

3-8 ENGINE AND ENGINE OVERHAUL

9. Disconnect the oil pressure sending unit wire from the sending unit. Disconnect the fuel lines; refer to Section 5.

10. Disconnect the accelerator cable from the throttle body. Disconnect the throttle valve rod/cable. Disconnect the cruise control cable, if equipped.

11. Disconnect the throttle valve vacuum line from the intake manifold, if equipped. Disconnect the transmission filler tube bracket from the cylinder block.

12. Disconnect the air conditioning lines and electrical connectors at the compressor; refer to Section 6. Plug the lines and the compressor fittings to prevent the entrance of dirt and moisture.

13. Disconnect the power steering pump bracket from the cylinder head. Remove the drive belt. Position the power steering pump aside in a position that will prevent the fluid from leaking.

14. Disconnect the power brake vacuum line from the intake manifold.

15. Disconnect the heater hoses from the heater tubes. Disconnect the electrical connector from the coolant temperature-sending unit.

16. Remove the transmission-to-engine upper bolts.

17. Disconnect the wiring harness at the two 10-pin connectors.

18. Raise and safely support the vehicle. Disconnect the starter cable from the starter and remove the starter.

19. Disconnect the muffler inlet pipes from the exhaust manifolds. Disconnect the engine mounts from the chassis. Disconnect the downstream thermactor tubing and check valve from the right exhaust manifold stud, if equipped.

20. Disconnect the transmission cooler lines from the retainer and remove the transmission inspection cover.

21. Match mark the converter and flywheel with a dab of paint to ease installation. Disconnect the flywheel from the converter and secure the converter assembly in the transmission. Remove the remaining transmission-to-engine bolts.

22. Lower the vehicle and then support the transmission. Attach suitable engine lifting equipment and hoist the engine.

23. Raise the engine slightly and carefully pull it from the transmission. Carefully lift the engine out of the engine compartment. Avoid bending or damaging the rear cover plate or other components. Install the engine on a workstand.

To install:

24. Attach the engine lifting equipment and remove the engine from the workstand.

25. Lower the engine carefully into the engine compartment. Make sure the exhaust manifolds are properly aligned with the muffler inlet pipes.

26. Start the converter pilot into the crankshaft. Align the paint mark on the flywheel to the paint mark on the torque converter.

27. Install the transmission upper bolts, making sure the dowels in the cylinder block engage the transmission.

28. Install the engine mount-to-chassis attaching fasteners and remove the engine lifting equipment.

29. Raise and safely support the vehicle. Connect both muffler inlet pipes to the exhaust manifolds. Install the starter and connect the starter cable.

30. Remove the retainer holding the torque converter in the transmission. Attach the converter to the flywheel. Install the converter housing inspection cover and install the remaining transmission attaching bolts.

31. Remove the support from the transmission and lower the vehicle.

32. Connect the wiring harness at the two 10-pin connectors.

33. Connect the coolant temperature sending unit wire and connect the heater hoses. Connect the wiring to the metal heater tubes and the engine coolant temperature, air charge temperature and oxygen sensors.

34. Connect the transmission filler tube bracket. Connect the manual shift rod and the retracting spring. Connect the throttle valve vacuum line, if equipped.

35. Connect the accelerator cable and throttle valve cable. Connect the cruise control cable, if equipped.

36. Connect the fuel lines and the oil pressure sending unit wire.

37. Install the pulley, water pump belt and fan/clutch assembly.

38. Position the alternator bracket and install the alternator bolts. Connect the alternator and ground cables. Adjust the drive belt tension.

39. Unplug and connect the refrigerant lines and connect the electrical connector to the compressor.

40. Install the power steering drive belt and power steering pump bracket. Connect the power brake vacuum line.

41. Place the shroud over the fan and install the radiator. Connect the radiator hoses and the transmission oil cooler lines. Position the shroud and install the bolts.

42. Connect the heater hoses to the heater

tubes. Fill the cooling system. Fill the crankcase with the proper type and quantity of engine oil. Adjust the transmission throttle linkage.

43. Connect the positive and then the negative battery cables. Start the engine and bring to normal operating temperature. Check for leaks. Check all fluid levels.

44. Install the air intake duct assembly. Install the hood, aligning the marks that were made during removal.

45. Have a MVAC certified evacuate and charge the air conditioning system.

46. Road test the vehicle.

Rocker Arm (Valve) Cover

REMOVAL & INSTALLATION

3.8L Engine

♦ See Figures 15, 16, 17, 18 and 19

1. Disconnect the negative battery cable.
2. Tag and disconnect the ignition wires from the spark plugs.

3. Remove the ignition wire separators from the valve cover retaining bolt studs.

4. If the left cover is being removed, remove the upper intake manifold. For details, please refer to the procedure located later in this section.

5. If the right cover is being removed, position the air cleaner assembly aside and remove the PCV valve.

6. If the left cover is being removed, removing the oil filler cap is not necessary.

7. Remove the rocker arm/valve cover mounting bolts, then remove the cover.

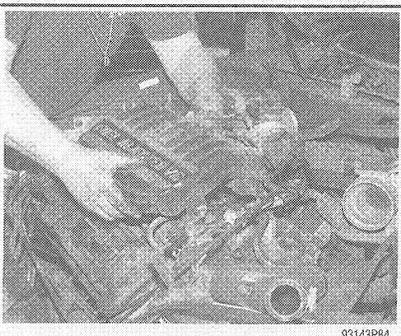
To install:

8. Lightly oil all bolt and stud bolt threads, then, using solvent, clean the cylinder head and valve cover sealing surface to remove all gasket material and dirt.

9. Position a new rocker arm/valve cover gasket on the cylinder head, then install the retaining bolts. Make sure to note the position of the ignition wire separator stud bolts, then tighten the retaining bolts to 80–106 inch lbs. (9–12 Nm).

10. If removed, install the upper intake manifold. For details, please refer to the procedure located later in this section.

11. If the left cover is being installed, install the oil filler cap.



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Fig. 15 Removing the upper intake manifold to access the left side rocker cover



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Fig. 16 Remove the 5 fasteners holding the rocker cover in place



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Fig. 17 Lift the rocker cover straight up to clear the valve train, be careful with the ignition wires