</td>
<td>52” H x 33” W x 20” D (132 cm x 83.8 cm x 50.8 cm)</td>
</tr>
<tr>
<td>Weight</td>
<td>180 lbs. (81.65 kg)</td>
</tr>
</tbody>
</table>
International Models for
R-134a, R12 Recovery, Recycling, Evacuation, and Recharging

Combines Simple Operation with Superior Accuracy.

- Automatic recovery/recharge by weight
- Automatic vacuum by time

Automatic Air Purge – Eliminates damaging air without any monitoring of gauges or opening of valves.

Oil Drain – The display reminds you to drain the system oil captured during recovery. Calibrations on the container clearly show you how much oil needs to be replaced.

Oil Inject – System prompts user to inject oil before charge. Reservoir provides visual reference on calibrated container.

Electronic Scale – The scale is mounted internally for protection, and has a dampening mechanism that protects against impact shocks such as movement over rough surfaces. The scale weighs recovered refrigerant and charges by weight for greatest accuracy.

Internal Storage Vessel – Refrigerant is recovered into and charged out of this vessel, which is permanently mounted to the electronic scale for continuing reliability.

Internal Manifold – Block manifold contains solenoids that control refrigerant flow for easy operation, also reducing the possibility of leaking connections.

Maintenance Prompts
- System prompts user to change vacuum pump oil when needed.
- System prompts user to change filter-drier when needed.

Ergonomic Design – The cabinet is easy to maneuver between service bays and position near the vehicle.

Gauges – The high and low side gauges are mounted at an angle that’s easy to see.

Unit of Measure – Select pounds or kilograms through the menu.

Features that Speed Service
- 142 l/m vacuum pump for fast, thorough pull-down.
- Heavy-duty compressor pulls from both sides during recovery.
- Single pass recycling.
- Oil injector lets you add system oil in seconds.

No. AC375A – R-134A recovery, recycle, evacuates, and recharge.
For Multiple Refrigerants...
The 17800B recovers, recycles, evacuates and recharges — all in one fast, continuous operation through one hook-up. It’s ideal for refrigerated trailers, buses, RVs, and other vehicles that use more than one refrigerant. The CoolTech Multi is also great for fleet maintenance, covering a variety of makes and models since it has both R-12 and R-134a capabilities. In-plant maintenance departments will find it can handle the different types of refrigerants used in various systems.

Proven technology simplifies service!
- **Microprocessor** — Controls functions; prompts lead you through programming and also signal when it’s time to change the filter-drier, vacuum pump oil, and compressor oil.
- **Float Chamber** — Automatically adjusts from liquid to vapor for most efficient recovery.
- **Electronic Scale** — Makes it simple to recharge to factory specifications; also weighs recovered refrigerant and provides tank overfill protection.
- **CoolTech Vacuum Pump** — 6 CFM has the capacity to thoroughly evacuate the system, readying it for recharging.

Versatility for many types of systems!
- **Lockout Panel** — Prevents mixing of refrigerants; rotates to one side for 1/4" fittings and to the other for 1/2" Acme fittings.
- **Single-Pass Recycling** — Makes an initial pass through the filter-drier; additional recycling can be programmed in case of compressor burn-out, or other conditions.
- **Heavy-Duty Filter-Drier** — Removes moisture and acid from the refrigerant; can handle up to 200 pounds between changeovers. Comes with two 50 pound tanks, one with 1/4" fittings and the other with 1/2" Acme fittings. Also three sets of charging hoses are included — one for R-12, one for automotive R-134a (with field service couplers), and one for other refrigerants using 1/4" SAE fittings.

**No. 17800B** — Multiple refrigerant recovery, recycling, and recharging machine.

**International Models**
- **No. 17801B** — 220–240V 50 Hz, readout in kilograms.

**Replacement Parts**
- **No. 19776** — Recycling filter-drier.
- **No. 17506** — 50 lb. (23 kg) refillable tank, 1/4" fittings.
- **No. 34750** — 50 lb. (23 kg) refillable tank, 1/2" ACME fittings.

**Specifications**
- **Voltage**.......................... 115V 60 Hz
- **Tanks**.......................... Two 50 lb. (23 kg) refillable
- **Operating Range**.................. 50° to 105° F (11° to 41° C)
- **Recovery Rate**.................... Vapor — 1/2 lb/min. (.2 kg/min.)
- **Recycling Rate**................... Liquid — 1 lb/min. (.4 kg/min.)
- **Recycling Filter-Drier**........... 1150 g XH-9
- **Pump Free Air Displacement**..... 6 cfm (142 l/m) at 50 Hz
- **Dimensions**....................... 47" H x 26" W x 30" D
- **Weight**........................... 256 lbs. (116 kg) without tank

Also great for in-plant maintenance!
R-12 Recovery, Recycling, Recharging

Fully automatic function lets you recover, vacuum, leak test, charge, and then walk away. Combines simple operation with superior accuracy. The CoolTech 17700Z recovers, recycles, evacuates, leak tests, and recharges R-12 quickly and accurately.

Automatic operation means less attention is needed!

Automatic Function — With this new option, you can program the unit to recover, vacuum, leak test, charge, and then walk away without having to operate panel valves.

Vacuum Leak Test — Will monitor the vacuum level after an evacuation, and inform the technician of a possible leak in the vehicle’s A/C system.

Automatic Refrigerant Refill — With this latest advance, you never have to stop in the middle of a job to change refrigerant tanks. The unit maintains 12 to 15 pounds of refrigerant in an internal vessel, and signals when it’s time to change the supply tank, so no monitoring is required.

Automatic Air Purge — Eliminates damaging air without any monitoring of gauges or opening of valves.

Automatic Oil Drain — The unit automatically drains system oil captured during recovery, and the display reminds you to empty the bottle. Graduations on the container clearly show you how much oil needs to be replaced.

Refrigerant Charging — Has never been this easy. Select a charge mode from either the high side, low side, or both.

Accuracy features eliminate guesswork!

Electronic Scale — The scale is mounted internally for protection and has a dampening mechanism that protects against impact shocks, such as movement over rough surfaces. The scale weighs recovered refrigerant and charges by weight for greatest accuracy.

Internal Storage Vessel — Refrigerant is recovered into and charged out of this vessel, which is permanently mounted to the electronic scale for continuing reliability.

Internal Manifold — A Robinair exclusive, this block manifold contains all the solenoids that control refrigerant flow in and out of the unit, reducing the possibility of leaking connections and eliminating the need to operate panel valves.

Best of all, it’s easy to use!

Ergonomic Design — The cabinet is easy to maneuver between service bays and position near the vehicle.

Large Gauges — The high- and low-side gauges are mounted at an angle that’s easy to see, and they’re a full 4” in diameter.

Features that speed service:
• 6 CFM vacuum pump for fast, thorough pull-down.
• Heavy-duty compressor pulls from both high- and low-side.
• Single-pass recycling meets SAE specs. Oil injector lets you add system oil in seconds.

No. 17700Z — R-12 recovery, recycling, & recharging unit.
No. 17492 — Dust cover.
Universal Recovery Station
For Contaminated Or Mixed Refrigerant...

With the CoolTech 680, you don't have to turn away an A/C job because the refrigerant is contaminated. This is a recovery-only unit designed for quickly capturing contaminated or unknown refrigerants, mixtures, and blends. It protects your recovery/recycling equipment and your shop's refrigerant supply.

- Recover into one 50-lb. tank for collection and off-site disposal. (Mixtures and blends cannot be recycled.)
- Simple to hook up and operate with instructions printed on the control panel for quick reference.
- Other features include an air regulator for compressor air supply; air line lubricator, which prolongs motor life by supplying continuous lubrication; and tank pressure gauge.
- Two hoses are included, one with a 1/4" MFL fitting and one with a 1/2" Acme field service coupler.

Here's how the CoolTech 680 works:
- Connect service hose (included) to A/C system's low-side access port.
- Turn switch to “Start.” Recovery begins immediately.
- Watch the inlet pressure gauge — it shows when the system has been pulled into a vacuum — recovery is complete.

Includes User Safety Features
- The unit runs on standard (compressed) shop air and the vehicle's battery, reducing risk when recovering flammable hydrocarbons. (Some substitute refrigerants contain propane or butane.)
- Tank float switch prevents overfilling of the 50 lb. tank.

No. 17680-2K — Contaminated refrigerant recovery station.

Replacement Part
No. 17686 — 50 lb. (23 kg) tank with float switch.

Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Source</td>
<td>12V DC and compressed air (200 psi max., 120 psi/min.)</td>
</tr>
<tr>
<td>Refrigerant Tank</td>
<td>50 lb. (23 kg) with float switch (included)</td>
</tr>
<tr>
<td>Dimensions</td>
<td>45” H x 22” W x 28” D (114 cm x 56 cm x 71 cm)</td>
</tr>
<tr>
<td>Weight</td>
<td>66 lbs. (30 kg) without tank</td>
</tr>
</tbody>
</table>

IMPORTANT:
Refrigerant collected should not be used in any A/C system. When the tank is full, send it to a disposal facility.
Make flushing part of your regular A/C service

You know that not all A/C jobs are simple recharges — there are times when you need to flush a vehicle’s air conditioning system to ensure that it operates satisfactorily. These circumstances fall into three categories:

- **Routine Maintenance** — As an air conditioning system ages, oil, sludge, and particulates build up, plug screens, expansion valves, and capillary tubes. Periodically, you should flush the system components to remove these contaminants.
- **Repairs** — To be sure the system will operate properly, you should flush it whenever you repair or replace components. Failed components may contain metal shavings, sludge, and other debris that damage the system or affect the operation.
- **R-134a Retrofits** — In some cases, conversion procedures call for complete removal of existing oil in an A/C system before changing fittings and recharging with R-134a. Flushing is the most thorough means of removing the oil, and it will also pick up any refrigerant residue in the system. Flushing, combined with pulling a deep vacuum, is your assurance the system is ready for the new refrigerant.

**A/C Component Flusher**

The 17580 makes flushing of lines, evaporators, and condensers fast and easy.

- **Closed Loop** — Circulates solvent continuously through components (adapters are needed).
- **Pulsing Action** — Loosens dirt, corrosion, and other debris; by switching the hoses, you can also back flush.
- **Air Agitation Needle Valve** — Bubbles air into liquid stream to enhance cleaning action.
- **Hose Adapters** — Contains adapters to mate with 1/4” flare and 3/8” quick disconnect fitting kits.
- **Sight Glass** — To observe flow rates and cleaning process.

One gallon of solvent is needed for the flush procedure. The unit purges solvent from the component, collecting the used material in the collection tank. An activated charcoal filter limits emissions and odors during flushing and purging.

**Specifications**

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>52” H x 33” W x 20” D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>110 lbs. (50 kg)</td>
</tr>
<tr>
<td>Supply Pressure</td>
<td>80–150 psi</td>
</tr>
</tbody>
</table>

**Fluid Capacities Book and CD**

- Has complete coverage of fluid capacities with lube type for domestic and import vehicles.
- Used for A/C, coolant and transmission, brake, power steering and engine oil.

No. 11411 — Fluid capacities book and CD.
Maintenance Kits
Keep recovery and recycling units operating at peak efficiency with a convenient maintenance kit. Contains one Quick Change filter-drier to be used on both R-12 and R-134a stations, and one 16-ounce bottle of our Premium High Vacuum Pump Oil.


See your instruction manual if you have questions about which filter-drier to use.

A/C System Sealant Remover
- Removes sealant, dye, lubricant, and other contaminants from refrigerant prior to entering the recovery unit.
- Use with recover, recycle, and recharge units that have external or internal manifold pressure gauges.
- Easy hookup between vehicle and the A/C recovery unit.
- Works with refrigerant in either a gas or a liquid state.

No. 17622 – A/C system sealant remover.
No. 17623 – Internal replacement filter.
No. 17641 – Sealant remover adapter hose kit for connecting one No. 17622, R-134A, or R-12.

Vinyl Dust Covers
Protect your investment with a heavy-duty vinyl cover. Features corded seams for durability; medium gray color with CoolTech logo.

No. 17495 – Fits all 34300-2K, 34134-2K series.
No. 17812 – Fits all 17800A, 17800-2K, 34800 series.
No. 17490 – Fits all 34900, 34800-2K, 17800B series.
**Oil Injectors**

It takes just seconds to transfer an oil charge while the system is in a vacuum. The injectors are great add-ons to recovery/recycling and charging.

- Installs in-line on the low side of the manifold.
- Made of durable polypropylene with oil levels marked in ounces and milliliters.
- Solid brass fitting with a Lexan® handwheel.

No. 18065 – Oil injector with 1/4" SAE fitting.
No. 34065 – R-134a oil injector with 1/2" Acme fitting.
*Not recommended for UV dye injection.

**Syringe-Type Injectors**

Use these syringe-type injectors to add oil to a fully pressurized A/C system. Just fill the barrel with the amount of oil needed, connect the injector, and press the plunger.

No. 16256 – R-134a oil injector, 1/2" Acme quick coupler.
No. 16258 – Oil injector, 1/4" SAE fitting.
*Not recommended for UV dye injection.

**Refrigerant Tanks**

No. 17121 – 30 lb. tank, 1/4" fittings (25150, 25175, 25200B, 34234, 34300-2K, 34800 series).
No. 17605 – 30 lb. tank with float switch (17650A series).
No. 17572 – 50 lb. tank with float switch.
No. 17576 – 30 lb. tank, float switch, 3/16" fitting. (17625A series).
No. 17686 – 50 lb. tank with 3/8" fitting, float assembly for 17680A series.
No. 34579 – 30 lb. tank (34650 series).
No. 34750 – 50 lb. tank for R-134a (34700 series).

**Recycling Filter-Driers**

Specially blended for maximum acid and moisture removal.

No. 17630 – Inlet filter for 17625A, 34650.
No. 17663 – Inlet filter for 17650A.
No. 19776 – Quick change filter for 17800B.
No. 34430 – Quick change filter for older 17700A, 34450, 34700 (1997), AC375, AC375A, AC375C, 34134Z.
Orifice Tube Remover
Use this handy tool to remove the orifice tube before flushing. Speeds service by removing the build-up of particulates on the orifice screen and restrictions that slow flushing. The basic tool works on GM and Ford vehicles and comes with: an extender body for 1985 and newer Ford models; an adapter for 1989–91 GM “J”, “L”, and “N” cars; and an adapter for 1991 and newer GM “C” and “K” trucks with #3096068 orifices.
No. 10986 — Orifice tube remover.

Flush Gun Kit
An economical means of flushing contaminants and scale from A/C system components, the flush gun uses dry shop air to pressurize the solvent. The process thoroughly cleans the part, removing oil, any refrigerant contaminants, and residue. The attached nozzle directs the flow of solvent without spray-back.
No. 17595 — Flush gun kit.

Power Flush Solvent
Gives you the cleaning power to flush particulates and system lubricant from A/C and refrigeration lines, evaporators, and condensers. An ideal substitute for CFC-113, it has excellent cleaning properties and good evaporation rate. Compatible with all CFC, HCFC, and HFC refrigerants. Meets ANSI/ASHRAE 97-1933.
No. 17565 — Gallon, six per carton.
No. 17609 — Quart, six per carton.

A/C Flushing Adapter Kit
These adapters are designed to isolate A/C system components for closed loop flushing.
No. 17607 — Universal flushing adapter kit.
Refrigerant Identifiers... Critical For Today’s Automotive A/C Service

It’s been estimated that one in 10 vehicles on the road has an A/C system with contaminated refrigerant. The only way to know for sure if you can safely recover these charges is with a refrigerant identifier. You may also save hundreds of dollars by checking bulk tanks for purity before use.

Robinair’s CoolTech line shows you in just seconds if it’s safe to recover or recharge the refrigerant. There’s no guesswork, because a red light indicates “fail”, while a green light is your signal to continue with service. For R-12 and R-134a vehicles.

CoolTech ID Plus
Identifies refrigerant type and purges damaging air

In addition to dependable refrigerant identification, the ID Plus measures non-condensable gases (air) in the refrigerant and purges them directly from the tank or system.

• Displays the actual percentage of R-12, R-134a, R-22, and air in the system or tank.
• Gives you the option of purging air if significant concentration is found.
• Hydrocarbon alarm sounds if flammable substances are sensed.
• On-board printer port allows you to connect a printer for a hard copy of testing results.

No. 16910 – CoolTech ID Plus.
No. 16913 – Replacement filter.
No. 19713 – R-12 replacement hose.
No. 19714 – R-134a low-side coupler, 1/2” Acme internal adapter.
No. 19716 – R-134a replacement hose.

CoolTech ID
Signals “Go” only if refrigerant is 98% pure

“Go” and “No Go” indicators on display clearly show if refrigerant is pure enough to be recovered or charged.

• Dual power source gives you flexibility, comes with battery clips for 12V power and 115V AC adapter.
• Displays percent of air in the A/C system or tank.

No. 16900 – CoolTech ID Plus.
No. 16913 – Replacement filter.
No. 19712 – Air detection sensor.
No. 19713 – R-12 replacement hose.
No. 19714 – R-134a low-side coupler, 1/2” Acme internal adapter.
No. 19716 – R-134a replacement hose.
No. 19718 – 12V battery adapter.
No. 19719 – 120V wall adapter.
TIFZX-1 Leak Detector

**Features**
- Patent pending Heated Pentode™ sensor technology.
- Refrigerant specific detection.
- Detects ALL halogenated refrigerants at levels below 0.1 oz./yr., as low as 0.05 oz./yr. for R-12.
- Tri-color visual leak size indication.
- Tactile keypad controls with one touch reset and adjustable sensitivity.
- True mechanical pump provides instant response and clearing.
- Sensor failure indication.
- Carrying case and re-charger included.
- Ni-MH rechargeable batteries.
- Revolutionary design.
- Certified to SAE J1627.
- Flexible stainless probe (16”).
- CE approved.
- 25-year warranty.

Replacement Parts
- TIFZX-2 – Heated Pentode™ sensor.
- TIFZX-3 – 110V-60 Hz battery charger (North and South America).
- TIFZX-3E – 230V-50Hz battery charger (Europe, Asia, Australia).
- TIFZX-3J – 100V-50/60 Hz battery charger (Japan only).
- TIFZX-5 – Ballistic nylon carrying case.
- TIFZX-6 – Remote battery charging base, 110V-60Hz (optional).
- TIFZX-7 – Nickel-Metal Hydride (Ni-MH) battery pack (optional).
- TIFZX-8 – Filter elements (10 pack).
- TIFZX-9 – Probe tip.
- TIFZX-10 – Flexible probe (includes probe tip).
- TIFZX-11 – 12V DC cigarette lighter charger.
- TIFZX-14 – Maintenance kit: probe tip, filter, and o-ring.
- TIFZX-15 – Filter elements (5 pack).

