

2006 BUELL LIGHTNING MODELS

SERVICE MANUAL

Part Number 99490-06Y

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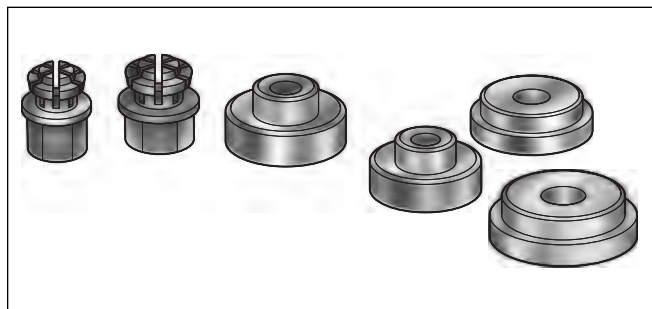
[Section 6: Drive/Transmission](#)

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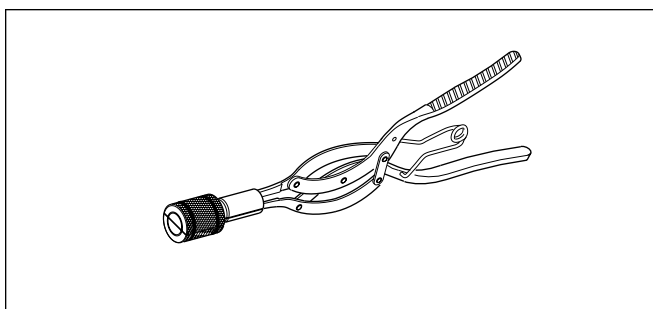
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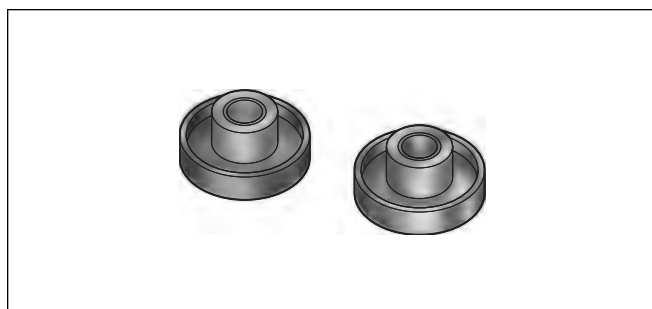
Part No. B-41623-B Oil Line Remover



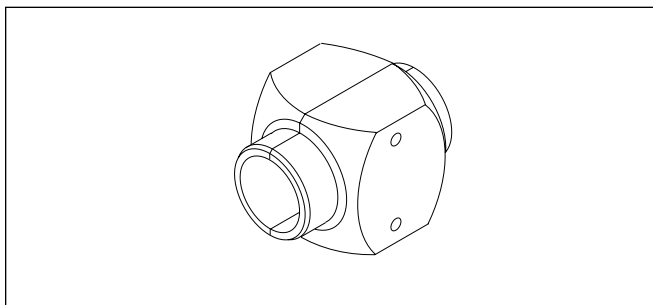
Part No. B-43993-7/-8 Wheel Bearing Collets



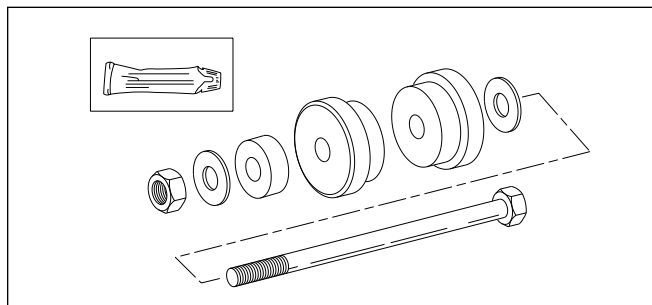
Part No. B-42887 Brake Caliper Piston Remover



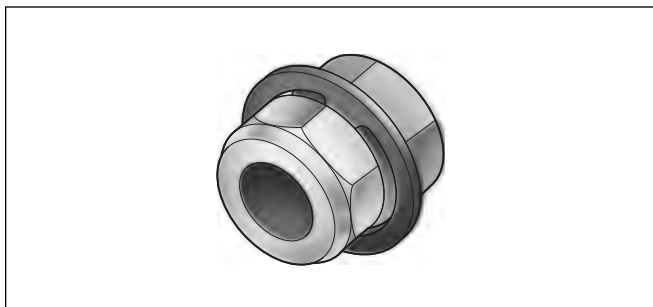
**Part No. B-45521 Steering Head Bearing Remover/
Installer**



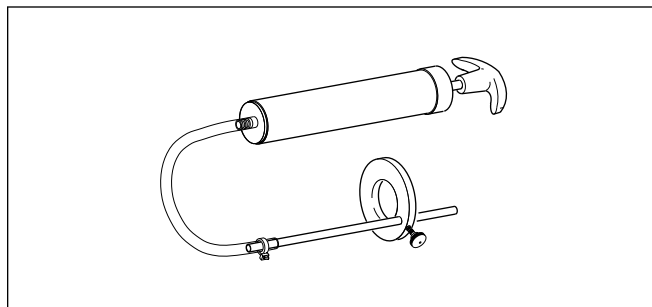
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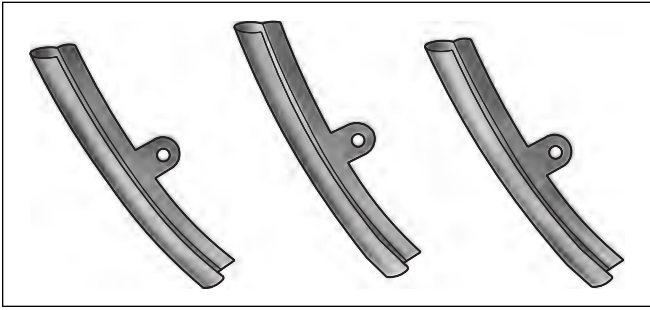
**Part No. HD-39302 Steering Head Bearing Race Installer
(Used with B-45521)**



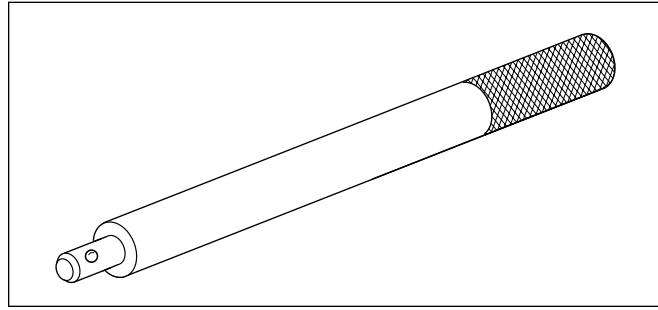
Part No. B-46279 7/8" Axle Wrench (Hex)



