

LUBRICATION & MAINTENANCE







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INTERNATIONAL SYMBOLS

DESCRIPTION

DaimlerChrysler Corporation uses international symbols to identify engine compartment lubricant and fluid inspection and fill locations.

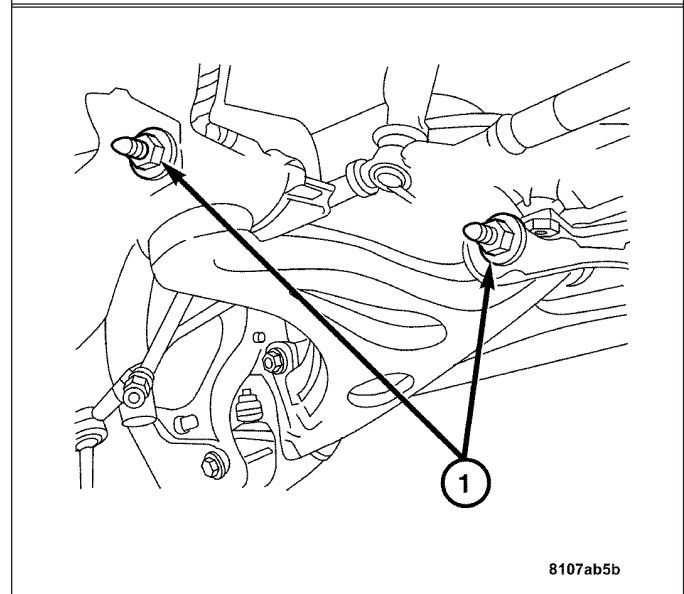
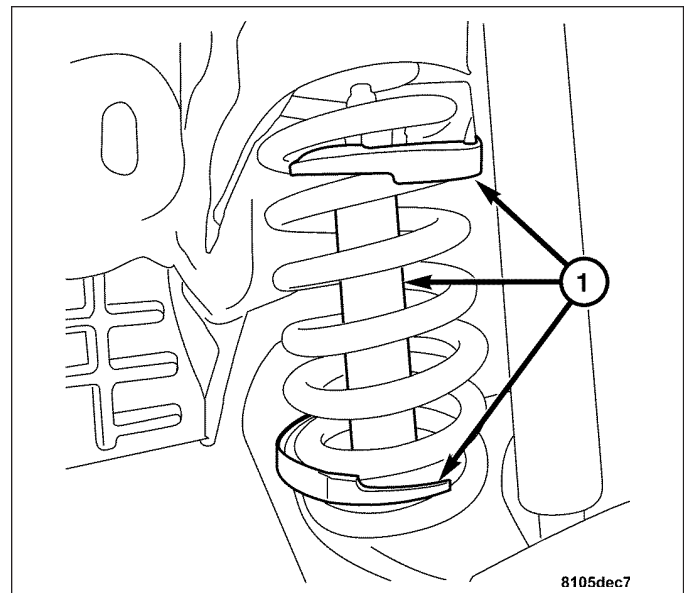
	ENGINE OIL		BRAKE FLUID
	AUTOMATIC TRANSMISSION FLUID		POWER STEERING FLUID
	ENGINE COOLANT		WINDSHIELD WASHER FLUID

- Support the lower control arm with a suitable supporting device. Raise the lower control arm up until it is almost level.

WARNING: ONLY USE APPROVED CLAMPING DEVICES AND IF APPROPRIATE ALSO SCREEN OFF THE DANGER AREA. INSPECT SPECIAL TOOLS FOR DAMAGE AND FUNCTION. WEAR SAFETY GLOVES AND EYE PROTECTION.

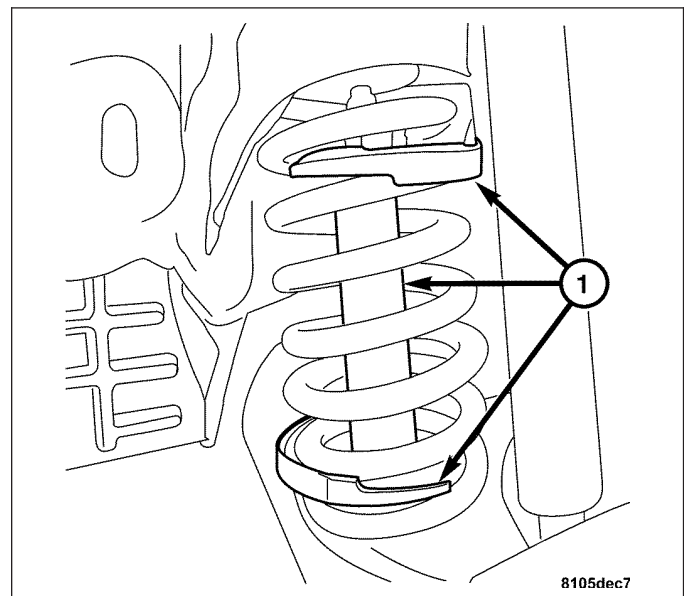
CAUTION: Risk of injury to hands and fingers from being trapped or crushed when working on pre-loaded springs or spring bodies.

- Using Special Tool 9151 Spring Compressor and 9152 Clamping Plates (1), carefully compress the front spring.
- Remove the nuts from the lower control arm mounting bolts.
- Carefully remove the lower control arm mounting bolts from the body.
- Lower the supporting device and swing the lower control arm down while holding the front spring. When enough clearance has been achieved from the lower control arm and the upper spring perch, remove the front spring from the vehicle.