**Specifications**

**Sensitivity**
Per SAE J1627 criteria: 0.5 oz./yr. (14 g/yr.) for R-134a, R-22, and R-12.

**Ultimate Sensitivity**
Less than 0.1 oz./yr. (3 g/yr.) R-134a, in high sensitivity; as low as 0.05 oz./yr. R-12 in low sensitivity.

**Warm-up Period**
20 seconds.

**Operating Temperature**
32° to 122° F (0° to 50° C).

**Power Supply**
Ni-Cad standard, Ni-MH optional.

**Battery Recharge Time**
2 hours, integral charge status indicator.

**Failed Sensor Indication**
All LEDs flash red, pump off.

**Sensor Life**
100 to 150 hours.

**Battery Life**
Standard Ni-Cad battery pack - 4 to 5 hours.
Optional Ni-MH battery pack - 5 to 6 hours.

**Unit Dimensions**
10.25" L x 2.5" Dia. (26 cm L x 6.5 cm Dia.)

**Weight**
Approximately 16 oz. (452 grams).
Electronic Leak Detector

For all CFC, HCFC, and HFC Refrigerants

Robinair’s electronic leak detector is ergonomically designed to fit in your hand. Holding it is natural and comfortable, and it fits into tight spots, so you can thoroughly check for leaks.

No. 16600 is packed with features that help you pinpoint leaks quickly.

One-Hand Operation — The 16” gooseneck probe holds its position so you can operate the detector with one hand.

Audible and Visual Leak Indicators — An alarm increases in frequency as the tip gets close to a high concentration of refrigerant. LEDs are especially helpful when you’re working in a noisy environment.

Threshold Balancing Control — Gives you infinite control for eliminating background contamination, so you can zero in on the leak site.

Volume Control — Adjust the audible leak signal to the volume that’s right for the background noise in the shop or at the job site.

Reliable Technology = Dependable Leak Detecting

No. 16600 uses proven corona discharge technology to sense leaks. It works by creating a high voltage corona in the sensing tip. When this field is interrupted by refrigerant, the alarm is triggered. All corona discharge leak detectors are not the same, however — the quality of key components is critical in providing an effective instrument.

Transformer

To create the high voltage corona, the unit must “pump up” from the battery output to 2000 volts. It takes a specialized transformer to consistently provide this voltage, and ours is the result of years of testing and field use to ensure operation you can rely on.

No. 16600 — Electronic leak detector.

Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Source</td>
<td>Four AA Alkaline batteries (included)</td>
</tr>
<tr>
<td>Battery Life</td>
<td>Approximately 25 hours</td>
</tr>
<tr>
<td>Dimensions</td>
<td>8-1/2” L x 3-1/4” W x 2” D</td>
</tr>
<tr>
<td></td>
<td>(21.59 cm x 8.26 cm x 5 cm)</td>
</tr>
<tr>
<td>Probe Length</td>
<td>16 in. (40.6 cm)</td>
</tr>
<tr>
<td>Weight</td>
<td>1.14 lbs. (.52 kg) with batteries</td>
</tr>
</tbody>
</table>

Sensing Tip

The materials, shape, and finish of the sensor and surrounding shell are critical to the effectiveness and life of the tip. Specially engineered tip is built with a mirror finish for superior sensitivity and durability.

No. 16503 — Sensing tip.
TIFXL-1A, TIFRX-1A, TIFXP-1A Leak Detectors

The revolutionary new “Generation X” line of TIF refrigerant leak detectors brings you tomorrow’s technology today. We not only changed the way our leak detectors look, but the way to look at leak detectors. Innovative MPC circuitry and Advanced Digital Signal Processing monitor the sensing tip up to 2000 times per second. Automatic reset, true mechanical pump, and visual indicators (TIF XP-1 and TIF RX-1) speed and simplify leak searches.

A completely re-designed sensing tip increases sensitivity, improves reliability, and lasts twice as long as its predecessor. This results in fewer comebacks, less hassle, and lower maintenance costs. We are so confident in the design and quality of these detectors that they are backed by a warranty of up to 3-years!

**All Models Feature**
- Microprocessor controlled circuit with Advanced Digital Signal Processing.
- Detects ALL halogenated refrigerants.
- Certified to SAE J1627.
- Variable frequency audible alarm.
- CE approval.
- UL classified.
- Constant power indication.
- Cordless and portable; operates on two C-cell batteries.
- 14" (35.5 cm) flexible stainless steel probe with Teflon liner.
- Carrying case included, optional holster.
- Optional reference leak source.

**Additional Features**

**TIFXL-1A**
- Single switch control.
- Two-year warranty.

**TIFRX-1A**
- Six-segment visual leak size indicator.
- True mechanical pump provides positive airflow through sensing tip.
- High and low sensitivity levels.
- One touch reset.
- Tactile keypad controls.
- Two-year warranty.

**TIFXP-1A**
- Tri-color, six-segment visual leak size indicator displays 18 alarm levels.
- Seven levels of sensitivity adjustment provide an increase of up to 64x.
- Battery test function with true voltage indication.
- Mute feature silences audible alarm.
- True mechanical pump provides positive airflow through sensing tip.
- One touch reset.
- Tactile keypad controls.
- Three-year warranty.

**Replacement Parts (all models)**
- TIFXP-2 – Maintenance kit (3 tips, 3 protectors).
- TIFXP-4 – Deluxe carrying case.
- TIFXP-5A – Battery cover.

**Specifications**

<table>
<thead>
<tr>
<th>Power Source</th>
<th>3V DC; 2 °C cell alkaline batteries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ultimate Sensitivity</td>
<td>TIFXL-1A - Less than 0.4 oz./yr. (11 g/yr.)</td>
</tr>
<tr>
<td></td>
<td>TIFRX-1A - Less than 0.25 oz./yr. (7 g/yr.)</td>
</tr>
<tr>
<td></td>
<td>TIFXP-1A - Less than 0.1 oz./yr. (3 g/yr.)</td>
</tr>
<tr>
<td>Sensing Tip Life</td>
<td>Approx. 20 hours</td>
</tr>
<tr>
<td>Operating Range</td>
<td>30° to 125° F (0° to 52° C)</td>
</tr>
<tr>
<td>Battery Life</td>
<td>TIFRX-1A and TIFXP-1A – Approx. 30 hrs.</td>
</tr>
<tr>
<td></td>
<td>TIFXL-1A – Approx. 40 hrs.</td>
</tr>
<tr>
<td>Duty Cycle</td>
<td>Continuous</td>
</tr>
<tr>
<td>Response Time</td>
<td>Instantaneous</td>
</tr>
<tr>
<td>Reset Time</td>
<td>One second</td>
</tr>
<tr>
<td>Warm-up Time</td>
<td>Approx. 2 seconds</td>
</tr>
<tr>
<td>Unit Weight</td>
<td>1.2 lbs. (560 grams)</td>
</tr>
<tr>
<td>Unit Dimensions</td>
<td>9&quot; x 2.25&quot; x 2.25&quot;</td>
</tr>
<tr>
<td></td>
<td>(22.9 cm x 5.7 cm x 5.7 cm)</td>
</tr>
<tr>
<td>Fixed Probe Length</td>
<td>14&quot; (35.5 cm)</td>
</tr>
</tbody>
</table>
TIF5750A Super Scanner™ Refrigerant Leak Detector

Full featured but easy to use, this is the original TIF detector. The TIF5750A offers the detachable, flexible probe with micro-pump, leak intensity indicators, and all the features you have come to know and trust. Includes the patented SCAN mode that revolutionized leak detection.

Features
- LED leak size indicators.
- Two sensitivity positions, including our unique ScanMode.
- Reset button for instant re-calibration.
- Detachable probe.
- High efficiency pump.
- Certified to SAE J1627.
- Detects ALL halogenated refrigerants.
- SAE classified for intrinsic safety.
- Constant power indication.
- Cordless and portable; operates on two C-cell batteries.
- 14" (35.5 cm) flexible, stainless probe.
- Carrying case and spare sensing tip included.
- One-year warranty.

A/C Pump Style Refrigerant Leak Detector

This AC powered Leak Detector is ideal for continuous use and/or bench testing. It has a sensitivity adjust knob for “Fine Tuning.” A unique probe with pump and a built-in neon light. Audible alarm and visual indication on all CFC, HCFC, and HFC leaks.

Features
- High efficiency pump
- Dual sensitivity positions
- Visual indicator in probe
- Built-in carrying case
- Powered by 115 volts AC (220V available)

Specifications
- Operating Temp: 30° to 125° F (0° to 52° C)
- Power Supply: 115V AC/60 Hz (230V 50 Hz)
- Response Time: Instantaneous
- Warm-up Time: 30 seconds
- Probe/Cord Length: 36" (91.4 cm)
- Dimensions: 8.5" x 5" x 3.75" (21.6 cm x 13 cm x 8 cm)
- Weight: 3.1 lbs. (1.4 kg)
- Maximum Sensitivity: 0.5 oz./yr. for R-12, R-22, & R-134a per SAE J1627 criteria
- Ultimate Sensitivity: Less than 0.25 oz./yr.
**TIF8900 Combustible Gas Detector**

The TIF8900 is a super-sensitive, cordless, combustible gas detector that detects a broad range of natural gases including propane, methanol, butane, and gasoline.

- Solid-state sensor technology, long life, and precision.
- Adjustable sensitivity levels; as low as 5ppm.
- Audible “Geiger counter” signal.
- Rechargeable battery and charger included.

**Specifications**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Source</td>
<td>Two 2.4V Ni-Cad batteries (included)</td>
</tr>
<tr>
<td>Battery Life</td>
<td>Approx. 4 hours per charge</td>
</tr>
<tr>
<td>Dimensions</td>
<td>8-1/2&quot; L x 2-1/2&quot; W x 2&quot; D</td>
</tr>
<tr>
<td>(21.59 cm x 6.35 cm x 5.08 cm)</td>
<td></td>
</tr>
<tr>
<td>Operating Range</td>
<td>32° F to 105° F</td>
</tr>
<tr>
<td>Probe Length</td>
<td>16 inches</td>
</tr>
<tr>
<td>Weight</td>
<td>12.3 oz.</td>
</tr>
</tbody>
</table>

TIF8900 – Combustible gas detector.

**Replacement Parts**

- TIF8801 – Sensing tip.
- TIF8803A – 115V battery charger.
- TIF8805 – Cigarette lighter adapter.
- TIF8806A – Rechargeable Ni-Cad batteries.
- TIF8806B – 220V battery charger.

**TIF8800, TIF8800A, TIF8850 Combustible Gas Detectors**

These detectors are MSHA approved and UL classified. The unique flexible 15” stainless probe allows you to access hard-to-reach places. All feature automatic warm-up, are ideal for a tremendous range of uses, and are invaluable for safety in many applications. Each unit includes its own rechargeable Ni-Cad batteries for years of use.

**All Models Feature**

- Automatic warm-up.
- Broad band detection.
- Low battery indicator.
- Recharger and ABS carrying case.
- Sensitivity adjust control.
- Audible “Geiger counter” signal.

**Additional Features of TIF8800A**

- LED leak intensity lights.

**Additional Features of TIF8850**

- LED leak intensity lights.
- Audio mute button to silence the alarm.

**Specifications**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Temp</td>
<td>32° to 125° F (0° to 52° C)</td>
</tr>
<tr>
<td>Power Supply</td>
<td>(2) 2.4V Ni-Cad Batteries</td>
</tr>
<tr>
<td>Battery Life</td>
<td>4 hours/charge</td>
</tr>
<tr>
<td>Response Time</td>
<td>Instantaneous</td>
</tr>
<tr>
<td>Warm-up Time</td>
<td>30 seconds</td>
</tr>
<tr>
<td>Probe/Cord Length</td>
<td>15” (38 cm)</td>
</tr>
<tr>
<td>Dimensions</td>
<td>8” x 3” x 1.8” (20 cm x 7.6 cm x 5 cm)</td>
</tr>
<tr>
<td>Weight</td>
<td>15.5 oz. (434 grams)</td>
</tr>
<tr>
<td>Ultimate Sensitivity</td>
<td>5–50 ppm</td>
</tr>
</tbody>
</table>

800-327-5060

**TIF Technical Services**

TIF Instruments, Inc.
Model No. TIF 8800-020
Combustible Gas Detector

MSHA APPROVAL NO. 20-3320-2
COMBUSTIBLE GAS DETECTOR

800-327-5060
TIF8800, TIF8800A, TIF8850
Combustible Gas Detectors (continued)

Applications
The TIF8800 series detectors are general purpose combustible gas detectors that may be used in almost any situation where a combustible gas, vapor, or residue needs to be found. Among the many applications are:

- Gas lines and pipes.
- Fuel in marine bilges.
- Exhaust and fuel leaks.
- Heat exchanger leaks.
- Propane filling stations.
- Check manholes for safety.
- Detect arson residue.
- IAQ tests.
- Liquid or gas fired heating systems.

Replacement Parts
TIF548 – Custom carrying case.
TIF8801 – Sensing tip.
TIF8803A – 115V battery charger.
TIF8805 – Cigarette lighter adapter.
TIF8806A – Rechargeable Ni-Cad batteries.
TIF8806B – 220V battery charger.

Partial List of Detectable Compounds

<table>
<thead>
<tr>
<th>Compound</th>
<th>Min. Detectable Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetylene</td>
<td>50 ppm</td>
</tr>
<tr>
<td>Iso-Butane (R600a)</td>
<td>500 ppm</td>
</tr>
<tr>
<td>Methane</td>
<td>500 ppm</td>
</tr>
<tr>
<td>Ethane (R170)</td>
<td>500 ppm</td>
</tr>
<tr>
<td>Propane (R290)</td>
<td>500 ppm</td>
</tr>
<tr>
<td>Ethylene</td>
<td>500 ppm</td>
</tr>
<tr>
<td>Hydrogen</td>
<td>500 ppm</td>
</tr>
<tr>
<td>Methyl Ether</td>
<td>500 ppm</td>
</tr>
<tr>
<td>Vinyl Chloride</td>
<td>5 ppm</td>
</tr>
<tr>
<td>Methyl Chloride</td>
<td>5 ppm</td>
</tr>
<tr>
<td>Hydrogen Sulfide</td>
<td>5 ppm</td>
</tr>
<tr>
<td>Acetone</td>
<td>50 ppm</td>
</tr>
<tr>
<td>Methanol</td>
<td>50 ppm</td>
</tr>
<tr>
<td>Ammonia (R717)</td>
<td>20 ppm</td>
</tr>
<tr>
<td>Gasoline</td>
<td>1 ppm</td>
</tr>
<tr>
<td>Chlorine</td>
<td>1 ppm</td>
</tr>
</tbody>
</table>
TruTrack Ultrasonic Leak Detector

TruTrack is an ultra-sensitive leak detector, which uses ultrasound technology to “hear” the sound of a leak. It makes finding leaks fast and accurate, because it eliminates annoying false triggering and interference. Also, there’s no need to recalibrate for background noise.

TruTrack is the perfect complement to other forms of leak detection. It’s effective on systems that are pressurized or under vacuum, because it senses the frequency of refrigerant escaping. Larger leaks may require the use of UV or electronic leak detection systems.

Use TruTrack to identify...

- Refrigerant leaks.
- Pressurized gas leaks.
- Vacuum leaks.
- Dry nitrogen gas leaks.
- Steam leaks.
- Failing solenoids, valves, bearings.

So Sensitive It Hears the Blink of an Eye!

Easy to Use — Just put on the headset, adjust the sensitivity level, and place the sensor near the suspected problem area; you can use the sensor alone or with one of the probes.

Positive Identification — You hear the sound of the leak in the headset with no beeps or squeals; the sound is loudest when you are near the leak.

Accurate — Wind, stray gases, or other contaminants will not trigger a false alarm; the unit suppresses most background noises.

Dependable — There are no clogged tips to clean, or sensors to replace, to get accurate readings.

Versatile — Ideal for a wide range of service and preventive maintenance applications. Taking regular readings of bearing or solenoid function, for instance, can show increased noise, which may be a sign the component is starting to fail.

Saves Time and Money — Pinpoints leaks quickly and accurately; can be used to prevent downtime by identifying potential component failure; hears tell-tale sounds without tearing down the equipment.

No. 16455 – TruTrack ultrasonic leak detector.

Replacement Parts
No. 16452 – Flextube.
No. 16956 – Contact probe.
No. 16958 – Replacement headset.

TruTrack Ultrasonic Sound Generator

An ideal accessory for Robinair’s Model 16455 Ultrasonic Leak Detector, the sound generator detects seal failure in refrigerators, microwaves, vehicle passenger compartments, trunks, and any other location where there should be a good seal. Battery-operated unit emits special frequency from inside the test area; where the sound can be heard, a leak exists.

No. 16451 – TruTrack ultrasonic sound generator.

Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Source</td>
<td>One 9V battery (included)</td>
</tr>
<tr>
<td>Dimensions</td>
<td>4-1/2&quot; L x 3-3/8&quot; W x 3/4&quot; D</td>
</tr>
<tr>
<td></td>
<td>(11.43 cm x 8.57 cm x 1.9 cm)</td>
</tr>
<tr>
<td>Weight</td>
<td>5 oz. (140 g)</td>
</tr>
</tbody>
</table>
UV Leak Detection

Robinair’s ultraviolet leak detection kits help you find leaks fast, because you can actually see the leak. You don’t have false triggering or background contamination to contend with, as you do with other types of detectors. The dye combines with the refrigerant lubricant and migrates out at the leak, where it is illuminated in the beam of the UV light.

UV leak detection can be used for both automotive and HVAC-R systems, and dyes won’t harm the system.

- High intensity beam makes even small leaks visible and is bright enough to be used in daylight.
- Rugged case and a shock-absorbing mounting mechanism protect the lamp during use and storage.
- UV bulb is rated for 3000 hours and is economical to replace.
- Comes with a 15’ (4.57 m) long cord with battery clips for automotive use or with a transformer for 115V operation, doing away with heavy batteries and the need to recharge.
- Designed with super luminescence, so leaks are easy to spot, even small ones.
- Won’t affect the viscosity of refrigerant lubricants and is safe for the entire A/C system.
- Speeds service, since there’s no need to recover the charge, add dye, and recharge, as with some other brands.


