

## DISASSEMBLY AND ASSEMBLY (Continued)

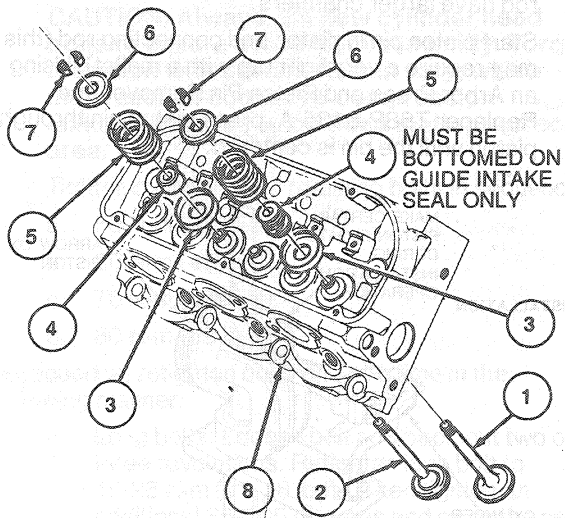
- Ensure bearing inserts and bearing bore in connecting rod and cap are clean. Foreign material under inserts will distort bearing and cause a failure. Install bearing inserts in connecting rod and cap with tangs fitting in slots provided.

**Cylinder Head****Tools Required:**

- Valve Spring Compressor T81P-6513-A

**Disassembly**

- Remove rocker arm fulcrum retaining bolts, fulcrums and rocker arms.
- Remove exhaust manifold, if required and spark plugs.
- Clean carbon out of cylinder head combustion chambers before removing valves.
- Compress valve springs using Valve Spring Compressor T81P-6513-A. Remove spring retainer locks and release spring.
- Remove spring retainer, spring, spring seat, stem seal and valve. Discard valve stem seals. Identify all valve parts as to which cylinder they were removed from and whether intake or exhaust.



A6719-D

Item	Part Number	Description
1	6507	Intake Valve
2	6505	Exhaust Valve
3	6A536	Valve Spring Seat
4	6A517	Valve Stem Seal
5	6513	Valve Spring
6	6514	Valve Spring Retainer

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Item	Part Number	Description
7	6518	Valve Spring Retainer Keys
8	6049	Cylinder Head

- Clean, inspect and service cylinder head as required, or prepare to transfer all usable parts to a new cylinder head.

**Assembly**

All valves, valve stems and valve guides are to be lubricated with Engine Assembly Lubricant D9AZ-19579-D (ESR-M99C80-A) or equivalent. The valve tips are to have Multi-Purpose Grease D0AZ-19584-AA (ESR-M1C159-A and ESB-M1C93-A) or equivalent applied before installation.

**NOTE:** Exhaust valve stem seals have a white stripe to identify them.

- Install each valve in port from which it was removed or to which it was fitted.

**CAUTION:** Due to different leakage rates between intake and exhaust valve stems, seals must not be interchanged.

- Install exhaust valve stem seal. Make sure seal is bottomed on guide.
- Install intake valve stem seal. Seal must be bottomed on guide.
- Install spring seat.
- Install valve spring over valve and then install spring retainer. Compress spring and install retainer locks.

**CAUTION:** Do not install the spacers unless necessary. Use of spacers in excess of recommendations will result in overstressing valve springs and overloading camshaft lobes which could lead to spring breakage and/or worn camshaft lobes.

- Measure assembled height of valve spring from top of spring seat to underside of spring retainer with dividers. Check dividers against a scale. If assembled height is greater than specification, install necessary 0.79mm (0.030 inch) thick spacer(s) between cylinder head spring pad and valve spring seat, to bring assembled height to recommended specification.
- Position rocker arms and fulcrums on cylinder head and install fulcrum retaining bolts. Do not tighten bolts. The bolts must be loose enough to allow rocker arm to be rotated to side.
- Install exhaust manifold if removed, and spark plugs.

**Front Cover Assembly**

The front cover assembly contains three components related to the lubrication system. These components are: