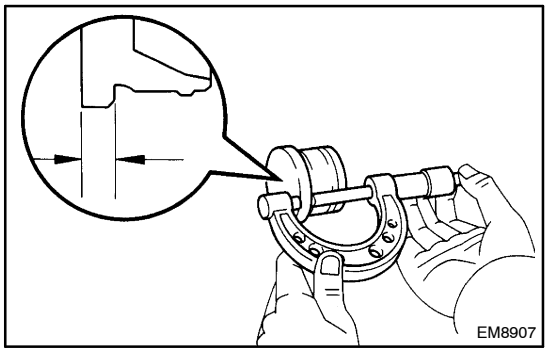
EM0WQ–01

REASSEMBLY

HINT:

- Thoroughly clean all parts to be assembled.
- Before installing the parts, apply new engine oil to all sliding and rotating surfaces.
- Replace all gaskets and oil seals with new ones,



1. 1HZ:

SELECT COMBUSTION CHAMBER SHIM

(a) If using the new combustion chamber:
Using a micrometer, measure the thickness of each used combustion chamber at the position shown in the illustration, then select the number of shims to be used.

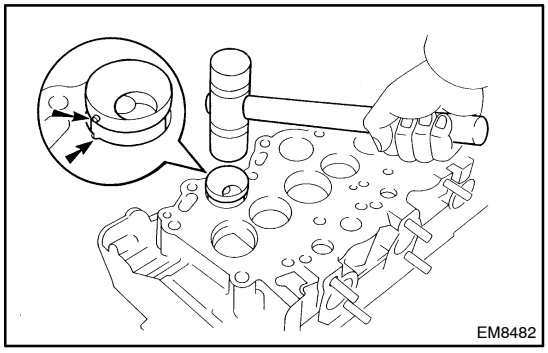
Combustion chamber thickness mm (in.)	No. of shims to be used
6.02 – 6.05 (0.2370 – 0.2382)	0
6.06 – 6.08 (0.2386 – 0.2394)	1
6.09 – 6.11 (0.2398 – 0.2406)	2

Shim thickness: 0.03 mm (0.0012 in.)

NOTICE:

If combustion chamber shims were already being used, do not perform the above step, use the same number of shims as were used before.

(b) If reusing the combustion chamber.
Install the combustion chamber back in the same position it was originally at.

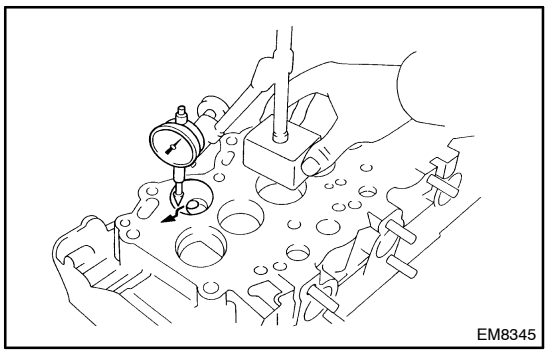


2. 1HZ:

INSTALL COMBUSTION CHAMBERS

(a) Align the knock pin of the combustion chamber with the notch of the cylinder head.

(b) Using a plastic – faced hammer, tap in the (shim and) combustion chamber.



(c) Using a dial indicator, measure the protrusion of the combustion chamber from the cylinder head.

Protrusion:

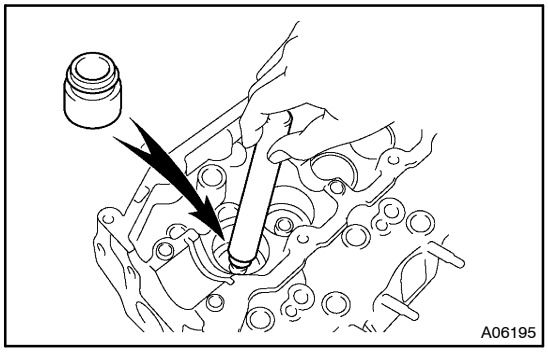
Minus 0.04 – Plus 0.04 mm

(Minus 0.0016 – Plus 0.0016 in.)

If the protrusion is less than specified, adjust with shims.

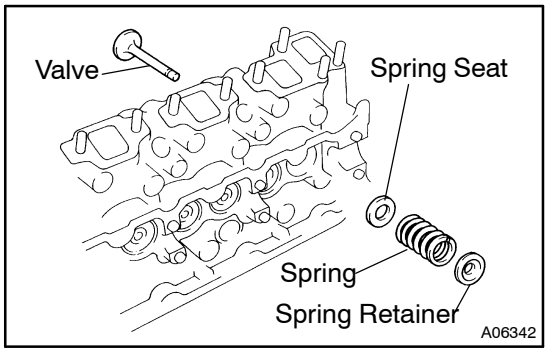
Shim thickness: 0.03 mm (0.0012 in.)

If the protrusion is greater than specification, replace the chamber and recheck the protrusion.

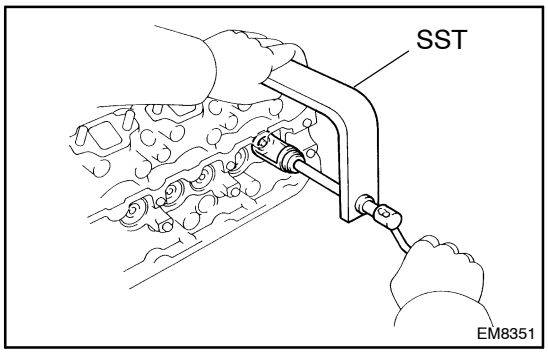


3. INSTALL VALVES

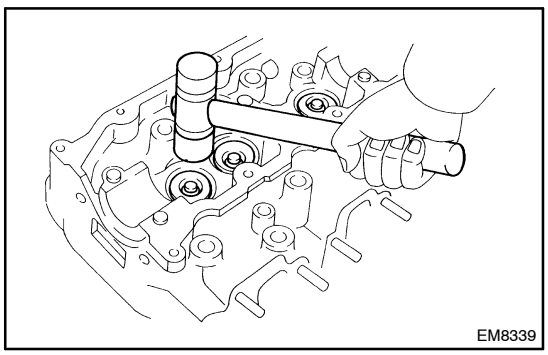
(a) Using SST, push in a new oil seal.
SST 09201–41020



(b) Install these parts:
- Valve
- Spring seat
- Valve spring
- Spring retainer



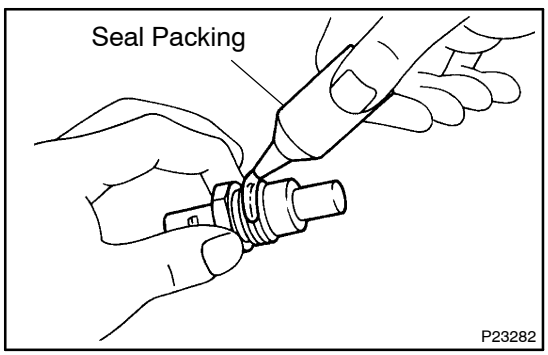
(c) Using SST, compress the valve spring and place the 2 keepers around the valve stem.
SST 09202–70020 (09202–00010)



(d) Using a plastic–faced hammer, lightly tap the valve stem tip to assure a proper fit.

4. INSTALL VALVE LIFTERS AND SHIMS

(a) Install the valve lifter and shim.
(b) Check the valve lifter rotates smoothly by hand.



5. INSTALL WATER TEMPERATURE SENDER GAUGE

(a) Apply seal packing to 2 or 3 threads.
Seal packing: Part No. 08826–00100 or equivalent
(b) Install the sender gauge.