

SUSPENSION

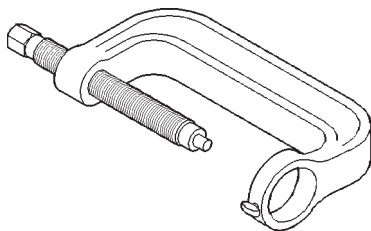
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FRONT

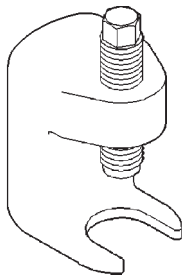
SPECIAL TOOLS

FRONT SUSPENSION

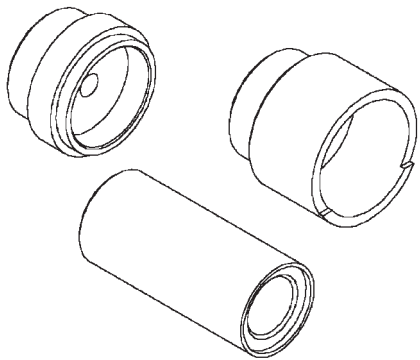


C-4212F-8011d4af

BALL JOINT PRESS - C-4212F

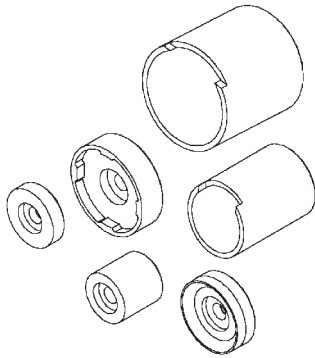


Remover C-4150A

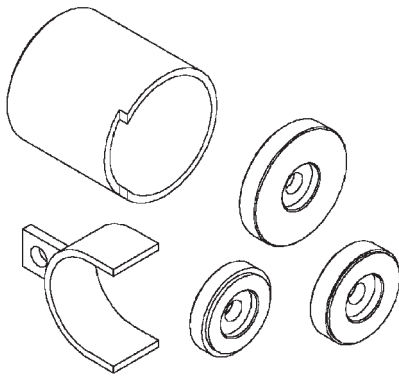


REMOVER / INSTALLER FRONT LOWER BALL
JOINT - 8859

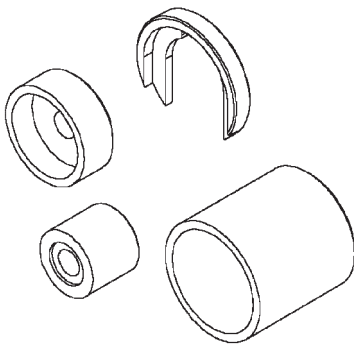
FRONT (Continued)



**FRONT LOWER CONTROL ARM & CLEVIS
BUSHING REMOVER/INSTALLER - 8858**



**REAR LOWER CONTROL ARM BUSHING
REMOVER/INSTALLER - 8862**



**FRONT LOWER CONTROL BUSHING REMOVER/
INSTALLER - 8830**

BUSHINGS

REMOVAL

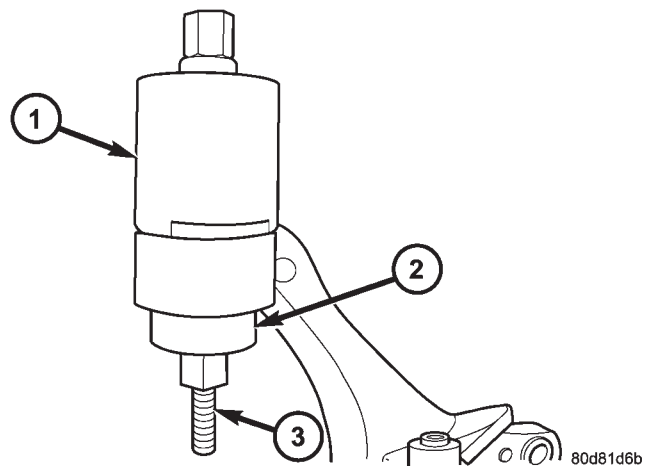
REMOVAL - LOWER CONTROL ARM BUSHING

(1) Remove the lower control arm (Refer to 2 - SUSPENSION/FRONT/LOWER CONTROL ARM - REMOVAL).

