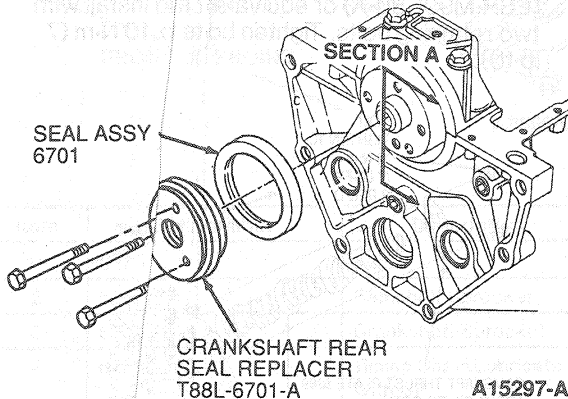
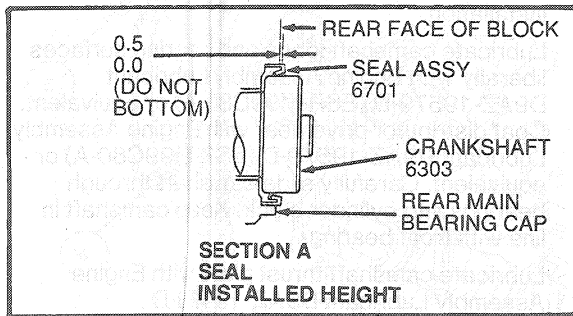


REMOVAL AND INSTALLATION (Continued)

- Screw in the threaded end of Jet Plug Remover T77L-9533-B. Use the slide hammer to remove seal.

Installation

- Apply engine oil to outer lips and inner seal edge.
- Position seal on Crankshaft Rear Seal Replacer T88L-6701-A. Position tool and seal to rear of engine. Alternate bolt tightening to seat the seal properly.
- Install engine as outlined.

**Camshaft****Tools Required:**

- Crankshaft Damper Removal Tool T58P-6316-D
- Vibration Damper Remover Adapter T82L-6316-B

Removal

- Remove engine from the vehicle as outlined and place on a workstand.
- Rotate crankshaft to 0 degrees at Top Dead Center (TDC) on the compression stroke.
- Remove throttle body. Refer to Section 03-04A, Fuel Charging and Controls.
- Disconnect fuel injector harness retaining stand off from inboard rocker arm cover studs. Carefully disconnect electrical connectors from each injector and remove fuel charging wiring from engine.

- Remove ignition wires from spark plugs by using a twisting motion on the rubber boot. Remove harness retaining stand offs from rocker arm cover studs.
- On unleaded gasoline only, mark distributor housing to block and note rotor position. Remove distributor retaining bolt and washer. Remove distributor.
- Remove ignition coil from rear of LH cylinder head.
- Remove rocker arm covers as outlined.
- Loosen cylinder No. 3 intake valve rocker arm retaining nut and rotate arm off of push rod and away from top of valve stem. Remove push rod.
- Remove generator assembly, brackets and belt tensioner and belt.

NOTE: Intake manifold assembly may be removed with fuel supply manifold and injectors in place.

- Remove intake manifold retaining bolts using a Torx® head socket. Before attempting to remove intake manifold, break the seal between the intake manifold and cylinder block. Wedge a large screwdriver or similar tool between intake manifold and block. Pry upward on tool using lug on top of front cover as a leverage point.
- Loosen rocker arm fulcrum retaining bolts enough to allow the rocker arm to be lifted off the push rods and rotated to one side.
- Remove push rods. Identify each push rod location. The push rods should be installed in their original location and position during assembly.
- Loosen roller tappet guide plate two retainer bolts. Remove guide plate retainer assembly from tappet valley.
- Remove tappet guide plates from tappets by lifting straight up.

NOTE: If the tappets are stuck in the bores due to excessive varnish or gum deposits, it may be necessary to use a claw type tool to aid removal. Rotate the tappet back and forth to loosen it from the deposits.

- Remove tappets by grasping each tappet and pulling in line with bore.
- Remove crankshaft pulley retaining bolts and remove pulley.
- Remove crankshaft damper retaining bolt and washer. Remove damper using Crankshaft Damper Removal Tool T58P-6316-D and Vibration Damper Remover Adapter T82L-6316-B.
- Remove oil pan assembly as outlined. Discard gasket.

NOTE: Water pump may be removed with front cover as an assembly. Do not remove bolts No. 11 through 15 to remove as an assembly. Refer to illustration for bolt location.