

ENGINE - 4.0L (Continued)

INSTALLATION

CAUTION: When installing the engine into a vehicle equipped with an automatic transmission, be careful not to damage the trigger wheel on the engine flywheel.

(1) Attach a lifting device to the engine and lower the engine into the engine compartment. For easier installation, it may be necessary to remove the engine mount bracket as an aid in alignment of the engine to the transmission.

(2) Align the transmission torque converter housing with the engine.

(3) Loosely install the converter housing lower bolts and install the next higher bolt and nut on each side.

(4) Tighten all 4 bolts finger tight.

(5) Install the engine mount brackets (if removed).

(6) Lower the engine and engine mount brackets onto the engine compartment cushions. Install the bolts and finger tighten the nuts.

(7) Remove the engine lifting device.

(8) Raise and support the vehicle.

(9) Install the remaining engine flywheel/converter housing bolts. Tighten all bolts to 38 N·m (28 ft. lbs.) torque.

(10) Install the converter-to-drive plate bolts.

(11) Ensure the installation reference marks are aligned.

(12) Install the engine flywheel/converter housing access cover.

(13) Install the exhaust pipe support and tighten the screw.

(14) Install the engine bending brace (Refer to 9 - ENGINE/ENGINE BLOCK/STRUCT SUPPORT - INSTALLATION).

(15) Tighten the engine mount-to-bracket bolts.

(16) Connect the vehicle speed sensor wire connections and tighten the screws.

(17) Connect the exhaust pipe to the manifold.

(18) Install the engine starter motor (Refer to 8 - ELECTRICAL/STARTING/STARTER MOTOR - INSTALLATION).

(19) Connect the wires to the engine starter motor solenoid.

(20) Lower the vehicle.

(21) Connect all the vacuum hoses and wire connectors identified during engine removal.

(22) Remove protective caps from the power steering hoses.

(23) Connect the hoses to the fittings at the steering gear. Tighten the nut to 52 N·m (38 ft. lbs.) torque.

(24) Fill the pump reservoir with fluid.

(25) Inspect the fuel supply line o-ring(s) and replace if necessary. Connect fuel supply line to injector rail and verify connection by pulling outward on the line.

(26) Install the fuel line bracket to the intake manifold.

(27) Connect the coil rail electrical connectors and oil pressure switch connector.

(28) Connect the following electrical connectors:

- Power steering pressure switch
- Coolant temperature sensor
- Six (6) fuel injector connectors
- Intake air temperature sensor
- Throttle position sensor
- Map sensor
- Crankshaft position sensor
- Oxygen sensor
- Camshaft position sensor
- Generator connector and B+ terminal wire

(29) Connect all previously removed vacuum hoses.

(30) Connect the body ground strap.

(31) Install the throttle, transmission line pressure, and speed control cables to their mounting bracket and connect them to the throttle body.

(32) Connect the heater hoses at the engine thermostat housing and water pump.

(33) Install the fan assembly (Refer to 7 - COOLING/ENGINE/RADIATOR FAN - INSTALLATION).

(34) Place the fan shroud in position over the fan.

(35) Install the radiator (Refer to 7 - COOLING/ENGINE/RADIATOR - INSTALLATION).

(36) Connect the service valves to the A/C compressor ports, if equipped with A/C.

(37) Charge the air conditioner system (Refer to 24 - HEATING & AIR CONDITIONING/PLUMBING - STANDARD PROCEDURE).

(38) Connect the radiator hoses and automatic transmission fluid cooler pipes, if equipped.

(39) Install the fan shroud to the radiator or radiator/condenser (if equipped with A/C).

(40) Install upper radiator support.

(41) Connect the upper radiator hose and tighten the clamp.

(42) Connect the lower radiator hose and tighten the clamp.

(43) Fill crankcase with engine oil. (Refer to LUBRICATION & MAINTENANCE/FLUID CAPACITIES - SPECIFICATIONS) for correct capacities.

(44) Fill the cooling system with reusable coolant or new coolant (Refer to 7 - COOLING - STANDARD PROCEDURE).

(45) Align the hood to the scribe marks. Install the hood.

(46) Install the air cleaner assembly.

(47) Install the battery and connect the battery cable.