

4-6 DRIVEABILITY AND EMISSIONS CONTROLS

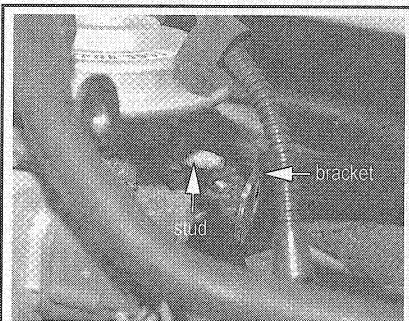


Fig. 21 On the 4.6L engine, remove the nut and the brake booster bracket from the EGR mounting stud



Fig. 22 Using a suitable size wrench, loosen the EGR valve-to-exhaust manifold tube and . . .



Fig. 23 . . . remove the tube from the EGR valve

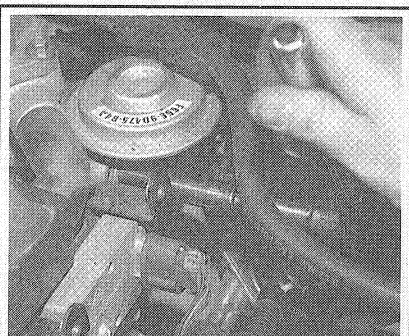


Fig. 24 Remove the EGR valve mounting bolts and . . .

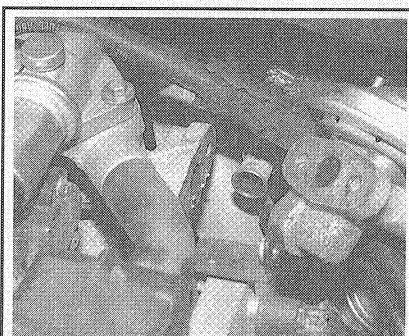


Fig. 25 . . . remove the EGR valve from the intake manifold

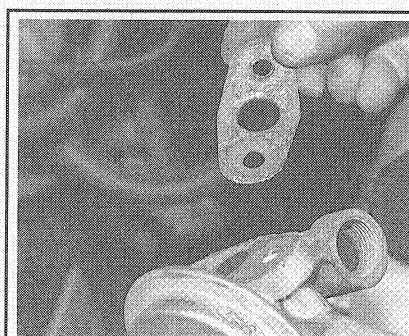


Fig. 26 Remove the EGR valve gasket and . . .

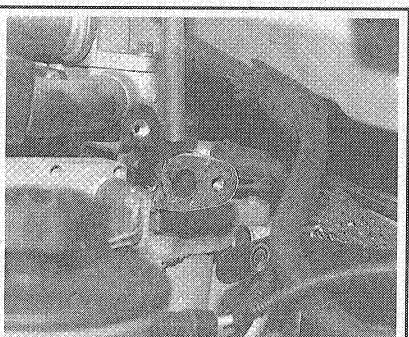


Fig. 27 . . . thoroughly clean the EGR valve mounting surface

ket, and clean the gasket mating surfaces on the valve and the intake manifold.

To install:

7. Install the EGR valve, along with a new gasket, on the intake manifold, then install and tighten the mounting bolts.
8. Connect the EGR valve-to-exhaust manifold tube to the valve, then tighten the tube nut to 25–35 ft. lbs. (34–47 Nm).
9. Connect the vacuum hose to the EGR valve.
10. On the 4.6L engine install the brake booster bracket and the retaining nut.
11. Connect the negative battery cable.

5.0L ENGINE

1. Disconnect the negative battery cable.
2. Remove the air cleaner outlet tube.
3. Detach the EVP sensor connector.
4. Disconnect the EGR valve-to-exhaust manifold tube from the EGR valve.
5. Remove the vacuum hose from the EGR valve.

6. Remove the EGR valve mounting bolts, then separate the valve from the intake manifold.

7. Remove and discard the old EGR valve gasket, and clean the gasket mating surfaces on the valve and the intake manifold.

To install:

➔ **If replacing the EGR valve, transfer the EVP sensor onto the new valve.**

8. Install the EGR valve, along with a new gasket, on the upper intake manifold, then install and tighten the mounting bolts.

9. Connect the EGR valve-to-exhaust manifold tube to the valve, then tighten the tube nut to 25–35 ft. lbs. (34–47 Nm).

10. Connect the vacuum hose to the EGR valve.

11. Attach the EVP sensor connector.
12. Install the air cleaner outlet tube.
13. Connect the negative battery cable.

ELECTRONIC ENGINE CONTROLS

Powertrain Control Module (PCM)

OPERATION

The Powertrain Control Module (PCM) performs many functions on your vehicle. The module accepts information from various engine sensors and computes the required fuel flow rate

necessary to maintain the correct amount of air/fuel ratio throughout the entire engine operational range.

Based on the information that is received and programmed into the PCM's memory, the PCM generates output signals to control relays, actuators and solenoids. The PCM also sends out a command to the fuel injectors that meters the appropriate quantity of fuel. The module automatically senses and compensates for any changes in altitude when driving your vehicle.

Oxygen Sensor

OPERATION

➔ **See Figure 28**

The oxygen (O₂) sensor is a device that produces an electrical voltage when exposed to the oxygen present in the exhaust gases. The sensor is mounted in the exhaust system, usually in the