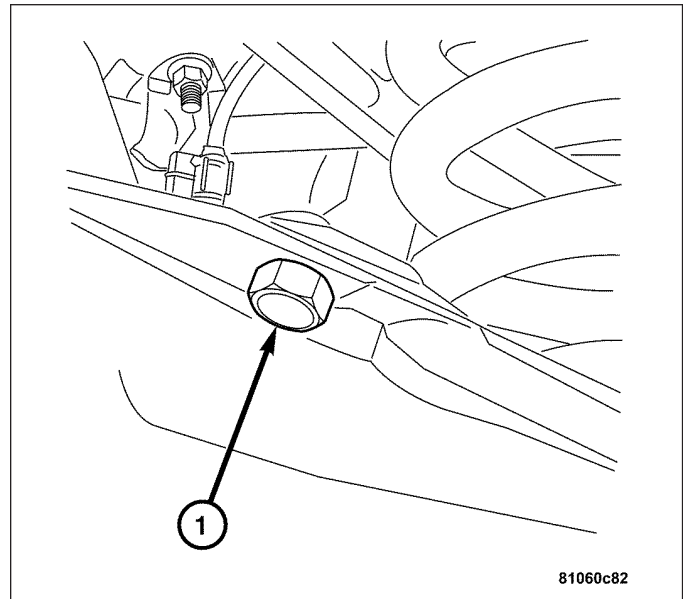


INSTALLATION

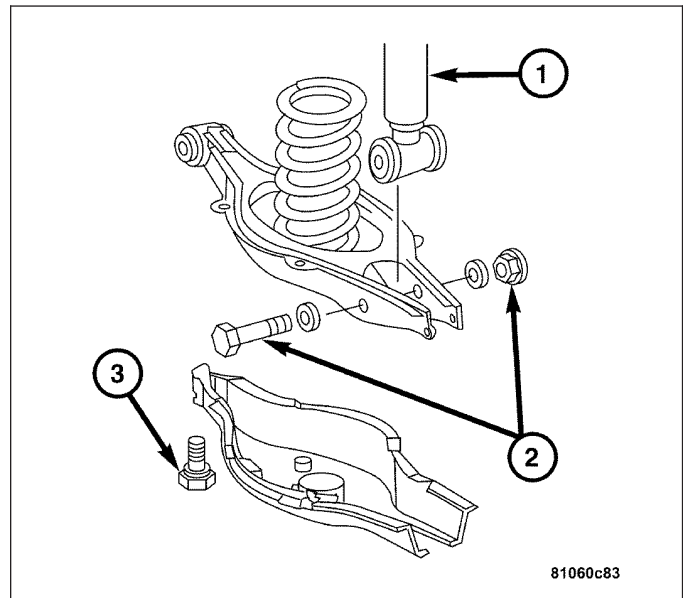
- Install the compressed front spring (1) with the rubber mount to the vehicle.



3. Remove the lower control arm plastic cover by removing the bolts (1) attaching the cover to the lower control arm.

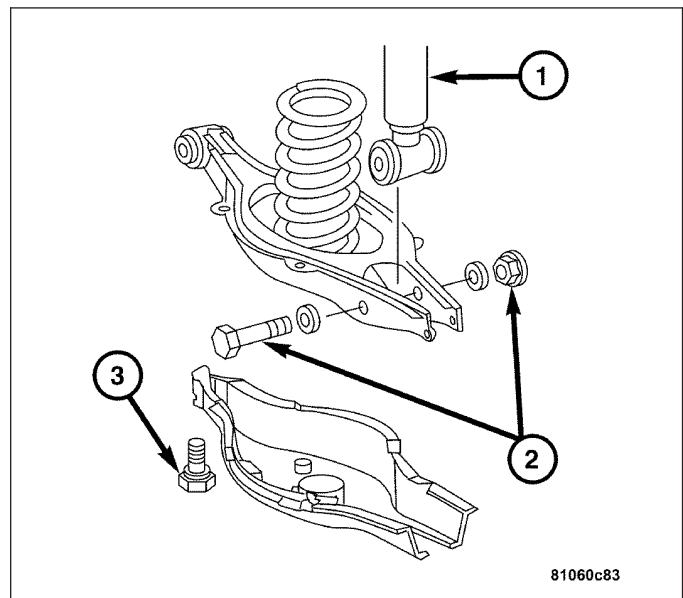


4. Remove the shock absorber (1) from the lower control arm.
5. Inspect the shock absorber.



INSTALLATION

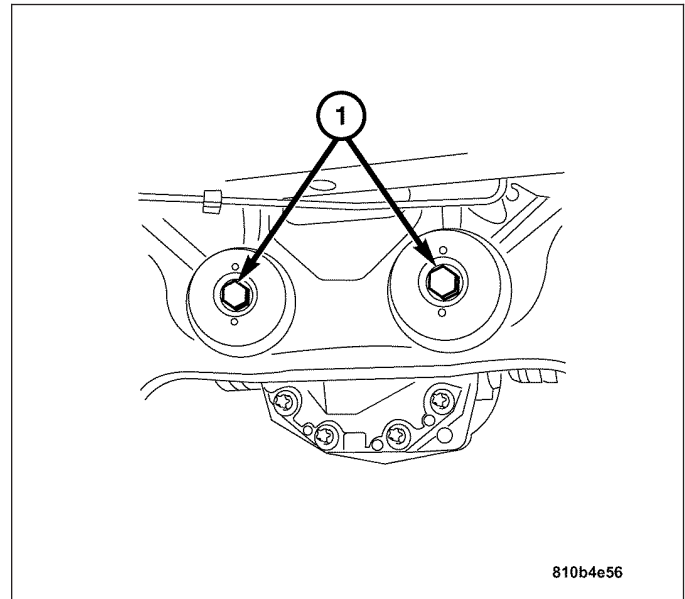
1. Install the shock absorber (1) onto the lower control arm then install the bolt and nut (2). Tighten to 55 N·m (41 ft. lbs.).



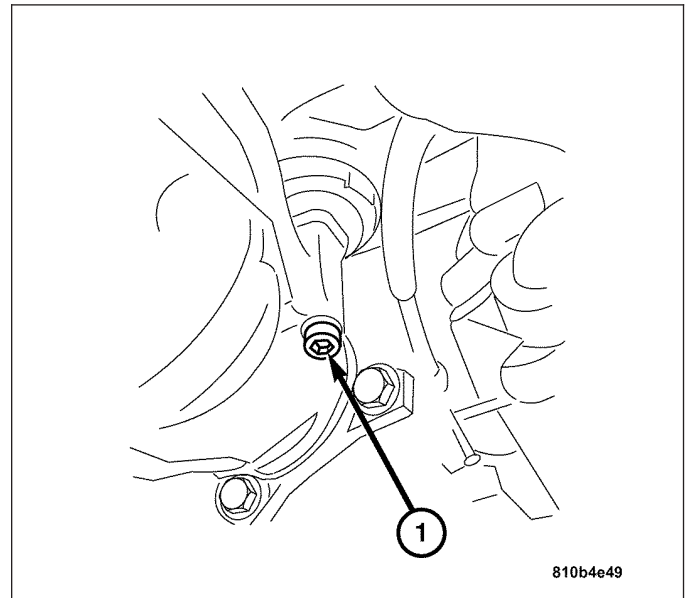
INSTALLATION

Note: Replace the self locking bolts and shims. Lightly oil the bolt at the thread and bolt head contact surfaces.