No. 16355 – UV injection kit include: Injection gun with R-134a hose and R-12 adapter, four universal A/C dye twist-on cartridges (No. 16356, 1 oz./30 ml each), and service stickers.

No. 16356 – Universal A/C dyes includes: Four 1 oz./30 ml twist-on cartridges. Enough dye for 20 applications (OEM-approved and SAE-certified dye). For kit Nos. 16350, 16380, and 16355.

No. 16357 – Six 1/4 oz./7.5 ml twist-on cartridges. Enough dye for six applications (OEM-approved and SAE-certified dye). For kit Nos. 16350, 16380, and 16355.

CoolTools UV Lamps

A high intensity lamp which makes even the smallest leak easy to spot. The durable design stands up to everyday use and the pistol-grip design is comfortable to hold. The bulb is rated for 3000-hour life and can be replaced when necessary.

No. 16296 – 12V UV lamp, UV shield/enhancer glasses, power cord with battery clips, CE approved.
No. 16254 – Replacement 60 watt bulb.
No. 16208 – On/Off switch.
No. 16249 – Replacement lens for UV lamp.
No. 16345 – Cordless/rechargeable true UV LED light, battery charger, and UV enhancing glasses.
No. 16347 – 12V battery charger.
No. 16348 – 120V battery charger.
No. 16349 – 220V battery charger.
Inspection Enclosure
Change your environment to enhance your senses!

Indoors: No need to shut off overhead lights or close garage doors.
  • Provides darkened area for inspecting engine compartments without inconveniencing other technicians.

Countless Applications:
  • UV dyes inspection: Coolant, A/C, transmission, engine oil.
  • Evaporative emission testing.
  • Electronic refrigerant leak detectors.
  • Enhanced viewing of backlit diagnostic tools.
  • Spark plugs: Ignition and crossfire traces.
  • Timing light.
  • Cylinder head inspection.

Outdoors: Blocks sun and wind.
  • Speeds testing and inspection by blocking light, wind, and rain.
  • Enhances intensity of any UV light.
  • Provides personal protection during inclement weather.
  • Stows in integral stuff-sack.
  • Soft Seal—encapsulated magnets for No Scratch Seal on open hood of vehicle.

No. 16390 – Portable inspection enclosure.
No. 16395 – Portable inspection enclosure with wall mounting frame, 73” wide x 48” deep.
No. 16393 – Wall mounting frame only, 73” wide x 48” deep.

Technician is able to perform several inspections in a darkened environment.
TIF manufactures a wide range of K-type digital thermometers. Packaged with a variety of probes, these fast responding, accurate thermometers are designed for rugged use.

The TIF7000, the original TIF thermometer, comes with three different probes. The first is the air probe, which can be used for instant readings of air temperatures from -40°F to over 1000°F. The second probe, the surface probe, is used for quick surface readings from -40°F to 1999°F. The immersion probe tests liquid temperature from -40°F to 500°F.

**Features**
- Field calibrateable, interchangeable probes.
- Custom fitted ABS carrying case.
- Wide sensing range.
- Superfast response.
- Universal connector.
- °F or °C selectable.
- 9V battery powered.
- One-year warranty.
- Auto zero each reading with display updates three times per second.

**No. TIF7000** – Digital thermometer/pyrometer.

**No. TIF7500A** – Includes the penetration probe (TIF7010 Only).

**No. TIF7000TP** – (TIF7002, TIF7003, TIF7008)

**No. TIF7005** – Coil cord.

**No. TIF7006** – Carrying case.

**No. TIF7007** – Tire.

**No. TIF7008** – Air.

**No. TIF7009** – General purpose.

**No. TIF7010** – Superheat.

**Accessory Probes**

**No. TIF7002** – Surface.

**No. TIF7003** – Air.

**No. TIF7004** – Immersion.

**No. TIF7007** – Superheat.

**No. TIF7008** – Penetration.

**Digital Thermometer/Pyrometer “Racing Kit”**

Whether racing is your hobby or your profession, you need to have the TIF7050. This is the first digital pyrometer to combine laboratory technology with speed. The tire probe (included) allows quick temperature readings across the entire tread width. Instant temperature readings provide information on your tire’s contact patch for camber, stagger, and/or shock adjustments.

**Features**
- Probe, display, connector cord, and a high impact carrying case.
- Super fast settling time.
- Switch selector for °F/°C.
- Display updates three times per second.
- ± 1% accuracy.

**No. TIF7050** – Digital thermometer/pyrometer “Racing Kit.”

**No. TIF7005** – Coil cord.

**Specifications**

**Range** .......................... -40° to 1999° F (-40° to 1100° C)

**Resolution** .......................... 1° F (1° C)

**Accuracy** .......................... ± 1%, ± 1 digit (32° to 212° F)

**Operating Temp** .......................... 32° to 125° F (0° to 52° C)

**Power Supply** .......................... (1) 9V battery

**Battery Life** .......................... 100 hours

**Response Time** .......................... 1–10 seconds

**Warm-up Time** .......................... Instantaneous

**Probe/Cord Length** .......................... 36" (91.4 cm)

**Dimensions** .......................... 5" x 2.5" x 1" (12.7 cm x 6 cm x 2.5 cm)

**Weight** .......................... 5 oz. (140 grams)
TIF7620, TIF7612, TIF7610 IR Thermometer PRO

- Complete IR design is incorporated inside of a single chip, reducing space and creating a compact and lightweight product.
- Innovative optical lens – accurate measurements; wide temperature range.
- Laser pointer – Easy to define the target area to be measured.
- Extend temperature – TIF7612 and TIF7620 have a thermocouple interface that can extend the temperature up to 1999°F.
- Simple and easy to operate – Simply point at desired target and press the trigger button for a temperature reading.
- Set alarm temperatures (Low and High Temperatures) to receive alert information when the you are measured out of the range (TIF7612 and TIF7620 only).
- (MAX), (MIN), Difference between MAX and MIN (DIF), and average (AVG) modes are available in TIF7612 and TIF7620.
- The new TIF IR thermometers incorporate visual low battery indication and simple operation of two “AAA” batteries.

<table>
<thead>
<tr>
<th>Specification</th>
<th>TIF7610</th>
<th>TIF7612</th>
<th>TIF7620</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement Range</td>
<td>-76 to +932°F (-60 to +500°C)</td>
<td>-76 to +932°F (-60 to +500°C)</td>
<td>-76 to +1400°F (-60 to +760°C)</td>
</tr>
<tr>
<td>Thermocouple Measurement Range</td>
<td>N/A</td>
<td>N/A</td>
<td>83.2 to +1999°F (-64 to +1400°F)</td>
</tr>
<tr>
<td>Accuracy: Tobj=59°-95°F (15-35°C) Tamb=77°F (25°C)</td>
<td>±1.8°F (1.0°C)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accuracy: Tobj= -27-932°F (-33-500°C) Tamb= 73°F ±5°F (23 ± 3°C)</td>
<td>±2% of reading or 4°F (2°C) whichever is greater</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thermocouple Accuracy</td>
<td>N/A</td>
<td>N/A</td>
<td>±1% of reading or 1.8°F (1°C) whichever is greater (Test under Tamb=73±1°F[23±6°C])</td>
</tr>
<tr>
<td>Emissivity</td>
<td>0.95 fixed</td>
<td></td>
<td>Adjustable</td>
</tr>
<tr>
<td>Resolution: 14.2° F<del>199.9° F (-9.9</del>199.9°C)</td>
<td>0.1°F/0.1°C (1° below 9.9 and above 199.9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spectral Response</td>
<td>5 ~ 14µm</td>
<td>.5 sec</td>
<td>8 ~ 14µm</td>
</tr>
<tr>
<td>Response Time (90%)</td>
<td>10:1</td>
<td>12:1</td>
<td>20:1</td>
</tr>
<tr>
<td>Battery Life</td>
<td>Typ.18 hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensions</td>
<td>175.2 x 39.0 x 71.9mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>179 grams including batteries (AAA*2pcs)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TIF7201 Pocket IR Thermometer

- System-on-a-Chip SoC technology: compact and lightweight
- Backlit LCD display w/ dual readings
- °C / °F Switch and MAX function
- Auto power off after 15 sec.
- Battery level indication
- Distance to spot (D/S): 1:1

Applications:
- Automotive
- Electrical
- General home use
- HVAC/R

Available in 4pk. display: TIF7201D (Includes 4 of the TIF7201)
**Digital Thermometer**

This digital thermometer gives you full-feature capabilities in a case that is small enough to fit in your shirt pocket. A wide temperature range and highly accurate readings make it useful for a variety of applications.

- Accurate readings from -40° F to 390° F (±2°) and from -40° C to 200° C (±1°).
- Switch selects Celsius or Fahrenheit.
- Sampling time is just one second; HOLD button freezes display for accuracy.
- Easy-to-read display can be read even in direct sunlight.
- Durable case includes a cover to protect the probe.
- Uses one 1.5V battery; includes battery-saver mode.
- Min/Max display for reading temperature ranges.

No. 43240 – Digital thermometer.

**Swivel Head Digital Thermometer**

The head on this digital thermometer swivels making it easy to see readings, at any angle. The compact size is convenient to carry and store.

- 180° swivel head makes display easier to read in tight places.
- Reliable readings over the entire temperature range.
- Readings can be toggled between Celsius and Fahrenheit.
- Sampling time is just one second.
- Durable case includes a pocket clip.
- For surface, liquid, and air temperatures.

No. 43230 – Swivel head digital thermometer.

**Dial Thermometers**

All pocket thermometers come with a pocket-clip carrying case for protection and easy access. Easy-to-read faces are available in a variety of sizes and ranges.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Temperature Range</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>10596</td>
<td>-40° to +160°F</td>
<td>1&quot; dial face</td>
</tr>
<tr>
<td>10597</td>
<td>0° to +220°F</td>
<td>1&quot; dial face</td>
</tr>
<tr>
<td>10945</td>
<td>0° to +220°F</td>
<td>1-3/4&quot; dial face</td>
</tr>
<tr>
<td>40859</td>
<td>-40° to +70°C</td>
<td>1&quot; dial face</td>
</tr>
</tbody>
</table>
R-134a Side-Wheel Manifolds for Automotive Service

Solid Forged Brass Bar — Long-lasting and durable with proven face seal valves.

New Universal Gauges — Easy-to-read dial faces show R-134a temperatures in degrees Fahrenheit, plus pressures in psi and kPa.

Flexible Holster — Protects your manifold during use and storage.

Pressure Temperature Chart — Stores in a slot on the back of the manifold; gives you multiple refrigerant capability.

Includes — R-134a low-permeation hoses with field service couplers on the high- and low-side hoses; yellow hose is 1/4" FFL x 1/2" Acme with Quick Seal™ fitting.

Models
No. 40134A — R-134a manifold gauge set with three 72" color-coded hoses and automotive field service couplers.
No. 42134A — R-134a manifold gauge set with three 72" color-coded hoses and automotive field service couplers; has Celsius temperature scale on gauges.
No. 13138 — Hanging hook.

Replacement Hoses for 40134A and 40135:
No. 41698 – Set of one red and one blue with 1/4" drive (barrel style).

Service Couplers for Automotive R-134a

Field service couplers connect to our special Enviro-Guard hoses to allow access to service ports on automotive R-134a A/C systems. The quick-connect design has an integral safety sleeve, which protects against injury and refrigerant loss if the coupler is disconnected under pressure. The compact design easily fits into tight quarters, which is especially handy for retrofits.

Six-ball couplers provide a more stable grip on the fitting than do couplers with four balls.

No. 19150 – O-ring kit for field service couplers.

No. 18190A – Low-side manual coupler, blue actuator.
No. 18191A – High-side manual coupler, red actuator.
No. 18192 – Set of manual service couplers.

No. 18341 – High- and low-side automatic couplers.
No. 18074 – Low-side coupler, straight, blue actuator.
No. 18075 – High-side coupler, straight, red actuator.
No. 18174 – Low-side coupler, 90°, blue actuator.
No. 18175 – High-side coupler, 90°, red actuator.
Side-Wheel Manifolds with 1/4" Fittings
Our popular side-wheel manifold is easy to use and designed for accuracy.

**Bar** — Solid forged brass for long life; handwheels are durable, color-coded Lexan™.

**Universal Gauges** — Clearly marked so they’re easy to read and protected with Lexan™ lenses.

**Field-Proven Face Seal Valve** — Prevents leakage past the stem.

**Models**
- **40152** – Standard side-wheel manifold, color-coded gauges, Fahrenheit scale, brass bar, handwheels, and hanging hook–no hoses.
- **40151** – Standard side-wheel manifold, color-coded gauges, Celsius scale, brass bar, handwheels, and hanging hook–no hoses.
- **40153** – Standard side-wheel manifold set, includes three 36" standard hoses with 1/4" fittings.
- **40159** – Standard side wheel manifold, color-coded gauges, Fahrenheit scale, brass bar, handwheels, 80 mm lens gauges, and hanging hook–no hoses.
- **40169** – Standard side wheel manifold set, includes three 60" standard hoses with 1/4" fittings.

Side-Wheel Manifolds-in Protective Holster
Use the 41600 for almost every job, instead of carrying several manifolds with 1/4" fittings. Gauges show R-22 and R-134a temperature scales.

**Flexible Holster** — Provides protection against the bumps and knocks of everyday use.

**Pressure Temperature Chart** — Stores in a slot on the back, giving multiple refrigerant capability.

**Face Seal Valves** — Provide a tight seal, less wear, and improved flow.

Comes with manifold bar, protective holster, 2-1/2" gauges, color-coded hand wheels, and hanging hook.
- **41600** – Side-wheel manifold in protective holster–no hoses.
- **41620** – Side-wheel manifold set with protective holster, three 72" standard hoses, and standard fittings.
- **41630** – Side-wheel manifold set with protective holster, three 72" standard hoses with Quick Seal™ fittings.
- **41640** – Side-wheel manifold set with protective holster, three 72" Enviro-Guard™ hoses with Quick Seal™ fittings.
- **41612** – Side-wheel manifold, temperature readings in degrees Celsius–no hoses.
Brass Manifold
No. 49300 – R-134a manifold only.
No. 13202 – R-134a manifold with hose set (49072) and service couplers.

Aluminum Block Manifold with Sight Glass
No. 13199 – 1/4" MFL manifold only.
No. 48430 – 1/4" MFL manifold with hose set (68472).
No. 13208 – R-134a manifold only.

R-134a Manifold Kit
Deluxe combination side can tap features: 1/4" MFI and 1/2" Acme ports, hinged inserts for cans of R-12, R-134a, and their respective oils. 72" hoses for R-134a with automatic couplers, aluminum manifold, 1" dial thermometer, temperature/pressure chart, and blow-molded case.
No. 13136 – R-134a manifold kit.

Dual Manifold Gauge Kit
Includes aluminum block manifold, high- and low- R-134a snap couplers, 1" dial thermometer, 72" R-134a hose set, 72" R-12 hose set, and blow-molded storage case.
No. 48450 – Dual manifold gauge set.

A/C System Performance Calculator
• Instant performance test under any ambient temperature condition.
• Suspends from hood latch or attaches to your manifold gauge set.
• Includes ambient and vent temperature probes.
• Fahrenheit and Celsius scales.
• Auto shut off.
• Diagnostic flow chart and tech tips to guide you through the test.
No. 43310 – A/C system performance calculator.

Replacement Gauges
Universal compound replacement gauge, psi/kPa pressure readings, R-22 and R-134a temperature readings in degrees Fahrenheit.
No. 11794 – Replacement gauge (replaces 11692).

Universal compound replacement gauge, psi/kPa pressure readings, R-22 and R-134a temperature readings in degrees Celsius.
No. 11797 – Replacement gauge.

Universal pressure replacement gauge, psi/kPa pressure readings, R-22 and R-134a temperature. Temperature readings in degrees Fahrenheit.
No. 11795 – Replaces 11693.

Universal pressure replacement gauge, psi/kPa pressure readings, R-22 and R-134a temperature. Temperature readings in degrees Celsius.
No. 11798 – Replacement gauge.

Replacement gauge lens, quarter turn on-off.
No. 11796 – Replacement gauge lens.
TIF9675 & TIF9685 Digital Replacement Gauges

TIF has designed these gauges with the latest state-of-the-art technology. The digital display means you can have quick, easy-to-read, and accurate readings. These gauges allow you to read both pressure and vacuum.

Gauges are compatible with all refrigerants and are individually powered by one 9V battery.

No. TIF9675 – Low-side gauge reads in increments of .10 from -30 in Hg to 99.9 psi.

No. TIF9685 – High-side gauge reads in increments of 1 psi from 0 psi to 500 psi.

Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Low: -29.9 in Hg to 99.9 psi</th>
<th>High: 0–500 psi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resolution</td>
<td>Low: 0.1 in Hg and 0.1 psi</td>
<td>High: 1 psi</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Battery Life</td>
<td>&gt;100 hours (alkaline)</td>
<td></td>
</tr>
<tr>
<td>Power Supply</td>
<td>(1) 9V battery</td>
<td></td>
</tr>
<tr>
<td>Operating Temp</td>
<td>32°–125° F (0°–52° C)</td>
<td></td>
</tr>
<tr>
<td>Dimensions</td>
<td>3.5” x 2.8” x 1.9” D</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(8.9 cm x 7.1 cm x 4.8 cm)</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>6 oz. (170g)</td>
<td></td>
</tr>
</tbody>
</table>

Stem Replacement Assembly Kit

Kits include all necessary parts to service one manifold valve. To replace stems on both valves, order two kits.

No. 40232 – Stem assembly kit for manifolds with conical seal design.

No. 13148 – Face seal kit for side-wheel manifolds, includes stem with o-rings, spring, and screw. Will not fit sight glass manifold.

No. 19695 – Face seal kit for sight glass manifolds.

No. 13067 – High vacuum grease.

Replacement Handwheels

No. 40449 – Set of one red and one blue with 1/4” drive.

No. 41698 – Set of one red and one blue with 1/4” drive (barrel style).

Replacement Parts for Hoses and Adapters

Replacement parts help you keep your charging hoses and adapters in top working condition.