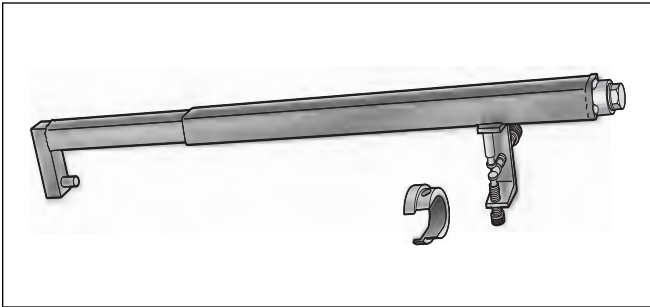
Part No. B-59000B Pro Level Oil Gauge



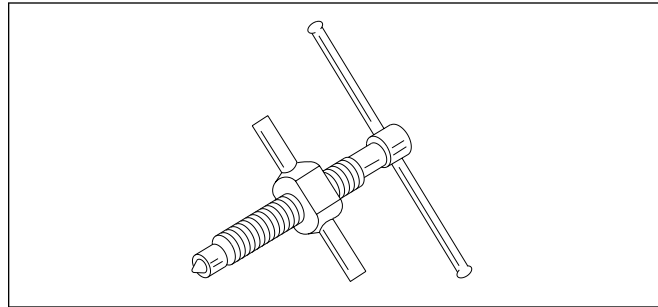
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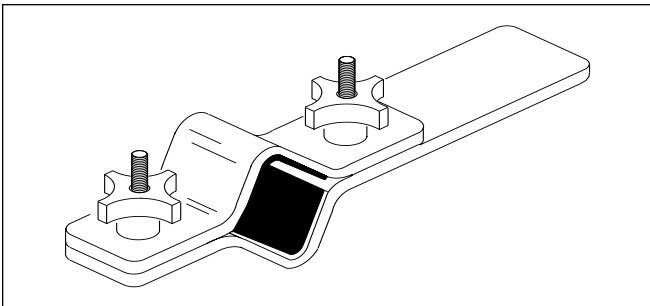
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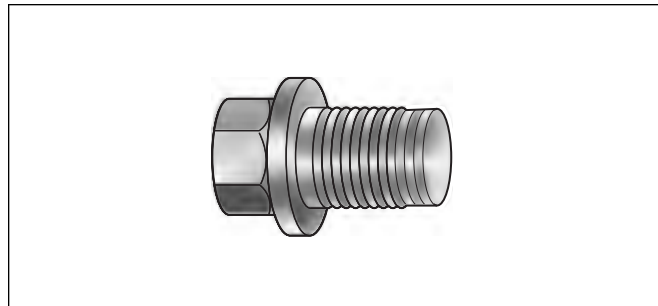
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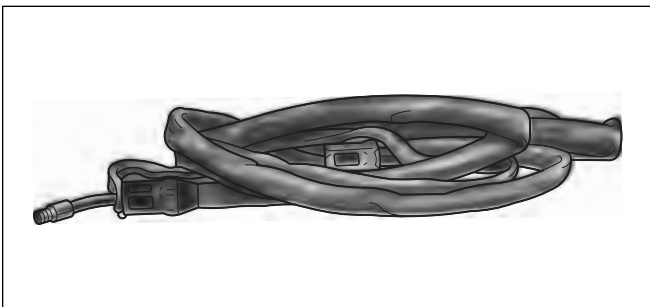
Part No. HD-33418 Universal Puller Forcing Screw



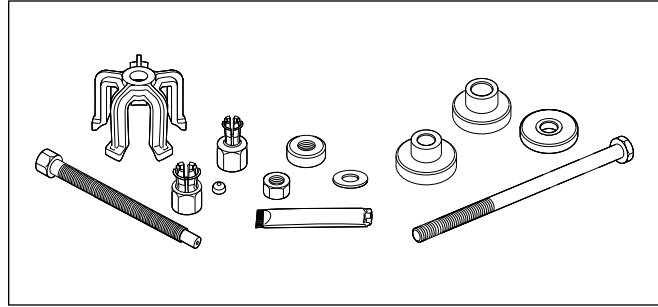
Part No. HD-41177 Fork Tube Holder



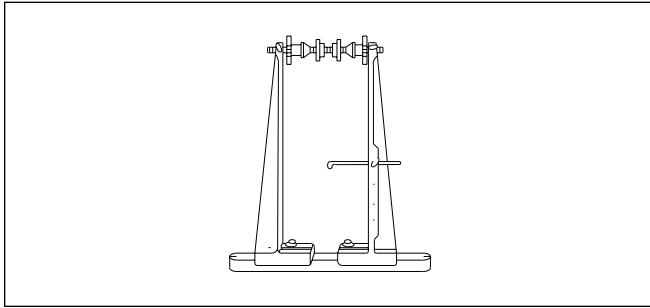
Part No. HD-B-45520 Gear Detent Assembly Aid



