

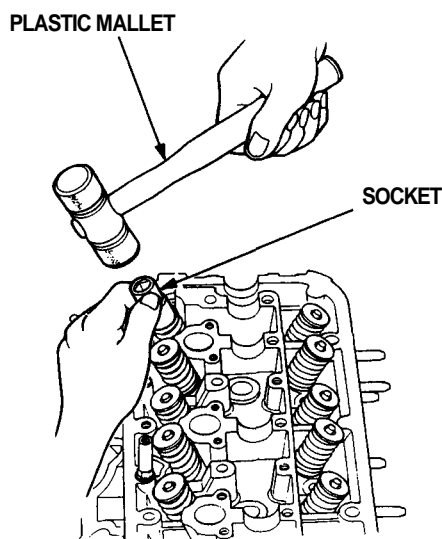
# Valves, Valve Springs and Valve Seals



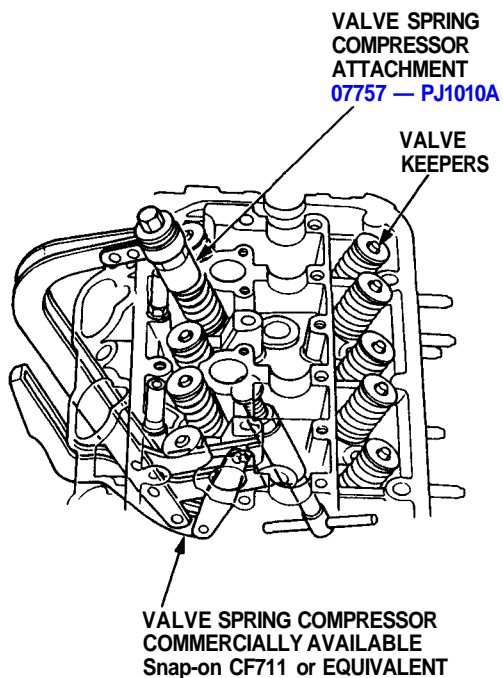
## Removal

NOTE: Identify valves and valve springs as they are removed so that each item can be reinstalled in its original position.

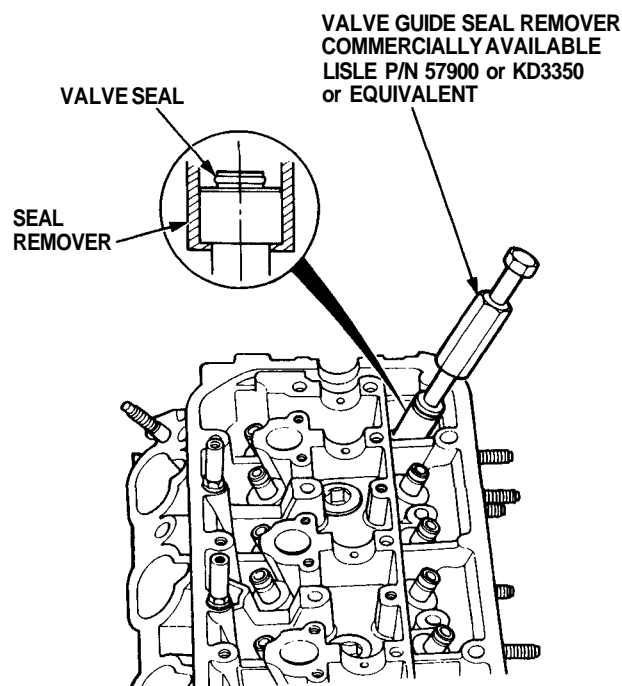
1. Using an appropriate-sized socket and plastic mallet, lightly tap the valve retainer to loosen the valve keepers before installing the valve spring compressor.



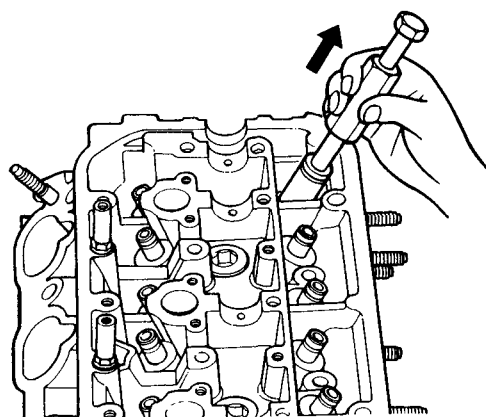
2. Install the valve spring compressor. Compress the spring and remove the valve keepers.



3. Install the special tool as shown.



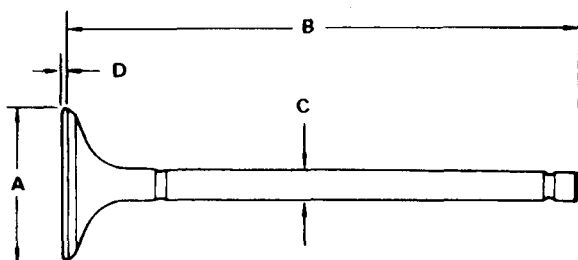
4. Remove the valve seal.



