

18. Valve Rocker Assembly

A: REMOVAL

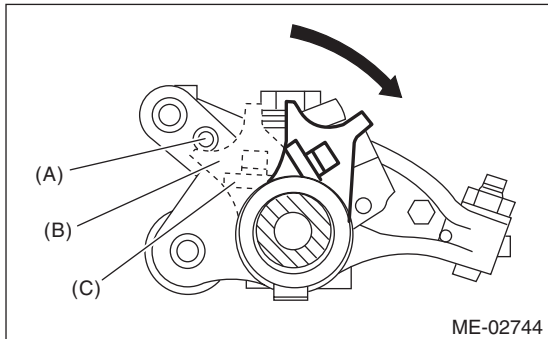
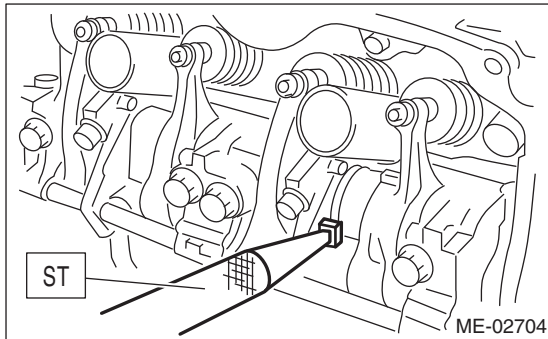
NOTE:

When replacing the single part, perform the work with the engine installed to vehicle body. Refer to "Valve Clearance" for preparation procedures. <Ref. to ME(H4SO)-29, Valve Clearance.>

- 1) Remove the ignition coil. <Ref. to IG(H4SO)-5, REMOVAL, Ignition Coil.>
- 2) Disconnect the PCV hose and remove the rocker cover.
- 3) Remove the valve rocker assembly.

- (1) Use the ST to rotate the spring stopper in the direction of the arrow to remove it from adjuster pin.

ST 18258AA000 SPRING INSTALLER

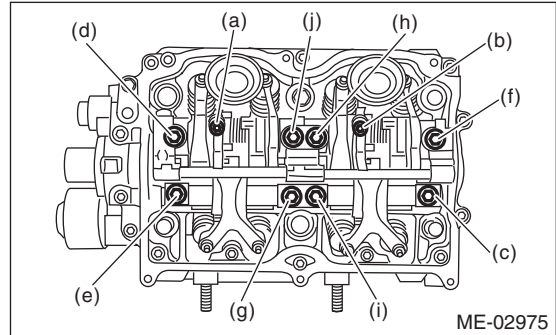


- (A) Adjuster pin
- (B) Spring stopper
- (C) Spring

- (2) Remove the bolts (a) through (j) in alphabetical sequence.

NOTE:

Leave two or three threads of bolts (i) and (j) engaged in order to retain the valve rocker assembly.

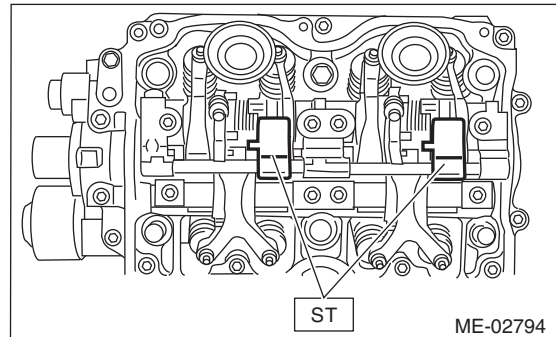


- (3) Remove the valve rocker assembly.

NOTE:

Set the ST in the position shown in the drawing to remove the intake valve rocker assembly.

ST 18354AA000 VALVE ROCKER HOLDER



B: INSTALLATION

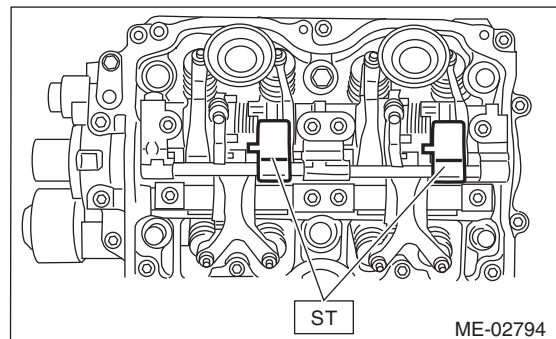
- 1) Install the valve rocker assembly.