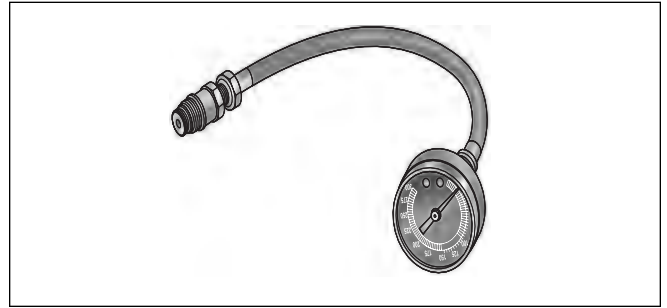
Part No. HD-28700 Tire Bead Expander



Part No. HD-44060 Wheel Bearing Remover/Installer



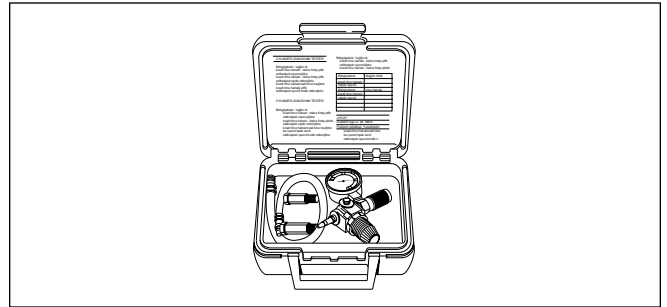
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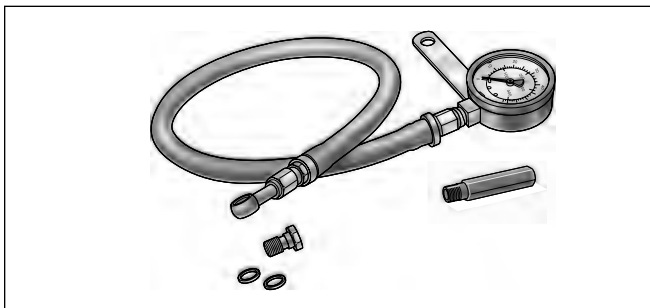
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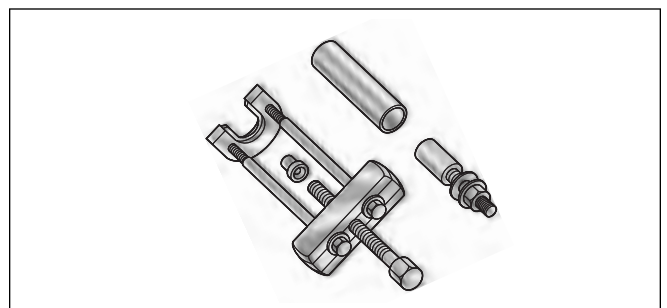
Part No. HD-35758-B Neway Valve Seat Cutter Set



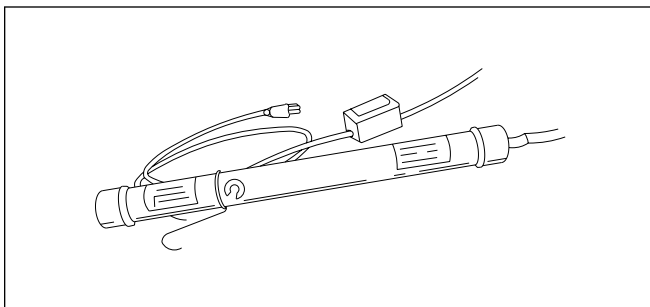
Part No. HD-35667A Cylinder Leakdown Tester



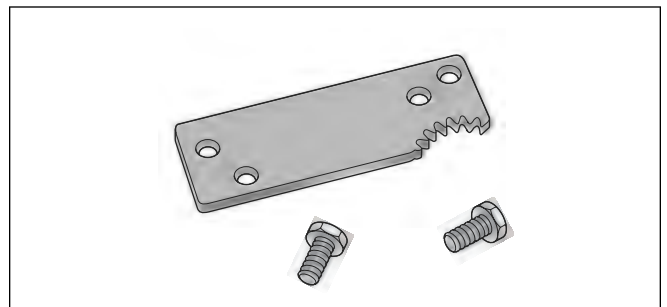
Part No. HD-96921-52A Oil Pressure Gauge



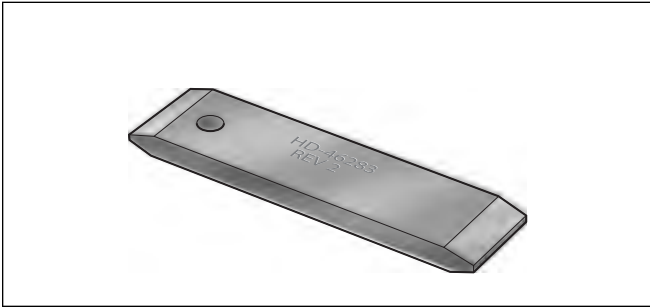
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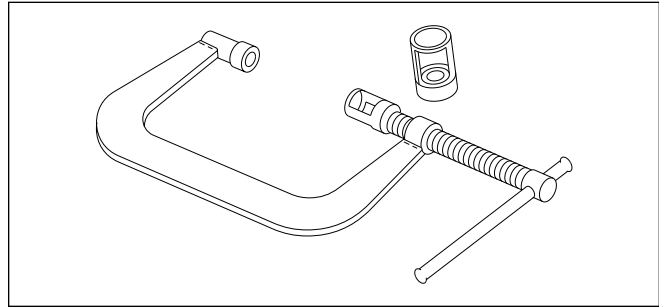
Part No. HD-35457 Black Light Leak Detector



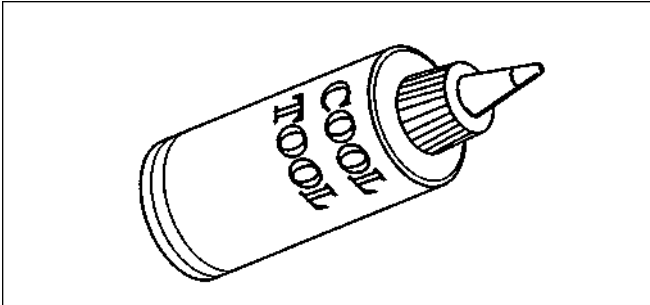
Part No. HD-43984 Crankshaft Locking Tool



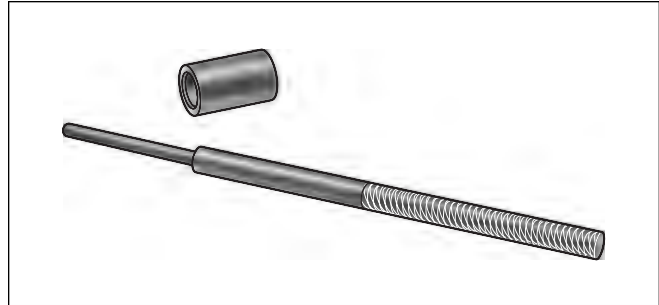
Part No. HD-46283 Primary Drive Locking Tool



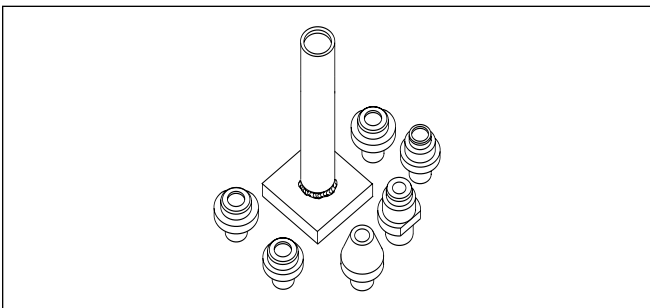
Part No. HD-34736B Valve Spring Compressor



