

5. Clean the gasket surfaces of the valve cover and cylinder head.
6. Coat the gasket contact surfaces of the valve cover and "UP" side of the valve cover gasket with oil resistant sealer. Allow to dry and then install gasket in valve cover, making sure locating tabs are properly positioned in slots in cover (Fig. 11).
7. Install 8 screws and torque to specification.
8. Install the air cleaner and all other hardware removed.
9. Run the engine at fast idle and check for oil leaks.

VALVE SPRING, RETAINER AND STEM SEAL

If the valve or valve seat has not been damaged, valve springs, seals and retainers may be replaced by holding the affected valve against its seat using compressed air. Use the tool shown in Fig. 12 installed in the spark plug hole. A minimum of 140 PSI line pressure is required. If air pressure does not hold the valve shut, the valve is damaged or burnt and the cylinder head must be removed and repaired (Part 21-01).

Removal

1. Remove the valve rocker arm cover and associated parts as required.
2. Remove the cam follower.
3. Using the tool shown in Fig. 12, compress the valve spring and remove the retainer locks, spring retainer, and valve spring. Remove and discard the stem seal.

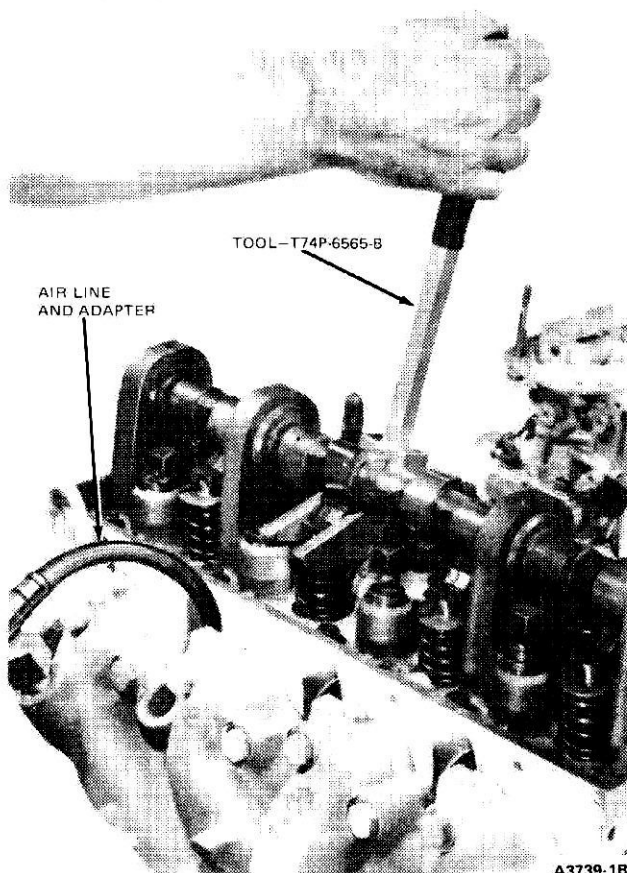


FIG. 12 Removing Valve Spring Retainer

4. If air pressure has forced the piston to the bottom of the cylinder, any removal of air pressure will allow the valve(s) to fall into the cylinder. A rubber band, tape or string wrapped around the end of the valve stem will prevent this condition and will still allow enough travel to check the valve for binds.
5. Inspect the valve stem for damage. Rotate the valve and check the stem tip for eccentric movement. Move the valve up and down through normal travel in the valve guide and check the stem for binds. If the valve has been damaged, it will be necessary to remove the cylinder head and repair as outlined in Part 21-01.

Installation

1. Install a new valve stem seal using a plastic installation cap. Use the tool shown in Fig. 13 and the procedure given in Fig. 14. Install the valve spring, retainer and locks. Turn off the air and remove the air line and adapter.
2. Apply Lubriplate or equivalent to all contact surfaces of the cam follower and install in position. Install the spark plug. **Be sure that the affected lash adjuster has been collapsed and released before rotating the camshaft.**
3. Install the rocker arm cover following the information given in Fig. 11.

INTAKE MANIFOLD

Information necessary to properly remove and install the intake manifold is given in Figs. 16, 17 and 18).

The special tool required to remove and install the carburetor is illustrated in Fig. 15. Carburetor installation is shown in Fig. 16.

