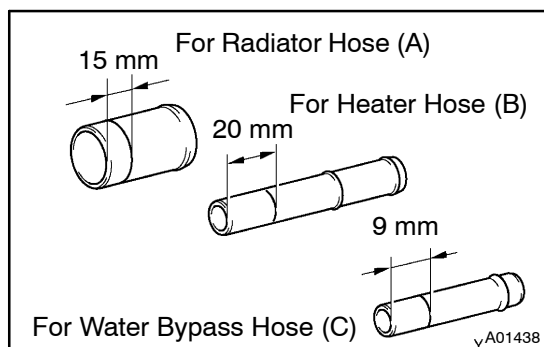


REASSEMBLY

HINT:

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

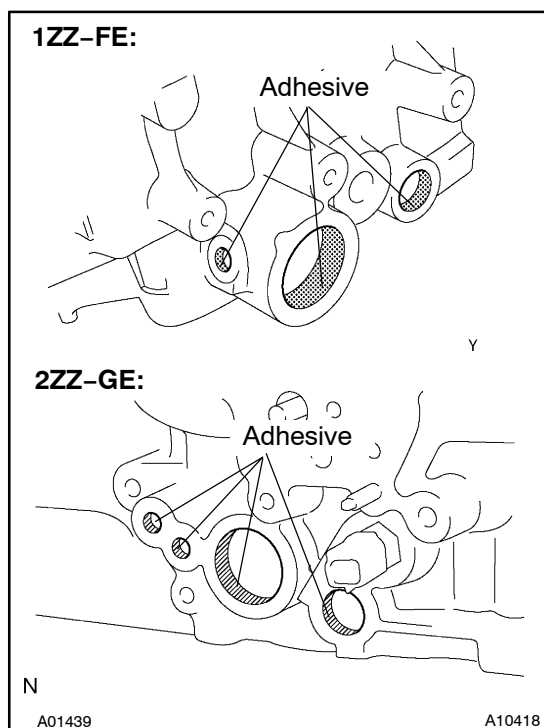


1. INSTALL WATER HOSE UNIONS

HINT:

When using a new cylinder head, water hose unions must be installed.

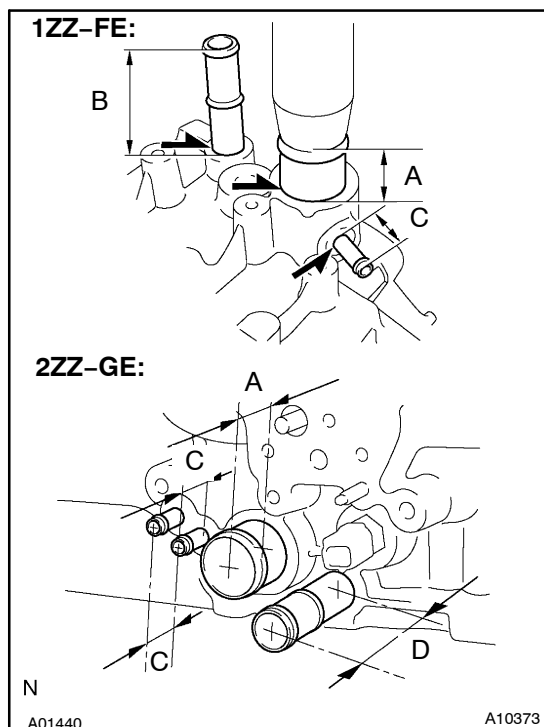
- Mark the standard position away from the edge, onto the water hose union.



- Apply adhesive to the water hose union hole of the cylinder head.

Adhesive:

Part No.08833-00070, THREE BOND 1324 or equivalent



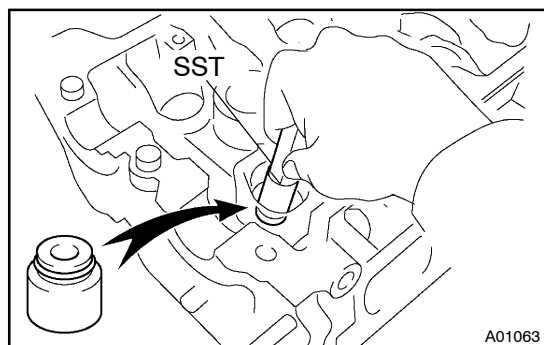
- (c) Using a press, press in a new water hose union until there is protruding from the cylinder head.

Standard protrusion:

- A 29 mm (1.14 in.)
 B 66.5 mm (2.618 in.)
 C 24 mm (0.95 in.)
 D 69.8 mm (2.630 in.)

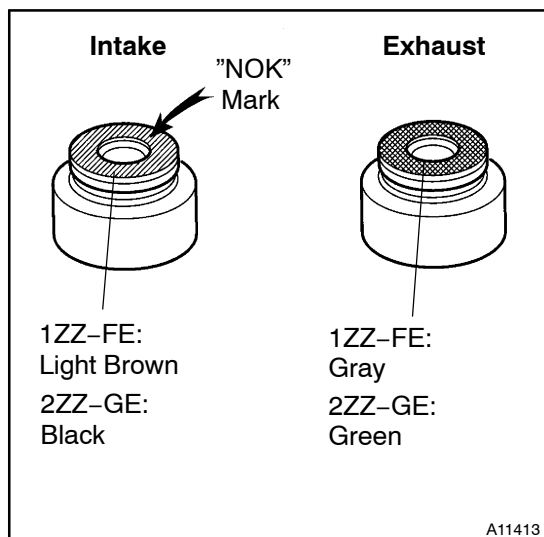
NOTICE:

Avoid pressing a new water hose union in too far by measuring the amount of protrusion while pressing.