(2) Secure the control arm in a vise.

NOTE: Extreme pressure lubrication must be used on the threaded portions of the tool. This will increase the longevity of the tool and insure proper operation during the removal and installation process.

(3) Press the bushing out using special tools 8858-5 (Receiver), 8858-6 (Driver) and 8839 with the threaded rod and the bearing as shown (Fig. 1)



**Fig. 1 LOWER CONTROL ARM BUSHING -
REMOVAL**

- 1 - 8858-5 RECEIVER
- 2 - 8858-6 DRIVER
- 3 - 8839 THREADED ROD

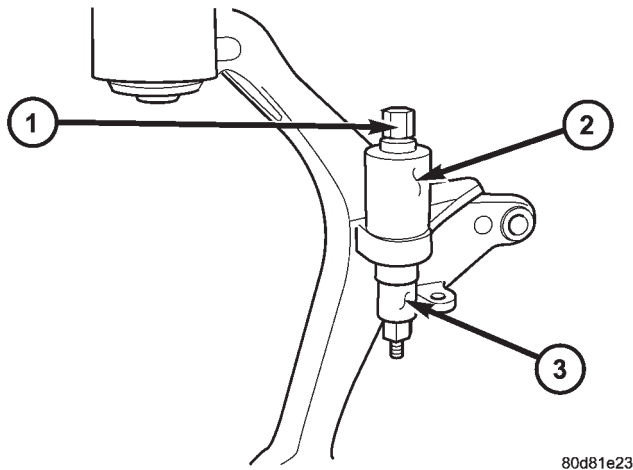
REMOVAL - CLEVIS BRACKET BUSHING

(1) Remove the clevis bracket from the shock (Refer to 2 - SUSPENSION/FRONT/CLEVIS BRACKET - REMOVAL).

NOTE: Extreme pressure lubrication must be used on the threaded portions of the tool. This will increase the longevity of the tool and insure proper operation during the removal and installation process.

BUSHINGS (Continued)

(2) Press the bushing out using special tools 8858-1 (receiver), 8858-3 (driver) and 8839 with the threaded rod 8839 and the bearing as shown (Fig. 2)



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Fig. 2 CLEVIS BRACKET BUSHING

- 1 - 8839 THREADED ROD
- 2 - 8858-1 RECEIVER
- 3 - 8858-3 DRIVER

REMOVAL - UPPER CONTROL ARM BUSHINGS

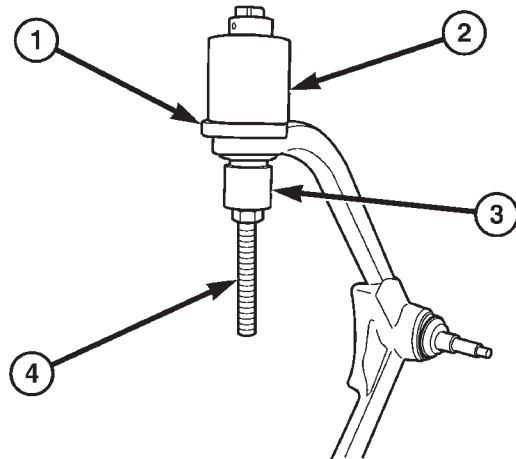
(1) Remove the upper control arm (Refer to 2 - SUSPENSION/FRONT/UPPER CONTROL ARM - REMOVAL).

(2) Secure the control arm in a vise.

NOTE: Extreme pressure lubrication must be used on the threaded portions of the tool. This will increase the longevity of the tool and insure proper operation during the removal and installation process.