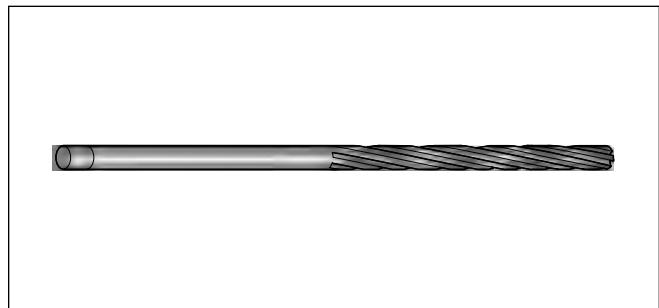
Part No. HD-39964 Reamer Lubricant (Cool Tool)



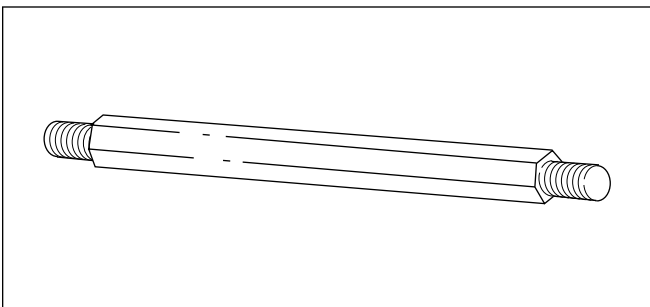
Part No. B-45524 Valve Guide Installer



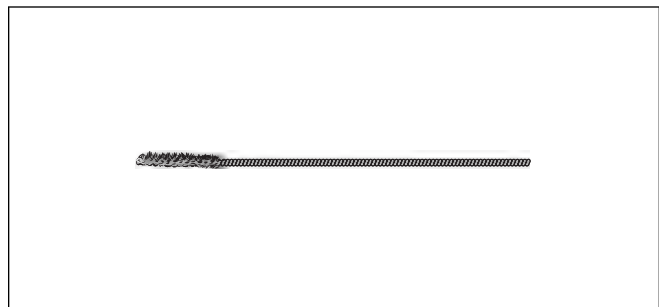
Part No. HD-39782 Cylinder Head Support



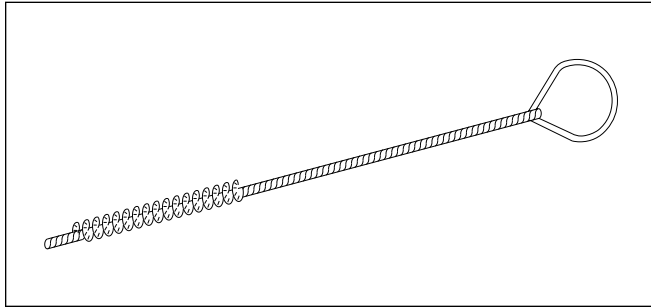
Part No. B-45523 Valve Guide Reamer (7mm)



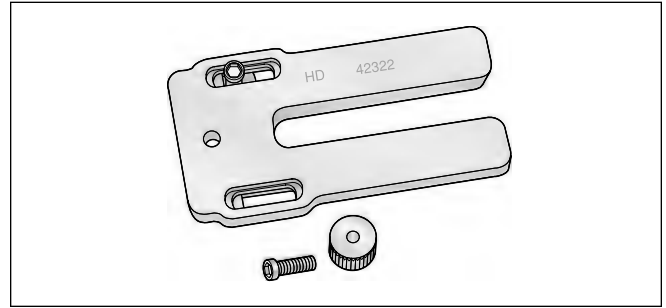
Part No. HD-39786 Cylinder Head Holding Fixture



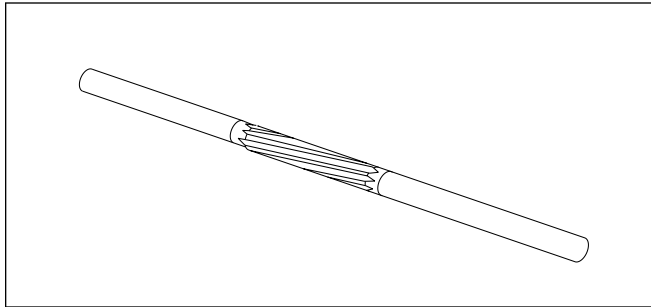
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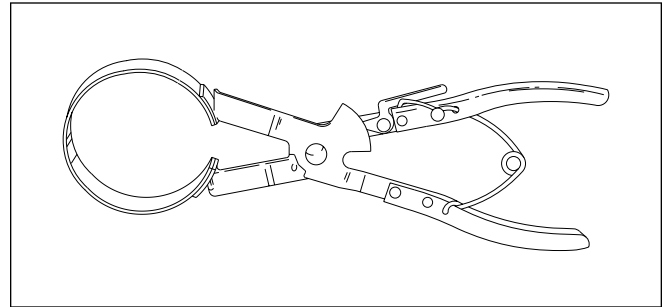
Part No. HD-34751 Nylon Valve Guide Brush



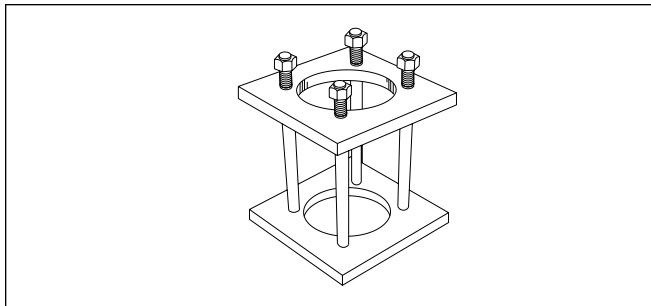
Part No. HD-42322 Piston Support Plate



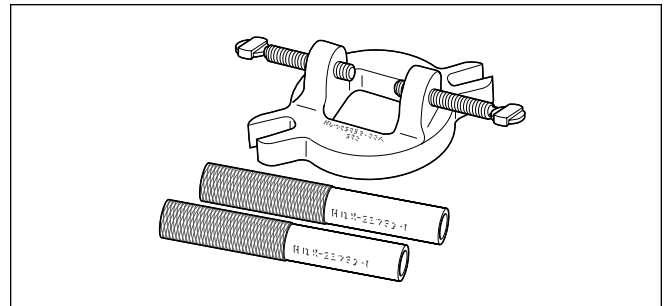
Part No. HD-94804-57 Rocker Arm Bushing Reamer



