

## 5-6 FUEL SYSTEM

5. Disconnect the PCV system by removing the hose from the fitting on the rear of the upper manifold.

6. Remove the nut retaining the EGR transducer to the upper intake manifold. Loosen the EGR tube at the exhaust manifold, then disconnect at the EGR valve.

7. Remove the two bolts retaining the EGR valve to the upper intake manifold, then remove the EGR valve and the EGR transducer as an assembly.

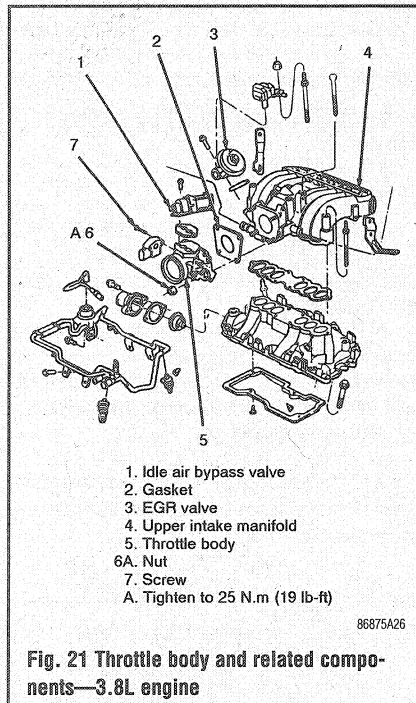
8. Remove the two canister purge lines from the fittings on the throttle body.

9. Remove the six upper intake manifold retaining bolts.

10. Remove the two retaining bolts on the front and rear edges of the upper intake manifold where the manifold support brackets are located.

11. Remove the nut retaining the alternator bracket to the upper intake manifold, then remove the two bolts retaining the alternator bracket to the water pump and alternator.

12. Remove the upper intake and throttle body as an assembly from the lower intake manifold.



**Fig. 21 Throttle body and related components—3.8L engine**

### To install:

13. Clean and inspect the mating surfaces of the lower and upper intake manifold.

14. Position a new gasket on the lower intake manifold mounting surface. Using alignment studs will make the job easier.

15. Install the upper intake manifold and throttle body assembly to the lower intake manifold. If alignment studs are not used, make sure the gasket stays in place.

16. Install the four center retaining bolts and two studs to the upper manifold and tighten to 8 ft. lbs. (10 Nm). Repeat, in sequence, in two steps:

a. Step 1: 15 ft. lbs. (20 Nm).

b. Step 2: 24 ft. lbs. (32 Nm).

17. Install the two bolts retaining the manifold support brackets to the upper manifold, then tighten to 19 ft. lbs. (25 Nm).

18. Position the alternator bracket, then install the two retaining bolts to the water pump and alternator. Install the alternator bracket to the upper intake manifold retaining nut, then tighten to 19 ft. lbs. (26 Nm).

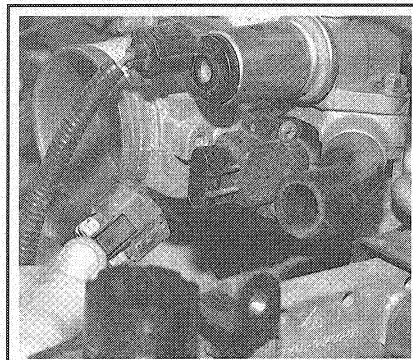
19. Connect the EGR valve to the EGR tube, making sure that the tube is properly seated in the EGR valve. Connect the EGR valve to the upper manifold, then tighten to 19 ft. lbs. (26 Nm).

20. Install the canister purge lines to the fittings on the throttle body.

21. Connect the PCV hose to the rear of the upper manifold.

22. Connect the vacuum lines to the vacuum tree, EGR valve, and fuel pressure regulator.

23. Position the throttle linkage bracket with cables to the upper intake manifold. Install the two retaining bolts, then tighten them to 13 ft. lbs. (17



**Fig. 22 Detach the TP sensor connector**

Nm). Connect the throttle cable and the transaxle cable to the throttle body.

24. Engage the air bypass valve, TP sensor and EGR position sensor electrical connectors.

⇒ If the lower intake manifold was removed, fill and bleed the cooling system.

### AIR INTAKE THROTTLE BODY

♦ See Figure 21

1. Disconnect the negative battery cable.  
2. Disengage the TP sensor and air bypass valve electrical connectors.

3. Remove the four throttle body retaining bolts. Remove the throttle body assembly, then remove and discard the gasket between the throttle body and the upper intake manifold.

4. If scraping is necessary, be careful not to damage the air bypass valve or throttle body gasket surfaces. Also, do not allow gasket material to drop into the throttle body.

### To install:

5. Install the throttle body using a new gasket on the four studs of the upper intake manifold. Tighten the retaining nuts to 19 ft. lbs. (26 Nm).

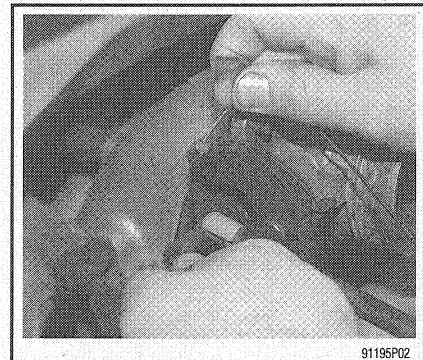
6. Engage the throttle position sensor and the idle air bypass valve.

7. Connect the negative battery cable.

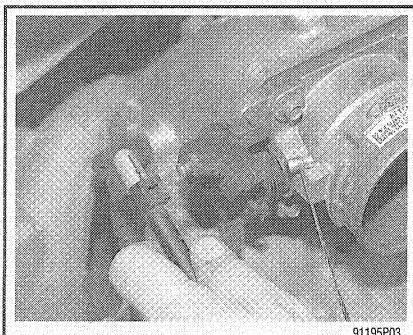
### 4.6L Engine

♦ See Figures 22 thru 29

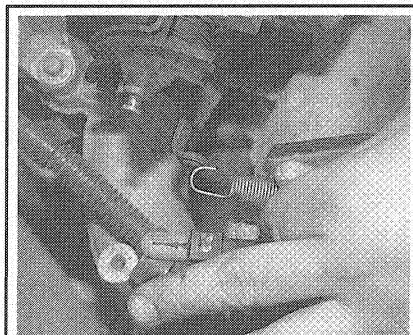
1. Disconnect the negative battery cable.  
2. Remove the air cleaner outlet tube from the throttle body.



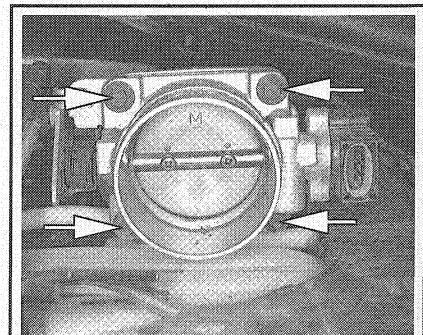
**Fig. 23 Disconnect the accelerator cable from the throttle lever**



**Fig. 24 If equipped with speed control, disconnect the speed control actuator from the throttle lever**



**Fig. 25 Disconnect the accelerator return spring from the throttle body**



**Fig. 26 Remove the four retaining bolts and . . .**