No. 18180 – O-rings for Quick Seal™ 1/4” fittings and adapters, pkg/6.

No. 40531 – O-rings for 10293 adapters, pkg/6.

No. 40082 – 1/4” valve core depressors, pkg/6.

No. 40083 – 1/4” gaskets, pkg/6.

No. 40084 – 3/8” gaskets, pkg/6.

No. 40677 – 3/16” gaskets, pkg/6.

No. 40653B – 3/16” valve core depressors.
Replacement Parts Kit for R-12 Manifold Gauges and Hoses

- 6 hose gaskets.
- 6 gasket adapters.
- 2 stem repair kits.
- 12 Quick Seal™ caps.
- 12 valve core depressors, 1/4".
- 4 Lexan® handwheels and screws.
- O-rings to service Quick Seal™ fittings.
- Valve core remover/installer with valve cores.

No. 18019 – Replacement parts kit for R-12 manifold gauges and hoses.

Replacement Parts Kit for R-134a Manifold Gauges and Hoses

- 4 manifold stems.
- 6 o-rings, 14 mm.
- 12 valve core depressors.
- 12 hose gaskets, 1/4".
- 12 manifold stem o-rings.
- 6 Quick Seal™ o-rings for R-134a.
- 2 caps with straps, 1/2" Acme.
- O-ring lubricant (high vacuum grease).
- Valve core remover/installer with 6 valve cores.
- 4 color-coded Lexan® handwheels and screws.
- Set of R-134a coupler o-rings, high- and low-side.

No. 18576 – Automotive replacement parts kit for R-134a manifold gauges and hoses.

Hoses

No. 30072 – Standard hose (500/2500 psi) – 72", 1/4" SAE internal fitting x 1/4" SAE internal.
No. 34107 – Standard hose (500/2500 psi) – 72" 1/4" SAE internal fitting x 1/4" SAE internal with auto shut-off.
No. 68472 – Enviro-Guard hose (740/3700 psi) – 72" 1/4" SAE internal fitting x 1/4" SAE internal with auto shut-off
No. 49072 – R-134a Enviro-Guard hose (740/3700 psi) – 72" red/blue, 1/2" ACME internal x 14 mm external fittings; yellow, 1/2" ACME internal x 1/2" ACME internal.

Special Hoses for Special Jobs

Enviro-Guard™ Hoses with Ball Valves

In-line ball valves control refrigerant flow, open and close in a quarter turn.

No. 65060 – Set of three 60" hoses with ball valves.
No. 65160 – 60" Enviro-Guard™ hose with ball valve, yellow.
No. 65260 – 60" Enviro-Guard™ hose with ball valve, blue.
No. 65360 – 60" Enviro-Guard™ hose with ball valve, red.

Hose Extension Coupler

Connect any number of hoses to get the extra length you need — there’s no need to order special hose lengths.

No. 40333 – 1/4" MFL x 1/4" MFL, no valve core.
No. 10328 – 1/2" Acme external x 14 mm internal (for automotive R-134a).

20' Charging Hoses

No. 68020 – Set of 20' Enviro-Guard™ red and blue, 1/4" fittings.
No. 68420 – Set of 20' Enviro-Guard™ red and blue, Quick Seal™ fittings.
Charging Hoses

Robinair premium refrigerant charging hoses are built for long life and dependability. A strong, six-sided crimp provides a reliable connection between the hose and barb, even at maximum pressure. The coupler nuts are deeply knurled for quick finger-tightening. Enviro-Guard™ hoses are ideal for high pressure applications, including R-410a systems.

Hose Selection Charts

1/4" Standard Hoses with Standard Fittings

Neoprene-coated for flexibility and wear resistance, with a valve core depressor and a 45° bend on one end for convenient access to the system.

500 psi working pressure; 2500 psi burst pressure.

<table>
<thead>
<tr>
<th>Length (inches)</th>
<th>Yellow</th>
<th>Blue</th>
<th>Red</th>
<th>Pkg. Set (Blue, Red, Yellow)</th>
</tr>
</thead>
<tbody>
<tr>
<td>36</td>
<td>31036</td>
<td>32036</td>
<td>33036</td>
<td>30036</td>
</tr>
<tr>
<td>60</td>
<td>31060</td>
<td>32060</td>
<td>33060</td>
<td>30060</td>
</tr>
<tr>
<td>72</td>
<td>31078</td>
<td>32072</td>
<td>31079</td>
<td>30072</td>
</tr>
<tr>
<td>96</td>
<td>31096</td>
<td>32096</td>
<td>33096</td>
<td>N/A</td>
</tr>
</tbody>
</table>

1/4" Standard Hoses with Quick Seal™ Fittings

500 psi working pressure; 2500 psi burst pressure.

<table>
<thead>
<tr>
<th>Length (inches)</th>
<th>Yellow</th>
<th>Blue</th>
<th>Red</th>
<th>Pkg. Set (Blue, Red, Yellow)</th>
</tr>
</thead>
<tbody>
<tr>
<td>72</td>
<td>38172A</td>
<td>38272A</td>
<td>38372A</td>
<td>39072A</td>
</tr>
</tbody>
</table>

1/4" Enviro-Guard™ Hoses with Standard Fittings

740 psi working pressure; 3700 psi burst pressure.

<table>
<thead>
<tr>
<th>Length (inches)</th>
<th>Yellow</th>
<th>Blue</th>
<th>Red</th>
<th>Pkg. Set (Blue, Red, Yellow)</th>
</tr>
</thead>
<tbody>
<tr>
<td>72</td>
<td>67172</td>
<td>67272</td>
<td>67372</td>
<td>67072</td>
</tr>
</tbody>
</table>

1/4" Enviro-Guard™ Hoses with Quick Seal™ Fittings

Special barrier material prevents virtually any permeation of refrigerant, yet remains flexible. With 45° Quick Seal™ fittings.

740 psi working pressure; 3700 psi burst pressure.

<table>
<thead>
<tr>
<th>Length (inches)</th>
<th>1/2&quot; ACME</th>
<th>Blue 14 mm x 1/2&quot; ACME</th>
<th>Red 14 mm x 1/2&quot; ACME</th>
<th>Pkg. Set (Blue, Red, Yellow)</th>
</tr>
</thead>
<tbody>
<tr>
<td>36</td>
<td>61036</td>
<td>62036</td>
<td>63036</td>
<td>60036</td>
</tr>
<tr>
<td>60</td>
<td>61060</td>
<td>62060</td>
<td>62243</td>
<td>60060</td>
</tr>
<tr>
<td>72</td>
<td>61072</td>
<td>62072</td>
<td>62244</td>
<td>60072</td>
</tr>
<tr>
<td>96</td>
<td>61096</td>
<td>62121</td>
<td>63096</td>
<td>60096</td>
</tr>
<tr>
<td>240</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>64240 (excl. yellow)</td>
</tr>
<tr>
<td>240</td>
<td>NA</td>
<td>NA</td>
<td>62246</td>
<td>NA</td>
</tr>
<tr>
<td>240</td>
<td>NA</td>
<td>62242</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

Enviro-Guard™ Hoses for Automotive R-134a

Meets all specifications for low permeation construction. Clearly marked for R-134a. See page 351 for service couplers.

740 psi working pressure; 3700 psi burst pressure.
Premium High Vacuum Pump Oil

The performance of your pump depends largely on the quality and purity of the vacuum pump oil. Robinair’s oil is engineered to maintain maximum viscosity at high running temperatures and to improve cold weather starts.

To keep the pump operating at peak efficiency, change the oil frequently. Moisture and other contaminants can quickly deteriorate the purity of the oil, thinning the oil, and reducing the pump’s ability to reach deep vacuum conditions.

Thermally Stable

Laboratory tests prove that Robinair oil is more thermally stable in comparison to other leading brands, which means it resists breaking down due to heat for a longer period of time.

Lower Moisture Content

Robinair oil has a lower moisture content than other oils, thanks to our special packaging and handling procedures. Moisture degrades the oil’s purity, thinning it, and reducing the pump’s ability to reach a deep vacuum.

No. 13119 – Pint bottle, 12 per case.
No. 13203 – Quart bottle, 12 per case.
No. 13204 – Gallon bottle, 4 per case.

Also Available

No. 17191 – Oil spout for quart bottle, 10” long, handy for adding oil to a pump mounted on a station.

Change Your Vacuum Pump Oil Frequently

Clean oil is important for peak vacuum pump performance. When the oil is contaminated, it reduces your pump’s ability to remove moisture from a system. You should change the pump oil frequently, and especially in the following situations:

• You have just evacuated a system that you suspect was overly moisture-laden.
• You have just evacuated a system with a compressor burnout.
• The pump oil looks cloudy or milky.
• The pump will not pull to factory specifications when blanked off to an electronic thermistor vacuum gauge.
• Every 10 hours of operation.

![COMPETITIVE OIL COMPARISON](chart.png)

The Importance of Deep Vacuum

The purpose of a vacuum pump is to remove moisture and air from an A/C-R system. Modern systems are built tighter and charges are more critical. That means these systems have a greater sensitivity to moisture and other contaminants, making thorough evacuation more important than ever before. Moisture in a refrigeration system, directly or indirectly, is the cause of most problems and complaints. First, moisture can cause freeze-up in a system. Moisture is picked up by the refrigerant and transported through the refrigerant line in a fine mist, with ice crystals forming at the point of expansion.

“Freeze-up” is not the only problem caused by moisture. It can also result in corrosion, the effects of which are not apparent until the real damage has occurred. Moisture alone is bad enough, but combined with refrigerants containing chlorine, hydrochloric acids can form. These greatly increase the corrosion of metals. Also, refrigerant oil rapidly absorbs moisture. Water-formed acids combine with the refrigerant, forming a closely bonded mixture of fine globules. The effect is called sludging and it greatly reduces the lubricating ability of the oil.

A vacuum pump removes troublesome moisture by lowering the pressure within the system and vaporizing (or boiling off) the moisture, then exhausting it along with air.

CoolTech™ – The Inside Story

A vacuum pump that’s fast and thorough saves you not only time, but also the expense of callbacks and dissatisfied customers. Robinair pumps perform better than other pumps in the industry, ensuring you complete dehydration before recharging.

Robinair pumps are engineered specifically to meet the needs of the kind of A/C work you’re doing today, and to give you trouble-free operation. We’ve put our years of experience and know-how into developing pumps that help you do the job faster and better.

All Robinair pumps are backed by our exclusive “No Hassle” over-the-counter replacement warranty. You can return a pump to your Robinair distributor for an immediate exchange — with no hassle! (In U.S. and Canada only; in other locations, see your Robinair distributor.)

Robinair CoolTech vacuum pumps are designed for use on A/C-R systems using CFCs, HCFCs, and HFCs in conjunction with mineral oil, ester oil, alkylbenzene oil, and PAG oil as lubricants. Do not use them with ammonia or lithium bromide systems; not for use with flammable refrigerants.

Selecting the Right Size Pump

The more air a pump moves, the faster it can reach an acceptable vacuum. A smaller pump takes more time to evacuate a system than one that’s the correct size for the job.

Use this Chart as a Guide to Selecting the Right Size Pump

<table>
<thead>
<tr>
<th>System</th>
<th>Recommended Pump Size</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CoolTech™</td>
</tr>
<tr>
<td>Up to 10 tons (35kW); Domestic Refrigeration, Passenger Cars</td>
<td>1.2 CFM (28 l/m)</td>
</tr>
<tr>
<td>Up to 30 tons (105kW); Residential A/C, Panel Trucks &amp; RV’s</td>
<td>4 CFM (93 l/m)</td>
</tr>
<tr>
<td>Up to 50 tons (176kW); Rooftop A/C systems, Tractor/Trailers, Buses</td>
<td>6 CFM (142 l/m)</td>
</tr>
<tr>
<td>Up to 70 tons (246kW)</td>
<td>10 CFM (236 l/m)</td>
</tr>
</tbody>
</table>

Tests done under the same laboratory conditions confirm that Robinair vacuum pumps consistently out perform other major brands. Our Model 15600 reaches a vacuum of 600 microns in just 60 minutes, while the competition’s pumps took more than two hours to reach the same micron level.

Robinair pumps weigh less!

You’ll appreciate the difference a few pounds make when you’re carrying the pump up a ladder or through an access hatch.

Robinair pumps use less oil!

Smaller oil capacity means that your maintenance costs will be lower over the life of the pump.
ROBINAIR FLUID PRODUCTS

A/C Vacuum

CoolTech® Vacuum Pumps

- Power and capacity for a wide range of service applications.
- High CFM rating for fast, thorough evacuation.
- Two-stage rotary vane design.

Features:

 Iso-Valve™ – Isolates the pump from the system with just a quarter-turn.

 Gas Ballast – Moisture laden air passing through the pump mixes with relatively dry air to such a degree that compression does not cause condensation.

 Two-stage Design – Cleans the system more thoroughly than a single-stage pump; the second stage starts pumping at a lower pressure so you can pull a deeper, ultimate vacuum.

 Oil Drain Valve – Positioned at the bottom of the oil reservoir and angled for faster, more complete draining.

 Oil Fill Port – Makes adding oil simple since the port is accessible from the front or either side. The sight glass on the front of the pump shows you when enough oil has been added.

 Heavy-Duty Motor – High torque design for easy startup and efficient operation.

 Offset Rotary Vanes – Our proven design builds a powerful compression within the pumping chamber to reduce system pressure and vaporize moisture so it can be exhausted along with air.

 Molded Base – Durable polycarbonate base improves pump balance and minimizes vibration during operation.

 Die-Cast Aluminum Housing – Cast aluminum housings make the pumps lightweight but durable.

<table>
<thead>
<tr>
<th>Model</th>
<th>Free Air Displacement</th>
<th>Factory Micron Rating</th>
<th>No. of Stages</th>
<th>Intake Fitting</th>
<th>Oil Capacity</th>
<th>Motor Size</th>
<th>Voltage</th>
<th>Approvals</th>
<th>Weight</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>15226</td>
<td>28 liters/minute</td>
<td>50 microns</td>
<td>2</td>
<td>1/4&quot; MFL and 1/2&quot; Acme</td>
<td>5 oz. (148 ml)</td>
<td>1/8 hp</td>
<td>220V 50/60 Hz</td>
<td>CE</td>
<td>10 lbs. (4.5 kg)</td>
<td>8.5&quot; x 4.5&quot; x 9.5&quot; L</td>
</tr>
<tr>
<td>15401</td>
<td>93 liters/minute</td>
<td>20 microns</td>
<td>2</td>
<td>1/4&quot; MFL and 1/2&quot; MFL</td>
<td>15 oz. (444 ml)</td>
<td>1/3 hp</td>
<td>115V/220-250V 50/60 Hz</td>
<td>CE</td>
<td>32 lbs. (14.5 kg)</td>
<td>9.5&quot; x 5.5&quot; x 9.5&quot; L</td>
</tr>
<tr>
<td>15424</td>
<td>93 liters/minute</td>
<td>20 microns</td>
<td>2</td>
<td>1/4&quot; MFL and 1/2&quot; Acme</td>
<td>15 oz. (445 ml)</td>
<td>1/3 hp</td>
<td>115V/220-250V 50/60 Hz</td>
<td>CE</td>
<td>32 lbs. (14.5 kg)</td>
<td>9.5&quot; x 5.5&quot; x 9.5&quot; L</td>
</tr>
<tr>
<td>15601</td>
<td>142 liters/minute</td>
<td>20 microns</td>
<td>2</td>
<td>1/4&quot; MFL and 1/2&quot; MFL</td>
<td>15 oz. (445 ml)</td>
<td>1/3 hp</td>
<td>115V/220-250V 50/60 Hz</td>
<td>CE</td>
<td>33 lbs. (15 kg)</td>
<td>9.5&quot; x 5.5&quot; x 9.5&quot; L</td>
</tr>
<tr>
<td>15121A</td>
<td>236 liters/minute</td>
<td>20 microns</td>
<td>2</td>
<td>1/4&quot; MFL and 1/2&quot; MFL</td>
<td>17 oz. (503 ml)</td>
<td>1/2 hp</td>
<td>115V/220V 50/60 Hz</td>
<td>CE</td>
<td>38 lbs. (17.2 kg)</td>
<td>10&quot; x 5.5&quot; x 9.5&quot; L</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model</th>
<th>Free Air Displacement</th>
<th>Factory Micron Rating</th>
<th>No. of Stages</th>
<th>Intake Fitting</th>
<th>Oil Capacity</th>
<th>Motor Size</th>
<th>Voltage</th>
<th>Approvals</th>
<th>Weight</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>15234</td>
<td>1.2 CFM</td>
<td>50 microns</td>
<td>2</td>
<td>1/4&quot; MFL and 1/2&quot; Acme</td>
<td>5 oz. (148 ml)</td>
<td>1/8 hp</td>
<td>115V 50/60 Hz</td>
<td>UL</td>
<td>10 lbs. (4.5 kg)</td>
<td>8.5&quot; x 4.3&quot; x 9.5&quot; L</td>
</tr>
<tr>
<td>15400</td>
<td>4 CFM</td>
<td>20 microns</td>
<td>2</td>
<td>1/4&quot; MFL and 1/2&quot; MFL</td>
<td>15 oz. (445 ml)</td>
<td>1/3 hp</td>
<td>115V 60 Hz</td>
<td>UL</td>
<td>29 lbs. (12.2 kg)</td>
<td>9.75&quot; x 5.625&quot; x 15&quot; L</td>
</tr>
<tr>
<td>15434</td>
<td>4 CFM</td>
<td>20 microns</td>
<td>2</td>
<td>1/4&quot; MFL and 1/2&quot; Acme</td>
<td>13 oz. (384 ml)</td>
<td>1/3 hp</td>
<td>115V 60 Hz</td>
<td>UL</td>
<td>29 lbs. (12.2 kg)</td>
<td>9.75&quot; x 5.625&quot; x 15&quot; L</td>
</tr>
<tr>
<td>15600</td>
<td>6 CFM</td>
<td>20 microns</td>
<td>2</td>
<td>1/4&quot; MFL and 1/2&quot; MFL</td>
<td>15 oz. (445 ml)</td>
<td>1/2 hp</td>
<td>115V 60 Hz</td>
<td>UL</td>
<td>30 lbs. (12.2 kg)</td>
<td>9.75&quot; x 5.625&quot; x 15&quot; L</td>
</tr>
<tr>
<td>15120A</td>
<td>10 CFM</td>
<td>20 microns</td>
<td>2</td>
<td>1/4&quot; MFL and 1/2&quot; MFL</td>
<td>16.5 oz. (448 ml)</td>
<td>1/2 hp</td>
<td>115V 60 Hz</td>
<td>UL</td>
<td>30 lbs. (12.2 kg)</td>
<td>10.75&quot; x 5.625&quot; x 16&quot; L</td>
</tr>
</tbody>
</table>

15434 – 4 CFM
15600 – 6 CFM
15400 – 4 CFM
15120A 10 CFM
15234 1.2 CFM
VacuMaster™
Economy Vacuum Pumps

- Performance tested to meet Robinair’s high standards
- Power and capacity for a wide range of service applications.
- High CFM rating for fast, thorough evacuation.
- Two-stage rotary vane design.

