

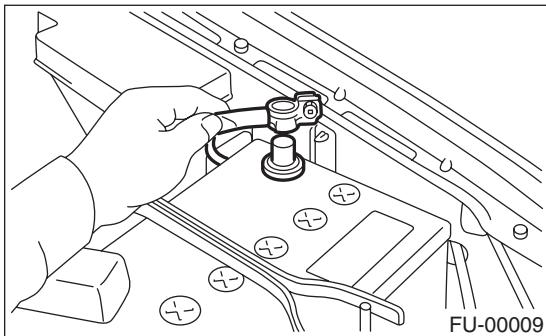
8. Valve Clearance

A: INSPECTION

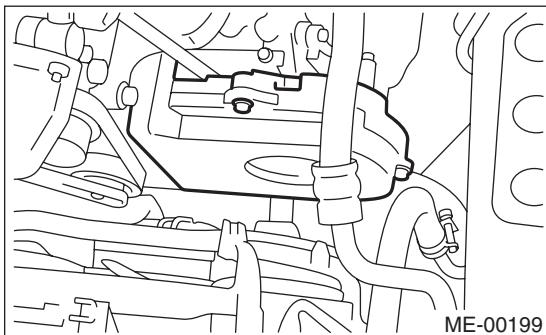
NOTE:

Inspection and adjustment of the valve clearance should be performed while engine is cold.

- 1) Set the vehicle on a lift.
- 2) Lift up the vehicle.
- 3) Remove the under cover.
- 4) Lower the vehicle.
- 5) Disconnect the ground cable from battery.



- 6) Remove the timing belt cover (LH).



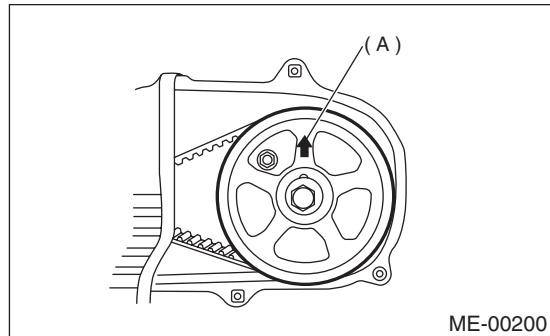
- 7) When inspecting #1 and #3 cylinders;
 - (1) Disconnect the spark plug cords from spark plugs on RH side. *<Ref. to IG(H4SO)-5, RH SIDE, REMOVAL, Spark Plug.>*
 - (2) Disconnect the PCV hose from rocker cover (RH).
 - (3) Remove the bolts, and then remove the rocker cover (RH).
- 8) When inspecting #2 and #4 cylinders;
 - (1) Disconnect the spark plug cords from spark plugs on LH Side. *<Ref. to IG(H4SO)-5, LH SIDE, REMOVAL, Spark Plug.>*
 - (2) Disconnect the PCV hose from rocker cover (LH).
 - (3) Remove the bolts, and then remove the rocker cover (LH).

- 9) Set the #1 cylinder piston to top dead center of compression stroke by rotating crankshaft pulley clockwise using ST.

ST 499977100 CRANKSHAFT PULLEY WRENCH

NOTE:

When arrow mark (A) on the camshaft sprocket (LH) comes exactly to the top, #1 cylinder piston is at the top dead center of compression stroke.



- 10) Measure the #1 cylinder valve clearance by using a thickness gauge.

CAUTION:

- Insert the thickness gauge (A) as parallel as possible with respect to the valve stem end face.
- Measure the exhaust valve clearances while lifting-up the vehicle.

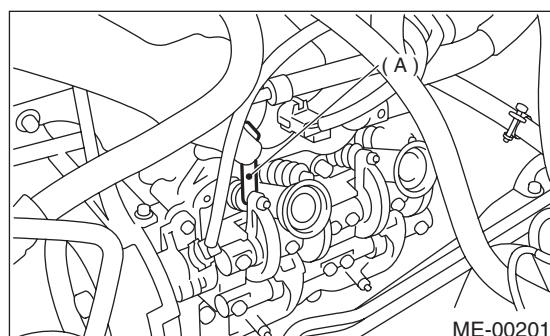
Valve clearance

Intake;

$0.20 \pm 0.02 \text{ mm (} 0.0079 \pm 0.0008 \text{ in)}$

Exhaust;

$0.25 \pm 0.02 \text{ mm (} 0.0098 \pm 0.0008 \text{ in)}$

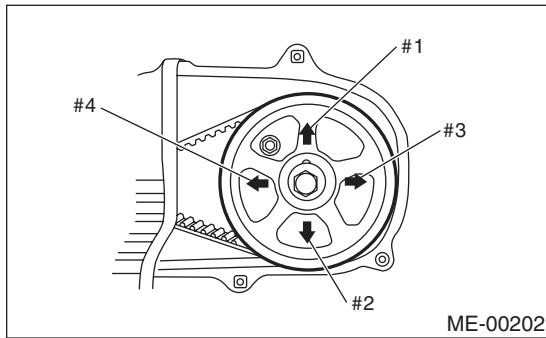


- 11) If necessary, adjust the valve clearance. *<Ref. to ME(H4SO)-31, ADJUSTMENT, Valve Clearance.>*

