

1. General Precautions

1) Before disassembling engine, place it on ST3.

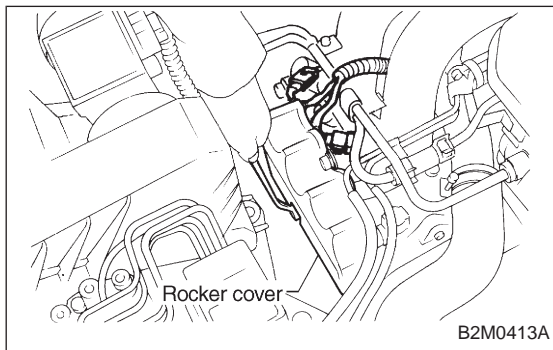
ST1	498457000	ENGINE STAND ADAPTER RH
ST2	498457100	ENGINE STAND ADAPTER LH
ST3	499817000	ENGINE STAND

- 2) All parts should be thoroughly cleaned, paying special attention to the engine oil passages, pistons and bearings.
- 3) Rotating parts and sliding parts such as piston, bearing and gear should be coated with oil prior to assembly.
- 4) Be careful not to let oil, grease or coolant contact the timing belt, clutch disc and flywheel.
- 5) All removed parts, if to be reused, should be reinstalled in the original positions and directions.
- 6) Gaskets and lock washers must be replaced with new ones. Liquid gasket should be used where specified to prevent leakage.
- 7) Bolts, nuts and washers should be replaced with new ones as required.
- 8) Even if necessary inspections have been made in advance, proceed with assembly work while making rechecks.

2. Hydraulic Lash Adjuster

A: INSPECTION

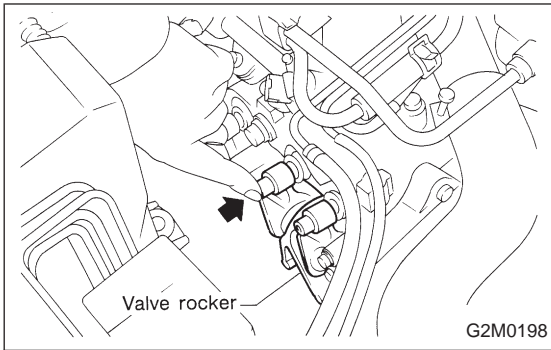
- 1) Disconnect blow-by hose from rocker cover.
- 2) Remove spark plug cap.



3) Remove left and right rocker covers.

CAUTION:

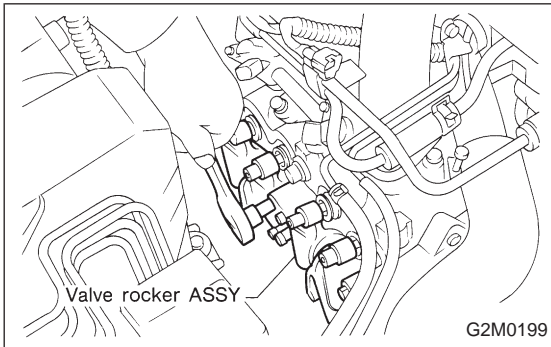
Before removing left rocker cover, disconnect battery cables and generator cable.



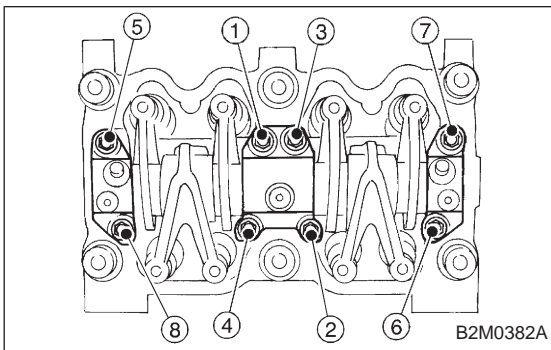
4) Manually push valve rocker (at lash adjuster location) to check that there is no air in it.