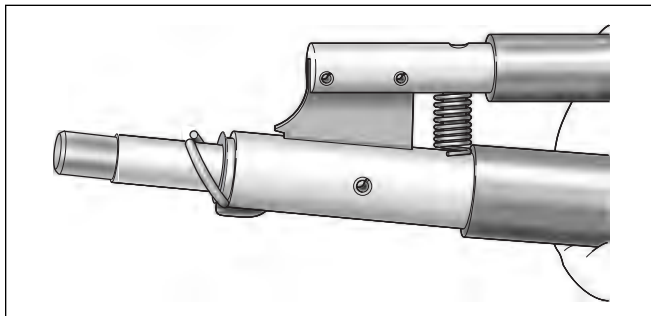
Part No. HD-96333-51C Piston Ring Compressor



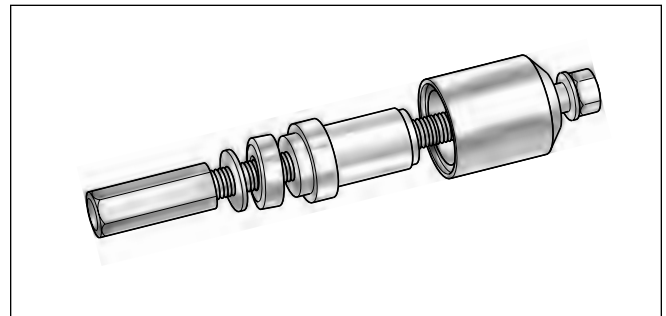
**Part No. HD-33446A Cylinder Torque Plates
and Torque Plate Bolts Part No. HD-33446-86**



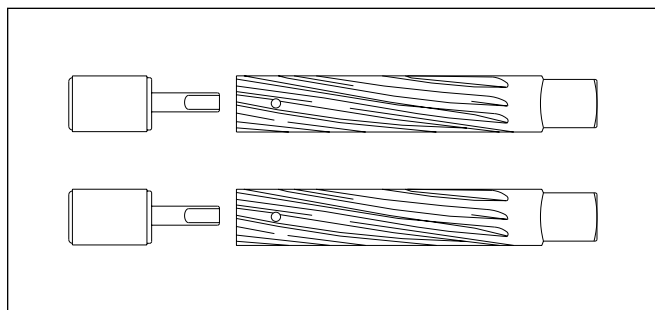
**Part No. HD-95952-33B Connecting Rod
Clamping Tool**



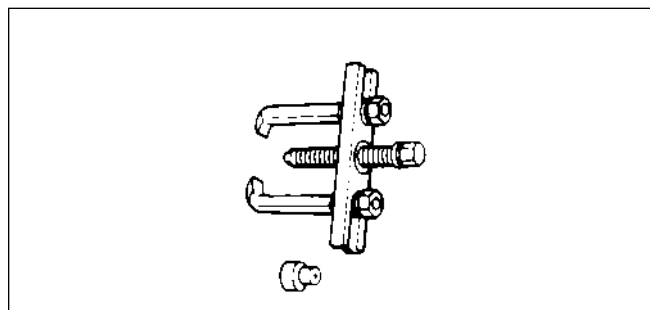
**Part No. HD-34623C Piston Pin
Retaining Ring Installer/Remover**



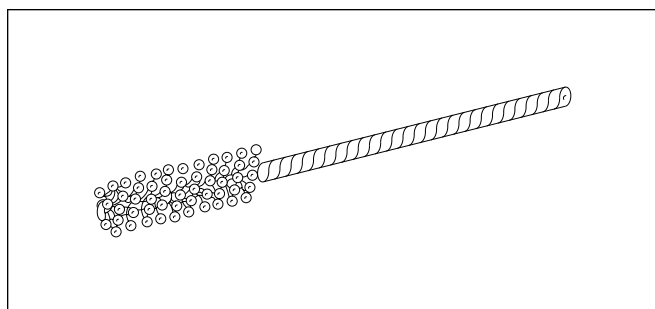
Part No. HD-95970-32D Piston Pin Bushing Tool



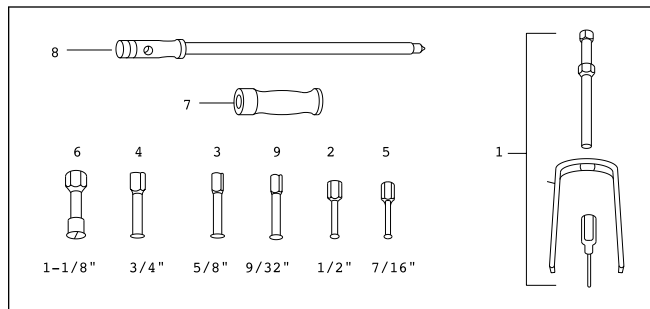
Part No. HD-94800-26A Connecting Rod Bushing Reamers and Pilots



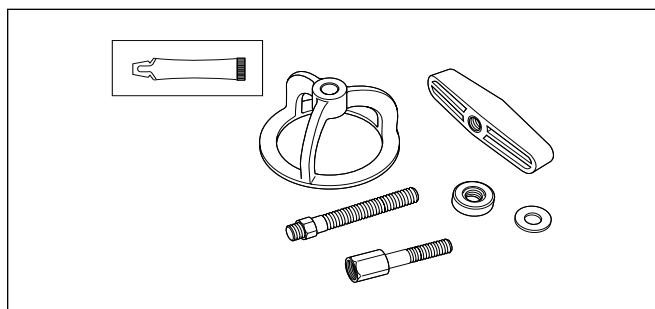
Part No. HD-97292-61 Two Claw Puller



Part No. HD-35102 Wrist Pin Bushing Hone (20 mm)



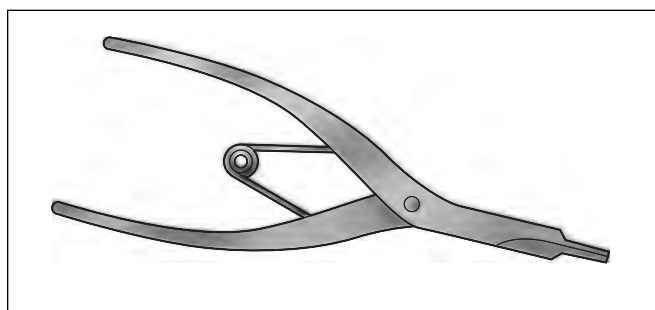
Part No. HD-95760-69A Bushing/Bearing Puller Tool Set.
Set includes items 1-5 and 9. Items 6 (HD-95769-69), 7 (HD-95770-69) and 8 (HD-95771-69) are optional.