EXHAUST MANIFOLD

Information necessary to properly remove and install the exhaust manifold is given in Fig. 19.

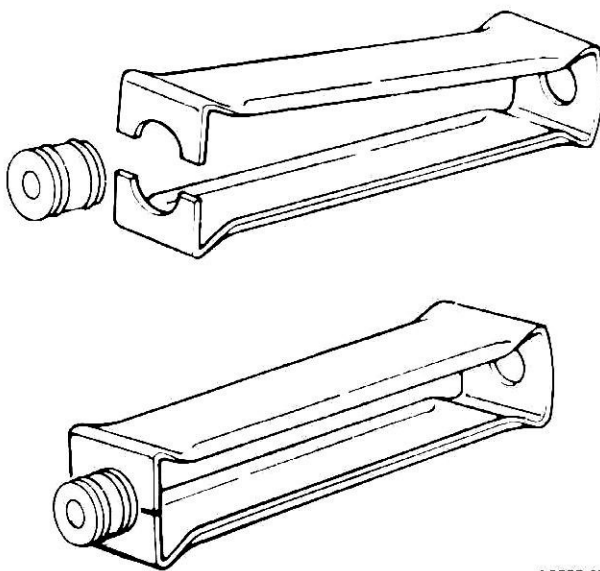


FIG. 13 Valve Stem Seal Installation Tool

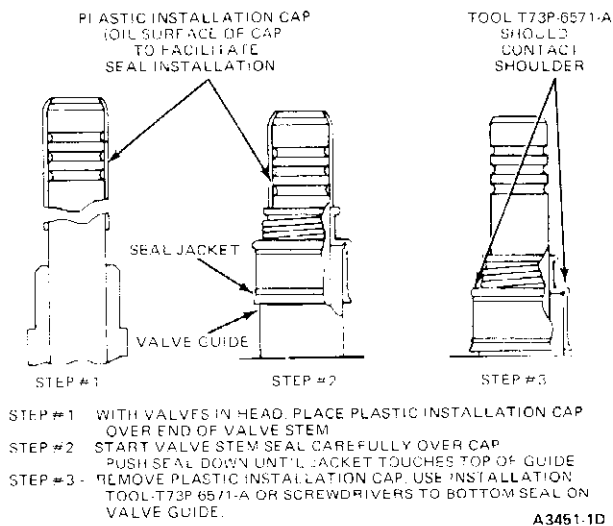


FIG. 14 Valve Stem Seal Installation

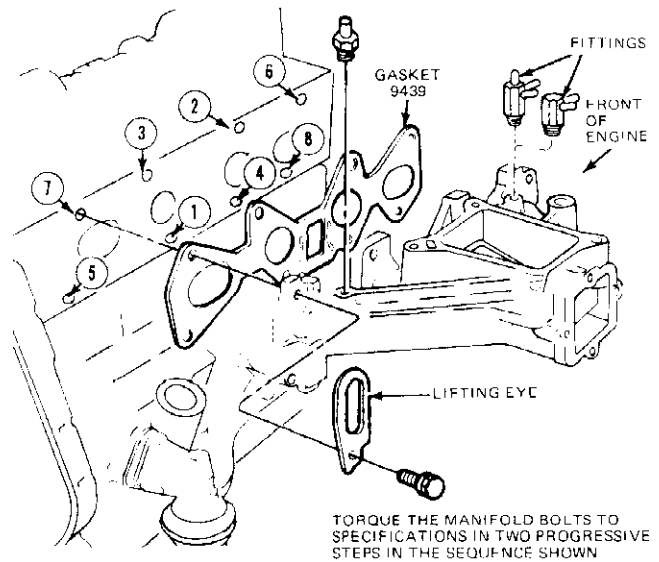


FIG. 16 Intake Manifold Installation

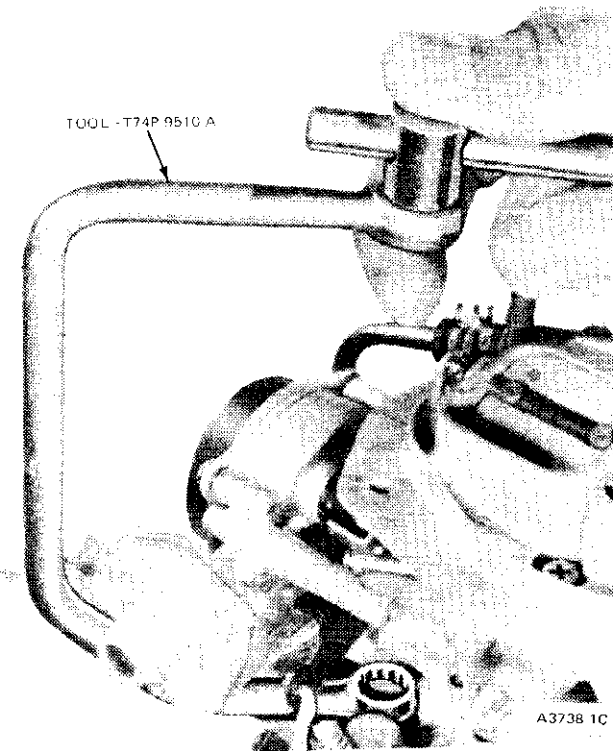


FIG. 15 Special Carburetor Wrench

CYLINDER HEAD

Information necessary to properly remove and install the cylinder head is given in Fig. 20. A disassembled view of the cylinder head is given in Fig. 42. Refer to the various other illustrations covering installation of the associated parts.

WATER PUMP

Provision for wrench clearance has been made in the timing belt inner cover, so only the outer cover must be removed in order to replace the water pump. Water pump and associated parts installation is illustrated in Fig. 21.

