

## 3-6 ENGINE AND ENGINE OVERHAUL

80. Fill the cooling system with the proper type and quantity of coolant. Fill the crankcase with the proper type and viscosity of motor oil to the required level.

81. Have a MVAC certified evacuate, pressure test and recharge the A/C system, using the proper equipment.

82. Start the engine and check for leaks.

### 4.6L Engine except Continental

#### See Figures 9 thru 14

1. Disconnect the negative, then the positive battery cable. Drain the crankcase and the cooling system into suitable containers.

**➔ If your vehicle is equipped with air conditioning, refer to Section 1 for information regarding the implications of servicing your A/C system yourself. Only an MVAC-trained, EPA-certified, automotive technician should service the A/C system or its components.**

2. Properly relieve the fuel system pressure.
3. Drain and recycle the engine coolant.
4. Relieve the fuel system pressure and disconnect the fuel lines; refer to Section 5. Discharge the air conditioning system; refer to Section 1.
5. Mark the position of the hood on the hinges and remove the hood.
6. Remove the cooling fan, shroud, and radiator.
7. Remove the wiper module and support bracket. Remove the air inlet tube.
8. Remove the 42-pin connector from the

retaining bracket on the brake vacuum booster. Disconnect the 42-pin connector and transmission harness connector and position aside.

9. Disconnect the accelerator and cruise control cables. Disconnect the throttle valve cable.

10. Disconnect the electrical connector and vacuum hose from the purge solenoid. Disconnect the power supply from the power distribution box and starter relay.

11. Disconnect the vacuum supply hose from the throttle body adapter vacuum port. Disconnect the heater hoses.

12. Disconnect the alternator harness from the fender apron and junction block. Disconnect the air conditioning hoses from the compressor.

13. Disconnect the Electronic Variable Orifice (EVO) sensor connector from the power steering pump and disconnect the body ground strap from the dash panel.

14. Raise and safely support the vehicle.

15. Disconnect the exhaust system from the exhaust manifolds and support with wire hung from the crossmember.

16. Remove the retaining nut from the transmission line bracket and remove the 3 bolts and stud retaining the engine to the transmission knee braces.

17. Remove the starter. Remove the 4 bolts retaining the power steering pump to the engine block and position aside.

18. Remove the plug from the engine block to access the torque converter retaining nuts. Rotate the crankshaft until each of the 4 nuts is accessible and remove the nuts. Matchmark the converter and flexplate with a dab of paint to ease installation.

19. Remove the 6 transmission-to-engine retaining bolts. Remove the engine mount through bolts, 2 on the left mount and 1 on the right mount.

20. Lower the vehicle. Support the transmission with a floor jack and remove the bolt retaining the right engine mount to the lower engine bracket.

21. Install an engine-lifting bracket to the left cylinder head on the front and the right cylinder head on the rear. Connect suitable engine lifting equipment to the lifting brackets.

22. Raise the engine slightly and carefully separate the engine from the transmission.

23. Carefully lift the engine out of the engine compartment and position on a workstand. Remove the engine lifting equipment.

#### To install:

24. Install the engine lifting brackets to the left cylinder head on the front and the right cylinder head on the rear. Connect the engine lifting equipment to the brackets and remove the engine from the workstand.

25. Carefully lower the engine into the engine compartment. Start the converter pilot into the flexplate and align the paint marks on the flexplate and torque converter. Make sure the studs on the torque converter align with the holes in the flexplate.

26. Fully engage the engine to the transmission and lower onto the mounts. Remove the engine lifting equipment and brackets. Install the bolt retaining the right engine mount to the frame.

27. Raise and safely support the vehicle. Install the 6 engine-to-transmission bolts and tighten to 30–44 ft. lbs. (40–60 Nm).

28. Install the engine mount through bolts and tighten to 15–22 ft. lbs. (20–30 Nm). Install the 4

