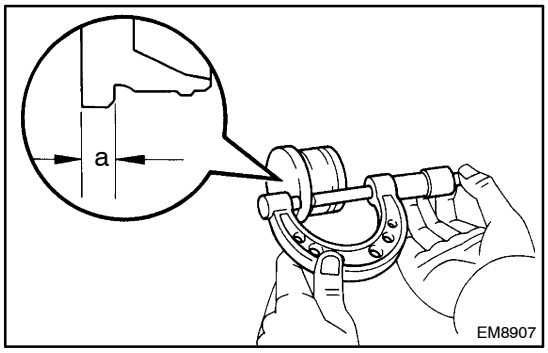
EM15H–01

REASSEMBLY

HINT:

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



1. SELECT COMBINATION CHAMBER SHIM

(a) If using new combustion chamber:

(1) Using a micrometer, measure the thickness of each used combustion chamber at the position shown in the illustration.

(2) Measure the thickness of the new combustion chamber the same way as in (a).

(3) From the thickness of the new chamber subtract the thickness of the used chamber in order to select the appropriate shim thickness from the table below.

Difference in chamber thickness
= New chamber thickness – Used chamber thickness
mm (in.)

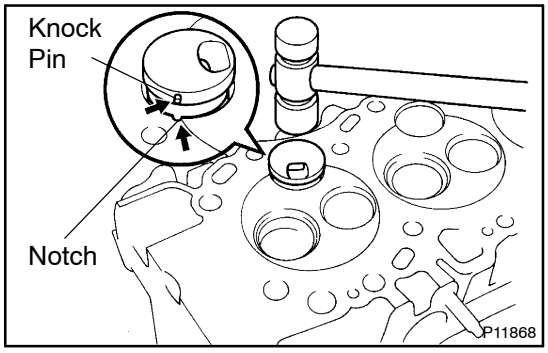
Difference in chamber thickness mm (in.)	Shim thickness required mm (in.)
Plus 0.02 – Minus 0.02 (Plus 0.0008 – Minus 0.0008)	No shim required
Minus 0.03 (Minus 0.0012)	0.05 (0.0020) or no shim required
Minus 0.04 – Minus 0.07 (Minus 0.0016 – Minus 0.0028)	0.05 (0.0020)
Minus 0.08 (Minus 0.0031)	0.05 (0.0020) or 0.10 (0.0039)
Minus 0.09 – Minus 0.12 (Minus 0.0035 – Minus 0.0047)	0.10 (0.0039)

NOTICE:

Do not use two 0.05 mm (0.0020 in.) shims instead of one 0.10 mm (0.0039 in.) shim.

(b) If reusing combustion chamber:

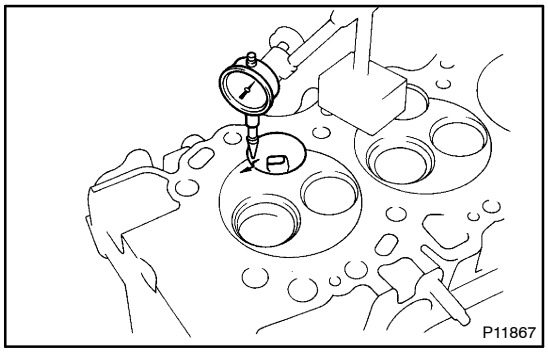
Install the combustion chamber back in its original position.



2. 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 combustion chamber.



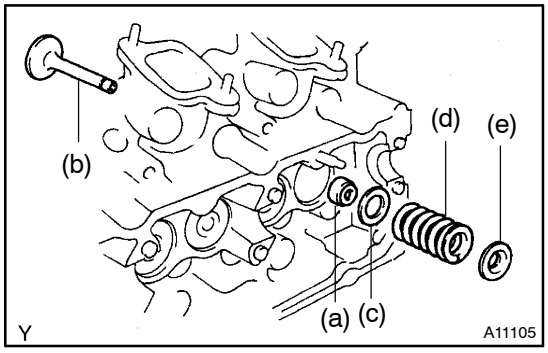
(c) Using a dial indicator, measure the protrusion of the combustion chamber from the cylinder head.

Protrusion:
Minus 0.03 – Plus 0.02 mm
(Minus 0.0012 – Plus 0.0008 in.)

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

Shim thickness:
0.05 mm (0.0020 in.)
0.10 mm (0.0039 in.)

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



3. INSTALL VALVES

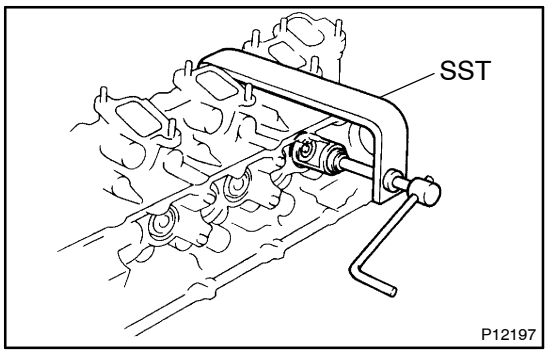
(a) Install the oil seal.

