

3-18 ENGINE AND ENGINE OVERHAUL

4. Remove the splash shield from the lower radiator support and the front sub-frame.
5. Remove the dual converter Y pipe.
6. Loosen the retaining nut and remove the LH secondary air injection manifold tube from the LH exhaust manifold.
7. Remove the eight exhaust manifold-to-cylinder head retaining nuts.
8. Remove the LH exhaust manifold and exhaust manifold gaskets.

To install:

9. Clean the mating surfaces of the exhaust manifold and the cylinder head.
10. Install the new exhaust manifold gasket on the LH cylinder head. Lightly press the exhaust manifold gasket over the exhaust manifold-positioning studs.
11. Install the LH exhaust manifold and install the eight retaining nuts. Tighten the retaining nuts in sequence to 13-16 ft. lbs. (18-22 Nm)
12. Connect the LH secondary air injection manifold tube to the LH exhaust manifold. Tighten the nut for the LH secondary air injection manifold tube to the LH exhaust manifold to 25-34 ft. lbs. (34-46Nm)
13. Install the dual converter Y pipe.
14. Install the splash shield to front sub-frame and lower radiator support. Tighten the retaining screws securely.
15. Lower the vehicle and connect the negative battery cable.
16. Check the exhaust system for leaks. Turn on the air suspension.

RIGHT-HAND SIDE

1. Disable the air suspension.
2. Disconnect the negative battery cable.
3. Raise and safely support the vehicle securely on a hoist.
4. Disconnect the heated oxygen sensors at the wiring connectors.
5. Remove the dual converter Y pipe.
6. Remove the exhaust connector retaining bolts and exhaust connector and muffler inlet pipe gasket from the RH exhaust manifold
7. Remove the EGR valve to exhaust manifold tube from the EGR valve tube to manifold connector using a 22 mm crowfoot wrench.
8. Loosen the retaining nut and remove the RH secondary air injection manifold tube from the RH exhaust manifold.
9. Remove the eight exhaust manifold-to-cylinder head retaining nuts.
10. Remove the RH exhaust manifold from the RH cylinder head by gaining access through the RH wheel opening area.
11. Remove the exhaust manifold gasket from the RH cylinder head. Discard the exhaust manifold gasket.

To install:

12. Clean the mating surfaces of exhaust manifold and cylinder head.
13. If removed, install the EGR valve tube to manifold connector to the RH exhaust manifold. Tighten the EGR valve tube to manifold connector to 33-48 ft. lbs. (45-65 Nm)
14. Position the new exhaust manifold gasket and the exhaust manifold onto the cylinder head. Install the eight retaining nuts. Tighten in sequence to 13-16 ft. lbs. (18-22 Nm)
15. Connect the RH secondary air injection

manifold tube to the RH exhaust manifold. Tighten the nut for the RH secondary air injection manifold tube to the RH exhaust manifold to 25-34 ft. lbs. (34-46 Nm)

16. Connect the EGR valve to exhaust manifold tube to the EGR valve tube to manifold connector. Tighten the nut to 30-33 ft. lbs. (40-45 Nm)

17. Install the exhaust connector with a new muffler inlet-pipe-gasket and retaining bolts to the RH exhaust manifold. Tighten the retaining bolts in two steps.

a. Tighten the bolts in sequence to 13-17 ft. lbs. (17-23 Nm).

b. Tighten the bolts in sequence to 30-40 ft. lbs. (41-54 Nm)

18. Install the dual converter Y pipe, and connect the heated oxygen sensors the wiring harness connectors.

19. Lower the vehicle and connect the negative battery cable.

20. Check the exhaust system for leaks. Turn on the air suspension.

5.0L Engine

1. Disconnect the negative battery cable.
2. Remove the thermactor hardware from the right exhaust manifold.
3. Remove the air cleaner and inlet duct, if necessary.
4. Tag and disconnect the spark plug wires. Remove the spark plugs.
5. Disconnect the engine oil dipstick tube from the exhaust manifold stud.
6. Raise and safely support the vehicle. Disconnect the exhaust pipes from the exhaust manifolds.
7. Remove the engine oil dipstick tube by carefully tapping upward on the tube. Disconnect the oxygen sensor connector.
8. Lower the vehicle.
9. Remove the attaching bolts and washers and remove the exhaust manifolds.

To install:

10. Clean the manifold, cylinder head, and exhaust pipe mating surfaces.
11. Position the manifolds on the cylinder heads and install the mounting bolts and washers. Working from the center to the ends, tighten the bolts to 18-24 ft. lbs. (24-32 Nm).
12. Install the engine oil dipstick tube. Connect the oxygen sensor connector.
13. Install the spark plugs and connect the spark plug wires.
14. Install the thermactor hardware to the right exhaust manifold. Install the air cleaner and inlet duct, if removed.
15. Raise and safely support the vehicle. Position the exhaust pipes to the manifolds. Alternately tighten the exhaust pipe flange nuts to 20-30 ft. lbs. (27-41 Nm).
16. Lower the vehicle, start the engine, and check for exhaust leaks.

Radiator

CAUTION

Never open, service, or drain the radiator or cooling system when hot; serious burns can

occur from the steam and hot coolant. In addition, when draining engine coolant, keep in mind that cats and dogs are attracted to ethylene glycol antifreeze and could drink any that is left in an uncovered container or in puddles on the ground. This will prove fatal in sufficient quantities. Always drain coolant into a sealable container. Coolant should be reused unless it is contaminated or is several years old.

REMOVAL & INSTALLATION

1988-94 Continental

See Figures 61, 62, 63 and 64

1. Disconnect the negative battery cable.
2. Loosen the radiator cap.
3. Drain the cooling system by opening the draincock located at the lower rear corner of the radiator inlet tank.
4. Detach the rubber overflow tube from the radiator.
5. Remove 2 upper shroud-retaining screws and lift the shroud out of the lower retaining clip(s).
6. Disconnect the electric cooling fan motor wires and remove the fan and shroud assembly.
7. Loosen the upper and lower hose clamps at the radiator and remove the hoses from the radiator tank connectors.
8. If equipped with an automatic transaxle, disconnect the transmission oil cooling lines from the transmission oil cooler radiator fittings using a disconnect tool.
9. Remove 2 hex nuts from the right radiator support bracket and 2 screws from the left radiator support bracket and remove the brackets. For 1993-94, remove the two hex nuts from the right hand radiator support bracket, then remove the two retaining nuts from the left hand radiator support bracket, then remove both brackets.
10. Tilt the radiator rearward approximately 1 in. (25mm) and lift it directly upward, clear of the radiator support.
11. If the lower or upper radiator hose is to be replaced, loosen the clamp at the engine end and, using a twisting motion, slip the hose off the connections.
12. Remove the radiator lower support rubber pads, if pad replacement is necessary.



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Fig. 61 Remove the radiator retaining bolts/screws