1. Position the differential housing in the vehicle and support it with a jack.
2. Install the two differential housing rear mounting bolts (1) and washers.



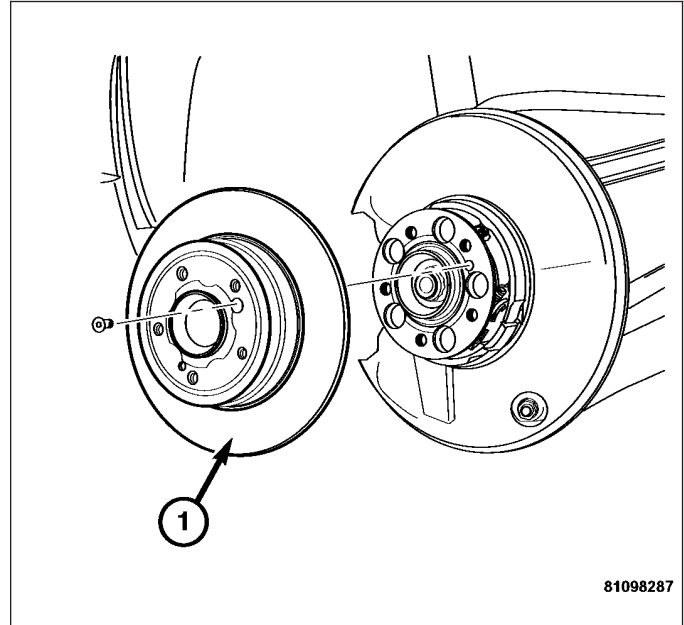
3. Install the differential housing front mounting bolt (1).
4. Tighten the differential housing rear mounting bolts to 110 N·m (82 ft. lbs.).
5. Tighten the differential housing front mounting bolt and nut to 45 N·m (33 ft. lbs.).



6. Connect the halfshafts to the rear differential connecting flanges. (Refer to 3 - DIFFERENTIAL & DRIVELINE/ HALF SHAFT - INSTALLATION).
7. Remove the differential housing support jack.
8. Install the propeller shaft. (Refer to 3 - DIFFERENTIAL & DRIVELINE/PROPELLER SHAFT - INSTALLATION).
9. Fill the differential housing to proper specification. (Refer to 3 - DIFFERENTIAL & DRIVELINE/REAR AXLE - STANDARD PROCEDURE).
10. Lower the vehicle.

INSTALLATION - REAR DISC BRAKE ROTOR

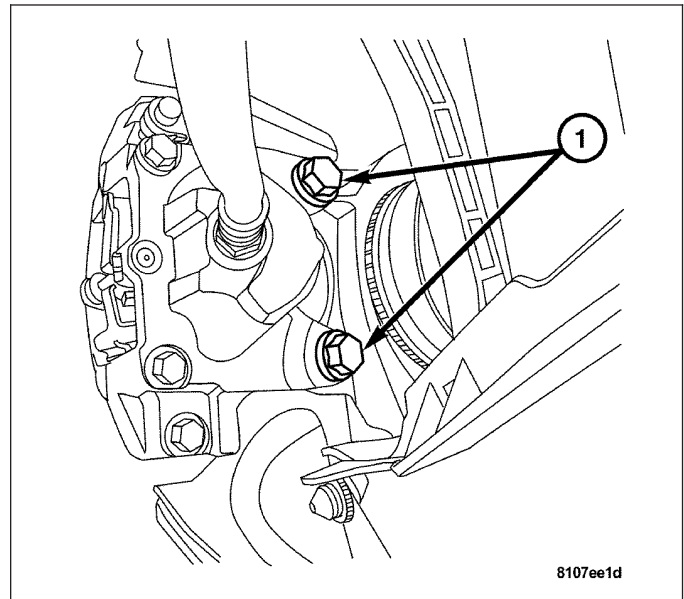
1. Install the rotor (1) onto the wheel hub.
2. Install the rotor retaining bolt. Tighten to 10 N·m (7 ft. lbs.).
3. Install caliper assembly onto rotor.



4. Install caliper mounting bolts (1). Tighten to 55 N·m (41 ft. lbs.).
5. Install the wheel and tire assembly. (Refer to 22 - TIRES/WHEELS - STANDARD PROCEDURE).

WARNING: DO NOT MOVE THE VEHICLE UNTIL A FIRM BRAKE PEDAL IS OBTAINED.

6. Lower the vehicle.
7. Pump the brake pedal until the caliper pistons and the brake pads are seated, and a firm brake pedal is achieved.



FLUID

DIAGNOSIS AND TESTING

BRAKE FLUID CONTAMINATION

Indications of fluid contamination are swollen or deteriorated rubber parts.

Swollen rubber parts indicate the presence of petroleum in the brake fluid.

To test for contamination, put a small amount of drained brake fluid in a clear glass jar. If the fluid separates into layers, there is mineral oil or another fluid contaminating the brake fluid.

If brake fluid is contaminated, drain and thoroughly flush system. Replace master cylinder with reservoir, caliper seals, Hydraulic Control Unit (HCU) and all hydraulic fluid hoses.

CAB SYSTEM OVERVOLTAGE (CONTINUED)**When Monitored and Set Condition**

- When Monitored: Ignition on. The Controller Antilock Brake (CAB) monitors the Fused B(+) circuit at all times for proper system voltage.
- Set Condition: If the voltage is above 16 volts for greater than 500 milliseconds (ms), the Diagnostic Trouble Code (DTC) is set.

POSSIBLE CAUSES

SYSTEM VOLTAGE HIGH
GROUND CIRCUIT OPEN
CONTROLLER ANTILOCK BRAKE

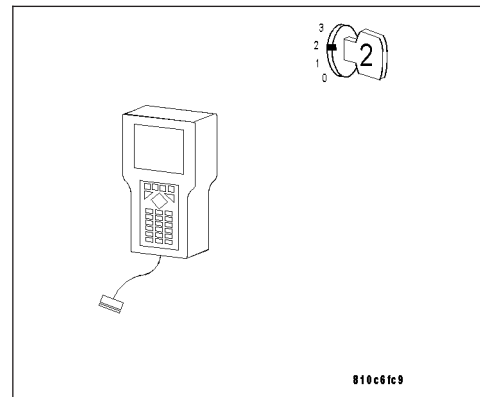
For a complete Electronic Stability Program (ESP) Circuit Diagram (Refer to 5 - BRAKES/ELECTRICAL - SCHEMATICS AND DIAGRAMS).

