

8. Valve Clearance

A: INSPECTION

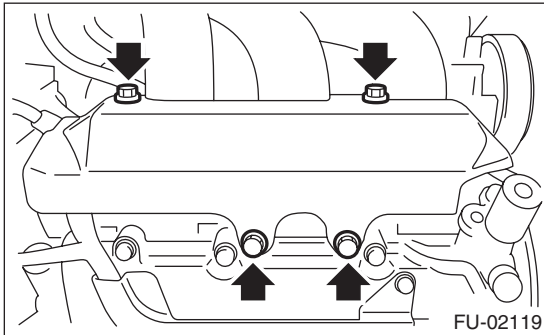
CAUTION:

If engine oil is spilt onto the exhaust pipe, wipe it off with cloth to avoid emission of smoke or causing a fire.

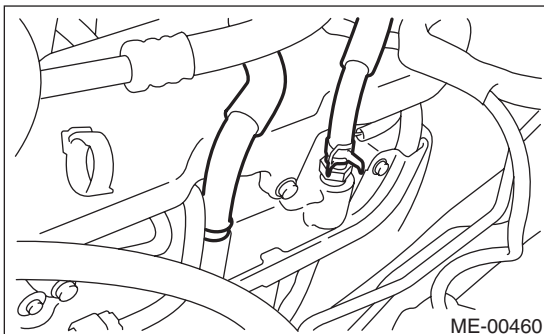
NOTE:

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

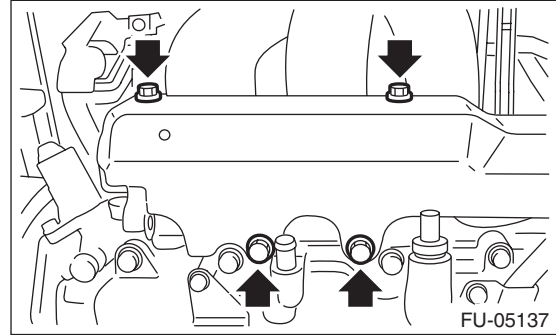
- 1) Remove the collector cover.
- 2) Disconnect the ground cable from battery.
- 3) Lift up the vehicle.
- 4) Remove the under cover.
- 5) Lower the vehicle.
- 6) When inspecting RH side cylinders:
 - (1) Remove the air intake duct and air cleaner case. <Ref. to IN(H6DO)-8, REMOVAL, Air Intake Duct.> <Ref. to IN(H6DO)-5, REMOVAL, Air Cleaner Case.>
 - (2) Remove the fuel pipe protector (RH).



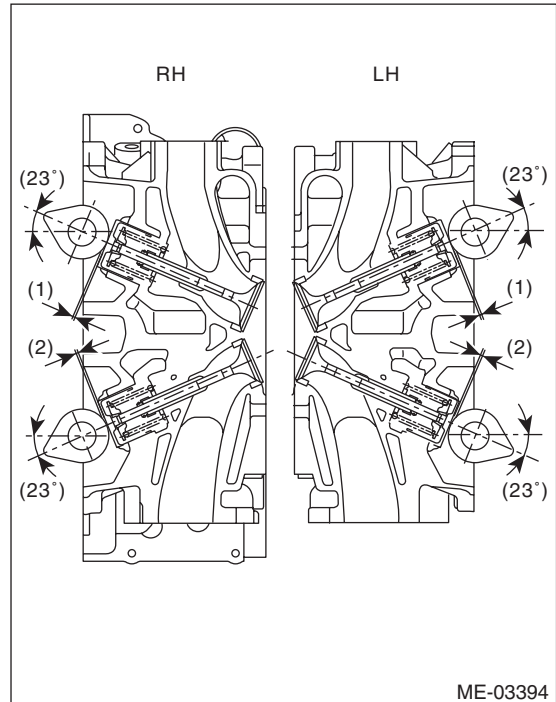
- (3) Disconnect the connector of oil pressure switch.
- (4) Remove the ignition coil. <Ref. to IG(H6DO)-8, REMOVAL, Ignition Coil.>
- (5) Remove the rocker cover (RH). <Ref. to ME(H6DO)-71, REMOVAL, Camshaft.>
- 7) When inspecting LH side cylinders:
 - (1) Disconnect the battery cable, and then remove the battery and battery carrier.
 - (2) Disconnect the PCV hose and blow-by hose from the rocker cover (LH).



- (3) Remove the fuel pipe protector (LH).



- (4) Remove the ignition coil. <Ref. to IG(H6DO)-8, REMOVAL, Ignition Coil.>
- (5) Remove the rocker cover (LH). <Ref. to ME(H6DO)-71, REMOVAL, Camshaft.>
- 8) Turn the crankshaft clockwise until the cam is set to position shown in the figure.



- (1) Valve clearance (Intake side)
- (2) Valve clearance (Exhaust side)

- 9) Measure the clearance of intake valve and exhaust valve using thickness gauge (A).

NOTE:

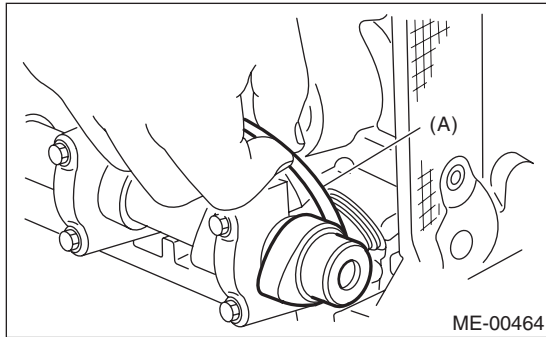
- Measure it within the range of $\pm 30^\circ$ from specified position shown in the figure.
- Insert a thickness gauge in a direction as horizontal as possible with respect to the valve lifter.