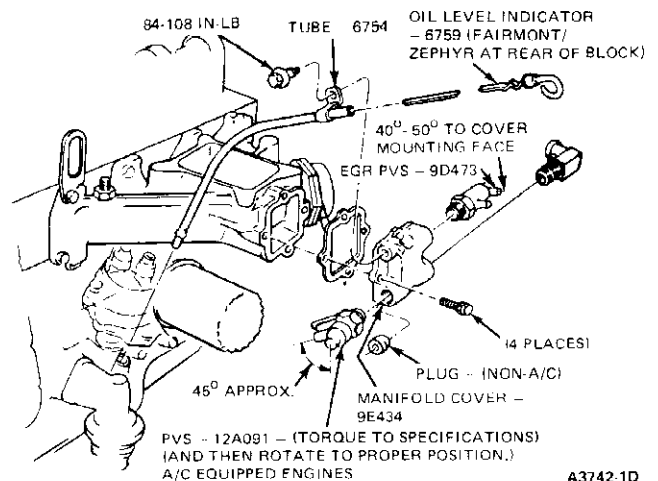


FIG. 17 Water Manifold Installation—Pinto/Bobcat/Mustang II Shown

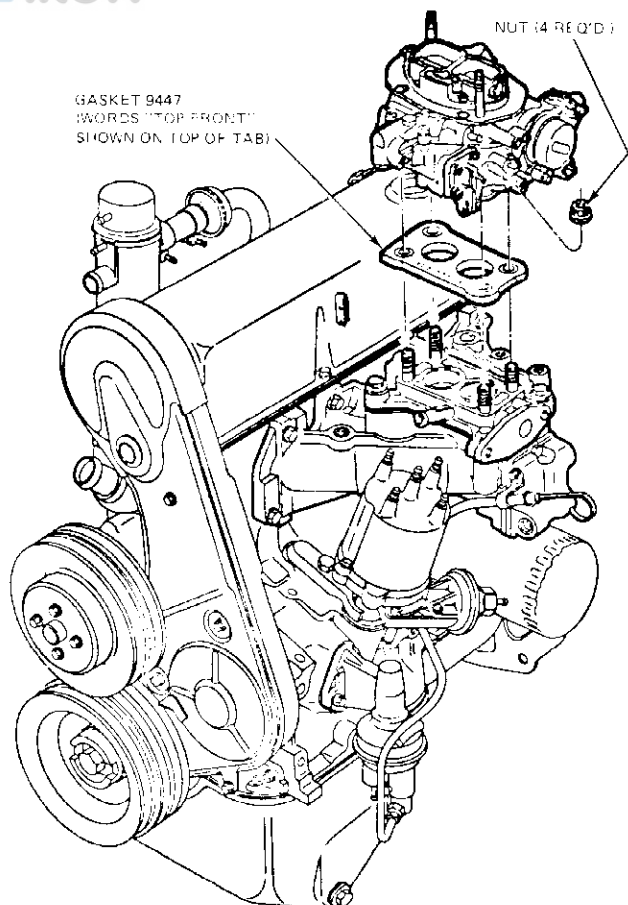
CYLINDER FRONT COVER, CAMSHAFT AND AUXILIARY SHAFT SEALS

The cylinder front cover, camshaft and the auxiliary shaft seals are replaced in the same manner with the same tools after the respective gear has been removed. **NOTE: Always use a new attaching bolt when replacing the camshaft sprocket or use new Teflon or equivalent sealing tape on the threads of the old bolt.**

Sprocket Removal And Installation

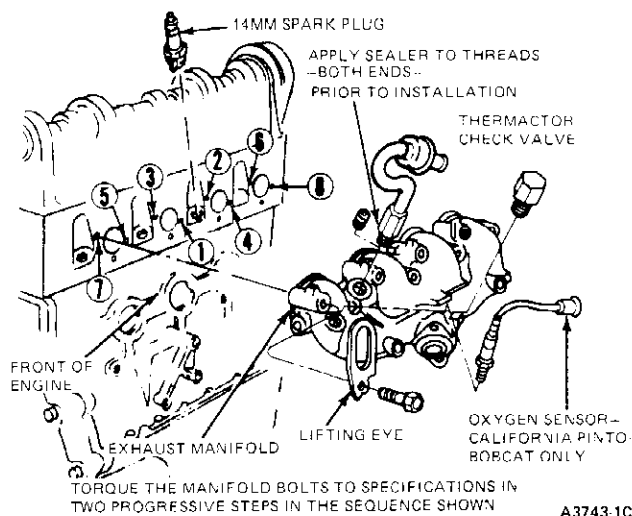