Diagnostic Test**1. WITH THE DRB III®, READ DTCs**

Turn the ignition on.
With the DRB III®, erase DTCs.
Turn the ignition off.
Turn the ignition on.
Start the engine.
With the DRB III®, read DTCs.

Does the DRB III® display a System Overvoltage DTC?

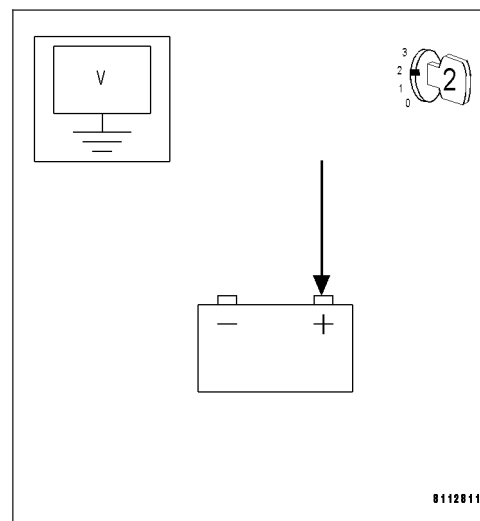
- Yes** >> Go to 2
- No** >> The condition that caused this DTC to set is currently not present. Inspect the related wiring harness for a possible intermittent condition.

**2. MEASURE THE BATTERY VOLTAGE**

Start the engine.
Raise engine speed above 1,800 RPM.
Measure the battery voltage.

Is the voltage above 16 volts?

- Yes** >> Refer to the appropriate service information for charging system testing and repair.
Perform ABS VERIFICATION TEST.
- No** >> Go to 3



LEFT REAR WHEEL SPEED SENSOR CIRCUIT (CONTINUED)

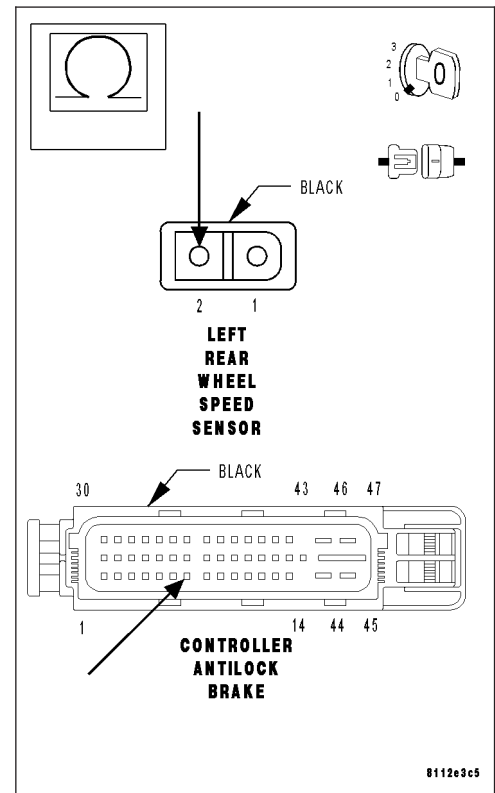
7. MEASURE THE RESISTANCE OF THE LEFT REAR WHEEL SPEED SENSOR 12 VOLT SUPPLY CIRCUIT

With the ignition off.

Measure the resistance of the Left Rear Wheel Speed Sensor 12 Volt Supply circuit from the CAB harness connector to the Left Rear Wheel Speed Sensor harness connector.

Is the resistance below 5.0 ohms?

- Yes** >> Go to 8
- No** >> Repair the Left Rear Wheel Speed Sensor 12 Volt Supply circuit for an open.
Perform ABS VERIFICATION TEST.



8. MEASURE THE RESISTANCE OF THE LEFT REAR WHEEL SPEED SENSOR SIGNAL CIRCUIT

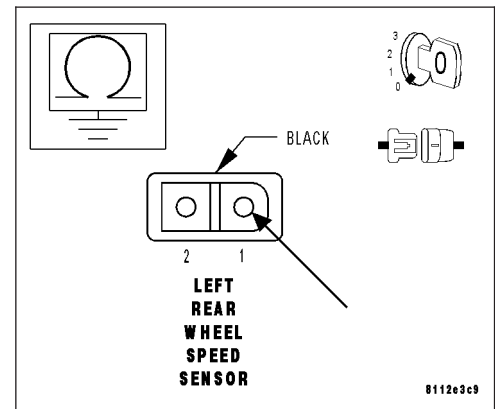
With the ignition off.

Reconnect the CAB harness connector.

Measure the resistance between ground and the Left Rear Wheel Speed Sensor Signal circuit.

Is the resistance less than 100 ohms?

- Yes** >> Go to 11
- No** >> Go to 9



BRAKE LAMP SWITCH CIRCUIT (CONTINUED)

7. MEASURE BRAKE LAMP RELAY CONTROL CIRCUIT VOLTAGE

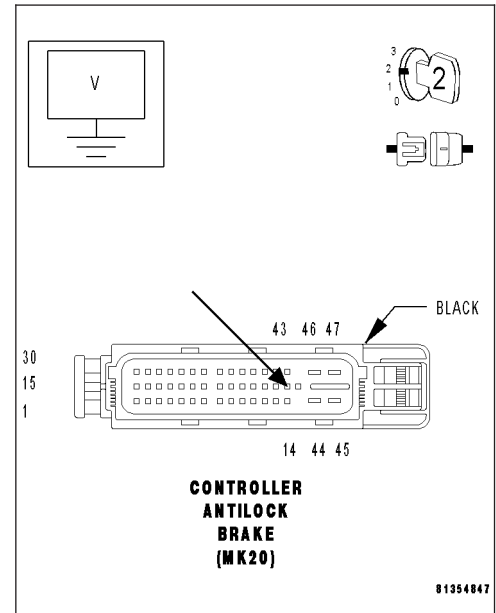
With the ignition on.

Measure the voltage of the Brake Lamp Relay Control circuit at CAB harness connector cavity 28.

Is the voltage above 10 volts?

Yes >> Go to 11

No >> Go to 8



8. MEASURE FUSED IGNITION SWITCH OUTPUT CIRCUIT VOLTAGE

Turn the ignition off.

Remove the Brake Lamp Relay.