(cont'd)

# Valves, Valve Springs and Valve Seals

## Removal (cont'd)



### GS model:

#### Intake Valve Dimensions

- A Standard (New): 33.90 — 34.10 mm (1.335 — 1.343 in)
- B Standard (New): 113.58 — 113.88 mm (4.472 — 4.483 in)
- C Standard (New): 5.48 — 5.49 mm (0.216 — 0.216 in)
- C Service Limit: 5.45 mm (0.215 in)
- D Standard (New): 0.85 — 1.15 mm (0.033 — 0.045 in)
- D Service Limit: 0.65 mm (0.026 in)

#### Exhaust Valve Dimensions

- A Standard (New): 27.90 — 28.10 mm (1.098 — 1.106 in)
- B Standard (New): 116.03 — 116.33 mm (4.568 — 4.580 in)
- C Standard (New): 5.45 — 5.46 mm (0.215 — 0.215 in)
- C Service Limit: 5.42 mm (0.213 in)
- D Standard (New): 1.35 — 1.65 mm (0.053 — 0.065 in)
- D Service Limit: 1.15 mm (0.045 in)

### Except GS model:

#### Intake Valve Dimensions

- A Standard (New): 32.90 — 33.10 mm (1.295 — 1.303 in)
- B Standard (New): 113.58 — 113.88 mm (4.472 — 4.483 in)
- C Standard (New): 5.48 — 5.49 mm (0.216 — 0.216 in)
- C Service Limit: 5.45 mm (0.215 in)
- D Standard (New): 0.85 — 1.15 mm (0.033 — 0.045 in)
- D Service Limit: 0.65 mm (0.026 in)

#### Exhaust Valve Dimensions

- A Standard (New): 27.90 — 28.10 mm (1.098 — 1.106 in)
- B Standard (New): 116.03 — 116.33 mm (4.568 — 4.580 in)
- C Standard (New): 5.45 — 5.46 mm (0.215 — 0.215 in)
- C Service Limit: 5.42 mm (0.213 in)
- D Standard (New): 1.35 — 1.65 mm (0.053 — 0.065 in)
- D Service Limit: 1.15 mm (0.045 in)

# Cylinder Heads

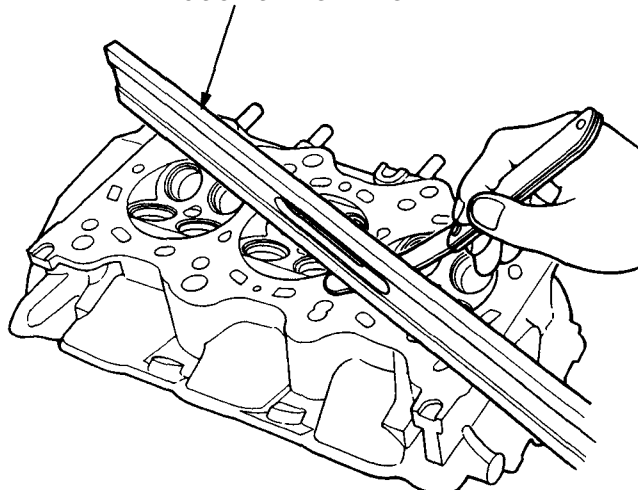
## Warpage

NOTE: If camshaft-to-holder oil clearances (see page 6-15) are not within specification, the head cannot be resurfaced.

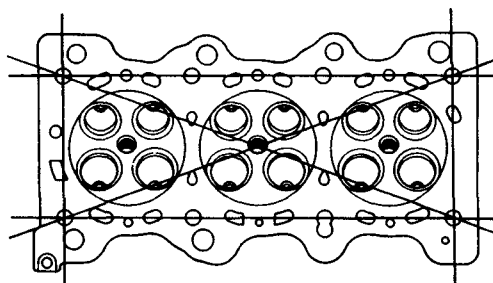
If camshaft-to-holder oil clearances are within specifications, check the head for warpage.

- If warpage is less than 0.05 mm (0.002 in) cylinder head resurfacing is not required.
- If warpage is between 0.05 mm (0.002 in) and 0.2 mm (0.01 in), resurface cylinder head.
- Maximum resurface limit is 0.2 mm (0.01 in) based on a height of 100 mm (3.9 in)

### PRECISION STRAIGHT EDGE



Measure along edges, and 3 ways across center.



Measure the cylinder head height at several points.

### Cylinder Head Height:

Standard (New): 99.95 — 100.05 mm (3.935 — 3.939 in)