Part No. HD-38515-A Clutch Spring Compressing Tool and Part No. HD-38515-91 Forcing Screw



Part No. HD-39965 Deutsch Terminal Crimp Tool



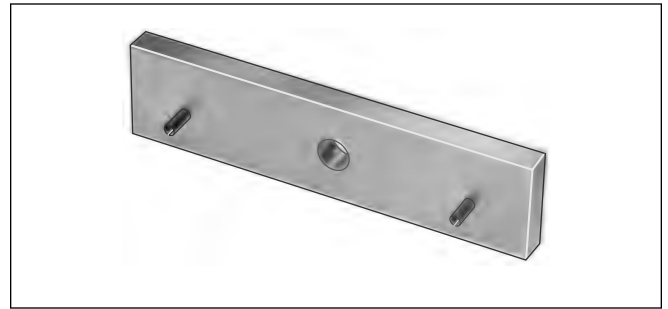
Part No. J-5586 Transmission Shaft Retaining Ring Pliers



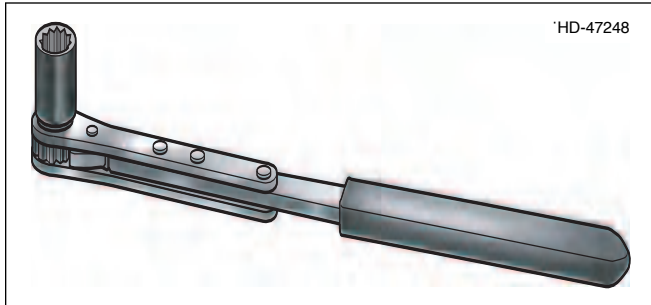
Part No. HD-41354 Speedometer Tester



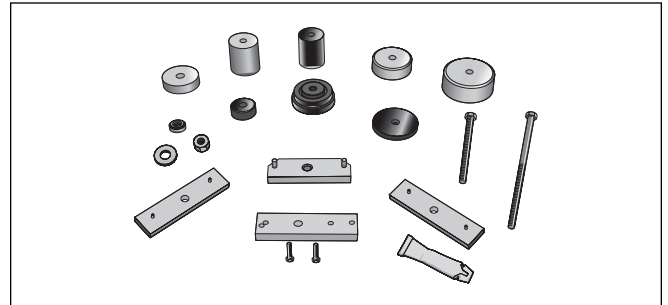
Part No. HD-41609 Amp Terminal Crimp Tool



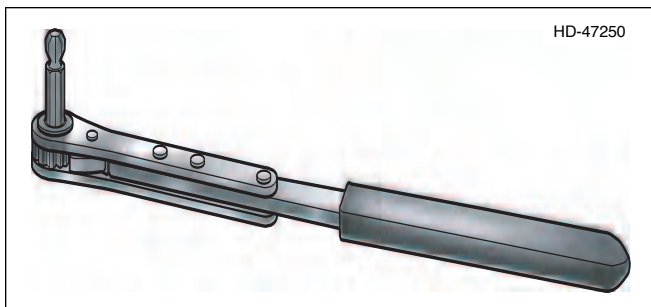
Part No. HD-45847 Cross Plate



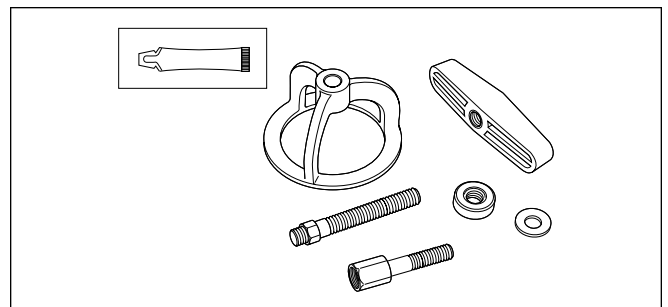
Part No. HD-47248 Rocker Housing Wrench



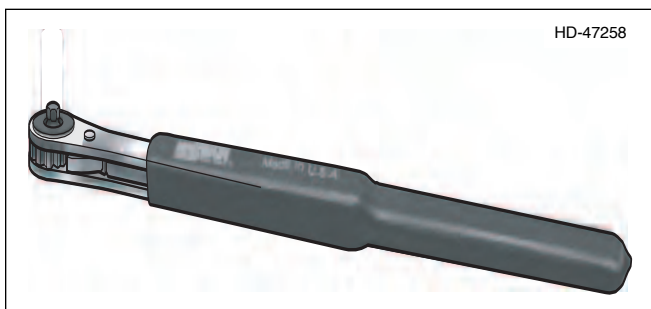
Part No. HD-35316-C Main Drive Gear Remover/Installer and Main Drive Gear Bearing Installer



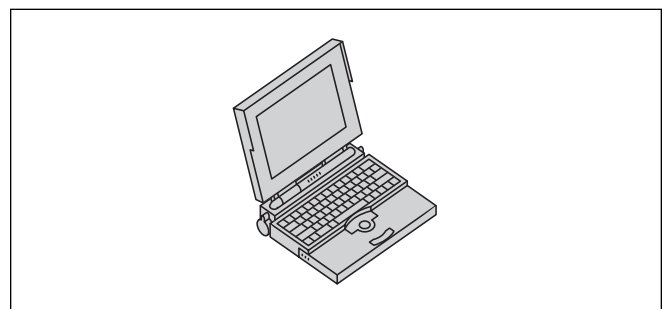
Part No. HD-47250 Intake Manifold Wrench



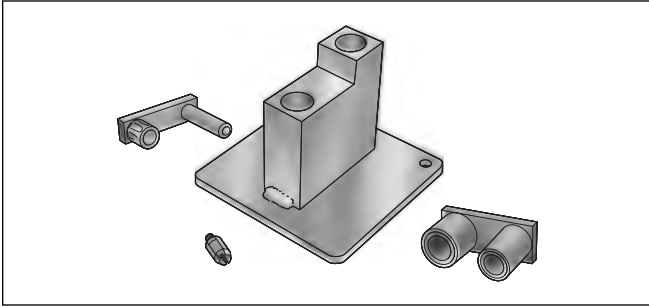
Part No. HD-38515-A Clutch Spring Compressor