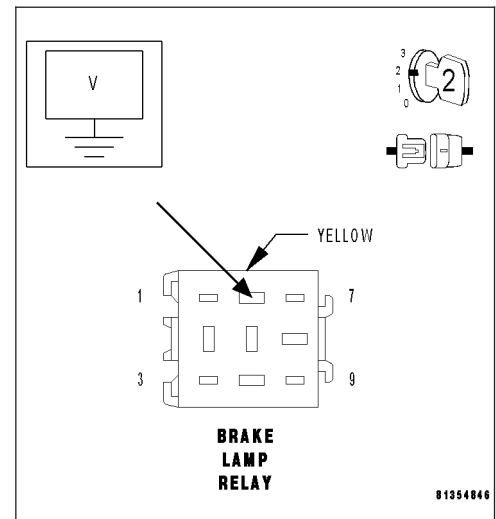
Turn the ignition on.

Measure the voltage of the Fused Ignition Switch Output circuit at Brake Lamp Relay harness connector cavity 4.

Is the voltage above 10 volts?

Yes >> Go to 9

No >> Repair the Fused Ignition Switch Output circuit.
Perform ABS VERIFICATION TEST.



BAS RELEASE SWITCH CIRCUIT (CONTINUED)

2. MEASURE THE VOLTAGE OF THE SENSOR (APPLIED) CIRCUIT

Turn the ignition off.

Disconnect the CAB harness connector.

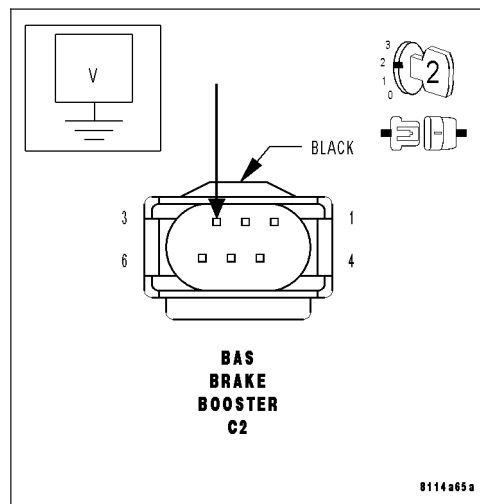
Note: Check connectors - Clean/repair as necessary.

Turn the ignition on.

Measure the voltage of the BAS Release Switch Sensor (Applied) circuit at the BAS Brake Booster C2 harness connector.

Is the voltage below 1.0 volt?

- Yes** >> Go to 3
- No** >> Repair the BAS Release Switch Sensor (Applied) circuit for a short to voltage.
Perform ABS VERIFICATION TEST.



3. MEASURE THE RESISTANCE BETWEEN THE BAS RELEASE SWITCH SENSOR (APPLIED) CIRCUIT AND ALL OTHER CAB VOLTAGE CIRCUITS

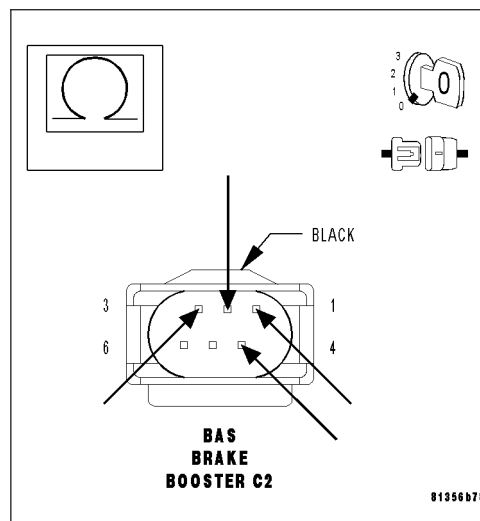
Turn the ignition off.

Measure the resistance between the BAS Release Switch Sensor (Applied) circuit and the Sensor (Released) circuit in the BAS Brake Booster C2 harness connector.

Measure the resistance between the BAS Release Switch Sensor (Applied) circuit and all 5 and 12 volt circuits in the CAB harness connector.

Is the resistance for all measurements above 100 kohms?

- Yes** >> Replace the Controller Antilock Brake. (Refer to 8 - ELECTRICAL/ELECTRONIC CONTROL MODULES/CONTROLLER ANTILOCK BRAKE - REMOVAL).
Perform ABS VERIFICATION TEST.
- No** >> Repair the BAS Release Switch Sensor (Applied) circuit for a short to the circuit(s) that measured less than 100 kohms.
Perform ABS VERIFICATION TEST.

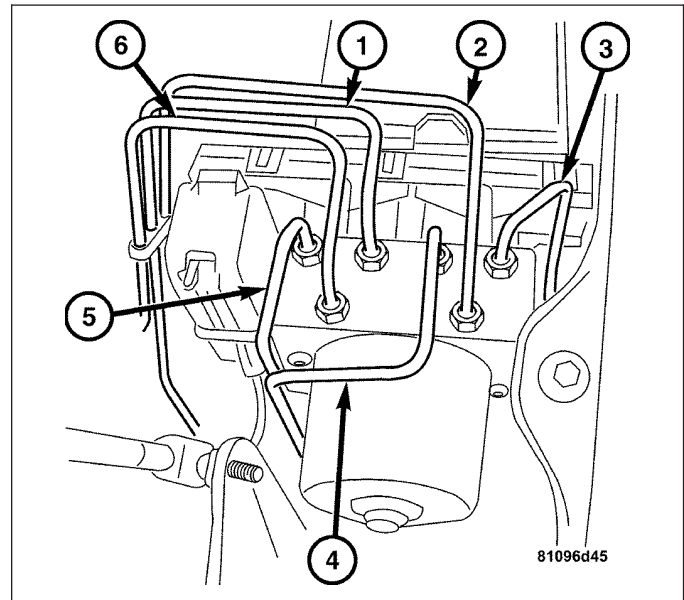


INSTALLATION

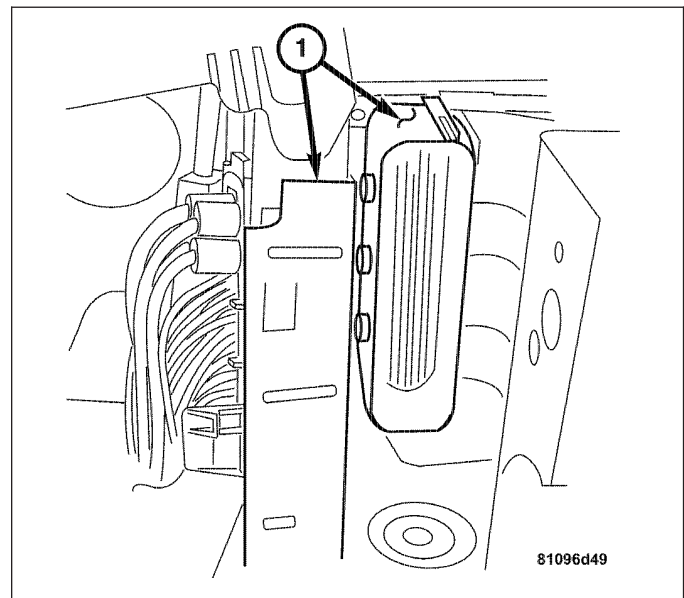
1. Inspect the seating and condition of the rubber grommets and replace if necessary.