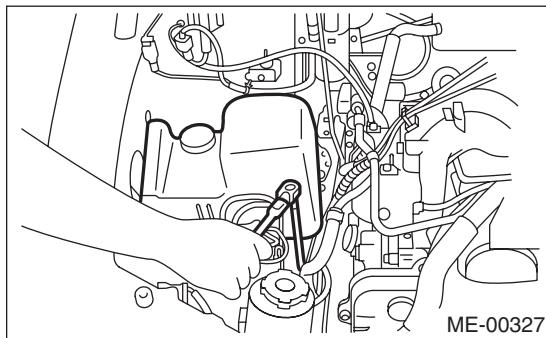
- 12) Similar to measurement procedures used for the #1 cylinder, measure the #2, #3 and #4 cylinder valve clearances.

NOTE:

- Be sure to set the cylinder pistons to their respective top dead centers on compression stroke before measuring valve clearances.
- To set the #3, #2 and #4 cylinder pistons to their top dead centers on compression stroke, turn the crankshaft pulley clockwise 90° at a time starting with arrow mark on camshaft sprocket (LH) facing up.



13) After inspection, install the related parts in the reverse order of removal.

Tightening torque:**Resonator chamber;****33 N·m (3.4 kgf-m, 25 ft-lb)****B: ADJUSTMENT**

NOTE:

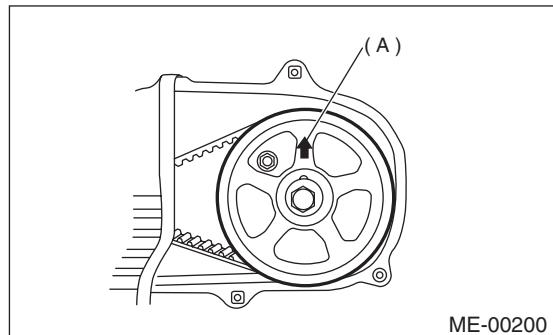
Adjustment of the valve clearance should be performed while engine is cold.

- 1) Set the #1 cylinder piston to top dead center of compression stroke by rotating crankshaft pulley clockwise using ST.

ST 499977100 CRANKSHAFT PULLEY WRENCH

NOTE:

When arrow mark (A) on the camshaft sprocket (LH) comes exactly to the top, #1 cylinder piston is at the top dead center of compression stroke.

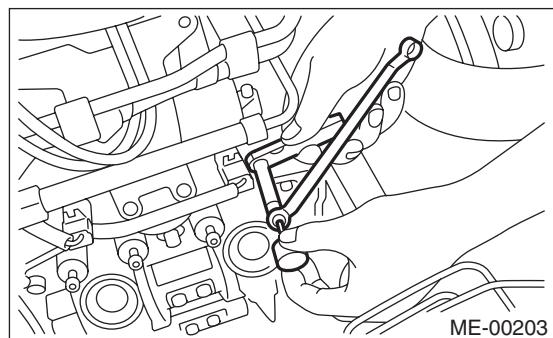


- 2) Adjust the #1 cylinder valve clearance.

- (1) Loosen the valve rocker nut and screw.
- (2) Place a suitable thickness gauge.
- (3) While noting the valve clearance, tighten the valve rocker adjust screw.
- (4) When specified valve clearance is obtained, tighten the valve rocker nut.

Tightening torque:**10 N·m (1.0 kgf-m, 7.2 ft-lb)****CAUTION:**

- Insert the thickness gauge as parallel as possible with respect to the valve stem end face.
- Adjust the exhaust valve clearances while lifting up the vehicle.

Valve clearance**Intake;** **0.20 ± 0.02 mm (0.0079 ± 0.0008 in)****Exhaust;** **0.25 ± 0.02 mm (0.0098 ± 0.0008 in)**

- 3) Ensure the valve clearances are within specifications.

- 4) Turn the crankshaft two complete rotations until #1 cylinder piston is set again to the top dead center on compression stroke.

- 5) Ensure the valve clearances are within specifications. If necessary, readjust the valve clearances.

VALVE CLEARANCE

MECHANICAL

6) Similar to adjustment procedures used for the #1 cylinder, adjust the #2, #3 and #4 cylinder valve clearances.

NOTE:

- Be sure to set the cylinder pistons to their respective top dead centers on compression stroke before adjusting valve clearances.
- To set the #3, #2 and #4 cylinder pistons to their top dead centers on compression stroke, turn the crankshaft pulley clockwise 90° at a time starting with arrow mark on camshaft sprocket (LH) facing up.

