

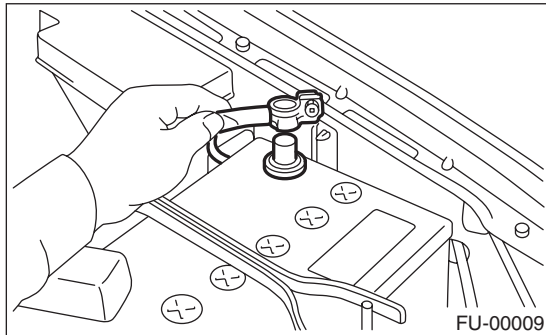
8. Valve Clearance

A: INSPECTION

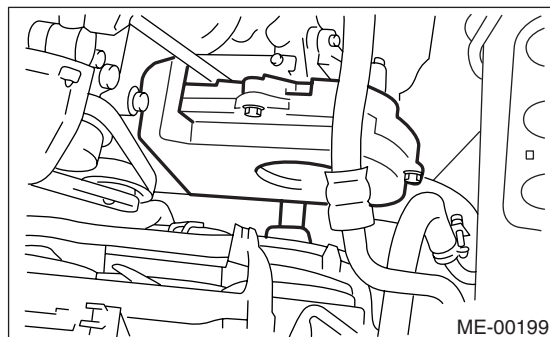
CAUTION:

Inspection and adjustment of 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) Remove the fuel injector. <Ref. to FU(H4SO)-30, REMOVAL, Fuel Injector.>

- 8) When inspecting #1 and #3 cylinders:

- (1) Disconnect the spark plug cords from spark plugs RH side. <Ref. to IG(H4SO)-4, RH SIDE, REMOVAL, Spark Plug.>
- (2) Disconnect the PCV hose from rocker cover (RH).
- (3) Remove the bolts, then remove the rocker cover (RH).

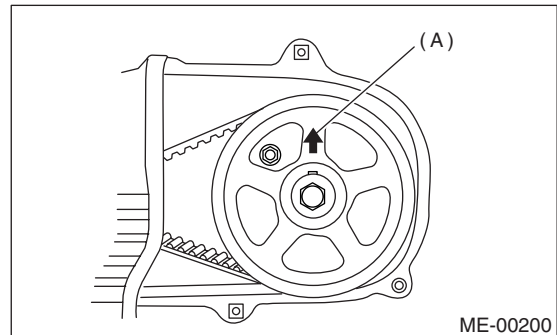
- 9) When inspecting #2 and #4 cylinders:

- (1) Disconnect the spark plug cords from spark plugs (LH side). <Ref. to IG(H4SO)-4, LH SIDE, REMOVAL, Spark Plug.>
- (2) Disconnect the PCV hose from rocker cover (LH).
- (3) Remove the bolts, then remove the rocker cover (LH).

- 10) Set #1 cylinder piston to top dead center of compression stroke by rotating the crank pulley clockwise using the socket wrench.

NOTE:

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



- 11) Measure #1 cylinder valve clearance by using thickness gauge.

CAUTION:

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

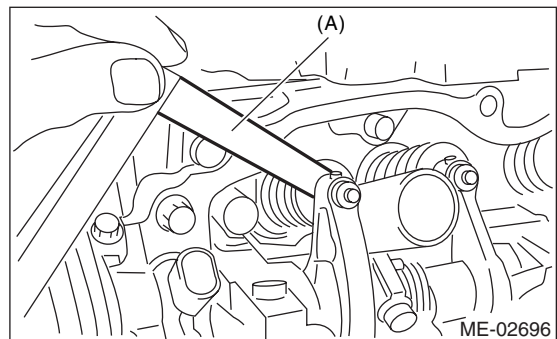
Valve clearance (standard):

Intake

$0.20 \pm 0.04 \text{ mm } (0.0079 \pm 0.0016 \text{ in})$

Exhaust

$0.25 \pm 0.04 \text{ mm } (0.0098 \pm 0.0016 \text{ in})$



- 12) If necessary, adjust the valve clearance. <Ref. to ME(H4SO)-28, ADJUSTMENT, Valve Clearance.>

Valve Clearance

MECHANICAL

13) Measure the valve clearance in #3, #2 and #4 cylinder in the same measurement procedure as #1 cylinder.

NOTE:

- Be sure to set the cylinder pistons to their respective top dead centers on compression stroke before measuring valve clearances.
 - By rotating the crank pulley clockwise every 180° from the state that #1 cylinder piston is on the top dead center of compression stroke, #3, #2 and #4 cylinder pistons come to the top dead center of compression stroke in this order.
- 14) After inspection, install the related parts in the reverse order of removal.

B: ADJUSTMENT

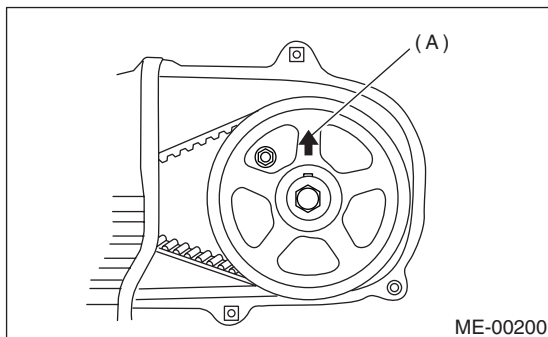
CAUTION:

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

1) Set #1 cylinder piston to top dead center of compression stroke by rotating the crank pulley clockwise using the socket wrench.

NOTE:

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



2) Adjust the #1 cylinder valve clearance.

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

Tightening torque:

9.75 N·m (1.0 kgf·m, 7.2 ft·lb)

CAUTION:

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

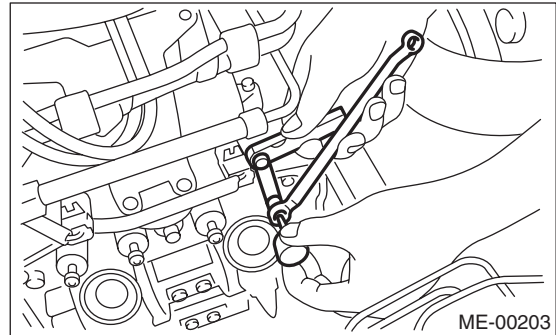
Valve clearance:

Intake

0.20 ± 0.04 mm (0.0079 ± 0.0016 in)

Exhaust

0.25 ± 0.04 mm (0.0098 ± 0.0016 in)



3) Adjust the valve clearance in #3, #2 and #4 cylinder in the same adjustment procedure as #1 cylinder.

NOTE:

- Be sure to set the cylinder pistons to their respective top dead centers on compression stroke before adjusting valve clearances.
 - By rotating the crank pulley clockwise every 180° from the state that #1 cylinder piston is on the top dead center of compression stroke, #3, #2 and #4 cylinder pistons come to the top dead center of compression stroke in this order.
- 4) Ensure the valve clearances of each cylinder are within specifications. If necessary, readjust the valve clearances.