CAUTION: Use caution when re-connecting hydraulic lines. Refer to markings for proper installation. If necessary, trace the line routing to the corresponding wheel.

2. Install the brake lines (1-6). Pay very close attention to the locations when installing the hydraulic lines. **DO NOT** cross thread.
 - Right rear wheel (1)
 - Master cylinder front (2)
 - Right front wheel (3)
 - Left front wheel (4)
 - Left rear wheel (5)
 - Master cylinder rear (6)

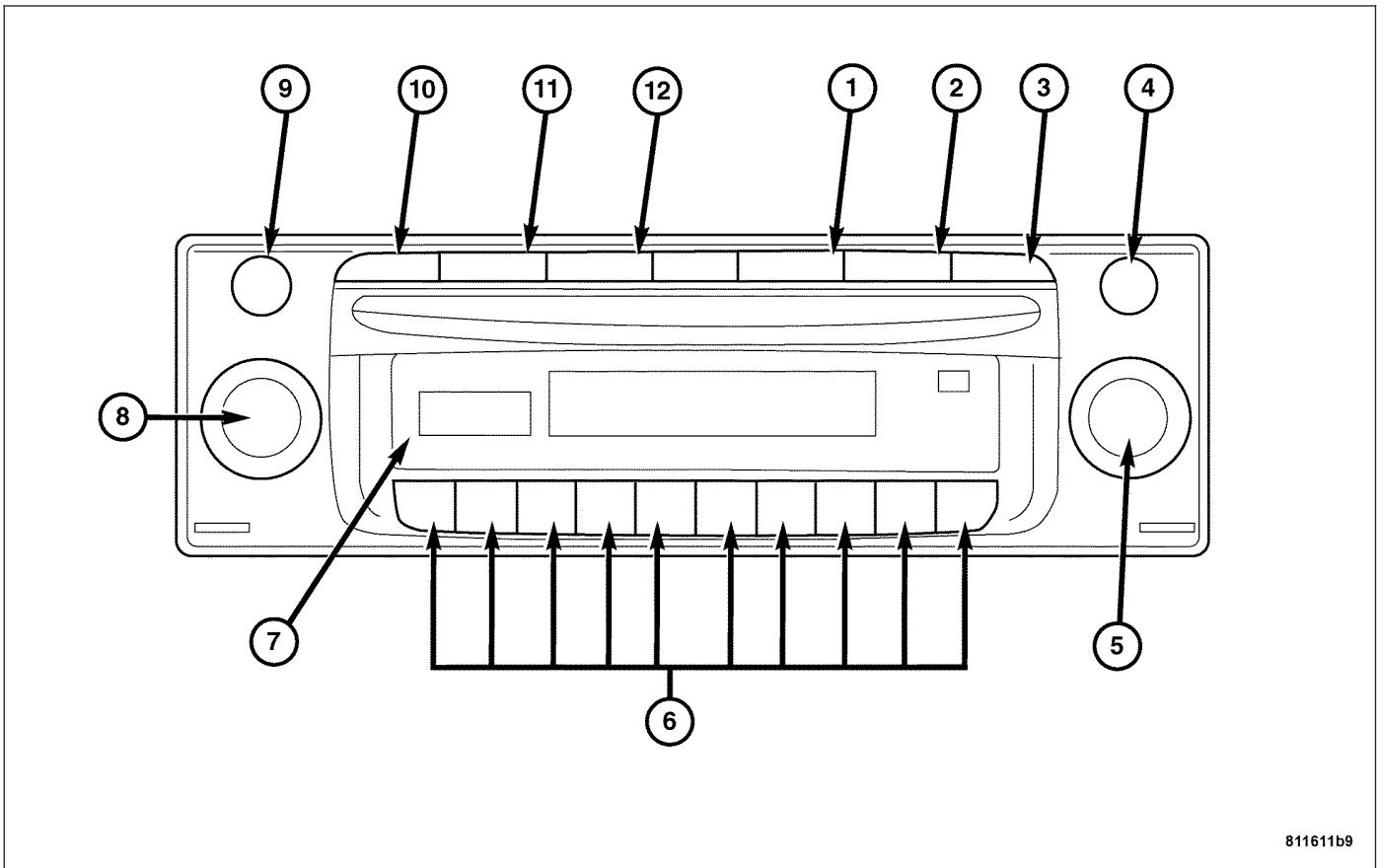


3. Connect the hydraulic control unit harness connector (1) to the CAB.
4. Bleed the brake system. (Refer to 5 - BRAKES - STANDARD PROCEDURE).
5. Connect the DRB III® and read any DTCs, then clear any applicable codes.



AUDIO - SERVICE INFORMATION

DESCRIPTION



811611b9

The audio system is standard factory-installed equipment. The system uses an ignition switched source of battery current so that the system will only operate when the ignition switch is in the ON/RUN or START positions.

The audio system includes the following components:

- Antenna
- Rear Window Antenna Module
- Power Amplifier
- Radio Receiver
- Speakers

OPERATION

For detailed operation instructions for the factory installed audio system, refer to the Understanding Your Instrument Panel section in the Owner's Manual.

DIAGNOSIS AND TESTING - AUDIO SYSTEM

For complete audio system diagnosis, see audio electrical diagnostics in this section.

***NO RESPONSE FROM POWERTRAIN CONTROL MODULE (CONTINUED)**

5. SCI RECEIVE CIRCUIT OPEN

With the ignition off.

Disconnect the PCM C4 harness connector.

