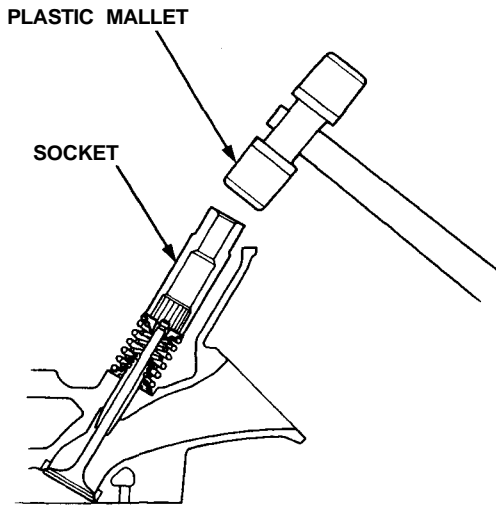


# Valves, Valve Springs and Valve Seals

## Replacement

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

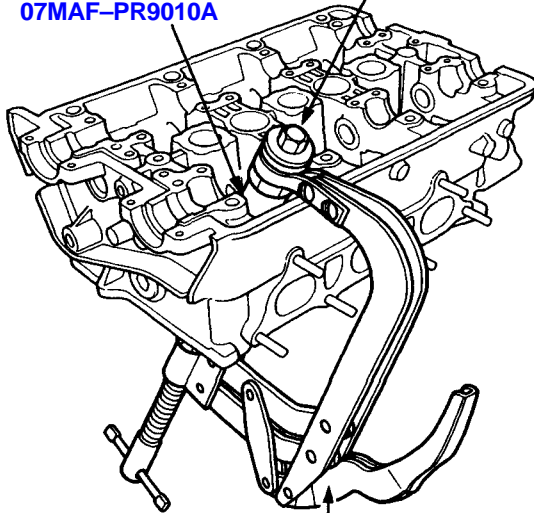
1. Using an appropriate-sized socket and plastic mallet, lightly tap the valve retainer to loosen the valve keepers before installing the valve spring compressor.