(3) Install bushing remover tools 8830-3, 8830-2 and 8830-4 with the threaded rod 8838 and the bearing as shown (Fig. 3)

(4) Press out the bushing.

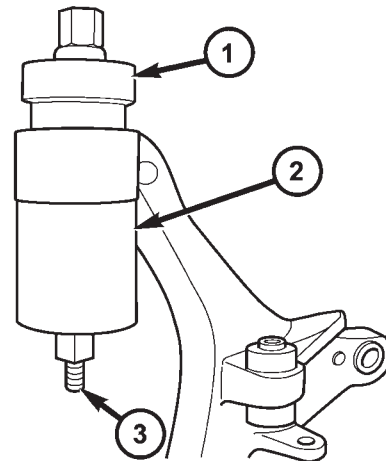


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Fig. 3 UPPER CONTROL ARM BUSHING REMOVAL

- 1 - 8830-3
- 2 - 8830-2
- 3 - 8830-4
- 4 - 8838

(1) Install the new lower control arm bushings into the lower control arm using tools 8858-5 (driver), 8858-6 (receiver) and the bearing with the threaded rod 8839 (Fig. 4) making sure to properly orient the bushing in the control.



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Fig. 4 LOWER CONTROL ARM BUSHING - INSTALLATION

- 1 - 8858-5 DRIVER
- 2 - 8858-6 RECEIVER
- 3 - 8839 THREADED ROD

INSTALLATION

INSTALLATION - LOWER CONTROL ARM BUSHING

NOTE: Extreme pressure lubrication must be used on the threaded portions of the tool. This will increase the longevity of the tool and insure proper operation during the removal and installation process.

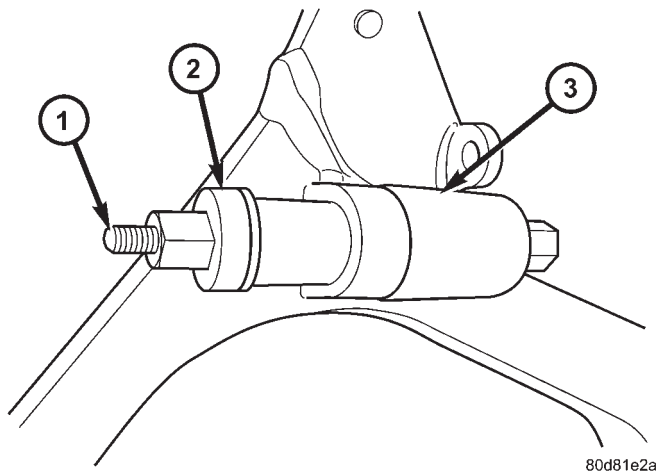
BUSHINGS (Continued)

- (2) Remove the control arm from the vise.
- (3) Install the lower control arm (Refer to 2 - SUSPENSION/FRONT/LOWER CONTROL ARM - INSTALLATION).
- (4) Reset the vehicle ride height (Refer to 2 - SUSPENSION/WHEEL ALIGNMENT - STANDARD PROCEDURE).
- (5) Perform a wheel alignment (Refer to 2 - SUSPENSION/WHEEL ALIGNMENT - STANDARD PROCEDURE).

INSTALLATION - CLEVIS BRACKET BUSHING

NOTE: Extreme pressure lubrication must be used on the threaded portions of the tool. This will increase the longevity of the tool and insure proper operation during the removal and installation process.

- (1) Install the new clevis bracket bushing into the lower control arm using tools 8858-2 (driver), 8858-1 (receiver) and the bearing with the threaded rod 8839 (Fig. 5) making sure to properly orient the bushing in the control.