(b) Install the valve.

(c) Install the spring seat.

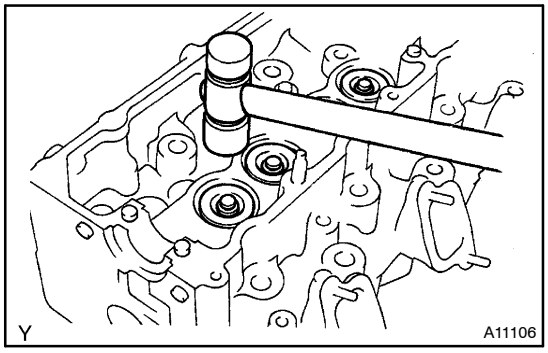
(d) Install the valve spring.

(e) Install the spring retainer.

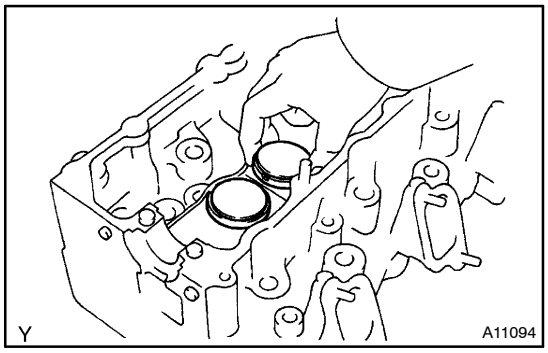


(f) Using SST, compress the valve spring and place the 2 keepers around the valve stem.

SST 09202–70020 (09202–00010)



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



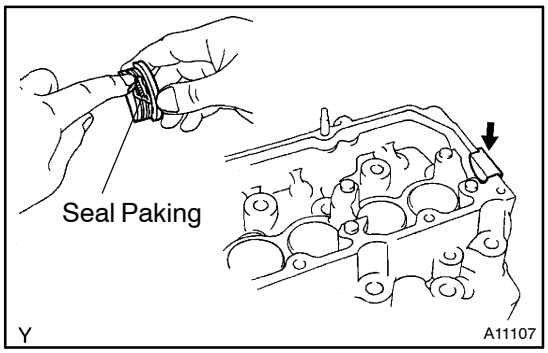
4. INSTALL VALVE LIFTERS AND SHIMS

(a) Install the valve lifter and shim.

(b) Check that the valve lifter rotates smoothly by hand.

5. INSTALL WATER TEMPERATURE SENDER GAUGE

6. INSTALL WIRE CLAMP BRACKET

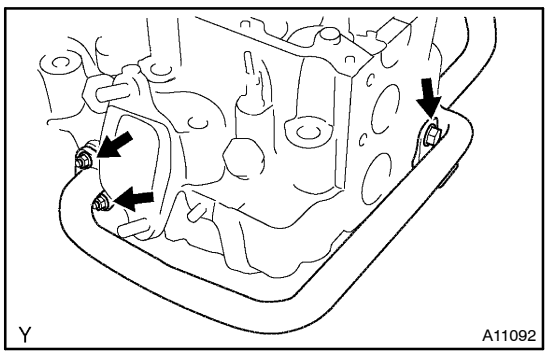


7. INSTALL SEMI CIRCULAR PLUG

(a) Remove any old packing (FIPG) material.

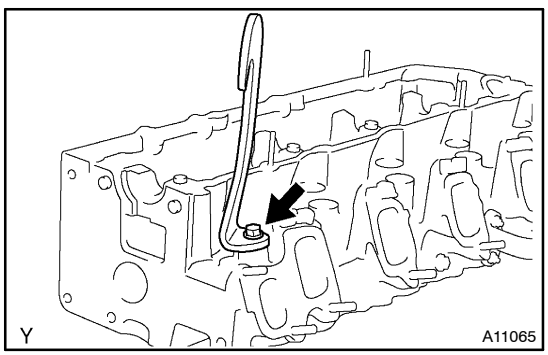
(b) Apply seal packing to the semi circular plug as shown.
Seal packing: Part No. 08826–00080 or equivalent

(c) Install the half circular plug to the cylinder head.



8. INSTALL HEATER WATER INLET PIPE

Install a new gasket, the heater water inlet pipe with the 2 nuts and bolt.



9. INSTALL FRONT ENGINE HANGER

Install the front engine hanger to the cylinder head.

Torque: 41 N·m (420 kgf·cm, 30 ft·lbf)