

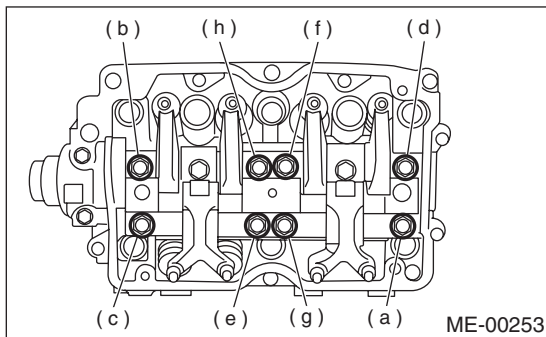
18. Valve Rocker Assembly

A: REMOVAL

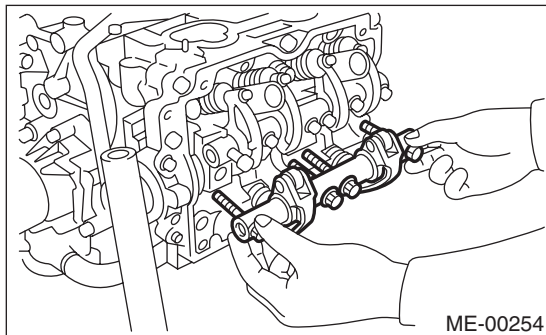
- 1) Remove V-belt. <Ref. to ME(H4SO)-40, REMOVAL, V-belt.>
- 2) Remove crankshaft pulley. <Ref. to ME(H4SO)-42, REMOVAL, Crankshaft Pulley.>
- 3) Remove timing belt cover. <Ref. to ME(H4SO)-43, REMOVAL, Timing Belt Cover.>
- 4) Remove timing belt. <Ref. to ME(H4SO)-44, REMOVAL, Timing Belt.>
- 5) Remove camshaft sprocket. <Ref. to ME(H4SO)-49, REMOVAL, Camshaft Sprocket.>
- 6) Disconnect PCV hose and remove rocker cover.
- 7) Removal of valve rocker assembly
 - (1) Remove bolts (a) through (h) in alphabetical sequence.

NOTE:

Leave two or three threads of bolts (g and h) engaged to retain valve rocker assembly.



- (2) Remove valve rocker assembly.



B: INSTALLATION

- 1) Installation of valve rocker assembly
 - (1) Temporarily tighten bolts (a) through (d) in alphabetical order equally as shown in figure.

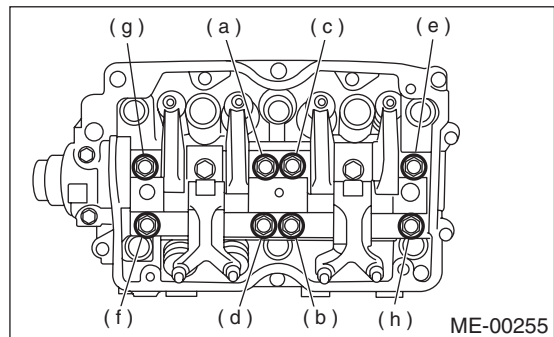
NOTE:

Do not allow valve rocker assembly to damage knock pins.

- (2) Tighten bolts (e) through (h) in alphabetical order to specified torque.
- (3) Tighten bolts (a) through (d) in alphabetical order to specified torque.

Tightening torque:

25 N·m (2.5 kgf-m, 18.1 ft-lb)



- 2) Adjust the valve clearances. <Ref. to ME(H4SO)-29, ADJUSTMENT, Valve Clearance.>
- 3) Install rocker cover and connect PCV hose.
- 4) Install camshaft sprocket. <Ref. to ME(H4SO)-49, INSTALLATION, Camshaft Sprocket.>
- 5) Install timing belt. <Ref. to ME(H4SO)-45, INSTALLATION, Timing Belt.>
- 6) Install timing belt cover. <Ref. to ME(H4SO)-43, INSTALLATION, Timing Belt Cover.>
- 7) Install crankshaft pulley. <Ref. to ME(H4SO)-42, INSTALLATION, Crankshaft Pulley.>
- 8) Install V-belt. <Ref. to ME(H4SO)-40, INSTALLATION, V-belt.>

C: DISASSEMBLY

- 1) Remove bolts which secure rocker shaft.
- 2) Extract rocker shaft. Remove valve rocker arms, springs, plates and shaft supports from rocker shaft.

NOTE:

Arrange all removed parts in order so that they can be installed correctly in their original positions.

- 3) Remove nut and adjuster screw from valve rocker.

VALVE ROCKER ASSEMBLY

MECHANICAL

D: ASSEMBLY

- 1) Install adjuster screw and nut to valve rocker.
- 2) Arrange valve rocker arms, springs and shaft supports in assembly order and insert valve rocker shaft.

Tightening torque (Shaft supports installing bolts):

5 N·m (0.5 kgf·m, 3.6 ft·lb)

NOTE:

Valve rocker arms, rocker shaft and shaft supports have identification marks. Ensure parts with same markings are properly assembled.

- 3) Install valve rocker shaft securing bolts.

E: INSPECTION

1. VALVE ROCKER ARM AND ROCKER SHAFT

- 1) Measure inside diameter of valve rocker arm and outside diameter of valve rocker shaft, and determine the difference between the two (= oil clearance).

Clearance between arm and shaft:

Standard

0.020 — 0.054 mm (0.0008 — 0.0021 in)

Limit

0.10 mm (0.0039 in)

- 2) If oil clearance exceeds the limit, replace valve rocker arm or shaft, whichever shows 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 cam or valve contact surface of valve rocker arm is worn or dented excessively, replace valve rocker arm.

- 4) Check that valve rocker arm roller rotates smoothly. If not, replace valve rocker arm.