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Fig. 5 CLEVIS BRACKET BUSHING

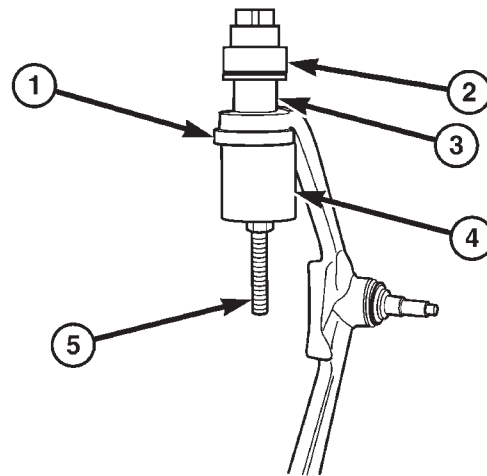
- 1 - 8858-2 DRIVER
- 2 - 8858-1 RECEIVER
- 3 - 8839 THREADED ROD

- (2) Install the clevis bracket (Refer to 2 - SUSPENSION/FRONT/CLEVIS BRACKET - INSTALLATION).

INSTALLATION - UPPER CONTROL ARM BUSHINGS

NOTE: Extreme pressure lubrication must be used on the threaded portions of the tool. This will increase the longevity of the tool and insure proper operation during the removal and installation process.

- (1) Install the new upper control arm bushings into the upper control arm using tools 8830-3, 8830-1 and 8830-2 the bearing with the threaded rod 8838 (Fig. 6) making sure to properly orient the bushing in the control arm.
- (2) Remove the control arm from the vise.
- (3) Install the upper control arm (Refer to 2 - SUSPENSION/FRONT/UPPER CONTROL ARM - INSTALLATION).
- (4) Reset the vehicle ride height (Refer to 2 - SUSPENSION/WHEEL ALIGNMENT - STANDARD PROCEDURE).
- (5) Perform a wheel alignment (Refer to 2 - SUSPENSION/WHEEL ALIGNMENT - STANDARD PROCEDURE).



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Fig. 6 UPPER CONTROL ARM BUSHING - INSTALLATION

- 1 - 8830-3
- 2 - 8830-1
- 3 - BUSHING
- 4 - 8830-2
- 5 - 8838

LOWER BALL JOINT

REMOVAL

- (1) Remove the tire and wheel assembly.
- (2) Remove the brake caliper and rotor (Refer to 5 - BRAKES/HYDRAULIC/MECHANICAL/ROTORS - REMOVAL).
- (3) Disconnect the tie rod from the steering knuckle (Refer to 19 - STEERING/LINKAGE/TIE ROD END - REMOVAL).
- (4) Remove the steering knuckle (Refer to 2 - SUSPENSION/FRONT/KNUCKLE - REMOVAL).
- (5) Move the halfshaft to the side and support the halfshaft out of the way (If Equipped).

NOTE: Extreme pressure lubrication must be used on the threaded portions of the tool. This will increase the longevity of the tool and insure proper operation during the removal and installation process.

- (6) Secure the steering knuckle in a vise.
- (7) Press the ball joint from the steering knuckle using special tools C-4212-F (PRESS), 8859-2 (RECEIVER) and 8859-1 (DRIVER) (Fig. 7).

