

STARTING SYSTEMS

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REMOVAL AND INSTALLATION

STARTER

2.5L DIESEL ENGINE

- (1) Disconnect and isolate the battery negative cable.
- (2) Raise and support the vehicle.
- (3) Remove the right front engine mount insulator and brackets. Refer to Group 9 - Engines for the procedures.
- (4) Remove the starter front support bracket (Fig. 1).

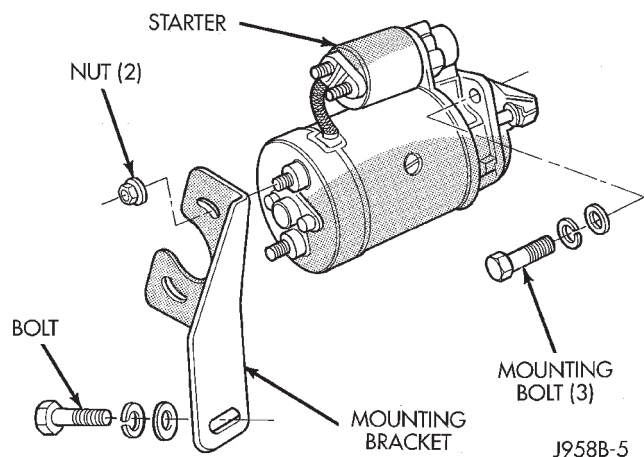


Fig. 1 Starter Mounting - 2.5L Diesel Engine

- (5) Remove the strap that secures the starter heat shield and remove the heat shield from the starter (Fig. 2).
 - (6) Remove the three bolts that secure the starter mounting flange to the transmission adapter plate.
 - (7) Lower the starter far enough to access and remove the wire harness connections from the solenoid.
 - (8) Remove the starter from the vehicle.
 - (9) Reverse the removal procedures to install.
- Tighten the starter hardware as follows:
- Battery cable terminal nut - 27 N·m (20 ft. lbs.)
 - Starter mounting bolts - 27 N·m (20 ft. lbs.)

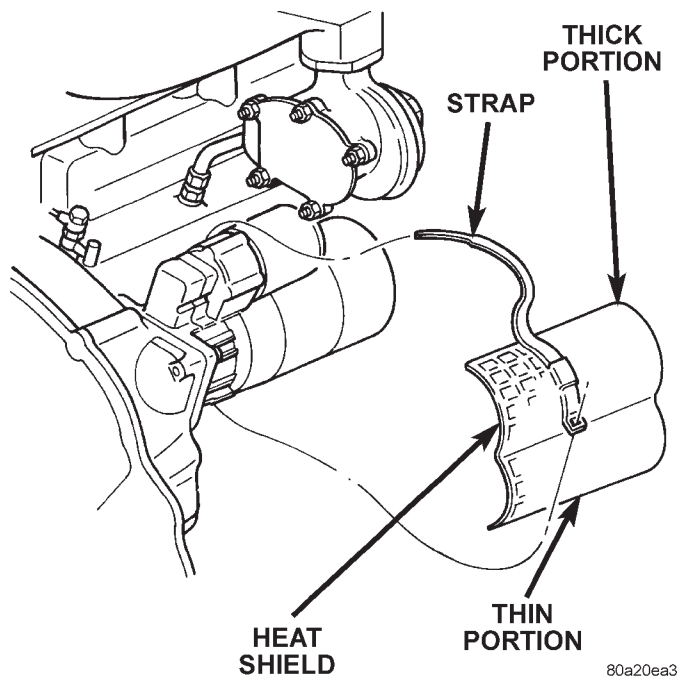


Fig. 2 Starter Heat Shield Remove/Install

- Front starter support bracket nuts - 10 N·m (90 in. lbs.)
- Front starter support bracket bolt - 47 N·m (35 ft. lbs.).

STARTER RELAY

- (1) Disconnect and isolate the battery negative cable.
- (2) Remove the cover from the Power Distribution Center (PDC).
- (3) Refer to the label on the PDC for starter relay identification and location.
- (4) Unplug the starter relay from the PDC.
- (5) Install the starter relay by aligning the relay terminals with the cavities in the PDC and pushing the relay firmly into place.
- (6) Install the PDC cover.
- (7) Connect the battery negative cable.
- (8) Test the relay operation.

SPECIFICATIONS

STARTING SYSTEM

| Starter and Solenoid | |
|--|--------------------------|
| Engine Application | 2.5L Diesel |
| Power Rating | 2.2 Kilowatt |
| Voltage | 12 Volts |
| Number of Fields | 4 |
| Number of Poles | 4 |
| Number of Brushes | 4 |
| Drive Type | Planetary Gear Reduction |
| Free Running Test Voltage | 11.5 Volts |
| Free Running Test Maximum Amperage Draw | 160 Amperes |
| Free Running Test Minimum Speed | 5500 rpm |
| Solenoid Closing Maximum Voltage | 7.8 Volts |
| *Cranking Amperage Draw test | 350 Amperes |
| *Test at operating temperature. Cold engine, tight (new) engine, or heavy oil will increase starter amperage draw. | |