- (1) Temporarily tighten the bolts equally in alphabetical order as shown in the figure.

NOTE:

- Do not temporarily tighten the bolts (i) and (j).
- Set the ST in the position shown in the drawing to mount the intake valve rocker assembly.

ST 18354AA000 VALVE ROCKER HOLDER



- (2) Tighten the bolts (a) through (h) to specified torque.

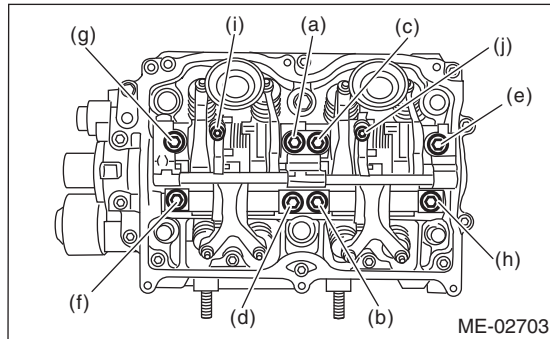
Tightening torque:

25 N·m (2.5 kgf·m, 18.4 ft·lb)

(3) Tighten the bolts (i) through (j) to specified torque.

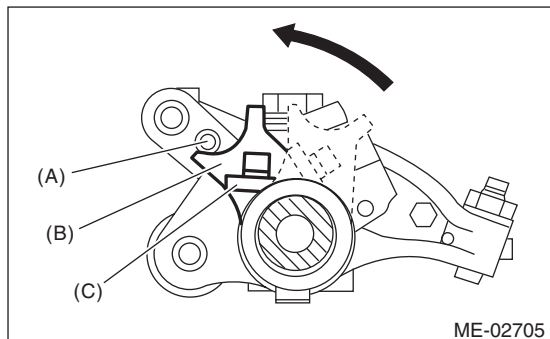
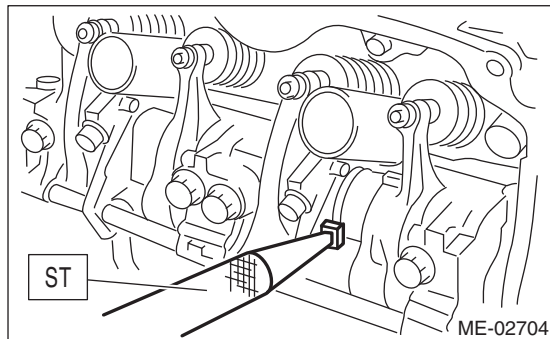
Tightening torque:

6 N·m (0.6 kgf-m, 4.4 ft-lb)



(4) Use the ST to rotate the spring stopper in the direction of the arrow to fasten the adjuster pin.

ST 18258AA000 SPRING INSTALLER



- (A) Adjuster pin
- (B) Spring stopper
- (C) Spring

- 2) Remove the timing belt cover LH.
- 3) Adjust the valve clearance. <Ref. to ME(H4SO)-30, ADJUSTMENT, Valve Clearance.>
- 4) Install the timing belt cover LH.

Tightening torque:

5 N·m (0.5 kgf-m, 3.7 ft-lb)

5) Install the rocker cover.

- (1) Install the rocker cover gasket to the rocker cover.

NOTE:

Use a new rocker cover gasket.

- (2) Temporarily tighten the bolts in alphabetical order shown in the figure, tighten them in two stages.