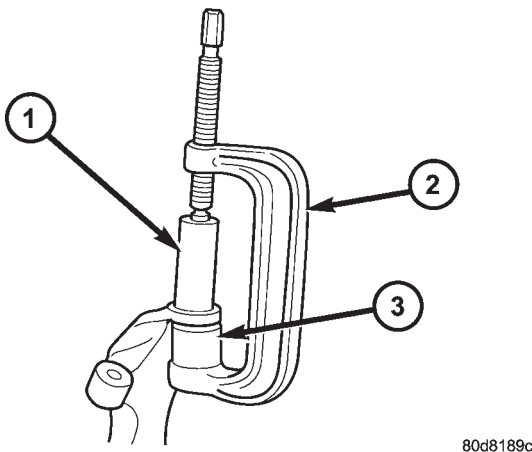


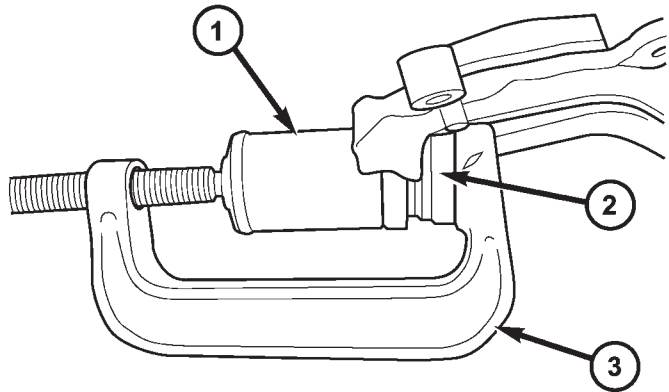
Fig. 7 LOWER BALL JOINT

- 1 - 8859-1 DRIVER
- 2 - C-4212F PRESS
- 3 - 8859-2 RECEIVER

INSTALLATION

NOTE: Extreme pressure lubrication must be used on the threaded portions of the tool. This will increase the longevity of the tool and insure proper operation during the removal and installation process.

- (1) Install the ball joint into the steering knuckle and press in using special tools C-4212-F (press), 8859-3 (driver) and 6761 (receiver) (Fig. 8).



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Fig. 8 LOWER BALL JOINT

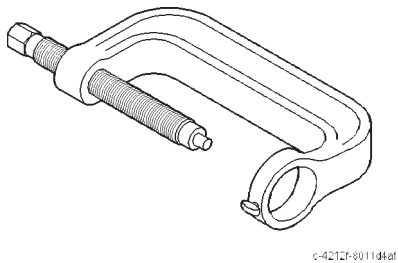
- 1 - 6761 RECEIVER
- 2 - 8859-3 DRIVER
- 3 - C-4212F PRESS

- (2) Install the ball joint boot.
- (3) Remove the support for the halfshaft and install into position (If Equipped).
- (4) Install the steering knuckle (Refer to 2 - SUSPENSION/FRONT/KNUCKLE - INSTALLATION).
- (5) Install the tie rod end into the steering knuckle (Refer to 19 - STEERING/LINKAGE/TIE ROD END - INSTALLATION).
- (6) Install and tighten the halfshaft nut to 136 N·m (100 ft. lbs.).
- (7) Install the brake caliper and rotor (Refer to 5 - BRAKES/HYDRAULIC/MECHANICAL/ROTORS - INSTALLATION).
- (8) Install the tire and wheel assembly (Refer to 22 - TIRES/WHEELS/WHEELS - STANDARD PROCEDURE).
- (9) Check the vehicle ride height (Refer to 2 - SUSPENSION/WHEEL ALIGNMENT - STANDARD PROCEDURE).
- (10) Perform a wheel alignment (Refer to 2 - SUSPENSION/WHEEL ALIGNMENT - STANDARD PROCEDURE).