Valve clearance (inspection value):

Intake
 $0.20^{+0.04}_{-0.06}$ mm ($0.0079^{+0.0016}_{-0.0024}$ in)

Exhaust
 0.35 ± 0.05 mm (0.0138 ± 0.0020 in)

- If the measured value is not within specification, take notes of the value in order to adjust the valve clearance later on.



10) If necessary, adjust the valve clearance. <Ref. to ME(H6DO)-31, ADJUSTMENT, Valve Clearance.>

11) Further turn the crank pulley clockwise and then measure the valve clearances again.

12) After inspection, install the related parts in the reverse order of removal. <Ref. to ME(H6DO)-72, INSTALLATION, Camshaft.>

B: ADJUSTMENT

1. INTAKE SIDE

CAUTION:

If engine oil is spilt onto the exhaust pipe, wipe it off with cloth to avoid emission of smoke or causing a fire.

NOTE:

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

1) Measure all the valve clearances. <Ref. to ME(H6DO)-30, INSPECTION, Valve Clearance.>

NOTE:

Record each valve clearance after measurement.

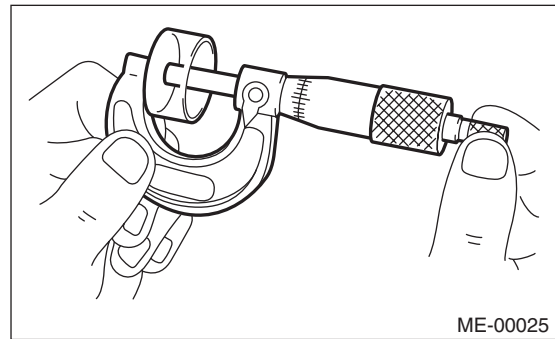
2) Remove the timing chain assembly. <Ref. to ME(H6DO)-51, REMOVAL, Timing Chain Assembly.>

3) Remove the cam sprocket. <Ref. to ME(H6DO)-69, REMOVAL, Cam Sprocket.>

4) Remove the camshaft. <Ref. to ME(H6DO)-71, REMOVAL, Camshaft.>

5) Remove the valve lifter.

6) Measure the thickness of valve lifter using micrometer.



7) Select a valve lifter of suitable thickness using the measured valve clearance and valve lifter thickness, and install it.

| Unit: mm (in) |
|---------------------------------------|
| $S = (V + T) - 0.20 \text{ (0.0079)}$ |
| S: Valve lifter thickness required |
| V: Measured valve clearance |
| T: Valve lifter thickness to be used |

8) Install the camshaft. <Ref. to ME(H6DO)-72, INSTALLATION, Camshaft.>

9) Install the cam sprocket. <Ref. to ME(H6DO)-69, INSTALLATION, Cam Sprocket.>

10) Install the timing chain assembly. <Ref. to ME(H6DO)-57, INSTALLATION, Timing Chain Assembly.>

11) Measure all valve clearance again at this time. If the valve clearance is not appropriate, repeat from the first step.

Valve clearance (adjustment value):

$0.20^{+0.04}_{-0.06} \text{ mm } (0.0079^{+0.0016}_{-0.0024} \text{ in})$

12) After measuring, install the related parts in the reverse order of removal.

NOTE:

Use a new rocker cover gasket.

2. EXHAUST SIDE

CAUTION:

If engine oil is spilt onto the exhaust pipe, wipe it off with cloth to avoid emission of smoke or causing a fire.

NOTE:

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

1) Measure all the valve clearances. <Ref. to ME(H6DO)-30, INSPECTION, Valve Clearance.>

NOTE:

Record each valve clearance after measurement.

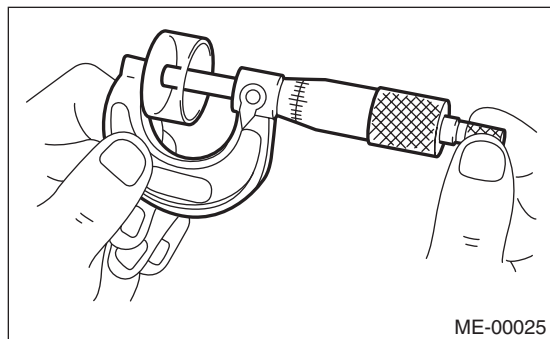
2) Remove the camshaft. <Ref. to ME(H6DO)-71, REMOVAL, Camshaft.>

3) Remove the valve lifter.

Valve Clearance

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4) Measure the thickness of valve lifter using micrometer.



5) Select a valve lifter of suitable thickness using the measured valve clearance and valve lifter thickness, and install it.

| Unit: mm (in) |
|--------------------------------------|
| $S = (V + T) - 0.35 (0.0138)$ |
| S: Valve lifter thickness required |
| V: Measured valve clearance |
| T: Valve lifter thickness to be used |

6) Install the camshaft. <Ref. to ME(H6DO)-72, INSTALLATION, Camshaft.>

7) Install the cam sprocket. <Ref. to ME(H6DO)-69, INSTALLATION, Cam Sprocket.>

8) Install the timing chain assembly. <Ref. to ME(H6DO)-57, INSTALLATION, Timing Chain Assembly.>

9) Measure all valve clearance again at this time.
If the valve clearance is not appropriate, repeat from the first step.

Valve clearance (adjustment value):

$0.35 \pm 0.05 \text{ mm } (0.0138 \pm 0.0020 \text{ in})$

10) After measuring, install the related parts in the reverse order of removal.

NOTE:

Use a new rocker cover gasket.