Features:

**Two-stage Design** – Cleans the system more thoroughly than a single-stage pump; the second stage starts pumping at a lower pressure so you can pull a deeper, ultimate vacuum.

**Oil Drain Valve** – Positioned at the bottom of the oil reservoir and angled for faster, more complete draining.

**Oil Fill Port** – Makes adding oil simple since the port is accessible from the front or either side. The sight glass on the front of the pump shows you when enough oil has been added.

**Heavy-Duty Motor** – High torque design for easy startup and efficient operation.

**Die-Cast Aluminum Housing** – Cast aluminum housings make the pumps lightweight but durable.

### Factory Free Air Micron No. of Motor

<table>
<thead>
<tr>
<th>Model</th>
<th>Free Air Displacement</th>
<th>Micron Rating</th>
<th>No. of Stages</th>
<th>Intake Fitting</th>
<th>Oil Capacity</th>
<th>Motor Size</th>
<th>Voltage</th>
<th>Weight</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>15150</td>
<td>1.5 CFM</td>
<td>50 microns</td>
<td>2</td>
<td>1/4&quot; MFL and 3/8&quot; Acme 3/8&quot; FFL x 1/2&quot; Acme adaptr.</td>
<td>7.4 oz. (219 ml)</td>
<td>1/4 hp</td>
<td>115V 60Hz</td>
<td>22 lbs. (10 kg)</td>
<td>9.5&quot; H x 4.75&quot; W x 12.5&quot; L 240 mm x 120 mm x 315 mm</td>
</tr>
<tr>
<td>15300</td>
<td>3 CFM</td>
<td>40 microns</td>
<td>2</td>
<td>1/4&quot; MFL and 3/8&quot; 3/8&quot; FFL x 1/2&quot; Acme adaptr.</td>
<td>7.5 oz. (220 ml)</td>
<td>1/3 hp</td>
<td>115V 60Hz</td>
<td>28 lbs. (12.5 kg)</td>
<td>10&quot; H x 5&quot; W x 13&quot; L 255 mm x 123 mm x 336 mm</td>
</tr>
<tr>
<td>15500</td>
<td>5 CFM</td>
<td>40 microns</td>
<td>2</td>
<td>1/4&quot; MFL and 3/8&quot; 3/8&quot; FFL x 1/2&quot; Acme adaptr.</td>
<td>7.5 oz. (220 ml)</td>
<td>1/3 hp</td>
<td>115V 60Hz</td>
<td>28 lbs. (12.2 kg)</td>
<td>10&quot; H x 5&quot; W x 13&quot; L 255 mm x 123 mm x 336 mm</td>
</tr>
<tr>
<td>15800</td>
<td>8 CFM</td>
<td>40 microns</td>
<td>2</td>
<td>1/4&quot; MFL and 3/8&quot; 3/8&quot; FFL x 1/2&quot; Acme adaptr.</td>
<td>18.6 oz. (550ml)</td>
<td>1 hp</td>
<td>115V 60Hz</td>
<td>37 lbs. (16.78 kg)</td>
<td>16&quot; H x 6&quot; W x 10&quot; L 408 mm x 152mm x 254mm</td>
</tr>
</tbody>
</table>

**Domestic Models**

**International Models**

- All Robinair pumps are backed by our exclusive “No Hassle” over-the-counter replacement warranty.
- You can return a pump to your Robinair distributor for an immediate exchange — with no hassle!
- (In U.S. and Canada only; in other locations, see your Robinair distributor.)

### Oil CoolTech™

<table>
<thead>
<tr>
<th>Pumps</th>
<th>Heavy Duty Motor</th>
<th>Two-Stage Design</th>
<th>Molded Base</th>
<th>Die-Cast</th>
<th>Oil Drain Valve</th>
<th>Offset Rotary Vanes</th>
<th>Iso-Valve</th>
<th>Gas Ballast</th>
</tr>
</thead>
<tbody>
<tr>
<td>CoolTech™</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>VacuMaster®</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
</tbody>
</table>
**Air-Vac™ for R-12 and R-134a**

Economical Air-Vac uses shop air to pull the system into vacuum and includes inlet fittings with 1/4" and 1/2" Acme sizes.

**Easy to use** — Unique venturi design runs on shop air.

**Rugged Lexan® Case** — Both oil- and scratch-resistant and comes with a convenient handle.

**Low Maintenance** — There’s no oil or moving parts to replace.

**No. 34970** – Air-Vac™ for R-12 and R-134a.

**No. 34977** – Replacement inlet tee, 1/4" MFL and 1/2" acme.

---

**Specifications**

- **Drive**: Compressed air
- **Free Air Displacement**: 1 CFM
- **Input Pressure**: 75 psi
- **Vacuum Rating**: 29 in./Hg
- **Intake Fitting**: 1/4" MFL and 1/2" ACME
- **Dimensions**: 4-1/2" H x 4" W x 7-1/2" L
- **Weight**: 2 lbs./1 kg

---

**Pump Intake Fittings**

**R-12/R-134a Dual Inlet Fittings**

Convert your pump to R-12 and R-134a. Solid brass tees replace inlet fittings on pump; includes a branch with a 1/4" MFL fitting for R-12 (and other refrigerants) and a branch with 1/2" Acme fittings for automotive R-134a.

**Also Available:**

- **No. 15555** – Screw-on inlet adapter converts any pump, 1/4" FFL coupler x 1/4" MFL x 1/2" Acme.
- **No. 15195** – 1/4" MFL/1/2" Acme combination inlet fitting for 15200 series vacuum pumps.
- **No. 15495** – 1/4" MFL/1/2" Acme combination inlet fitting for 15400/15600 series vacuum pump.

**Pump Intake Fitting Adapters:**

- **No. 10459** – Adapter, 1/2" FFL to 1/4" MFL.
- **No. 13110** – Adapter, 3/8" FFL to 1/4" MFL.
- **No. 13066** – Adapter, 1/2" FFL to 3/8" MFL.
The Importance of Measuring Vacuum

Moisture in an A/C system is a serious problem for the technician – it causes freeze-ups and corrosion, seriously damaging the A/C system. The most effective way to eliminate moisture is to create a vacuum deep enough to boil it away. For that, you need a high vacuum pump, and a tool to tell you when the vacuum is deep enough to adequately dehydrate the system.

Without a means of measurement, evacuation time is based on guesswork. The length of time required for thorough dehydration will vary from system to system because of several factors – so using a clock isn’t foolproof. You risk not removing all the moisture – or wasting time by running the pump long after evacuation is complete.

Many service technicians rely on the compound gauge of the manifold to read vacuum. While the manifold is good for gross measurements, it’s simply not accurate enough to determine exact vacuum levels. It’s designed to read low pressures in inches of mercury, but there’s no way to read exact levels when you’re pulling the last, most critical inch of vacuum.

If you look at the compound gauge face, you can see that it’s not possible to clearly differentiate between 29” Hg and 29.9” Hg, for example. But in microns – the precise measurements for the last inch of vacuum – that’s the difference between roughly 23,000 and 250 microns.

A closed-end, U-tube, mercury manometer is capable of reading to 500 microns. However, it’s a delicate instrument, more suited to a laboratory or controlled environment.

The most economical, effective, and easy-to-use option is an electronic thermistor vacuum gauge. It eliminates the guesswork by measuring the vacuum to precise micron levels, ensuring the system is leak-free, moisture-free, and ready to be recharged. Although originally developed as a laboratory instrument, today’s thermistor vacuum gauges are rugged enough – and reliable enough – for field service work.

Thermistor Vacuum Gauge

Solid-state instrument constantly monitors and visually indicates the vacuum level in 10 segments from atmosphere to 50 microns.

- LCD screen can be read even in direct sunlight and minimizes battery consumption.
- There are no adjustments to make, no calibrations for atmospheric pressure or altitude.
- Durable carrying case protects the instrument and has a built-in compartment for storing the 24” charging hose (included).

No. 14830A – Thermistor vacuum gauge.
Compact Electronic Vacuum Gauge

Robinair’s 14777 electronic vacuum gauge is just 2-1/2” x 3” in size, but accurate enough to clearly indicate when the system is free from moisture and ready for recharging. Specifically designed for use with a high vacuum pump, the 14777 measures to 10 microns.

Clearly Shows Vacuum Level – The display is an easy-to-read LCD type with readout showing the current vacuum level.

6’ Lead for Service Flexibility – Hang the gauge in a location that’s convenient for you to monitor vacuum level.

Mounting Magnet – Position the 14777 where it’s easy to read the LCD.

Hassle-Free Operation

No. 14777 – Compact electronic vacuum gauge.

No. 14778 – Replacement thermistor tube.

Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>14777</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Supply</td>
<td>One 9V battery (included)</td>
</tr>
<tr>
<td>Vacuum Fitting</td>
<td>1/4” MFL</td>
</tr>
<tr>
<td>Length of Lead</td>
<td>6 feet (8.3 m)</td>
</tr>
<tr>
<td>Vacuum Rating</td>
<td>29 in./Hg</td>
</tr>
<tr>
<td>Dimensions</td>
<td>3” H x 2.5” W x 1” D</td>
</tr>
</tbody>
</table>

(7.62 cm x 6.35 cm x 2.54 cm)

When reading vacuum, remember that the location of the vacuum gauge tube will affect the reading. The closer the gauge is to the vacuum pump, the lower the reading will be. Conversely, if you take the reading at a line far away from the pump, the reading will be on the high side.

The way to get the most reliable reading is to isolate the vacuum pump using a vacuum valve assembly. Allow the pressure to equalize throughout the system, then take a final reading.

A reading that’s too high is a good indication of moisture in the system; continuing to evacuate will likely pull the system into a deeper vacuum. If the pressure will not equalize, you probably have a leak, which should be repaired.
Slimline Refrigerant Scale

A revised and updated version of the classic TIF Slimline scale, the TIF9010A brings greater performance, reliability, and usability to the trade. With the greatest resolution in the industry, and no compromise on capacity, this unit offers features and specs that you won’t want to do without.

FEATURES

• Touch key controls.
• Three display modes - lbs./oz.; decimal lbs.; kilograms.
• Very high resolution - 0.1 oz/0.005 lbs./2 grams.
• Extreme accuracy.
• 110 pound/50 kg capacity.
• Auto zero.
• Compact design, 2.5” (6.35 cm) thick.
• Charging and recovery capabilities.
• Can be used with all refrigerants.
• Completely portable, battery powered.
• Removable control box with prop stand/hanging hook.
• Built into carrying case.
• Two-year warranty.

No. TIF9010A – Slimline refrigerant scale.

Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range</td>
<td>0 lbs. 0.0 oz. to 110 lbs. 0.0 oz, or 0.000 lbs. to 110,000 lbs., or 0.000 kg to 50,000 kg</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.1 oz./0.005 lbs./2 grams</td>
</tr>
<tr>
<td>Accuracy</td>
<td>±0.5% of reading</td>
</tr>
<tr>
<td>Operating Temp</td>
<td>32° to 120°F (0° to 49°C)</td>
</tr>
<tr>
<td>Power Supply</td>
<td>9V DC</td>
</tr>
<tr>
<td>Battery Life</td>
<td>20 hours</td>
</tr>
<tr>
<td>Coil Cord Length</td>
<td>6 ft. (1.8 m)</td>
</tr>
<tr>
<td>Dimensions</td>
<td>15.25&quot; x 10.5&quot; x 2.5&quot;</td>
</tr>
<tr>
<td>Weight</td>
<td>4.5 lbs. (2 kg)</td>
</tr>
</tbody>
</table>

Economy Digital Refrigerant Scale

• New molded design, easy to carry and store.
• Capacity up to 220 lbs. (100 kg). Display shows lbs./oz. and kg.
• High accuracy (±0.5 oz.) and resolution (0.1 oz).
• 9-volt battery power.
• Platform to adapt to most existing tanks (9" x 9").
• Three control keys: On/Off, automatic zeroing, and measurement units.
• Charging and recovery capabilities
• CE approved.
• One-year warranty.

No. TIF9030 – Economy digital refrigerant scale.
No. TIF9031 – Economy digital refrigerant scale carrying case.
**Certified Refrigerant Scale**

- 200 pound OR 100 kg capacity.
- Allows automatic charging or recovery operations.
- Color-coded keypad controls.
- Three display modes – lbs./oz.; decimal lbs.; kilograms.
- Very high resolution – 0.2 oz./0.010 lbs./4 grams.
- Can be used with all refrigerants.
- Advanced charge and recovery modes – uses tare weight and maximum capacity of cylinder to calculate maximum charge/recovery available.
- User programmable memory for up to 99 different stored values.
- “Repeat” charge feature.
- Removable platform and control box with prop stand/hanging hook.
- Compact design – completely portable, battery powered.
- Low battery indicators.
- Five-year warranty.

No. TIF9055 – Certified refrigerant scale.

---

**Automatic Charging Scale**

Just program the charge amount and this scale accurately charges refrigerant from a bulk tank, and shuts off automatically for hands-off operation.

**Charging is simple** – just press and hold the “Charge” key until the display shows the desired weight, then release the key!

**Accurate Charging** – Meter is accurate to ±1 oz.; can handle up to 110 lbs.

**Dual Fittings for Versatility** – Includes both 1/4” MFL and 1/2” ACME fittings.

**Corner Balancing** – Weight measurement is accurate even if the tank is placed off-center on the platform.

**Tare Function** – Zeroes the display so you can easily read changes in the weight.

No. 34990 – Automatic charging scale.

---

**Specifications**

| Weight Limit | 110 lb. (50 kg) bulk tank maximum |
| Display      | 16 digit alphanumeric LCD          |
| Weight Resolution | 0.02 lbs. (.01 kg)        |
| Operating Temp | 50°F to 120°F (10°C to 49°C)     |
| Power Supply  | 110V 50 Hz                       |
| Dimensions   | 13.5” x 11” x 4”                 |
| Platform Dimensions | 8.5” x 8.5” (22 cm x 22 cm) |
| Weight       | Approx. 8 lbs. (4 kg)             |
Cordless Rechargeable 30-LED Light
- Work anywhere without worrying about tangled cords
- Eliminate the possibility of electrical shock from worn and frayed power cords!
- One-hour recharge time provides up to 8 hours of continuous operation.
- 30 super-bright, long-life LEDs provide forward directed pure white light.
- Strong enough to withstand being driven over by a vehicle!
- Slim design allows access into tight areas.
- Swivel hook allows the light to be positioned in any direction.

No. 16440 – Cordless rechargeable 30-LED light.

Dial-A-Charge® Charging Cylinders
Calibrated shrouds make accurate charging simple, and the charge is measured by weight for greatest accuracy. Using the calibrations in conjunction with the pressure gauge, you can easily compensate for volume fluctuations that occur as the ambient temperature changes, just by “re-dialing” the shroud.

Heated cylinders help speed the transfer of refrigerant by overcoming the equalization of pressure between the system and the charging cylinder. This reduces the time required for a complete charge.

- Charges by volume; calibrations on the shroud make it easy to charge the exact amount required.
- Comes in durable polyethylene case for protection during storage and transit. Cylinder snaps in and out of the case and can be stored either vertically or horizontally.
- For safety, all cylinders come with pressure relief valves; they automatically reset when a safe working pressure is restored.

<table>
<thead>
<tr>
<th>Capacity</th>
<th>110V</th>
<th>220V</th>
<th>Graduations</th>
</tr>
</thead>
<tbody>
<tr>
<td>R-12, R-22, R-502 MODELS – 1/4” SAE FITTINGS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-1/2 lb.</td>
<td>43299B</td>
<td>NA</td>
<td>1 oz.</td>
</tr>
<tr>
<td>5 lb.</td>
<td>4367B</td>
<td></td>
<td>1 oz.</td>
</tr>
<tr>
<td>2200 grams</td>
<td>43681B</td>
<td>20349B</td>
<td>25 g</td>
</tr>
<tr>
<td>R-134a MODELS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capacity</td>
<td>110V</td>
<td>Graduations</td>
<td></td>
</tr>
<tr>
<td>2-1/2 lb.</td>
<td>43134B</td>
<td>1 oz.</td>
<td></td>
</tr>
<tr>
<td>1100 grams 1/4” SAE fittings</td>
<td></td>
<td>25 g</td>
<td></td>
</tr>
<tr>
<td>5 lb.</td>
<td>43534B</td>
<td>1 oz.</td>
<td></td>
</tr>
<tr>
<td>2200 grams 1/4” SAE fittings</td>
<td></td>
<td>25 g</td>
<td></td>
</tr>
<tr>
<td>5 lb.</td>
<td>34205A</td>
<td>1 oz.</td>
<td></td>
</tr>
<tr>
<td>2200 grams ACME fittings</td>
<td></td>
<td>25 g</td>
<td></td>
</tr>
<tr>
<td>Capacity</td>
<td>220V</td>
<td>Graduations</td>
<td></td>
</tr>
<tr>
<td>5 lb.</td>
<td>43220</td>
<td>1 oz.</td>
<td></td>
</tr>
<tr>
<td>2200 grams ACME fittings</td>
<td></td>
<td>25 g</td>
<td></td>
</tr>
</tbody>
</table>
Heater Blanket
Robinair’s heater blanket speeds charging by maintaining a constant temperature, thus creating a positive pressure between the refrigerant tank and the A/C system.
- Fits 30 and 50 pound refrigerant tanks.
- Thermostat is set at 125°F (55°C).
- Thermal cut-off switch protects against overheating.
- 300 watts, 2.6 amps.
No. 10994 – Heater blanket.