REAR

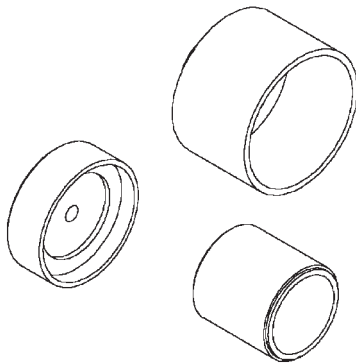
SPECIAL TOOLS

REAR SUSPENSION

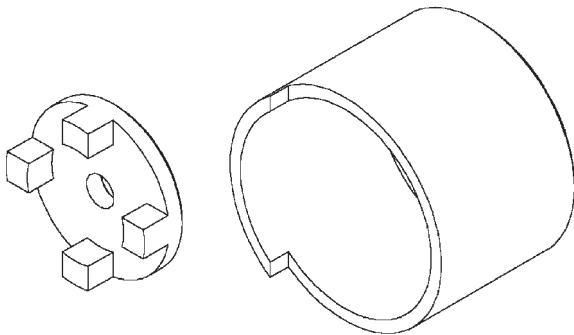


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BALL JOINT PRESS - C-4212F



**REMOVER / INSTALLER REAR UPPER BALL JOINT
- 8861**



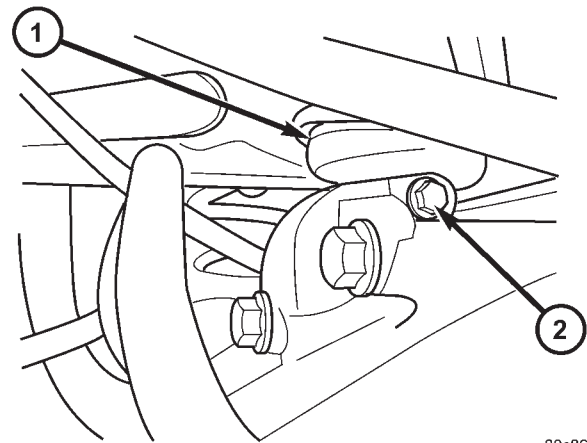
**REMOVAL / INSTALLATION REAR UPPER
CONTROL ARM BUSHINGS - 8860**

UPPER BALL JOINT

REMOVAL

- (1) Raise and support the vehicle.
- (2) Support the rear axle with a hydraulic jack.
- (3) Remove the ball joint pinch bolt from the top of the axle. (Fig. 9)

- (4) Separate the ball joint arm assembly from the differential housing by prying upwards.



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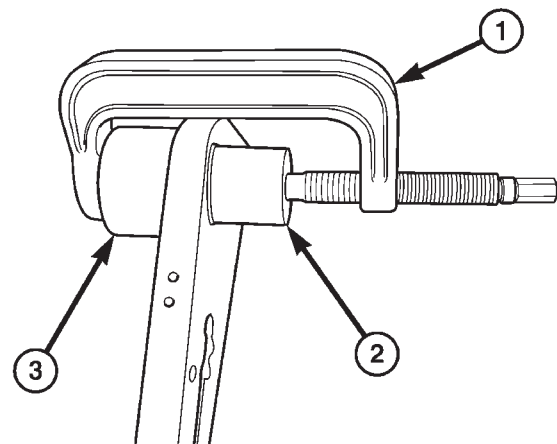
Fig. 9 BALL JOINT PINCH BOLT

- 1 - UPPER BALL JOINT
- 2 - PINCH BOLT

- (5) Remove the upper suspension arm from the vehicle (Refer to 2 - SUSPENSION/REAR/UPPER CONTROL ARM - REMOVAL).

- (6) Secure the suspension arm in a vise.

- (7) Install special tools C-4212F (press), 8861-3 (driver) and 8861-2 (receiver) (Fig. 10)



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Fig. 10 UPPER BALL JOINT - REMOVAL

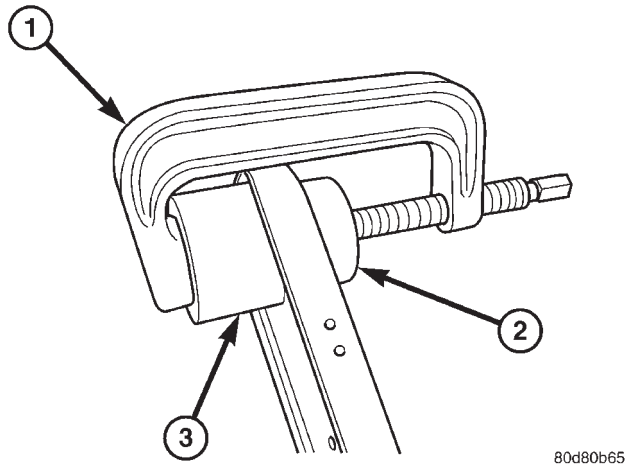
- 1 - C-4212F PRESS
- 2 - 8861-3 DRIVER
- 3 - 8861-2 RECEIVER

- (8) Press out the old ball joint.

INSTALLATION

- (1) Install special tools C-4212F (press), 8861-1 (receiver) and 8861-2 (driver) with the ball joint in place (Fig. 11).