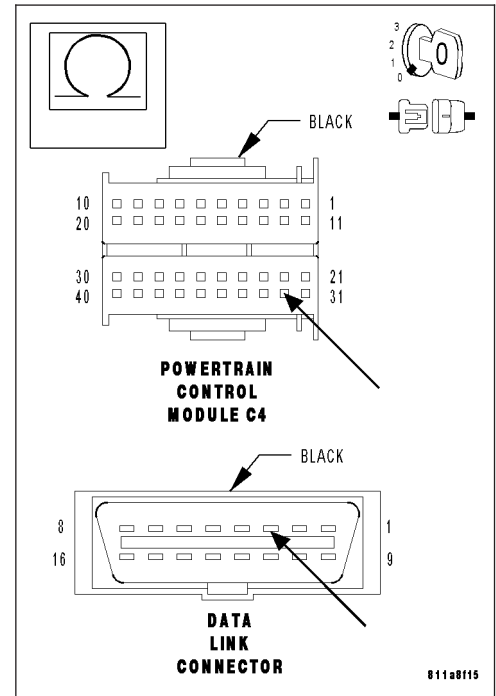
Note: Check connector — Clean/repair as necessary.

Measure the resistance of the PCM SCI Receive circuit from the PCM C4 harness connector to the DLC.

Is the resistance below 5.0 ohms?

Yes >> Go to 6

No >> Repair the PCM SCI Receive circuit for an open.
Perform POWERTRAIN VERIFICATION TEST - VER 2.



6. SCI RECEIVE CIRCUIT SHORTED TO GROUND

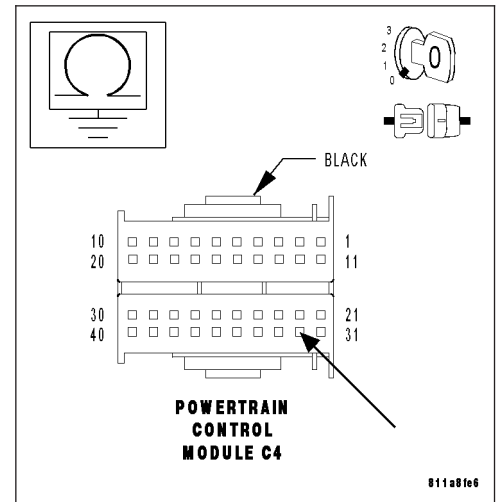
With the ignition off.

Measure the resistance between ground and the PCM SCI Receive circuit.

Is the resistance above 100 kohms?

Yes >> Go to 7

No >> Repair the PCM SCI Receive circuit for a short to ground.
Perform POWERTRAIN VERIFICATION TEST - VER 2.



OPERATION

Data exchange between modules is achieved by serial transmission of encoded data over a broadcast network. The Controller Area Network (CAN) data bus messages are carried over the bus in the form of variable pulse width modulated signals. The Engine CAN C Data Bus speed is 500 Kilo-bits per second (Kbps) (ignition on) while the Interior CAN B Data Bus speed is 83 Kilo-bits per second (Kbps).

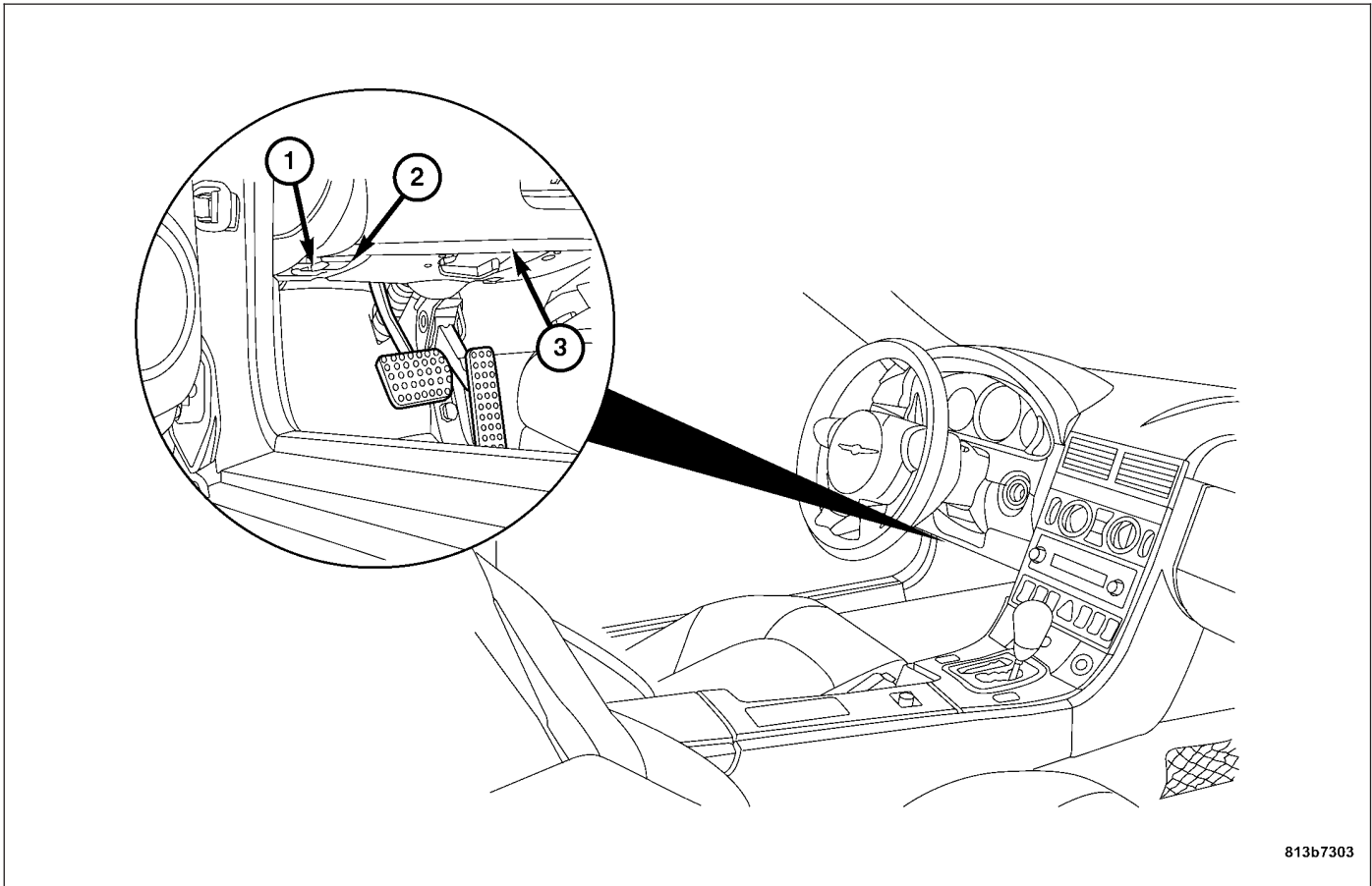
The voltage network used to transmit messages requires biasing and termination. The biasing and termination for the network is supplied by the PCM and the SKREEM Module with a terminating resistor and a terminating capacitor. The Powertrain Control Module is the dominant node for the CAN C Engine Data Bus System and the Body Control Module is the dominant node for the CAN B Interior Data Bus System.