Fig. 22 shows the multi-purpose tool being used to pull the cam drive sprocket. This same tool is used in exactly the same manner to remove the auxiliary shaft sprocket.

Fig. 23 shows the same multi-purpose tool with the threaded puller insert removed, being used to hold the cam sprocket while the attaching bolt is installed and torqued. This is also typical of the auxiliary shaft sprocket installation.



A3741-1D

FIG. 18 Carburetor Installation



A3743-1C

FIG. 19 Exhaust Manifold Installation

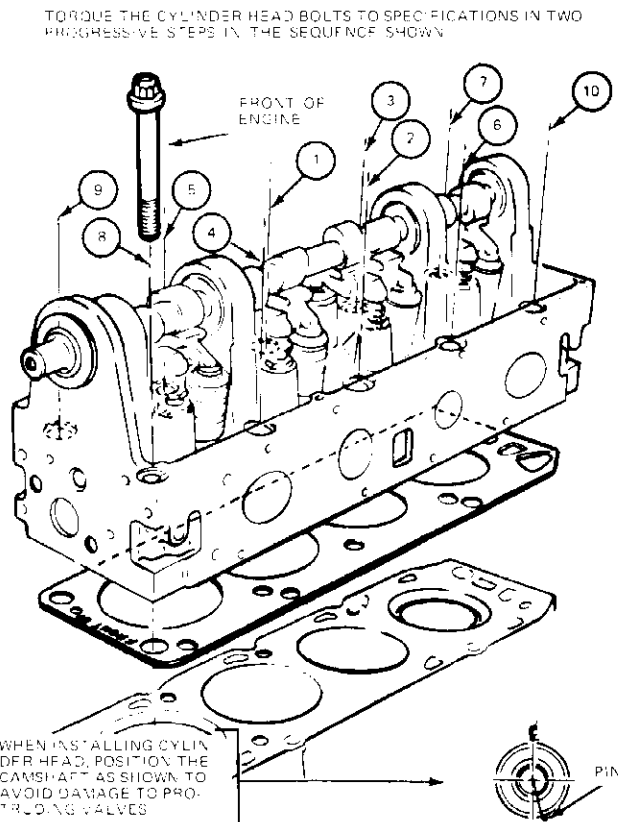
Fig. 24 shows the multi-piece tool used to pull the crankshaft drive sprocket off the crankshaft.

No special tool is required for installing the crankshaft sprocket on the crankshaft.