UPPER BALL JOINT (Continued)

**Fig. 11 UPPER BALL JOINT - INSTALLATION**

- 1 - C-4212F PRESS
 2 - 8861-1 RECEIVER
 3 - 8861-2 DRIVER

(2) Press the ball joint in the upper suspension arm.

(3) Remove the upper suspension arm from the vise.

(4) Reinstall the upper suspension arm (Refer to 2 - SUSPENSION/REAR/UPPER CONTROL ARM - INSTALLATION).

(5) Raise the rear axle with a hydraulic jack to align the ball joint with the differential housing bracket.

(6) Insert the ball joint into the differential housing bracket.

(7) Install the ball joint pinch bolt and tighten to 95 N·m (70 ft. lbs.). (Fig. 9).

(8) Remove the supports and lower the vehicle.

BUSHINGS

REMOVAL

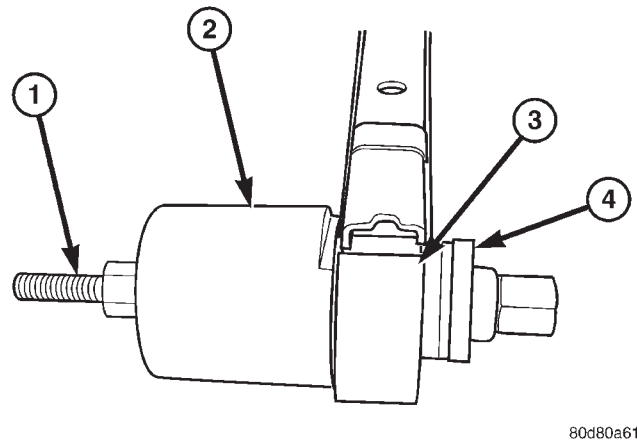
REMOVAL - LOWER SUSPENSION ARM BUSHING

(1) Remove the lower suspension arm (Refer to 2 - SUSPENSION/REAR/LOWER CONTROL ARM - REMOVAL).

(2) Secure the suspension arm in a vise.

NOTE: Extreme pressure lubrication must be used on the threaded portions of the tool. This will increase the longevity of the tool and insure proper operation during the removal and installation process.

(3) Install special tools 8862-4 (receiver), 8862-5 (spacer) and 8862-1 or 8862-2 (driver) with the threaded rod 8839 and the bearing as shown (Fig. 12)

**Fig. 12 LOWER SUSPENSION ARM BUSHING REMOVAL**

- 1 - 8839 THREADED ROD
 2 - 8862-4 RECEIVER
 3 - 8862-5 SPACER
 4 - 8862-1 OR 8862-2 DRIVERS

(4) Press out the bushing.

REMOVAL - UPPER SUSPENSION ARM BUSHING

(1) Remove the upper suspension arm (Refer to 2 - SUSPENSION/REAR/UPPER CONTROL ARM - REMOVAL).

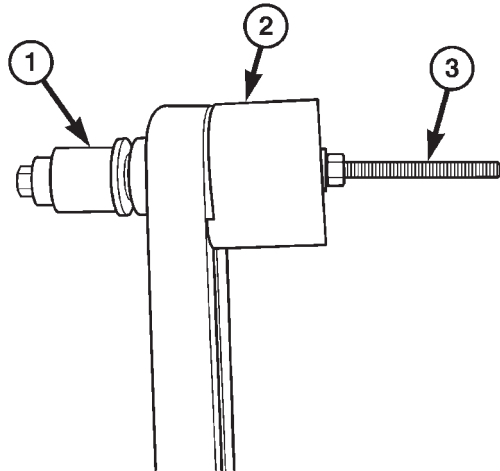
(2) Secure the suspension arm in a vise.

NOTE: Extreme pressure lubrication must be used on the threaded portions of the tool. This will increase the longevity of the tool and insure proper operation during the removal and installation process.