2. Install spring compressor. Compress spring and remove valve keeper.

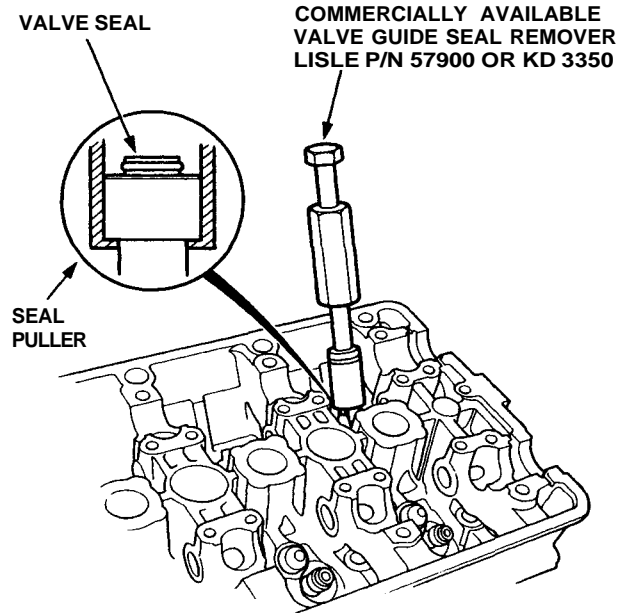
VALVE SPRING COMPRESSOR ATTACHMENT EXTENSION  
07MAF-PR9010A

VALVE SPRING COMPRESSOR ATTACHMENT  
07757-PJ1010A

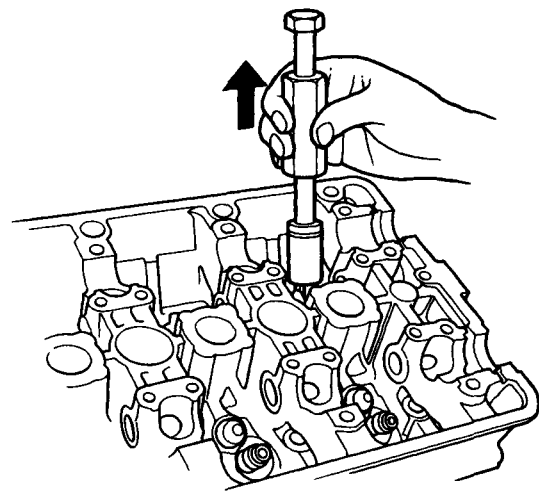


VALVE SPRING COMPRESSOR  
Snap-on CF711

3. Install the special tool as shown.



4. Remove the valve guide seal.





# Cylinder Heads

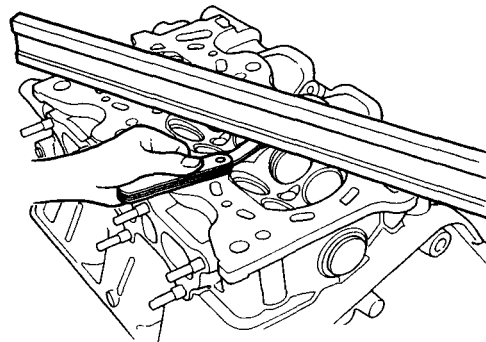
## Warpage

NOTE: If camshaft-to-holder oil clearances (page 6-38) are not within specification, the head cannot be resurfaced.

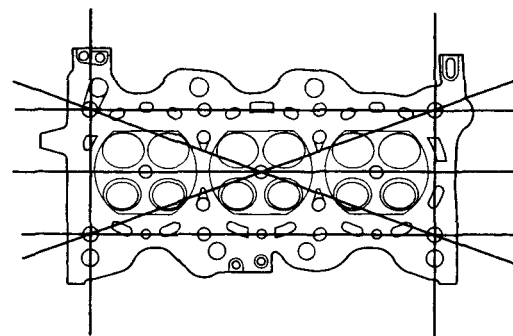
If camshaft-to-holder oil clearances are within specifications, check the head for warpage.

- 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 (0.008 in), resurface cylinder head.
- Maximum resurface limit is 0.2 mm (0.008 in) based on a height of 151 mm (5.945 in).

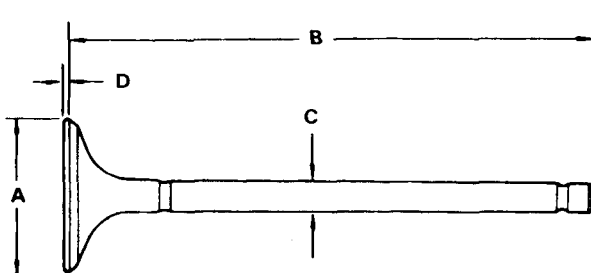
### PRECISION STRAIGHT EDGE



Measure along edges, and 3 ways across center.



Cylinder Head Height;  
 Standard (New): 150.95-151.05  
 (5.943-5.947 in)  
 Service Limit: 150.8 mm (5.937 in)



**Intake Valve Dimensions**

A Standard (New): 34.9—35.1 mm  
(1.374-1.382 in)

B Standard (New): 111.05-111.40 mm  
(4.372-4.386 in)

C Standard (New): 5.475—5.485 mm  
(0.2156-0.2159 in)

C Service Limit: 5.445 mm (0.2144 in)

D Standard (New): 1.05—1.35 mm  
(0.041-0.053 in)

D Service Limit: 0.85 mm (0.033 in)

**Exhaust Valve Dimensions**

A Standard (New): 29.9—30.1 mm  
(1.177-1.185 in)

B Standard (New): 109.60-109.90 mm  
(4.315-4.327 in)

C Standard (New): 5.45-5.46 mm  
(0.2146-0.2150 in)

C Service Limit: 5.42 mm (0.2134 in)

D Standard (New): 1.65—1.95 mm  
(0.065-0.077 in)

D Service Limit: 1.45 mm (0.057 in)