International Models
No. 13183 – Heater blanket, 220V–240V 50 Hz, no plug.
No. 13184 – Heater blanket, 220V–240V 50 Hz, with internal IEC receptacle.

Mini Tubing Cutter
With a short swing radius, this cutter makes quick work of cutting tubing in tight spots. The 42022 is especially versatile with its larger range: 1/8" to 1-1/8" O.D. tubing capacity.
No. 42022 – Mini tubing cutter.

Mini Tubing Cutter
With the smallest cutting radius in the industry, the 42024 is ideal for extremely tight places. A finer thread screw provides easier tightening. For 1/8" to 5/8" O.D. tubing.
No. 42024 – Mini tubing cutter.

Mini Tubing Cutter
- Works on tubing sizes 1/8" to 5/8" O.D. (3 mm to 16 mm).
- Easily cuts copper, brass, aluminum, and steel brake lines in hard-to-reach places.
- Ream folds onto cutter body for storage.
- Extra cutting wheel stored under ream.
No. 6514 – Mini tubing cutter.

Heavy-Duty Tubing Cutter
- Works on tubing sizes 1/8" to 1-1/8" O.D. (3 mm to 29 mm).
- Easily cuts copper, brass, aluminum, and steel brake lines.
- Ream folds onto cutter body for storage.
- Extra cutting wheel stored under ream.
No. 6512 – Heavy-duty tubing cutter.

Tubing Cutter
Our roller-type cutter makes clean cuts in copper, aluminum, steel, and stainless steel tubing. Features easy action, wide capacity range, and a pencil reamer. For 1/4" to 1-1/2" O.D. tubing.
No. 42028 – Tubing cutter.
Slip-Adjust Tubing Cutter
- All metal construction.
- Spring-loaded cutting tool for faster cutting.
- Two locations for spare cutting wheels (1 included).
- For 1/4" to 2" tubing.
- Includes attached reaming tool.

No. 42035 – Slip-adjust tubing cutter.

Ratcheting Tubing Cutters
- Designed for confined spaces.
- Unique ratcheting action operates like a socket ratchet, but cuts copper, aluminum, stainless steel, and PVC.
- Spring-loaded adjusting screw applies continuous pressure while cutting.

No. 42071 – Ratcheting tubing cutter for 1/8" to 1/2" tubing.
No. 42080 – Ratcheting tubing cutter for 1/4" to 7/8" tubing.
No. 42090 – Ratcheting tubing cutter for 1/4" to 1-1/8" tubing.

Ratcheting Tubing Cutter Display
- Includes twelve No. 42071 ratcheting tubing cutters designed for use in confined spaces.
- Unique ratcheting action operates like a socket ratchet, but cuts copper, aluminum, stainless steel, and PVC.
- Spring-loaded adjusting screw applies continuous pressure while cutting.

No. 42012 – Display box of 12 No. 42071 ratcheting tubing cutters for 1/8" to 1/2" tubing.

Replacement Cutter Wheels
These top quality replacement cutter wheels are thinner for cleaner cuts with less effort. Made of high quality, shock-resistant, tool steel, the cutters are also heat treated to resist breakage and last longer. Cutter wheels are available to fit Robinair cutters, and can be used as replacements in nearly all other brands.

<table>
<thead>
<tr>
<th>Replacement Wheel Chart</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model No.</td>
</tr>
<tr>
<td>------------</td>
</tr>
<tr>
<td>13167</td>
</tr>
<tr>
<td>13168</td>
</tr>
<tr>
<td>42062</td>
</tr>
<tr>
<td>42073</td>
</tr>
<tr>
<td>42083</td>
</tr>
</tbody>
</table>
Single Blade Deburring Tool
This handy tool removes internal burrs in copper tubing. It features a high-speed steel, blade, aluminum handle, and pocket clip. Tubing size is unlimited.
No. 42040 – Single blade deburring tool.

Deburring Tool
Quickly deburrs aluminum, copper, and steel tubing, and can work on any size tubing. It’s made with a high-speed, steel blade and a durable aluminum handle. Three spare blades store in the handle.
No. 13162 – Deburring tool.

Fiber Optics Inspection Light
The applications for this handy tool are practically endless...check burners on heat exchangers for cracks, check coils for dirt and damage, look at serial numbers, fan motor tags, etc., on furnaces and condensing units. Fiber optics provide a bright light, but the shaft is just 7.6 mm in diameter. A durable cover fits over the 15” flexible shaft for protection. Powered by three AA batteries.
No. 13182 – Fiber optics inspection light.
No. 45355 – Inspection light with magnetic tip and base.

A/C Clutch Pulley Puller Set
- For removal of stubborn air conditioning clutch pulleys. Also used on many alternator, generator, power steering, and crankshaft pulleys, harmonic balancers, and fiber timing gears.
- Set includes drop-forged components: one 3/4”-16 x 5” live-center forcing screw, 5-1/2” crossbar with three spread settings, two pairs of jaws, and a clamp bolt.
- Spread: 3” to 5”; Reach: 1” to 5”.
- Includes blow-molded plastic case.
No. 4536 – A/C clutch pulley puller set.

A/C Clutch Hub Remover/Installer Set
- For damage-free removal and installation of the clutch hubs on these air conditioning compressors: GM-Harrison DA-6, HR-5, V-5, A-6, and early R4; Nippondenso Ford/Chrysler A590, C171, FS-6, 6P148A (new style); Sanden & Sankyo; York/Tecumseh HR980; Zexel/Mitsubishi CH series.
- Set includes a removing flange, plus forcing screws and adapter assemblies to remove and install virtually all clutch hubs.
- Includes blow-molded plastic case.
No. 4535 – A/C clutch hub remover/ installer set (13 pc.).

Clutch Plate Remover
Designed to overcome resistance when removing the clutch plate.
No. 11009 – Clutch plate remover.
Spring Lock Coupler Disconnect Set
Set includes four sizes for use on 3/8", 1/2", 5/8", and 3/4" tubes. Allows quick, safe disconnect of spring lock couplers on late model Ford systems and Tecumseh HR980 compressors.
No. 7238 – Spring lock coupler disconnect set.

Fuel Line Disconnect Tool
Special low-profile design works in close quarters on GM, Ford, and Chrysler vehicles where there is limited clearance between the fuel line fittings and fuel filters, fuel rails, or sending units. This tool is designed to access the center port on the GM fuel tank sending unit. For 3/8" and 1/2" applications; will also service 2001 thru current 3/4- and 1-ton trucks with the Duramax Diesel engine.
No. 6511 – Fuel line disconnect tool.

Clutch Plate Remover/Installer
These compact tools are used both to remove the clutch for access to the shaft seal and to re-install it by simply inverting the nut and main bearing.

Compressor Turning Tool
Works on wide variety of compressor models. Fits clutch hubs that do not have holes that a spanner wrench can grip, or a hex end that a box wrench can grip. Spreads lubrication to prevent compressor damage at start-up. Recommended by OE compressor manufacturers.
- Threads into most hex-less clutch hubs.
- Uses a standard 19mm (3/4") wrench.
- Allows technician to check for internal damage.
- Breaks compressor lock-up due to sticky protective coatings.
- Turns compressor in the direction of normal rotation.
No. 41057 – Compressor turning tool.

A/C Clutch Holding Tool
This three-stud spanner wrench keeps the A/C clutch from turning when loosening or tightening the retaining nut. Adjusts quickly with brass thumbscrews to fit various styles of A/C compressors used on GM, Ford, and Chrysler vehicles. Also fits a variety of other pulleys.
No. 4537 – A/C clutch holding tool.

Four-In-One Tube Bender
Effortlessly bends four different sizes of soft or annealed tubing without crimping, flattening, or scratching. Calibration allows duplication of any angle. Handles are 8-1/2" long, so extensions are not needed, and glass/plastic construction combines strength with lightweight durability.

Fin Straightener
Use our handy six-in-one straightener to clean and straighten condenser and evaporator coil fins. Straightener sections are clearly marked for fin size. The tool is compact enough to use even in confined spaces: the straightener head is 3-1/8" in diameter; the handle is 3-1/2" long.
No. 18403 – Fin straightener – 8, 9, 10, 12, 14, & 15 fins per inch.
Valve Core Remover/Installer
Remove and install the valve core from a 1/4" male flare access fitting without the loss of refrigerant. Durable, solid brass tool has a ball valve that can be opened and closed in just a quarter-turn, rather than a stem-type valve. Designed with a stainless steel ball and brazed side fitting for durability and long life.
No. 18560 – Valve core remover/installer.

Valve Core Remover/Installer
Replace leaking valve cores quickly and easily, or remove the valve core and hold it out of place for evacuation or charging. The 18561 features a solid brass body with convenient handle that opens and closes in a quarter-turn to speed service. The compact design easily fits most installations.
No. 18561 – Valve core remover/installer.

Thread Chaser
For use with No. 18560 or 18561, valve core remover/installer. This item actually repairs damaged threads on valve cores in the service line, without releasing refrigerant into the atmosphere.
No. 14773 – Thread chaser.

Pick Extractor
For use with No. 18560 or 18561, valve core remover/installer, this extractor lets you remove damaged cores in the service line while the system is fully charged. There’s no release of refrigerant into the atmosphere.
No. 14774 – Pick extractor.

Access Valve Core Removers Save Service Time
These handy tools remove valve cores without losing the system charge. They’re designed specifically for use during evacuation or recharging on any system with valve core-type access ports. Removing the core restriction results in maximum flow, greatly reducing the time required for evacuation and charging.

R-12 Valve Core Remover
Services late model GM cars with deeper valve cores.
No. 11014 – R-12 valve core remover.

R-134a Valve Core Remover
Our popular valve core remover/installer has been engineered for use when servicing deeper core R-134a A/C systems.
No. 10588 – R-134a valve core remover.

1/4" Valve Core Remover
Robinair’s standard valve core remover includes six replacement valve cores which store in the tool’s body.
No. 13145 – Replacement valve cores, pkg/6.

Valve Core Remover/Installer
Replace leaking valve cores quickly and easily, or remove the valve core and hold it out of place for evacuation or charging. Designed for automotive access fittings with deeper valve cores.
No. 18132 – Valve core remover/installer.
Valve Core Remover Kit
- Standard valve core extractor.
- 8 mm valve core extractor.
- 10 mm valve core extractor.
- GM high flow valve core extractor.
- JRA valve core extractor.
- R-134a low- and high-side body assemblies with side ports.
- R-134a low- and high-side port adapters.
- Plastic carrying case.
- Usage chart.
No. 18340 – Valve core remover kit.
Order Separately:
No. 20371 – (Red) High-side valve core remover tool – GM.
No. 18336 – (Blue) Low-side valve core remover tool – GM.

Access Adapters
Robinair offers a complete selection of access adapters for hooking up A/C systems for evacuation and recharging. These adapters fit most systems, and sizes are available to fit most passenger cars. “A” models have longer valve core depressors to work on both standard and the deeper-set valve cores in some vehicles. Check manufacturer’s specifications for specific applications.

90° Style Adapters
Solid brass fitting is ideal for tight spots or locations where making connections is difficult.
No. 10469A – 1/4” MFL x 3/16” FFL.
No. 40563A – 1/4” MFL x 1/4” FFL.

Straight Style Adapters
Straight adapter is versatile and easy to use. Made of solid brass.
No. 10468A – 1/4” MFL x 3/16” FFL.
No. 40560A – 1/4” MFL x 1/4” FFL.

Flexible Adapters
Flexible adapters feature brass fittings and a durable neoprene-coated hose, 6” long.
No. 10293 – 1/4” MFL x 1/8” FFL, blue.
No. 10470A – 1/4” MFL x 3/16” FFL, red.
No. 10778 – 1/4” MFL x 1/4” FFL, yellow.
No. 40531 – Replacement o-rings for 10293, pkg/6.
No. 40677 – 3/16” gasket.
No. 40653B – 3/16” valve core depressors.
No. 40082 – 1/4” valve core depressors.
No. 40083 – 1/4” hose gaskets.
Fits-All Adapter Kit
Our access adapters have been combined into a kit that’s ideal for accessing R-12 vehicle A/C systems, as well as other types of systems. Five different adapters are included with 1/4" fittings: three flexible adapters (part numbers 10293, 10470A, 10778) and two 90° brass adapters (part numbers 10469A and 40563A). See descriptions above for specifications.

No. 10237A – Fits-all adapter kit.

Straight Adapter
This straight adapter is designed specifically for General Motors vehicles with R-12 air conditioning systems featuring “Positive Seal” high-side charge valves. The adapter is made of brass with an easy-to-grip coupler nut, 1/4" MFL x 3/16" FFL.

No. 18143 – Straight adapter.

Quick Seal™ Adapters
Quick Seal fittings automatically shut off the charging hose when you disconnect it from the system, so any refrigerant left in the hose is not released. This also prevents “finger burn” and adds an extra measure of safety. Made of solid brass.

No. 10292 – 1/4" MFL to 1/4" FFL.
No. 10296 – 1/4" MFL to 3/16" FFL.
No. 10250 – 1/4" MFL to 1/4" FFL, 90°.

Quick Seal Repair Kits
No. 40300 – 1/4" FFL Quick Seal™ kit – for hoses and adapters.
No. 40302 – 1/2" Acme Quick Seal™ kit.
No. 18451 – 45° 1/4" Quick Seal™ kit.
No. 18180 – 1/4" Quick Seal™ o-rings.

Brass Caps
No. 40572 – 1/4" solid brass caps have knurled ridges for easy gripping. Package of six.

Heat Gun
A lightweight source of directed heat offering 500°F and 750°F settings, and also has a “cold” setting. This handy heat gun is ideal for many applications, including:

• Fast heating/drying of materials.
• Quick curing/drying of epoxies.
• Applying shrink tubing.
• Softening tubing for bending.
• Speed-drying of touch-up paint to eliminate “haze.”
• Drying out condensation in motors, clutches, controls, etc. Shock-proof and cool-running with a tough Lexan® housing, the unit weighs just 2-1/2 lbs.

• 115V 50/60 Hz.

No. 14450 – Heat gun.

Replacement parts
No. 44993 – Heater element assembly for 14450.
No. 44996 – Carbon brush.
No. 44997 – Switch assembly.
Alphabetical Index

A
Adapters
Air conditioning ..............................................373
Anchor pin ..................................................237
Breakout box ...............................................42
Compression tester, Ford .................................122
Crankshaft balancer puller kit, GM .....................121
Engine stand adapters ..................................269
External-internal threaded ..............................212
Grip wrench ..................................................214
Inner tie rod sockets ....................................100
Internal threaded ..........................................212
Lite Link™ ....................................................25
MagiKey .......................................................25
Metric ..........................................................211
Step plate .....................................................212
Vision Premier ..............................................53
Air bag release tool ......................................51, 182
Air bag simulators .........................................51, 103
Air brake service kit ..................................239
Air conditioning
A/C disconnect tools ......................................155–157
Adapters .......................................................373
Air-Vac™ .....................................................362
Charging cylinder, Dial-A-Charge ....................367
Clutch holding tool .......................................371
Clutch hub remover/installer set .......................370
Clutch pulley puller set ................................370
Compressor turning tool ................................371
Coupers .........................................................351
Dust covers, vinyl .........................................335
Flushing kits and solvent ................................337
Flushing unit ................................................334
Gauges ........................................................351–354
Heat gun .......................................................374
Heater blankets ............................................368
Internal replacement filter .............................335
Leak detectors ..............................................339–346
Manifold accessories/replacement parts ..............351–356
Oil injectors ...................................................336
Orifice tube remover ......................................337
Recovery/recycling units ...............................322–333
Recycling filter-driers ....................................336
Refrigerant identifiers ....................................338
Refrigerant scales .........................................365–366
Refrigerant tanks .........................................336
Replacement gauges .....................................353
Sealant remover adapter hose kit ....................335
Side-wheel manifold .....................................352
Sight glass manifold, alum ............................353
Spring-lock coupling tools .............................156
Syringe-type injectors ....................................336
System performance calculator ......................355
System sealant remover .................................335
Vacuum gauges and parts ..............................363–364
Vacuum pumps ..............................................360–361
Air cooler tester, charged ..............................230
Air lift jacks ..................................................254
Air-Vac™ for R-12 & R-134a ..........................362
Alignment assist tool ....................................0.99
Alternator tools ............................................104, 129
Alternator/starter tester, The Judge ....................63
Analyzers, MicroGas .....................................54
Anchor pin press ..........................................237
ANSI / PALD safety standards ......................320
Auto body tools ............................................187, 190–191, 203, 284
AutoCode™ diagnostic tool ............................18
Automatic scope ..........................................30–31

B
Back Buddy™ lift & accessories ......................262
Ball Joint
Application chart ..........................................94–97
Separators ...................................................86–90
Sockets, Chrysler .........................................93
Spanner wrench ............................................93
Tie rod separator ...........................................101
Tools, adapters, kits, & accessories ................90–97
Banjo fittings, quick-disconnect .....................229
Barring tool, Cummins® ................................229
Battery and electrical systems testers ..............58–61
Battery service .............................................184–186
Bearing cup installer .....................................233
Bearing cup remover ....................................142
Belt tension gauge .......................................119
Blade Buddy™ cutting edge handler ..................264
Blast-Vac multipurpose cleaning gun ...............138
Boot clamp tools .........................................146–147
Bore scope ....................................................47
Bottle jacks ....................................................282, 316–317
Brake drum dolly .........................................262, 313
Brake tools ....................................................162–168, 239–241
Brake-Link™ diagnostic tool .........................25
Brakes
Air brake service kit ..................................239
Brake anchor pin and bushing service set ..........240
Fluid evacuation/bleeding .............................164, 179
Pressure test kit ..........................................162
S-cam air brake spring tool .........................240
Breakout Box .................................................42
Bushing service tools ................................88, 199, 238, 240, 300–305