2. INSTALL VALVES

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

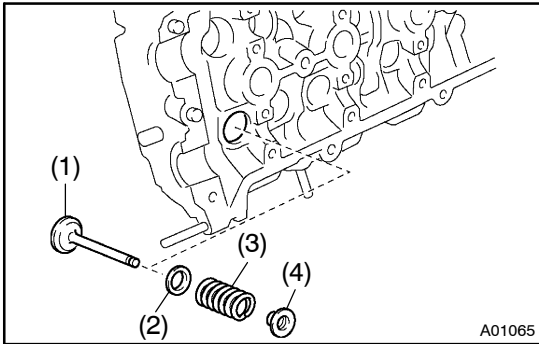


HINT:

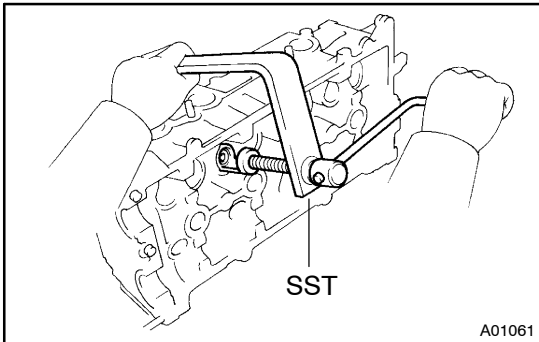
- 1ZZ-FE:
The intake valve oil seal is light brown and the exhaust valve oil seal is gray.
- 2ZZ-GE:
The intake valve oil seal is black and the exhaust valve oil seal is green.

NOTICE:

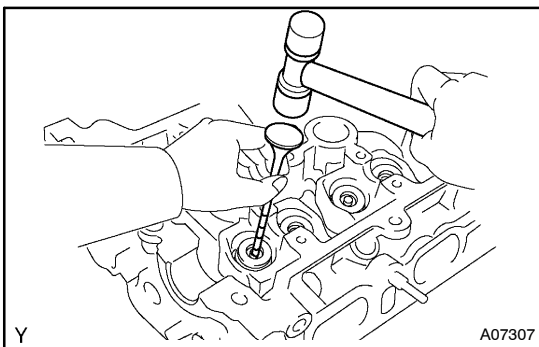
Pay much attention assembling the oil seal for intake and exhaust. Assembling the wrong one may cause a failure.



- (b) Install the valve (1), spring (2), valve spring (3), and spring retainer (4).



- (c) Using SST, compress the valve spring and place the 2 keepers around the valve stem.
SST 09202-70020 (09202-00020)



- (d) Using a plastic-faced hammer and the valve stem (not in use) tip wound with vinyl tape, lightly tap the valve stem tip to ensure a proper fit.

NOTICE:

Be careful not to damage the valve stem tip.

3. INSTALL VALVE LIFTERS

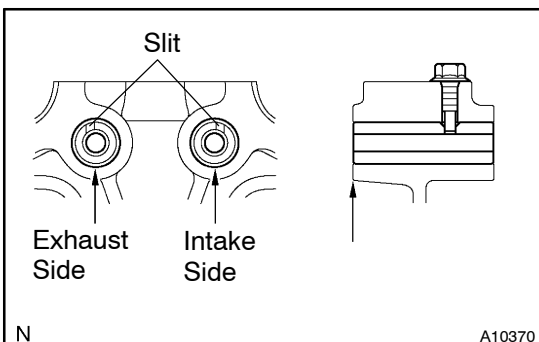
- (a) Install the valve lifter.
(b) Check that the valve lifter rotates smoothly by hand.

4. 2ZZ-GE:

INSTALL VALVE ROCKER ARM

- (a) Set the 8 valve rocker arms.
(b) Install the rocker No. 1 and No. 2 shaft with the 2 bolts.

Torque: 7.5 N·m (76 kgf·cm, 66 in.·lbf)



HINT:

- Position the slit of the locker shaft in the direction shown in the illustration.
- Align the locker shaft end with the cylinder head end.

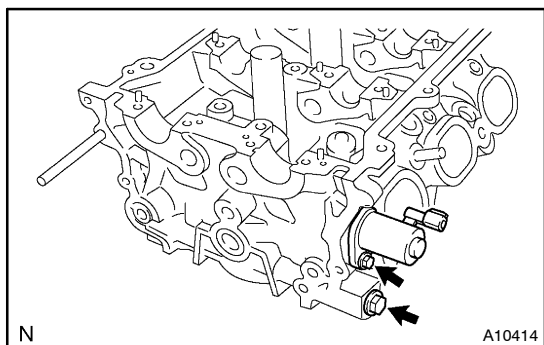
5. 2ZZ-GE:

INSTALL OIL CONTROL VALVE HOUSING

- (a) Install the oil control valve filter.
(b) Install the gasket and oil control valve housing with the 3 bolts and 2 nuts.

Torque: 9.0 N·m (92 kgf·cm, 80 in.·lbf)

- (c) Apply adhesive to 2 or 3 threads of the oil pressure switch.
Adhesive:
Part No. 08833-00080, THREE BOND 1344, LOCTITE 242 or equivalent
- (d) Using SST, install the oil pressure switch.
SST 09816-30010
Torque: 13 N·m (130 kgf·cm, 9 ft·lbf)
- (e) Install the oil control valve for VVTL with the bolt.

**6. INSTALL CONTROL VALVE for VVT**

Install the oil control valve for VVT with the bolt.

7. INSTALL OIL CONTROL VALVE FILTER

Install the oil control valve filter and new gasket with the bolt.

Torque: 29 N·m (300 kgf·cm, 22 ft·lbf)