Tightening torque:

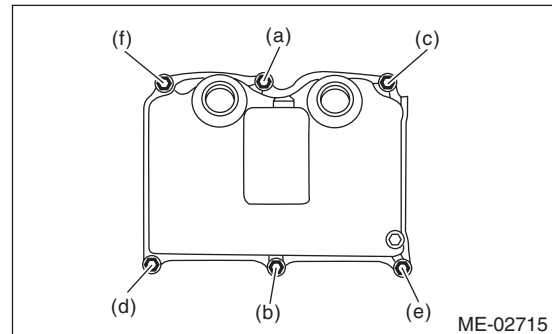
1st

6.4 N·m (0.7 kgf-m, 4.7 ft-lb)

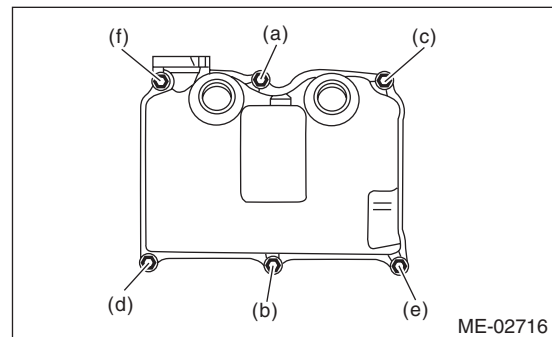
2nd (only (a) and (b) are tightened)

6.4 N·m (0.7 kgf-m, 4.7 ft-lb)

RH side



LH side



(3) Connect the PCV hose.

6) Install the ignition coil. <Ref. to IG(H4SO)-5, INSTALLATION, Ignition Coil.>

C: DISASSEMBLY

NOTE:

Intake valve rocker assembly cannot be disassembled.

- 1) Remove the exhaust valve rocker arm from the rocker shaft.

NOTE:

Keep all the removed parts in order for re-installing in their original positions.

- 2) Remove the nut and adjusting screw from exhaust valve rocker.

Valve Rocker Assembly

MECHANICAL

D: ASSEMBLY

NOTE:

Intake valve rocker assembly cannot be disassembled.

- 1) Install the adjusting screw and nut to the exhaust valve rocker.
- 2) Insert the exhaust valve rocker arm to rocker shaft.

NOTE:

Valve rocker arms, and rocker shaft have identification marks. Make sure the parts with same markings are properly assembled.

E: INSPECTION

1. INTAKE VALVE ROCKER ASSEMBLY

- 1) If the roller or valve contact surface of valve rocker arm is worn or dented excessively, replace the valve rocker assembly.
- 2) Check that the valve rocker arm roller rotates smoothly. If not, replace the valve rocker assembly.

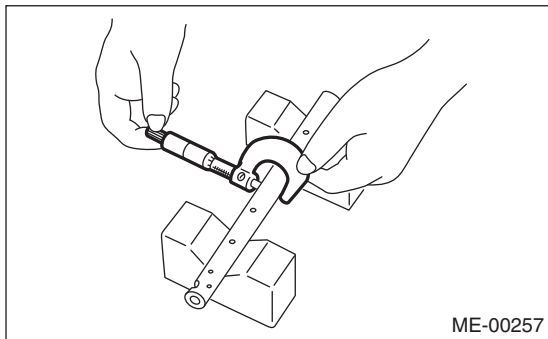
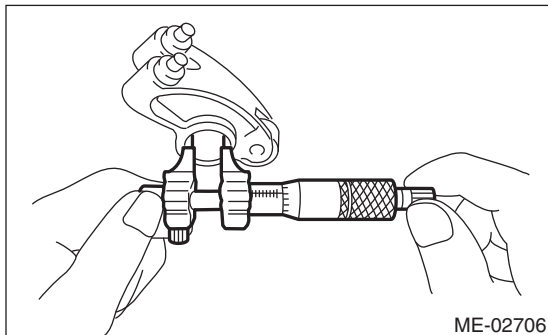
2. EXHAUST VALVE ROCKER ASSEMBLY

- 1) Measure the inner diameter of valve rocker arm and outer diameter of valve rocker shaft, and confirm the difference (oil clearance) between the two values.

Clearance between arm and shaft:

Standard

0.020 — 0.054 mm (0.0008 — 0.0021 in)



- 2) If the oil clearance exceeds the limit, replace the valve rocker arm or shaft, whichever shows the greater amount of wear.

Rocker arm inside diameter:

22.020 — 22.041 mm (0.8669 — 0.8678 in)

Rocker shaft diameter:

21.987 — 22.000 mm (0.8656 — 0.8661 in)

- 3) If the roller or valve contact surface of valve rocker arm is worn or dented excessively, replace the valve rocker arm.
- 4) Check that the valve rocker arm roller rotates smoothly. If not, replace the valve rocker arm.