(3) Install special tools 8853-3 (driver), 8860-1 (receiver) and with the threaded rod 8838 and the bearing as shown (Fig. 13)

(4) Press out the bushing.

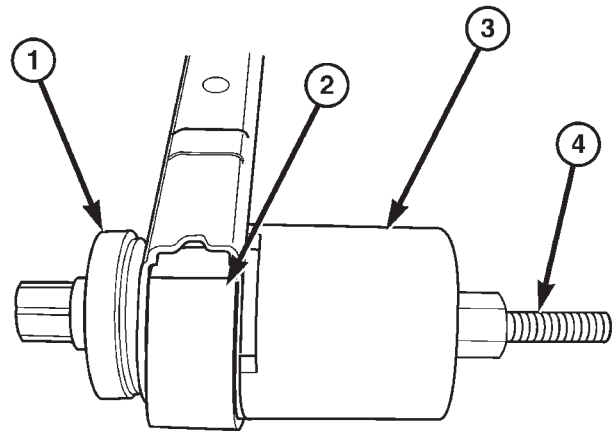
BUSHINGS (Continued)



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Fig. 13 UPPER SUSPENSION ARM BUSHING - REMOVAL

- 1 - 8853-3 DRIVER
- 2 - 8860-1 RECEIVER
- 3 - 8838 THREADED ROD



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Fig. 14 LOWER SUSPENSION ARM BUSHING INSTALLATION

- 1 - 8862-3 DRIVER
- 2 - 8862-5 SPACER
- 3 - 8862-4 RECEIVER
- 4 - 8839 THREADED ROD

INSTALLATION

INSTALLATION - LOWER SUSPENSION ARM BUSHING

NOTE: Extreme pressure lubrication must be used on the threaded portions of the tool. This will increase the longevity of the tool and insure proper operation during the removal and installation process.

(1) Install the new lower suspension arm bushings into the lower suspension arm using tools 8862-3 (driver), 8862-4 (receiver), 8862-5 (spacer) and the bearing with the threaded rod 8839 (Fig. 14) making sure to properly orient the bushing in the suspension arm.

(2) Remove the suspension arm from the vise.

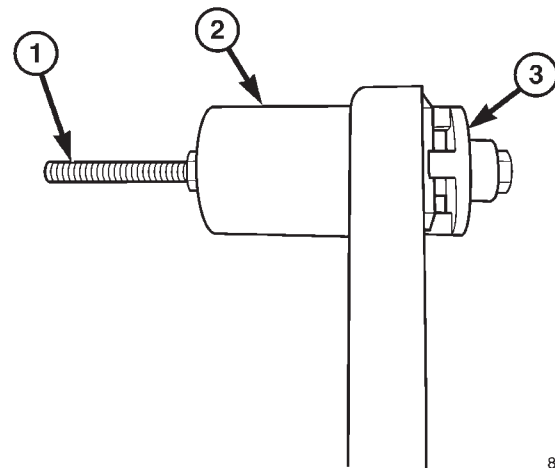
(3) Install the lower suspension arm (Refer to 2 - SUSPENSION/REAR/LOWER CONTROL ARM - INSTALLATION).

INSTALLATION - UPPER SUSPENSION ARM BUSHING

NOTE: Extreme pressure lubrication must be used on the threaded portions of the tool. This will increase the longevity of the tool and insure proper operation during the removal and installation process.

(1) Install the new upper suspension arm bushings into the upper suspension arm using tools 8835-3

(receiver), 8860-2 (driver) and the bearing with the threaded rod 8838 (Fig. 15) making sure to properly orient the bushing in the suspension arm.



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Fig. 15 UPPER SUSPENSION ARM BUSHING - INSTALLATION

- 1 - 8838 THREADED ROD
- 2 - 8835-3 RECEIVER
- 3 - 8860-2 DRIVER

(2) Remove the suspension arm from the vise.

(3) Install the upper suspension arm (Refer to 2 - SUSPENSION/REAR/UPPER CONTROL ARM - INSTALLATION).