SEAL

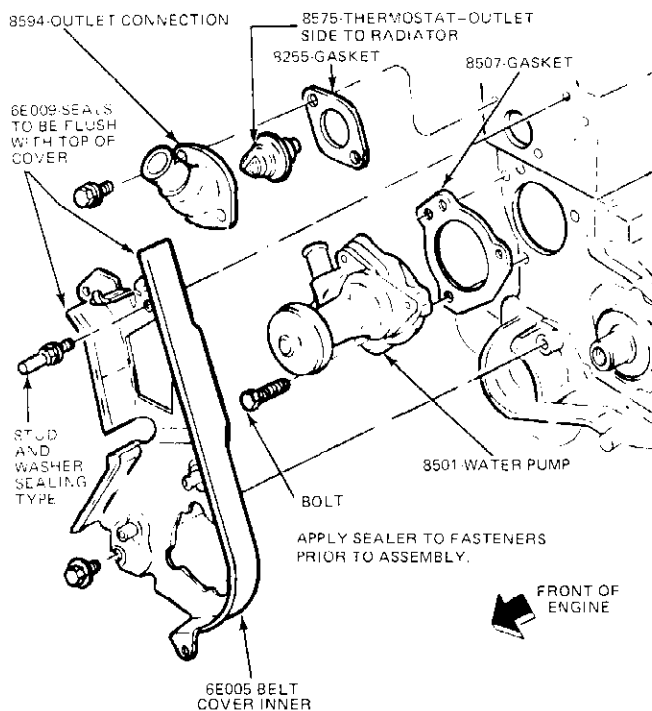
Removal

One common seal removal tool is used to remove all the seals.



A3744-1A

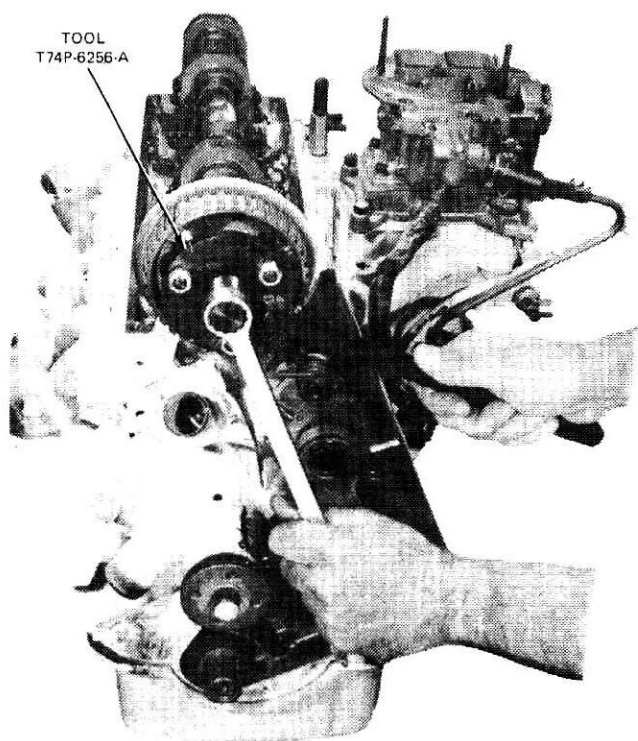
FIG. 20 Cylinder Head Installation



A3745-1C

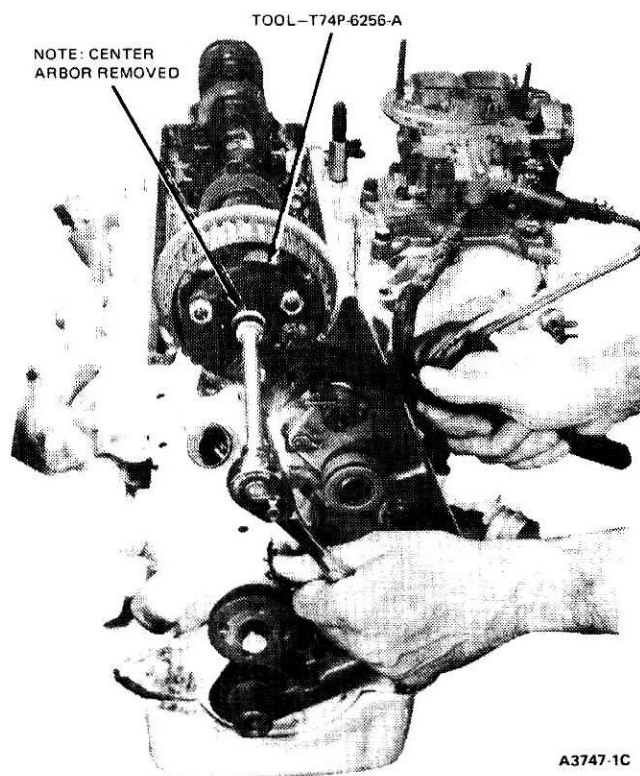
FIG. 21 Water Pump, Thermostat and Inner Timing Belt Cover Installation