The CAN bus uses low and high voltage levels to generate signals. The voltage on the bus varies between zero and two and one-half volts. The low and high voltage levels are generated by means of variable-pulse width modulation to form signals of varying length.

When a module is transmitting on the bus, it is reading the bus at the same time to ensure message integrity.

DATA LINK CONNECTOR

DESCRIPTION



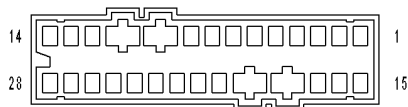
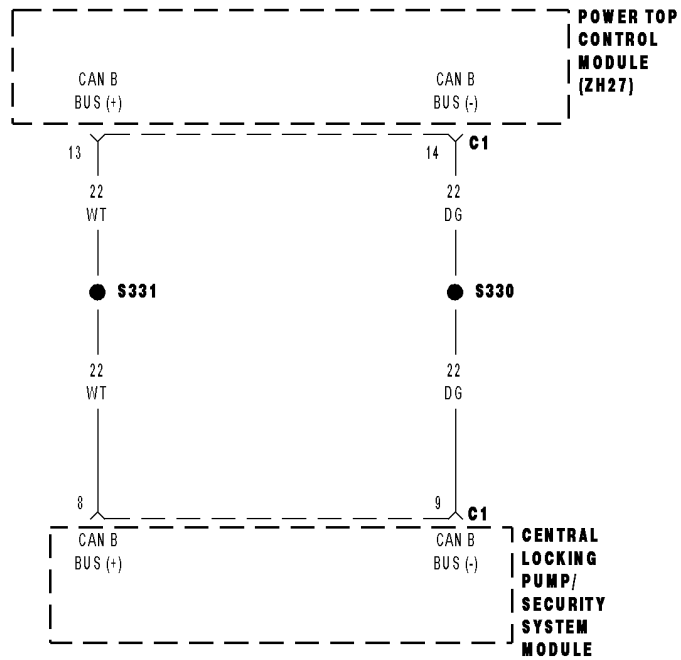
813b7303

The Data Link Connector (DLC) (1) is located at the lower edge of the instrument panel (3) near the hood release (2). The exposed connector terminals are protected by a plastic cover which flips open if access is needed.

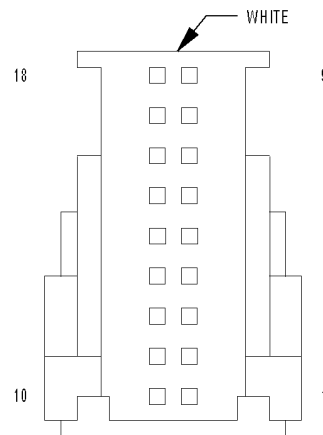
OPERATION

The 16-way Data Link Connector (DLC) provides a communication link between the DRB III® scan tool and the vehicle electronic control modules.

9078 NO COMMUNICATION WITH CENTRAL LOCKING PUMP/SECURITY SYSTEM MODULE (CPL/SSM)



POWER TOP CONTROL MODULE C1 (ZH27)



CENTRAL LOCKING PUMP/SECURITY SYSTEM MODULE C1

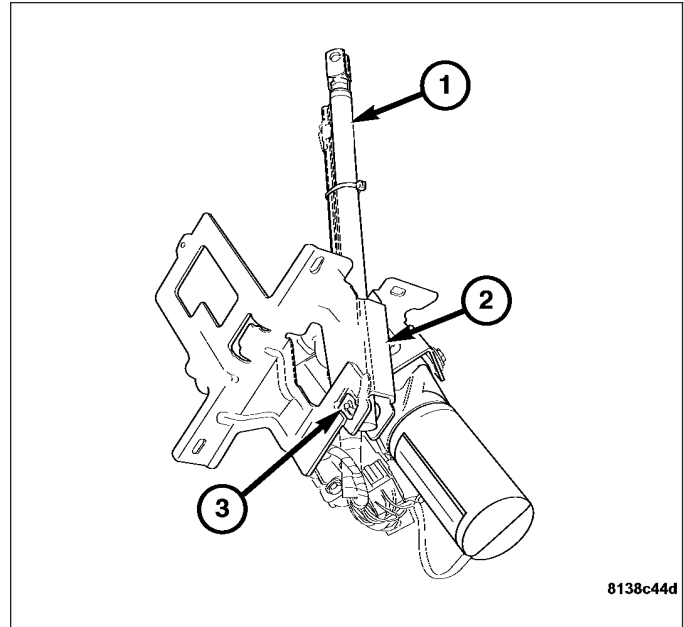
INSTALLATION

INSTALLATION - TONNEAU COVER CYLINDER

1. Install tonneau cover cylinder (1) to pump bracket (2) and install the lower retainer (3).

Note: Be sure to use new retainers and O-rings when installing hydraulic lines to the cylinder.

2. Connect hydraulic lines to cylinder with new retainers.
3. Connect both travel sensors to the cylinder.
4. Install the hydraulic pump assembly (Refer to 23 - BODY/CONVERTIBLE TOP/HYDRAULIC PUMP MOTOR - INSTALLATION).
5. Install the left side trunk trim panel.
6. Connect the negative battery cable.



INSTALLATION - MAIN CYLINDER

1. Install the travel sensors on the cylinder (left side only).
2. Connect the hydraulic lines to the cylinder with a new O-rings and retainers.
3. Position the main cylinder (1) into the top frame assembly and install the retainers (2).
4. Lower the tonneau cover manually and relatch the rear bow (Refer to 23 - BODY/CONVERTIBLE TOP - STANDARD PROCEDURE).
5. Connect the negative battery cable.

