

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:

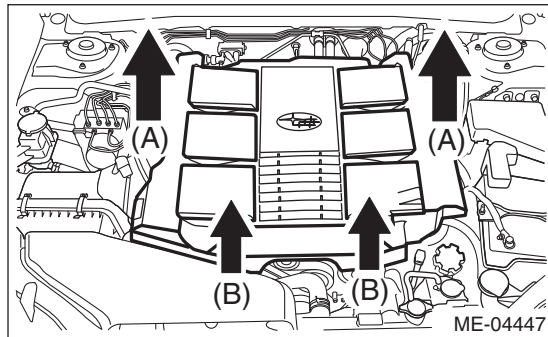
Inspection of valve clearance should be performed while engine is cold.

1) Remove the collector cover.

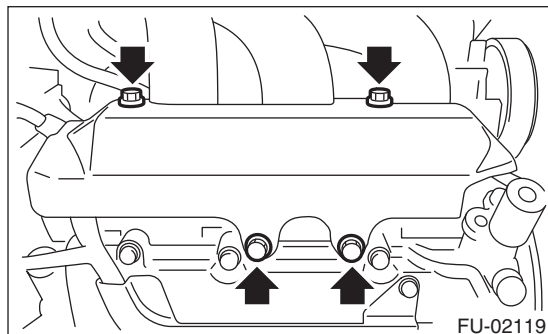
NOTE:

Follow these procedures for removal of the collector cover.

- (1) Lift up the rear side holding two positions (A).
- (2) Lift up the front side holding two positions (B) while moving it in the forward direction of the vehicle.



- 2) Disconnect the ground cable from battery.
- 3) Lift up the vehicle.
- 4) Remove the under cover. <Ref. to EI-35, REMOVAL, Front Under Cover.>
- 5) Lower the vehicle.
- 6) When inspecting #1, #3 and #5 cylinders
 - (1) Remove the air intake duct, air cleaner case and air intake boot assembly. <Ref. to IN(H6DO)-8, REMOVAL, Air Intake Duct.> <Ref. to IN(H6DO)-5, REMOVAL, Air Cleaner Case.> <Ref. to IN(H6DO)-7, REMOVAL, Air Intake Boot.>
 - (2) Remove the fuel pipe protector (RH).



(3) Disconnect the connector of oil pressure switch.

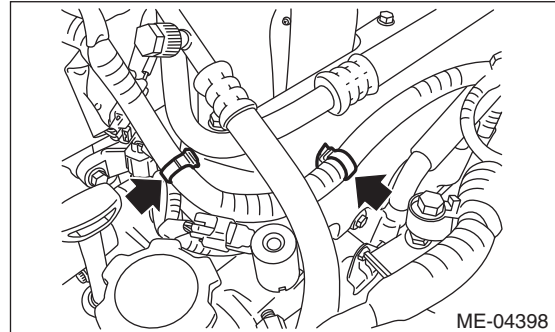
(4) Remove the ignition coil. <Ref. to IG(H6DO)-7, REMOVAL, Ignition Coil.>

(5) Remove the rocker cover (RH). <Ref. to ME(H6DO)-79, REMOVAL, Camshaft.>

7) When inspecting #2, #4 and #6 cylinders

(1) Disconnect the battery cable, and then remove the battery and battery carrier. <Ref. to SC(H4SO)-26, REMOVAL, Battery.>

(2) Remove two fixing clips on the fuel pipe protector (LH).



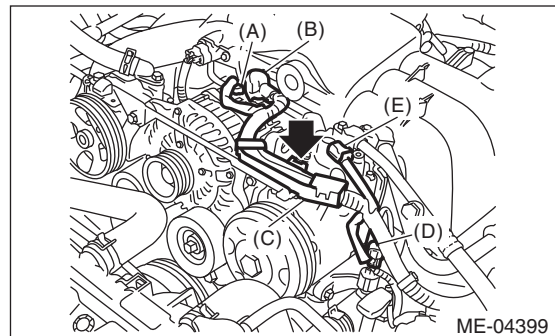
(3) Generator connector

(4) Generator terminal B

(5) Remove the harness cover from collector cover bracket.

(6) A/C compressor solenoid connector

(7) Flow sensor connector



(A) Generator connector

(B) Terminal B

(C) Harness cover

(D) A/C compressor solenoid connector

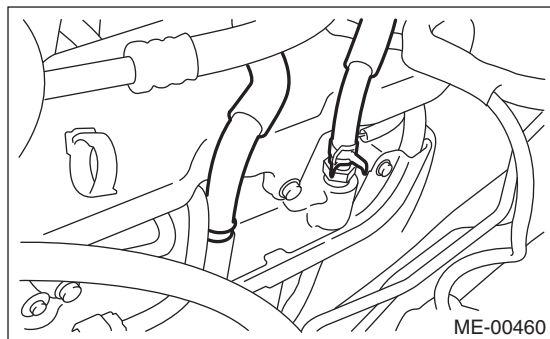
(E) Flow sensor connector

(8) Slide the harness and connector to the battery side.

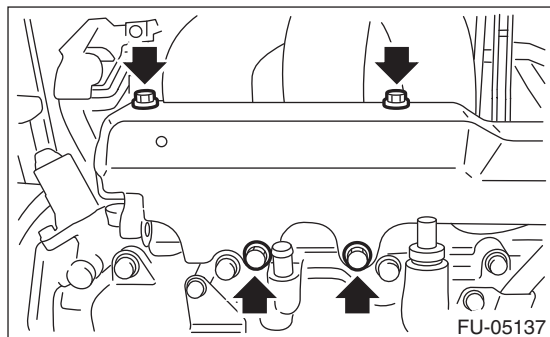
Valve Clearance

MECHANICAL

- (9) Disconnect the PCV hose and blow-by hose from the rocker cover (LH).