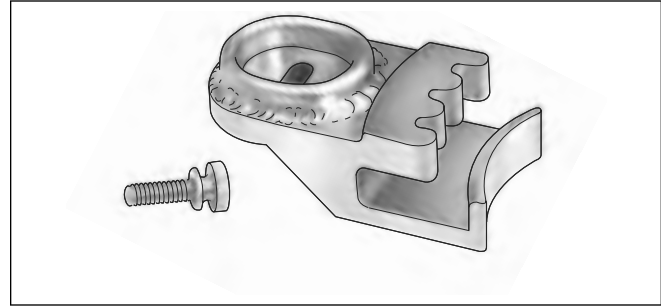
Part No. HD-47258 Rocker Cover Wrench



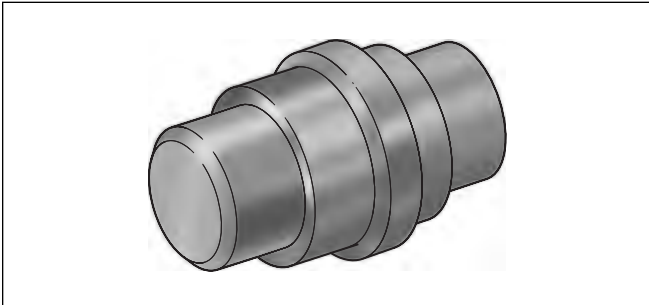
Part No. HD-44750-P29 Panasonic Toughbook (touch screen) and HD-44750-P50 Panasonic Toughbook (non-touch screen)



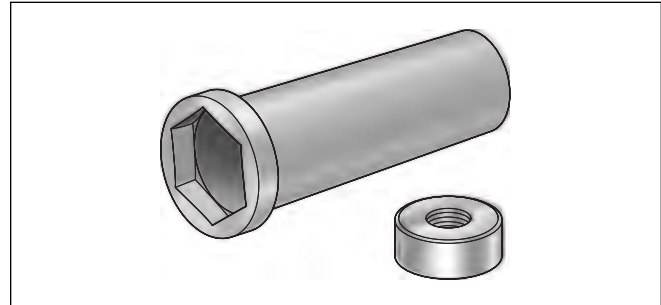
Part No. HD-46285 Transmission Assembly Fixture



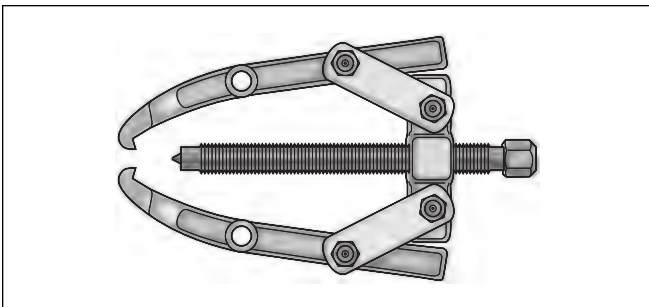
Part No. B43982 Transmission Locking Tool



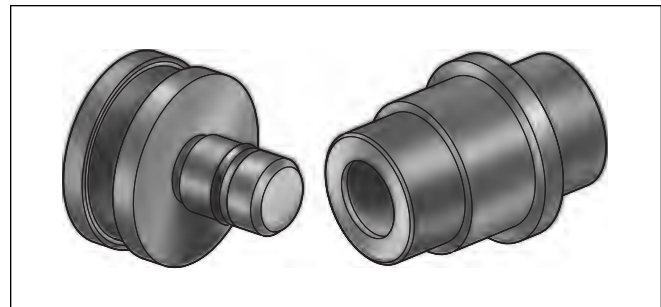
Part No. HD-47855 Main Drive Gear Needle Bearing Installer



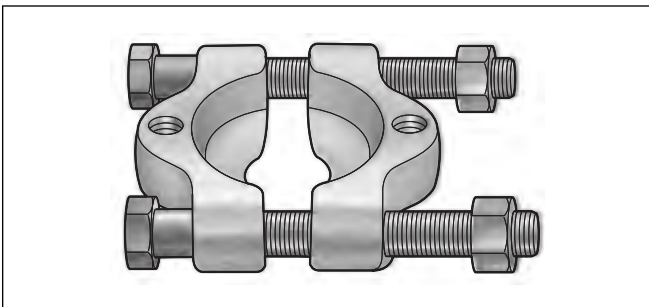
Part No. HD-94660-37B Mainshaft Locknut Wrench



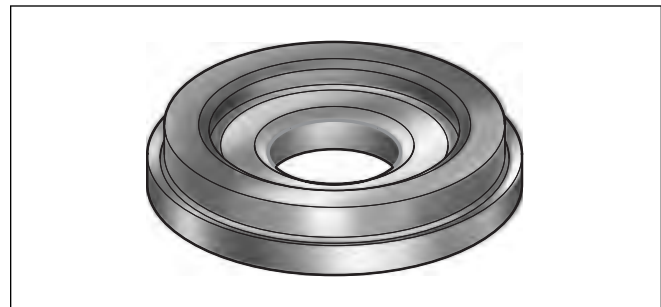
**Part No. HD-95635-46 All-Purpose Claw Puller
(use with HD-95637-46A)**



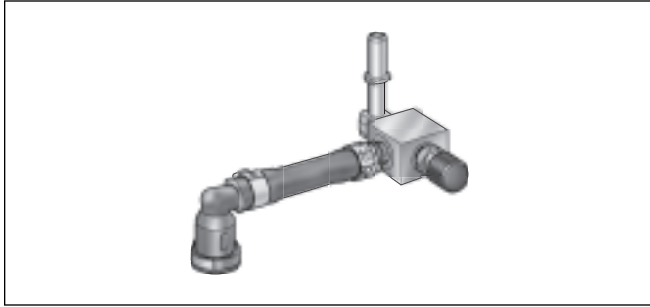
Part No. HD-45926 Clutch Shell Bearing Remover



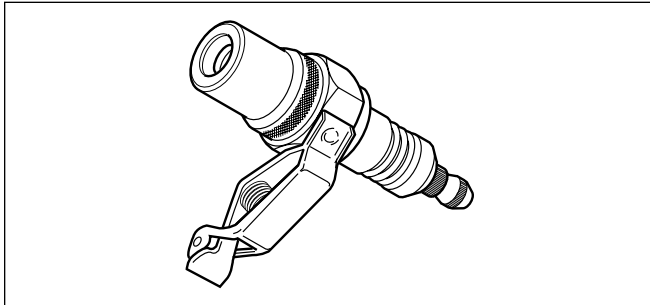
**Part No. HD-95637-46A Wedge Attachment for Claw Puller
(use with HD-95635-46)**



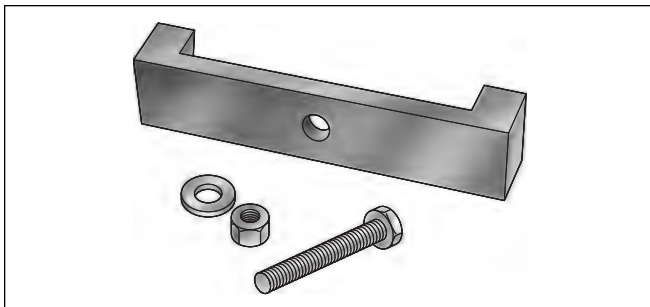
Part No. B-45676 Sprocket Shaft Seal Installer