Fig. 25 shows the tool being used to remove the camshaft seal. When positioning this tool, be sure that



A3746-1C

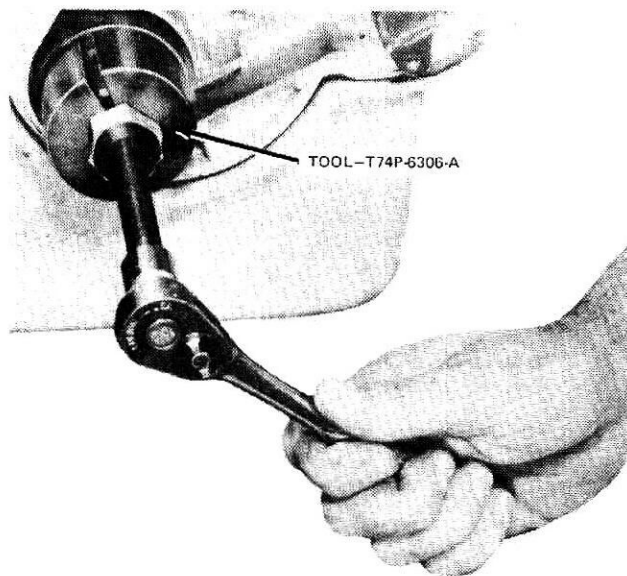
FIG. 22 Removing Cam or Auxiliary Shaft Sprocket



A3747-1C

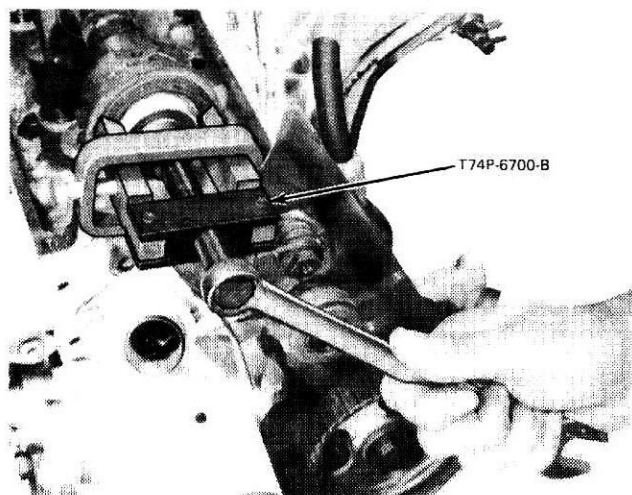
FIG. 23 Installing Cam or Auxiliary Shaft Sprocket

the jaws are gripping the thin edge of the seal very tightly before operating the jack-screw portion of the tool.



A3748-1A

FIG. 24 Removing Crankshaft Sprocket



A3749-1C

FIG. 25 Removing Cam or Auxiliary Shaft Seal

Fig. 26 shows the tool being used to remove the cylinder front cover seal.

Installation

One common tool with a stepped, threaded arbor is used to install all the seals. The tool acts as a press, using the internal threads of the various shafts as a pilot.

Fig. 27 shows the special tool being used to install the camshaft seal. This is typical of the other seal installations.

CAMSHAFT TIMING BELT

Installation information for the complete cam drive mechanism is given in Fig. 30. Associated parts are illustrated in Fig. 42 and 43.

TIMING BELT TENSIONER

Illustrated instructions are given in Fig. 30 covering installation of the timing belt tensioner. A close-up view of the tensioner assembly is shown in Fig. 33.