C
Cables
ABS / Air Bag USA 2004 .................................11
Breakout Box .................................................42
Electronic diagnostic ...................................21–23
Genisys .........................................................10–11
Nemisys .......................................................14, 23
Tech II Flash .................................................20, 23
The Judge ......................................................63
Vision Premier ..............................................52
Calibration fluid ..........................................245
Caliper hanger set .......................................165
Caliper pin removers ....................................166
Cam tools ......................................................105–117
Camber adjusting tool ...................................98
Car dolly .......................................................270
Caster/camber adjusting tools .........................98–99
Charging cylinder, Dial-A-Charge ....................367
Circuit testers, leads .....................................35–37
Clevis pin press .............................................239
Clutch tools ...................................................152–154, 231–232, 370–371
Clutch, flywheel handlers ................................261
Code retrieval keys, GM ................................49, 167
Code Scanner diagnostic tool .........................17
Collision repair sets ......................................283, 319
Compression testers .......................................122, 123, 226–227
ConnecTech™ PC wireless .............................11
Control arm pryng tool, lower .........................98
Coolant exchange unit ...................................134
Coolant service accessories ............................135
Cooling system pressure tester .......................136
Couplers, service .........................................288, 351
Crankshaft (app. charts) ...............................106–117
Crankshaft service tools ................................118, 120–121, 123, 125
Cutter set, spot weld .....................................188
Cutting edge handler ....................................264
CV joint tools .................................................145–147
Cylinder leakage tester kit .............................124
Cylinder liner height gauge .........................226–227

D
DAT diagnostic tools ..................................32
Decarbonizer fluid ........................................67
Deburring tools ............................................370
Diagnostic guide, component .........................37
Diagnostic software .....................................10–11, 24
Diagnostic tools
Brake-Link™ ..................................................25
Code Scanner ...............................................17
DAT ..............................................................32
Engine analyzer ..........................................52
Genisys .........................................................3–13
MagiKey® module .......................................25
Multimeters ...............................................32–33
Nemisys .........................................................14
ScanPro .........................................................16
Tech 2 Flash ..................................................20
Vision Premier ..............................................52
Diesel emission tester ....................................55
Diesel nozzle tester .......................................246–248
Differential service tools ...............................155, 232
Digital Automotive Tester (DAT) .....................32
Disconnect tools ..........................................75–76, 155–157, 371
Distributor service tools ................................122

E
Electronic diagnostic ...................................21–23
Engine analyzer ..........................................52
Engine stand adapters ..................................269
External-internal threaded .............................212

G
Gauges ........................................................351–354
Grip wrench ..................................................214

H
Heat gun .......................................................374
Heat blanket .................................................368
Heater blankets ............................................368
Internal replacement filter .............................335
Leak detectors ..............................................339–346
Manifold accessories/replacement parts ..............351–356

N
Nemisys ........................................................14

O
Oil injectors ...................................................336
Orifice tube remover ......................................337
Recovery/recycling units ...............................322–333
Recycling filter-driers ....................................336
Refrigerant identifiers ....................................338
Refrigerant scales .........................................365–366
Refrigerant tanks .........................................336
Replacement gauges .....................................353
Sealant remover adapter hose kit ....................335
Side-wheel manifold .....................................352
Sight glass manifold, alum ............................353
Spring-lock coupling tools .............................156
Syringe-type injectors ....................................336
System performance calculator ......................355
System sealant remover .................................335
Vacuum gauges and parts ..............................363–364
Vacuum pumps ..............................................360–361

P
Pressure test kit ..........................................162

R
RAD™ ..............................................................362

S
S-cam air brake spring tool .........................240
S-cam air brake spring tool ............................240
S-cam air brake spring tool ............................240

T
Tech II Flash .................................................20, 23
The Judge ......................................................63
Vision Premier ..............................................52

V
Vision Premier ..............................................52

W
Workflow module .........................................38

Alphabetical Index
### Alphabetical Index

**Dolly**  
Brake drum dolly ........................................... 262, 313  
Car dolly ....................................................... 270  
Easy Roller™ .................................................. 312  
Wheel dolly ..................................................... 262–263, 308  
Drive-pulley service tools .................................. 230  
DVOMs ............................................................ 33  

**E**  
E-clip tool set .................................................... 191  
Easy Roller™ vehicle positioning system .................. 312  
Electrical system & battery testers ......................... 58–61  
Emission tester, diesel ........................................ 55  

**Engine**  
Analyzer .......................................................... 52  
Barring tool, Cummins ........................................ 133  
Cam timing tools ............................................... 105–117  
Lift package ....................................................... 314  
Load leveler ....................................................... 313  
Pre-luber kit ...................................................... 128  
Stands and adapters ........................................... 267–269  
Support bar ....................................................... 268, 313  
Turning tool, Cummins ......................................... 229  
EVAP tester ....................................................... 80–81  
Exhaust back pressure gauge .................................. 78  

**F**  
Fan clutch service tools ....................................... 139–142  
Fiber optics inspection light .................................. 370  
Fin straightener .................................................. 371  
Flaring tools ...................................................... 168, 169  
Flex-View bore scope .......................................... 47  
Floor cranes ....................................................... 270–272, 314  
Flow meter, fuel emission ..................................... 78  
Flow testers, hydraulic ........................................ 305  
Fluid capacities book and CD ................................ 334  
Ford cam tool application charts ............................. 106, 107, 108  
Fork lift jack ...................................................... 264, 312  
Front axle shaft installer, Subaru .............................. 145  
Front end service set .......................................... 86  
Front hub tools ................................................... 143  
Front leaf spring, pin, & bushing service set ............... 238  
Front spindle puller, 4WD ...................................... 144  
Frost plug remover/installer set ............................... 129  
Fuel injection, cleaners, chemicals adapters, fittings, & access ........................................ 67, 69–73  

**Fuel injection**  
Cleaning kits ..................................................... 67  
Cummins test kit ............................................... 133  
Diagnostic kits .................................................. 68–69  
Gauge assemblies .............................................. 68, 71–72, 73, 78  
Hoses ............................................................... 68, 72  
Nozzle pullers, adapters ....................................... 244  
Nozzle socket, Bosch .......................................... 244  
Pump rotating tool .............................................. 245  
Remover kit, Cummins® diesel ................................ 132  
Test kit, Cummins® diesel ..................................... 220  
Finder tester ....................................................... 48, 74  
Fuel inlet restriction test adapter, Cummins® diesel .... 229  
Fuel line clamp set ............................................. 71, 77  
Fuel line wrenches, diesel .................................... 245  
Fuel pressure test kit ........................................... 68, 228  
Fuel tank handler ............................................... 252  
Fuel volume test adapter, Cummins® diesel ............... 133, 229  

**G**  
Gas detector, combustible .................................... 343, 344  

**Gauges**  
A/C ................................................................. 351–354  
Component tester .............................................. 44  
Exhaust back pressure ......................................... 78  
Fuel injection ..................................................... 68  
Hydraulic .......................................................... 299  
Gear-position sensor adjuster, Ford ......................... 138  
Genisys diagnostic tool ........................................ 3–13  
Glue plug service tools ....................................... 129, 131, 226–227  

**H**  
Half-shaft remover/differential rotator ..................... 128, 155  
Hammer & punch set .......................................... 190  
Harmonic balancer service tools .............................. 120, 121  
Headlamp alignment tool, Ford ............................... 186  
Heat gun and replacement parts .............................. 374  
Heater blankets ................................................. 368  
Heater line quick-disconnect release tool, GM ............ 138  
Heating system, magnetic induction ......................... 284–285  

**Heavy-Duty Tools**  
223–248  
Hendrickson service tools .................................... 300–305  
Holding fixture, bench mounted ................................ 204, 267  

**Hoses**  
A/C ................................................................. 355  
A/C selection chart ............................................ 356  
Cutters ............................................................. 183  
Hydraulic .......................................................... 300  
Removal tool ..................................................... 137  
Hub puller, universal .......................................... 143  
Hub resurfacing kit, holder, replacement parts .......... 144, 165  
Hubcap installer .................................................. 236  
HubTamer bearing service tools ............................... 142  
Hydraulic adapters, fittings, gauges, couplers .......... 299  
Hydraulic flow testers .......................................... 305  
Hydraulic hoses ................................................ 300  
Hydraulic oil ...................................................... 300  

**I**  
Idle air control / idle speed control testers ................. 49, 71  
Ignition spark testers .......................................... 48  
Ignition tester, Digital .......................................... 32  
Automotive Tester (DAT) ....................................... 32  
Impact drivers .................................................... 189, 190  
InfoTech 2005 software kit .................................... 10  
Injection pump timing wrenches .............................. 132–228  

**Injector**  
Nozzle testers, Noztrater, accessories ....................... 246–248  
Remover/installer kits ........................................ 132, 227, 243  
Seat cleaner ..................................................... 245  
Sleeve set ......................................................... 245  
Timing kit, Cummins® diesel ................................. 230  
Inspection enclosure ............................................ 347  
Inspection light, fiber optics .................................. 370  
Intake system cleaning fluid .................................. 67  

**J**  
Jack & stand packs ............................................ 259, 310–311  
Racing jacks ...................................................... 259  
Service jacks ..................................................... 257–259, 309–311  
Stands ............................................................... 259–260, 315–316  
Transmission jacks ............................................. 251–253, 306–307  
Under-axle jacks ................................................ 255–256, 308  
Judge, The ....................................................... 63  

**K**  
Kingpin & brake anchor pin pusher .......................... 237  

**L**  
Leak detectors .................................................. 80–81, 339–345  
LED light, cordless rechargeable ............................. 367  
Lift system ......................................................... 253  
Lift, motorcycle /ATV ............................................ 312  
Lite Link™ adapter .............................................. 25  
Load-Rotor ......................................................... 272–273  
Lock pin remover, accessories ................................ 172  
Lock plate compressor/steering wheel remover set ...... 102  
Lug nut cap remover ............................................ 236  

**M**  
MagKey® module ............................................... 25  
Manifold, gauges, accessories, replacement parts ....... 351–356  
MicroGas analyzer & replacement parts .................... 54  
MinuteMan Plus electrical system tester .................... 61
## Alphabetical Index

### Sockets
- Axle nut .................................................. 160
- Bit holders ................................................ 173
- Brake caliper .......................................... 165, 171
- Budd wheel .............................................. 235
- Chrysler ball joint .................................... 93
- Diesel injector .......................................... 132, 228
- Head bolt, BMW & Toyota ............................ 127
- Hex .......................................................... 172, 173
- Locknut .................................................... 158, 162
- Mack kingpin ............................................ 237
- Oil pressure sending unit ............................... 77
- Oxygen sensor ........................................... 77
- Pinion ...................................................... 236
- Saturn window glass .................................. 182
- Spark plug, Ford F-150 ................................. 119
- Strut rod nut ............................................. 84
- Tie rod ..................................................... 100, 101,
- Tool board ................................................ 234, 235
- TORX ....................................................... 170–173
- Truck pinion .............................................. 236
- VW and Audi strut nut ................................. 84
- Water pump, GM ........................................ 138
- Wheel bearing locknut .................................. 160,
- Software kits, electronic diagnostic ................. 10–11
- Solarity diagnostic tool ................................. 26–29
- Spark plug service tools ............................... 48, 119
- Spreader, hydraulic ..................................... 287
- Spring compressors .................................... 81–83
- Steering wheel service tools ......................... 101–103,
- Stethoscope ............................................... 49, 203
- Strut tools ................................................ 82–83
- Support stands .......................................... 260, 316
- Surge protector, Antizap auto ......................... 49
- Syringe-type injectors .................................. 336

### T
- Tech 2 diagnostic tool .................................. 20
- Terminal release tool .................................. 50
- Terminal test kit ......................................... 34
- Thermistor vacuum gauge ............................ 363
- Thermometers .......................................... 348–350
- Thread chaser ............................................ 194
- Tie rod service tools ................................... 86–87,
- Timing service tools ................................... 89, 99–101
- Timing service tools ................................... 43, 106–118
- Tire pressure monitoring system ..................... 241–242
- Toe adjustment service tools ....................... 85–86
- Tool boards .............................................. 234, 235, 236
- Torque angle gauge .................................... 181
- Torque converter/cleaner & accessories ............. 151
- Torque wrenches, multipliers ....................... 180–181
- Torsion bar tools ....................................... 84, 85
- Torx- bit sockets, holders ........................... 170–173
- Transfer Tanker ........................................ 264, 319
- Transflow transmission oil cooler flusher ........... 150
- Transmission service tools ......................... 124,
- 150–154, 204, 241–243,
- 251–253, 306–307
- Tube bender ............................................. 166, 371
- Tubing cutters .......................................... 167, 368, 369

### U
- U-joint service tools .................................... 145
- Ultrasonic leak detector ............................... 345
- Upper control arm alignment wrenches ............. 99
- Upper control arm bushing service set ............. 88
- Upper control arm knock-out tool .................... 84
- USA 2005 European starter kit ....................... 11
- USA 2004 ABS / Air Bag cable kit .................. 11
- USA 2004 ABS / Air Bag software kits ............. 11
- USA 2006 Asian cable kit ............................. 10
- USA 2006 Asian software kits ....................... 10
- USA 2006 Domestic software update kit .......... 10
- UV lamps ............................................... 346

### V
- Vacuum/pressure pump kit ........................... 179
- Vacuum front hub puller release tools (Ford) ....... 144
- Vacuum gauges ......................................... 363–364
- Vacuum grease, high ................................... 354
- Vacuum hose and fuel line removal tool ............. 136
- Vacuum pump oil ....................................... 357
- Vacuum pump pulley remover jaws, Ford diesel ... 105
- Vacuum pump, deluxe metal .......................... 179
- Vacuum pumps ........................................... 360–361
- Vacuum/pressure gauge kit ......................... 124
- Valve core remover/installer ......................... 372, 373
- Valve spring compressors ............................. 119, 125
- Valves, hydraulic ....................................... 297
- Vision Premier engine analyzer ..................... 52

### W
- Water pump pulley tool, Cummins® ................. 230
- Water pump socket, GM ............................... 138
- Wheel dolly ............................................ 262–263
- Wheel Mate™ ........................................... 263
- Wheel steps ............................................ 258, 319
- Wheel tipper ........................................... 263
### GM Tool Index

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>4WD ball joint service kit for Dana 44 front axles No. 7704</td>
<td>91</td>
</tr>
<tr>
<td>4WD front spindle puller No. 7502</td>
<td>144</td>
</tr>
<tr>
<td>4WD ball joint adapter set No. 7920</td>
<td>92</td>
</tr>
<tr>
<td>4WD spindle nut socket set No. 4543</td>
<td>161</td>
</tr>
<tr>
<td>ABS brake proportioning valve depressor No. 7853</td>
<td>164</td>
</tr>
<tr>
<td>Alignment assist tool No. 7676</td>
<td>99</td>
</tr>
<tr>
<td>Axle nut socket set No. 4547</td>
<td>160</td>
</tr>
<tr>
<td>Ball joint adapter update kit No. 6732</td>
<td>92</td>
</tr>
<tr>
<td>Brake shoe spanner and spring remover No. 6631</td>
<td>168</td>
</tr>
<tr>
<td>Camshaft timing tools No. 6045</td>
<td>118</td>
</tr>
<tr>
<td>Cam tool set (in-line 4-cylinder) No. 6685</td>
<td>112</td>
</tr>
<tr>
<td>Cam tool set (GM Northstar V8) No. 6686</td>
<td>115</td>
</tr>
<tr>
<td>Cam tool sets (6 cylinder) (in-line 5,6, or V6) No. 4547, 6689</td>
<td>116</td>
</tr>
<tr>
<td>Cam tool sets (8 cylinder) No. 6680</td>
<td>99</td>
</tr>
<tr>
<td>Camshaft timing tools No. 7091</td>
<td>99</td>
</tr>
<tr>
<td>Camshaft timing tools No. 6004</td>
<td>118</td>
</tr>
<tr>
<td>Compression tester adapter No. 6076</td>
<td>130</td>
</tr>
<tr>
<td>Diesel compression test adapter No. 6077</td>
<td>130</td>
</tr>
<tr>
<td>Diesel fan clutch wrench No. 6069</td>
<td>139</td>
</tr>
<tr>
<td>Diesel vacuum pump pulley remover jaws No. 7922</td>
<td>105</td>
</tr>
<tr>
<td>Disc brake caliper pin remover No. 7499</td>
<td>166</td>
</tr>
<tr>
<td>Disconnect tool set No. 6508</td>
<td>157</td>
</tr>
<tr>
<td>Ear-type CV boot clamp piers No. 4529</td>
<td>104</td>
</tr>
<tr>
<td>Front hub puller for 4WD vehicles No. 7901</td>
<td>143</td>
</tr>
<tr>
<td>Glow plug removal tool No. 7005</td>
<td>105</td>
</tr>
<tr>
<td>Harmonic balancer puller No. 7667</td>
<td>121</td>
</tr>
<tr>
<td>Inner tie rod adapter sockets No. 6768</td>
<td>100</td>
</tr>
<tr>
<td>Inner tie rod service set No. 7504A, 7505A</td>
<td>101</td>
</tr>
<tr>
<td>Front pump socket No. 7502</td>
<td>105</td>
</tr>
<tr>
<td>Inner tie rod tools No. 7504A, 7505A</td>
<td>101</td>
</tr>
<tr>
<td>Master disconnect tool set No. 6508</td>
<td>157</td>
</tr>
<tr>
<td>Oil pump drive removal tool No. 7943</td>
<td>120</td>
</tr>
<tr>
<td>Pitman arm remover No. 6896</td>
<td>119</td>
</tr>
<tr>
<td>Disconnect tool set No. 6508</td>
<td>157</td>
</tr>
<tr>
<td>Disconnect tool set No. 6508</td>
<td>157</td>
</tr>
<tr>
<td>Disconnect tool set No. 6508</td>
<td>157</td>
</tr>
<tr>
<td>Disconnect tool set No. 6508</td>
<td>157</td>
</tr>
<tr>
<td>Rear main oil seal No. 7835</td>
<td>131</td>
</tr>
<tr>
<td>Rear main oil seal No. 7835</td>
<td>131</td>
</tr>
<tr>
<td>Rear toe adjustment wrenches No. 7814, 7706, 7899</td>
<td>85</td>
</tr>
<tr>
<td>Separator tool No. 6533</td>
<td>89</td>
</tr>
<tr>
<td>Spark plug sockets No. 6000, 6887</td>
<td>119</td>
</tr>
<tr>
<td>Steering wheel pulser leg set No. 7929A</td>
<td>101</td>
</tr>
<tr>
<td>Tie rod/Pitman arm adjustment set No. 6274</td>
<td>100</td>
</tr>
<tr>
<td>Torque bar adjustment tool No. 7840</td>
<td>98</td>
</tr>
<tr>
<td>Transmission cooler line disconnect set No. 6593</td>
<td>153</td>
</tr>
<tr>
<td>Truck tie rod set No. 6065</td>
<td>101</td>
</tr>
<tr>
<td>Truck tie rod set No. 6065</td>
<td>101</td>
</tr>
<tr>
<td>Upper arm alignment wrenches No. 7414</td>
<td>99</td>
</tr>
<tr>
<td>Valve spring compressor tool No. 7928</td>
<td>119</td>
</tr>
<tr>
<td>Chrysler Tool Index</td>
<td>Part No.</td>
</tr>
<tr>
<td>A/C spring-lock coupling tools No. 6538</td>
<td>156</td>
</tr>
<tr>
<td>Alignment assist tool No. 7676</td>
<td>99</td>
</tr>
<tr>
<td>Ball joint socket No. 8033, 8034</td>
<td>93</td>
</tr>
<tr>
<td>Boot clamp piers No. 4720</td>
<td>146</td>
</tr>
<tr>
<td>Cam tool set No. 6689</td>
<td>100</td>
</tr>
<tr>
<td>Camshaft alignment tool set No. 6689</td>
<td>100</td>
</tr>
<tr>
<td>Crankshaft damper remover/installer kit No. 6075</td>
<td>121</td>
</tr>
<tr>
<td>Differential bearing preload wrench No. 6602</td>
<td>155</td>
</tr>
<tr>
<td>Disconnect tool set No. 6508</td>
<td>157</td>
</tr>
<tr>
<td>Harmonic balancer holding tool No. 6495</td>
<td>120</td>
</tr>
<tr>
<td>Inner tie rod adapter sockets No. 7678, 7594</td>
<td>100</td>
</tr>
<tr>
<td>Inner tie rod crimpler tool No. 7504A</td>
<td>101</td>
</tr>
<tr>
<td>Inner tie rod socket tool No. 7504A</td>
<td>101</td>
</tr>
<tr>
<td>Jeep/truck ball joint set No. 8031</td>
<td>90</td>
</tr>
<tr>
<td>LH toe adjusting tool sets No. 6272, 7891</td>
<td>86</td>
</tr>
<tr>
<td>Power steering and alternator pulley pulley/Installer No. 4529</td>
<td>104</td>
</tr>
<tr>
<td>Power steering pump pulley kit No. 7830A</td>
<td>104</td>
</tr>
<tr>
<td>Spark plug socket set No. 6897</td>
<td>119</td>
</tr>
<tr>
<td>Steering wheel lock plate removers No. 7815, 7031A</td>
<td>102</td>
</tr>
<tr>
<td>Upper control arm bushing service set No. 7068</td>
<td>88</td>
</tr>
</tbody>
</table>

