

bolts/studs. Remove the upper intake manifold and gasket.

17. Remove the injectors and fuel injection supply manifold assembly.

18. Remove the heater water outlet hose.

➔ **When removing the intake manifold retainers keep them in order so they can be installed in their original positions.**

19. Remove the lower intake manifold attaching bolts/studs, then remove the lower intake manifold. Remove the manifold side gaskets and end seals. Discard and replace with new gaskets and end seals.

➔ **The manifold is sealed at each end with RTV-type sealer. To break the seal, it may be necessary to pry on the front of the manifold with a small or medium pry bar. If it is necessary to pry on the manifold, use care to prevent damage to the machined surfaces.**

To install:

➔ **When installing the upper and/or lower intake manifold(s), ALWAYS use a new gasket.**

20. Lightly oil all attaching bolt and stud threads before installation.

➔ **When using silicone rubber sealer, assembly must occur within 15 minutes after sealer application. After this time, the sealer may start to set-up and its sealing effectiveness**

may be reduced. The lower intake manifold, cylinder head and cylinder block mating surfaces should be clean and free of oil and gasket material. Use a suitable solvent to clean these surfaces.

21. Apply Gasket Adhesive to each cylinder head mating surface. Press the new intake manifold gaskets into place, using locating pins as necessary to aid in assembly alignment.

22. Apply a 1/8 in. (3-4mm) bead of silicone sealer at each corner where the cylinder head joins the cylinder block.

23. Install the front and rear intake manifold end seals.

24. Carefully lower the intake manifold into position onto the cylinder block and between the cylinder heads. Use locating pins as necessary to guide the manifold.

25. Install the retaining bolts and stud bolts in their original locations.

26. For vehicles through 1991, torque the retaining bolts in numerical sequence to the following specifications in 3 steps:

- a. Step 1: 8 ft. lbs. (11 Nm)
- b. Step 2: 15 ft. lbs. (20 Nm)
- c. Step 3: 24 ft. lbs. (32 Nm)

27. For 1992-94 vehicles torque the retaining bolts in numerical sequence to the following specifications in 2 steps:

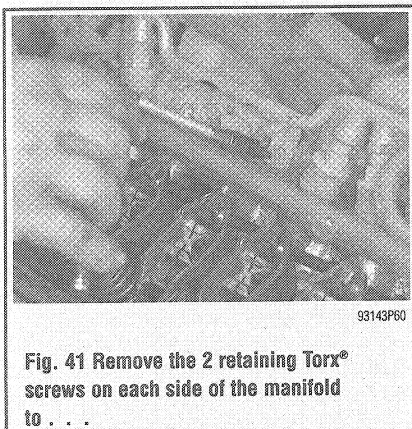


Fig. 41 Remove the 2 retaining Torx® screws on each side of the manifold to . . .



Fig. 42 . . . Release the fuel injection rail. Carefully pull the injector out of the manifold, leaving it connected to the rail

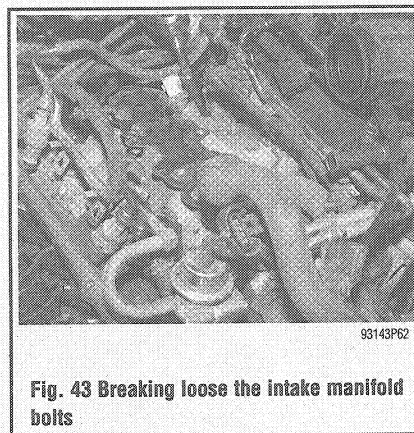


Fig. 43 Breaking loose the intake manifold bolts

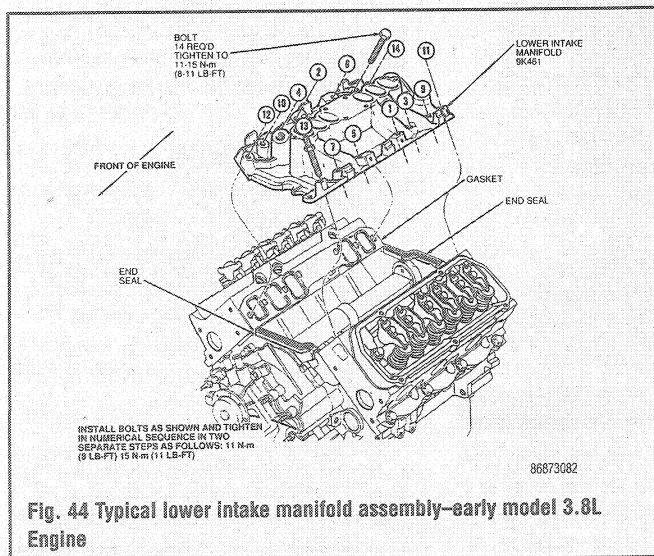


Fig. 44 Typical lower intake manifold assembly—early model 3.8L Engine

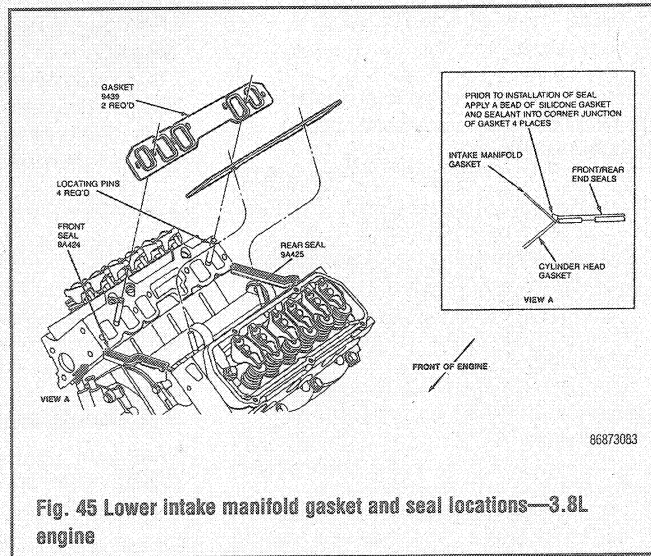


Fig. 45 Lower intake manifold gasket and seal locations—3.8L engine