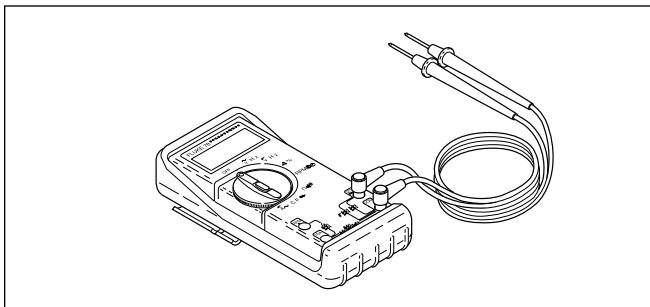
Part No. B-45522 Fuel Pressure Gauge Adapter



Part No. HD-26792 Spark Tester



Part No. B-45657 Fuel Pump Puller



Part No. HD-39978 Fluke 78 Multimeter (DVOM)F

REMOVING SOCKET/PIN TERMINALS

1. Remove connector from the retaining device, either attachment or rosebud clip.
2. Depress the button on the socket terminal side of the connector (plug) and pull apart the pin and socket halves.
3. Bend back the latch slightly and free one side of secondary lock, then repeat the step to release the other side. Rotate the secondary lock outward on hinge to access terminals in chambers of connector housing.
4. Looking in the terminal side of the connector (opposite the secondary lock), take note of the cavity next to each terminal.
5. See [Figure B-1](#). With the flat edge against the terminal, insert the pick tool (Snap-On TT600-3) into the cavity until it stops. Pivot the end of the pick away from the terminal (locktab is inside housing) and gently tug on wire to pull terminal from chamber. Do not tug on the wire until the tang is released or the terminal will be difficult to remove. A "click" is heard if the tang is engaged but then

inadvertently released. Repeat the step without releasing the tang.

NOTE

- If pick tool is not available, a push pin/safety pin may be used instead.
- An *ELECTRICAL TERMINAL CRIMP TOOL* (Part No. HD-41609) is used to install Amp Multi lock pin and socket terminals on wires. If new terminals must be installed, see *Crimping Instructions* on the next page.

INSTALLING SOCKET/PIN TERMINALS

NOTE

For wire location purposes, numbers are stamped into the secondary locks of both the socket and pin housings. See [Figure B-2](#).

1. From the secondary lock side of the connector, insert the terminal into its respective numbered chamber until it snaps in place. For proper fit, the slot in the terminal must face the tang in the chamber.

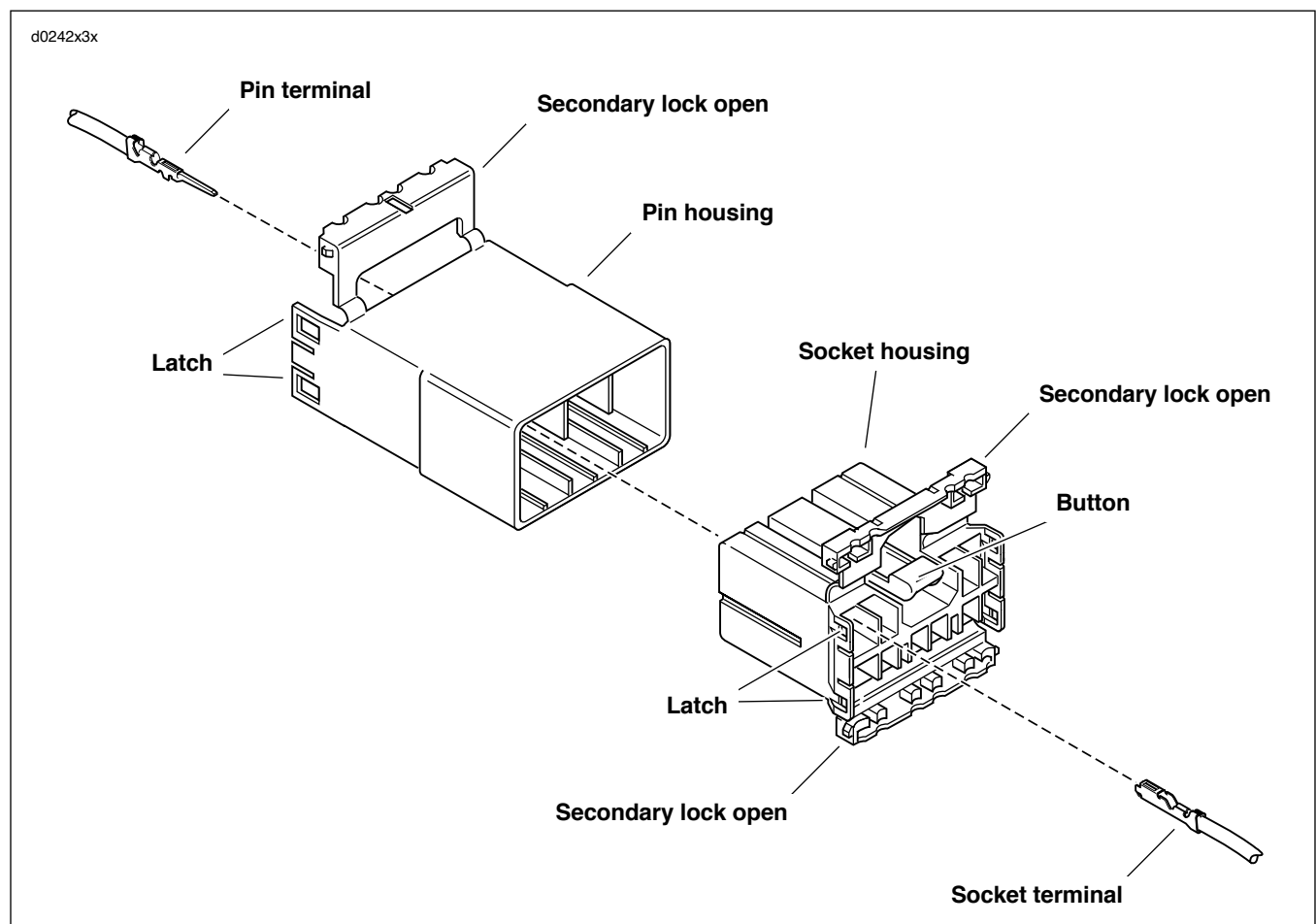


Figure B-1. 10-Place Amp Multilock Connector