### Ford Tool Index

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2WD Ford van ball joint adapter set No. 7919</td>
<td>92</td>
</tr>
<tr>
<td>4.6L 4-valve cam timing kit No. 6498</td>
<td>108</td>
</tr>
<tr>
<td>4.6L 4-valve camshaft service kit for Dana 44 front axles No. 7704</td>
<td>91</td>
</tr>
<tr>
<td>4.6L 4-valve camshaft service kit No. 7586A</td>
<td>99</td>
</tr>
<tr>
<td>5- and 9-pin connector harness for glow plug testing No. 6088, 6089</td>
<td>131</td>
</tr>
<tr>
<td>Air bag simulators No. 7954, 7956, 7957</td>
<td>103</td>
</tr>
<tr>
<td>Axle shaft seal installer No. 6695</td>
<td>144</td>
</tr>
<tr>
<td>Ball joint adapter set (master set) No. 7918</td>
<td>93</td>
</tr>
<tr>
<td>Ball joint adapter set No. 8032</td>
<td>91</td>
</tr>
<tr>
<td>Ball joint adapter update kit No. 6731</td>
<td>92</td>
</tr>
<tr>
<td>Ball joint remover No. 7825</td>
<td>91</td>
</tr>
<tr>
<td>Ball joint spanner wrench No. 7080</td>
<td>93</td>
</tr>
</tbody>
</table>

### GM, Ford, Chrysler Tool Index

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ball joint super set No. 6530</td>
<td>90</td>
</tr>
<tr>
<td>Brake spring tool No. 7458</td>
<td>166</td>
</tr>
<tr>
<td>Clipper pin remover No. 7299</td>
<td>166</td>
</tr>
<tr>
<td>Cam tool kits No. 6486, 6487, 6488</td>
<td>105</td>
</tr>
<tr>
<td>Cam tool kits No. 6489</td>
<td>106</td>
</tr>
<tr>
<td>Cam tool kits No. 6489</td>
<td>108</td>
</tr>
<tr>
<td>Caster/camber adjusting tools No. 7829, 8312</td>
<td>98</td>
</tr>
<tr>
<td>Caster/camber alignment set No. 7091</td>
<td>99</td>
</tr>
<tr>
<td>Clutch coupling tool No. 7646A</td>
<td>152</td>
</tr>
<tr>
<td>Compression tester adapter No. 5607</td>
<td>122</td>
</tr>
<tr>
<td>Crankshaft positioning tool No. 7091</td>
<td>99</td>
</tr>
<tr>
<td>Diesel compression test adapter No. 6077</td>
<td>130</td>
</tr>
<tr>
<td>Diesel fan clutch wrench No. 6069</td>
<td>139</td>
</tr>
<tr>
<td>Diesel vacuum pump pulley remover jaws No. 7922</td>
<td>105</td>
</tr>
<tr>
<td>Disc brake caliper pin remover No. 7499</td>
<td>166</td>
</tr>
<tr>
<td>Disconnect tool set No. 6508</td>
<td>157</td>
</tr>
<tr>
<td>Ear-type CV boot clamp piers No. 4529</td>
<td>104</td>
</tr>
<tr>
<td>Fan clutch wrench sets No. 4585, 6974</td>
<td>141</td>
</tr>
<tr>
<td>Front hub pulser for 4WD vehicles No. 7901</td>
<td>143</td>
</tr>
<tr>
<td>Front hub release tool set No. 7932</td>
<td>144</td>
</tr>
<tr>
<td>Gear position sensor adjuster No. 7784</td>
<td>136</td>
</tr>
<tr>
<td>Glow plug removal tool No. 7005</td>
<td>104</td>
</tr>
<tr>
<td>Halflink remover/differential rotor No. 7140</td>
<td>128</td>
</tr>
<tr>
<td>Harmonic balancer puller No. 6667</td>
<td>121</td>
</tr>
<tr>
<td>Injector remover/installer kit No. 6067</td>
<td>132</td>
</tr>
<tr>
<td>Inner tie rod adapter sockets No. 7593</td>
<td>100</td>
</tr>
<tr>
<td>Lock pin remover No. 7122R</td>
<td>103</td>
</tr>
<tr>
<td>Oil line disconnect tool for 6.0L No. 6594</td>
<td>131</td>
</tr>
<tr>
<td>Oil line disconnect tool (high pressure) No. 6595</td>
<td>132</td>
</tr>
<tr>
<td>Pitman arm puller (super-duty) No. 6497</td>
<td>87</td>
</tr>
<tr>
<td>Power steering pump pulley installer No. 7771</td>
<td>103</td>
</tr>
<tr>
<td>Power steering pump/alternator pulley remover No. 7185</td>
<td>104</td>
</tr>
<tr>
<td>Rear crankshaft seal installer No. 7834</td>
<td>120</td>
</tr>
<tr>
<td>Rear main seal installer No. 7786</td>
<td>120</td>
</tr>
<tr>
<td>Rear main oil seal kit No. 7835</td>
<td>131</td>
</tr>
<tr>
<td>Rear toe adjustment wrenches No. 7814, 7706, 7899</td>
<td>85</td>
</tr>
<tr>
<td>Separator tool No. 6533</td>
<td>89</td>
</tr>
<tr>
<td>Spark plug sockets No. 6000, 6887</td>
<td>119</td>
</tr>
<tr>
<td>Steering wheel pulser leg set No. 7929A</td>
<td>101</td>
</tr>
<tr>
<td>Tie rod/Pitman arm adjustment set No. 6274</td>
<td>100</td>
</tr>
<tr>
<td>Torque bar adjustment tool No. 7840</td>
<td>98</td>
</tr>
<tr>
<td>Transmission cooler line disconnect set No. 6593</td>
<td>153</td>
</tr>
<tr>
<td>Truck tie rod set No. 6065</td>
<td>101</td>
</tr>
<tr>
<td>Upper arm alignment wrenches No. 7414</td>
<td>99</td>
</tr>
<tr>
<td>Valve spring compressor tool No. 7928</td>
<td>119</td>
</tr>
</tbody>
</table>
Numerical Index
000-31529..................53
000-31568..................53
000-31598..................53
464...........................214
465...........................214
518...........................220
522...................198, 218
525...........................219
534-07071..................53
538-06766-002...........53
679...........211, 218, 222
680...........................211
680...........................222
714...........................178
885...........................197
898A.........................203
927...........209, 218, 220
938...................209, 220
939...........................209
981...........................217
0000-8103..................53
0100.........................176
0200.........................176
0300.........................176
0400.........................176
0500.........................176
0600.........................176
1020.........................208
1021.........................208
1022.................208, 220
1023.................208, 215
1024.................208, 220
1025.................208, 222
1026.................208, 220
1027.........208, 215, 222
1028.................155, 214
1031.................155, 214
1035.........208, 220, 222
1036.................208, 220
1037.........208, 220, 222
1038.........................208
1039.........208, 220, 222
1040.........................208
1041.................208, 222
1042.........................208
1043.........................208
1044.........................208
1045.........................208
1046.........................208
1047.........................208
1048.........................208
1049.........................208
1050.........................208
1062.........210, 221, 222
1062M......................234
1063.........................210
1064.........................209
1065.........................209
1066.........209, 221, 222
1067.........................209
1070.........210, 221, 222
1071.........................210
1072.........................209
1073.........................209
1074.........209, 221, 222
1075.........................209
1076.........210, 221, 222
1080.........209, 221, 222
1100..........................209
1101..................209, 220
1102..........................209
1103..........................209
1104..........209, 210, 220
1105.................209, 210,
.........................221, 222
1106..........209, 210, 222
1107..........209, 210, 222
1108..................209, 210
1109..........209, 210, 222
1110..................209, 210
1111.................209, 210,
.........................221, 222
1112..........................210
1113..........210, 221, 222

380

1120..................176, 177
1121..........210, 218, 220
1122.................210, 215,
.................218, 220, 222
1123.................210, 218,
.........................220, 222
1124..........................210
1125..................176, 177
1125..........................177
1126..................210, 222
1127..........210, 221, 222
1128..................210, 222
1130.................210, 218,
.................220, 221, 222
1131..........................177
1150..........................211
1151..........................211
1152..................211, 220
1153..........................211
1154..........211, 221, 222
1155..................213, 215
1156..........................213
1165..........................211
1166..................221, 222
1170..........213, 220, 222
1171..........................213
1172..........................213
1173..........................213
1174..........................213
1176.................213, 216,
.........................220, 222
1177..........213, 215, 220
1178..........................216
1179..........................215
1180..........................218
1182..........................218
1183..........................218
1184..........................215
1200.........................224
1201.........................224
1202.........................224
1203.........................224
1204.........................225
1205.........................225
1219.........................225
1221.........................225
1222.........................225
1223.........................225
1225.........................225
1227.........................225
1230.........................225
1230PB.............207, 280
1232.........................225
1233.........................225
1240.........................225
1242.........................225
1243.........................225
1245.........................225
1246.........................225
1250.........................225
1252.........................225
1253.........................225
1254.........................225
1255.........................225
1256.........................225
1266.........................187
1320.........................177
1325.........................177
1329.........................177
1340.................176, 177
1345.................176, 177
1349.........................177
1500A.......................310
1503A.......................310
1504A.......................310
1505B.......................309
1507A.......................309
1510B.......................309
1511A........................309
1512.........................309
1513A.......................319
1515A.......................319
1517A.......................283
1519A.......................283
1520.........................253
1521A.......................306

1522A.......................306
1525.........................259
1526.........................311
1532.........................259
1533.........................259
1534A.......................319
1536.........................311
1537.........................311
1540.........................312
1543.........................313
1545.........................312
1560.........................177
1565.........................177
1569.........................177
1572.........................270
1577.........................319
1580.........................312
1582.........................259
1585.........................250
1590.........................254
1591A.......................254
1595.........................250
1620.........................220
1621.........................220
1675.........................220
1676.........................220
1677.........................220
1679.........................222
1680.........................222
1681.........................222
1682.........................222
1683.........................222
1688.........................221
1689.........................221
1690.........................221
1723.........................268
1725.........................268
1726.........................267
1728.........................252
1728-19....................252
1733.........................260
1734A.......................258
1735.........................267
1736.........................260
1740.........................301
1741.........................301
1742.........................301
1743.........................302
1744.........................302
1745.........................302
1746.........................301
1748.........................304
1749.........................305
1750.........................268
1750A.......................268
1757.........................304
1758.........................252
1762.........................303
1763.........................303
1764.........................303
1767.................238, 305
1769A.......................308
1770A.......................263
1772C.......................315
1773C.......................315
1774B.......................260
1778A.......................260
1779A.......................260
1781A.......................260
1783.........................260
1784C.......................315
1788A.......................308
1791.........................253
1792.........................253
1793A.......................307
1794A.......................307
1805.........................272
1806.........................272
1807.........................270
1812.........................273
1813.........................272
1814.........................272
1815.........................271
1819.........................271
1820.........................271
1821.........................265

1822.........................273
1823.........................276
1823A.......................276
1824.........................276
1824A.......................276
1825.........................275
1826.........................277
1826A.......................277
1833.........................276
1834.........................276
1845.........................278
1846A.......................278
1847.........................278
1850.........................278
1851.........................278
1854.........................279
1857.........................280
1858.........................280
1858-1P....................280
1865.........................281
1865P.......................281
1866.........................281
1868.........................280
1872.........................278
1874.........................265
1875.........................265
1876.........................265
1877.........................266
1879.........................276
1880.........................275
1881.........................277
1882.........................279
1884.........................274
1887.........................274
1888.........................275
1889.........................277
1893.........................279
1896.........................266
1899.........................274
1901.........................234
1902.........158, 159, 234
1903.................234, 235
1904.................234, 235
1905.................234, 235
1906.........................234
1907.................234, 235
1908.................234, 235
1909.................234, 235
1910.................234, 235
1911..................234, 235
1912.........................234
1913.................234, 235
1914.................234, 235
1915.........................234
1916.........................234
1917.................234, 235
1918.........................234
1919.................234, 235
1920.........................234
1921.................234, 235
1922.................234, 235
1923.................234, 235
1924.................234, 235
1925.................234, 235
1926.........................234
1927.................234, 235
1928................158, 159,
.........................234, 235
1929.........................235
1930.........................235
1931.........................235
1932.................234, 235
1933.................234, 235
1934.........................234
1935.................234, 235
1936.........158, 159, 234
1937.................234, 235
1938.................234, 235
1939.........................234
1940.........................234
1941.........................234
1944.........................235
1945A.......................235
1946A.......................235
1947A.......................235
1948A.......................235

1949A.......................235
1950M......................234
1951M......................234
1952M......................234
1953M......................234
1954M......................234
1955M......................234
1956M......................234
1957M......................234
1958M......................234
1959M......................234
1960M......................234
1961M......................234
1975.........................236
1976.........................236
1977.........................236
1978.........................236
1979.........................236
1980.........................236
1981.........................236
1982M......................242
2002.........................314
2003.........................314
2004.........................314
2010A.......................315
2012A.......................315
2015A.......................316
2016A.......................316
2018A.......................316
2036PB.............207, 280
2510A.......................318
2860PB.............207, 280
3050C...................45, 73
3051.....................45, 74
3052S.......45, 71, 73, 74
3053S.......45, 71, 73, 74
3054C.............45, 71, 73
3101-02......................24
3101-04......................25
3101-11.......................24
3101-14......................24
3101-15......................24
3101-16......................24
3101-17......................24
3101-41......................24
3101-44......................24
3101-45......................24
3101-46......................24
3101-47......................24
3101-49......................24
3101-52......................24
3101-56......................24
3101-57......................24
3101-61......................24
3101-62......................24
3101-63......................24
3101-65......................24
3101-69......................24
3101-70......................24
3101-71......................24
3101-72......................24
3101-77......................24
3101-78......................25
3101-79......................24
3101-80......................24
3102...........................25
3102-01......................25
3102-05......................25
3103...........................25
3104...........................24
3106...........................25
3130AGM...................61
3131-02......................61
3131AGM...................61
3135...........................61
3136...........................62
3141...........................49
3142...........................49
3167...........................56
3167-01......................56
3167-HD.....................57
3168...........................56
3168-HD.....................57
3169.....................56, 57
3172...........................56
3172-15......................57

3180...........................59
3181...........................59
3182...........................59
3183...........................58
3184...........................58
3185...........................58
3225...........................42
3225-10......................42
3226...........................42
3226-04......................42
3226-13......................42
3235...........................42
3238...........................42
3238-UPD...................42
3239...........................42
3305-124....................22
3305-13......................22
3305-14................21, 22
3305-141....................22
3305-15......................22
3305-16......................22
3305-17................21, 22
3305-18......................21
3305-19................21, 22
3305-20......................22
3305-22......................22
3305-27......................21
3305-48......................22
3305-53......................71
3305-58......................21
3305-65......................22
3305-68......................22
3305-71......................21
3305-72......................21
3305-73......................21
3305-74......................21
3305-84......................21
3305-92......................22
3305-93......................22
3306-05......................21
3306-11.......................21
3306-12......................21
3306-13......................21
3306-14......................21
3306-15......................21
3306-16......................21
3306-17......................21
3306-18......................21
3306-19......................21
3306-20......................21
3306-21......................21
3306-22......................21
3306-23......................21
3306-24......................21
3306-26......................21
3306-27......................21
3306-28......................21
3306-29......................21
3306-31......................21
3306-32......................21
3306-33......................21
3306-34......................21
3306-35......................21
3306-36......................21
3306-37......................21
3306-38......................21
3306-41......................21
3306-47......................23
3306-48......................21
3320.....................49, 71
3358...........................18
3363...........................43
3365...........................43
3367...........................43
3381...........................60
3382...........................60
3382-01......................60
3385...........................44
3386...........................60
3397...............48, 71, 74
3398...............48, 71, 74
3416...........................15
3416-01......................15
3421-04......................21
3421-08......................21
3421-09......................31