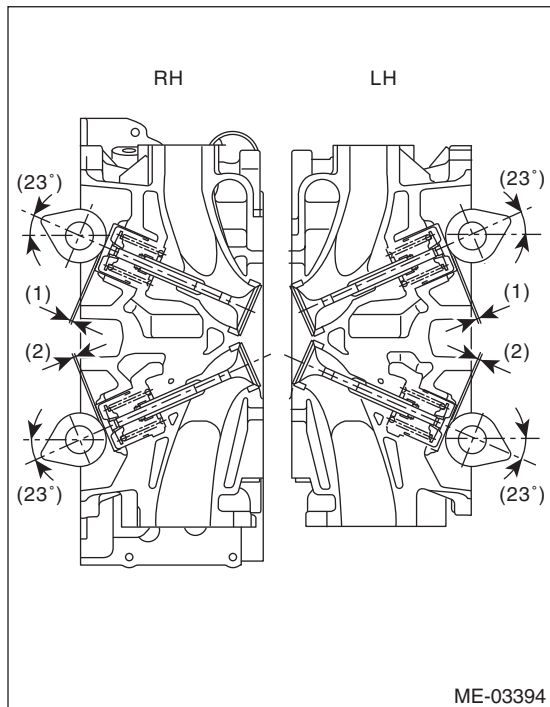
- (10) Remove the fuel pipe protector (LH).



- (11) Remove the ignition coil. <Ref. to IG(H6DO)-7, REMOVAL, Ignition Coil.>

- (12) Remove the rocker cover (LH). <Ref. to ME(H6DO)-79, REMOVAL, Camshaft.>

- 8) Turn the crankshaft clockwise until the camshaft 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):

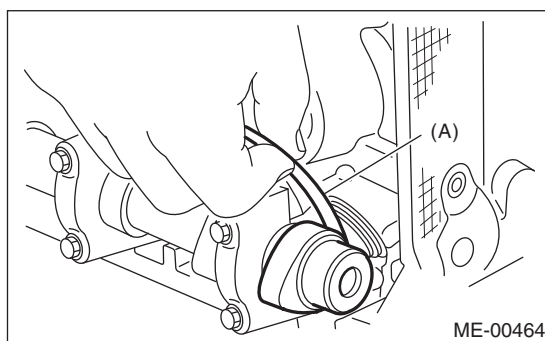
Intake

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

Exhaust

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

- 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)-32, 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)-81, 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)-31, INSPECTION, Valve Clearance.>

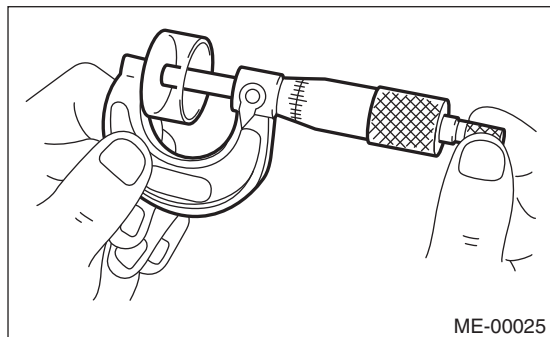
NOTE:

Record each valve clearance after measurement.

- 2) Remove the timing chain assembly. <Ref. to ME(H6DO)-59, REMOVAL, Timing Chain Assembly.>

- 3) Remove the cam sprocket. <Ref. to ME(H6DO)-77, REMOVAL, Cam Sprocket.>

- 4) Remove the camshaft. <Ref. to ME(H6DO)-79, 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.

NOTE:

Use a new valve lifter.

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

- 8) Install the camshaft. <Ref. to ME(H6DO)-81, INSTALLATION, Camshaft.>
- 9) Install the cam sprocket. <Ref. to ME(H6DO)-77, INSTALLATION, Cam Sprocket.>
- 10) Install the timing chain assembly. <Ref. to ME(H6DO)-65, INSTALLATION, Timing Chain Assembly.>
- 11) Measure all valve clearance again at this time. If the valve clearance is not correct, repeat the procedure over again 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)-31, INSPECTION, Valve Clearance.>

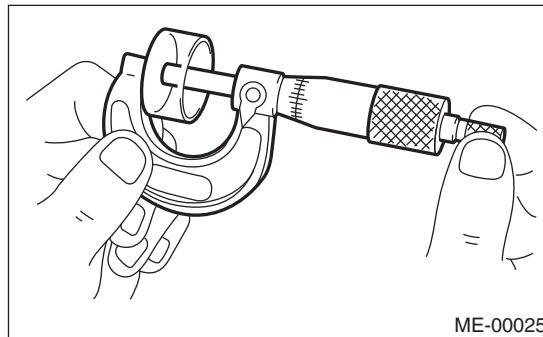
NOTE:

Record each valve clearance after measurement.

- 2) Remove the camshaft. <Ref. to ME(H6DO)-79, REMOVAL, Camshaft.>

- 3) Remove the valve lifter.

- 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.

NOTE:

Use a new valve lifter.

| 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)-81, INSTALLATION, Camshaft.>
- 7) Install the cam sprocket. <Ref. to ME(H6DO)-77, INSTALLATION, Cam Sprocket.>
- 8) Install the timing chain assembly. <Ref. to ME(H6DO)-65, INSTALLATION, Timing Chain Assembly.>
- 9) Measure all valve clearance again at this time. If the valve clearance is not correct, repeat the procedure over again 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.