NOTE:

When air is in lash adjuster, valve rocker moves when pushed with fingers.



5) If air is in lash adjuster, remove valve rocker assembly from engine and bleed air completely.



B: AIR BLEEDING

1) Remove valve rocker assembly.

(1) Remove bolts ① through ④ in numerical sequence.

CAUTION:

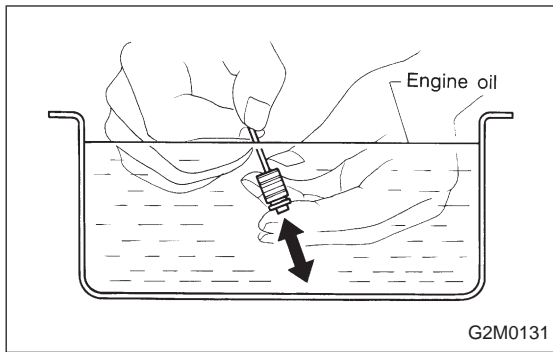
Leave two or three threads of bolt ① engaged to retain valve rocker assembly.

(2) Equally loosen bolts ⑤ through ⑧ all the way, being careful that knock pin is not gouged.

2) Manually remove lash adjusters where air is trapped.

CAUTION:

If lash adjuster is difficult to remove manually, use pliers. Be careful not to scratch lash adjuster.

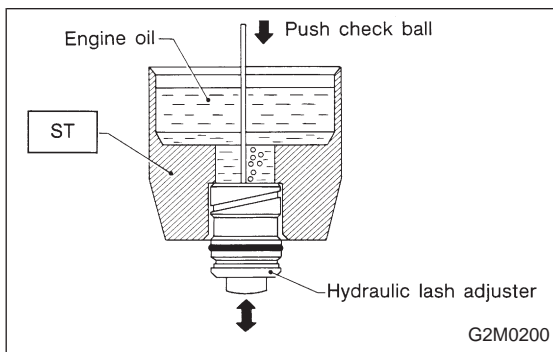


3) Bleed air from hydraulic lash adjuster as described below:

- (1) While dipping hydraulic lash adjuster in engine oil, as shown in Figure, push check ball in using a 2 mm (0.08 in) diameter round bar.
- (2) With check ball pushed in, manually move plunger up and down at one second intervals until air bubbles disappear.
- (3) After air bubbles disappear, remove round bar and quickly push plunger in to ensure it is locked. If plunger does not lock properly, replace hydraulic lash adjuster.

CAUTION:

Leave hydraulic lash adjuster (after air is bled) in engine oil until it is ready for installation.



4) Using ST;

- (1) Insert lash adjuster into ST, and fill ST with engine oil. Using a 2 mm (0.08 in) diameter rod, push check ball in.

ST 499597000 OIL SEAL GUIDE

- (2) With check ball pushed in, push plunger at an interval of one second.
- (3) Move plunger up and down until air bubbles are no longer emitted from lash adjuster.

NOTE:

Hold hydraulic lash adjusters vertically during air bleeding.

5) Remove the rod. Push plunger to ensure that air is completely bled out.

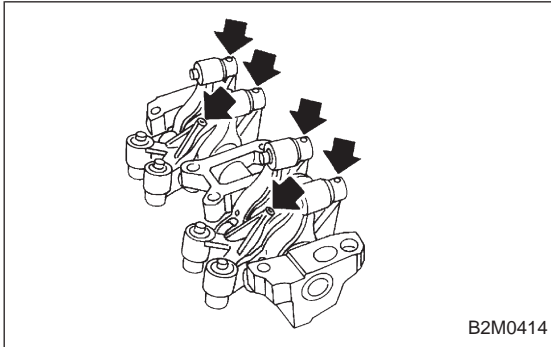
CAUTION:

If plunger does not properly lock (when pushed), replace lash adjuster with a new one.

6) Fill rocker arm's oil reservoir with engine oil and install lash adjuster.

CAUTION:

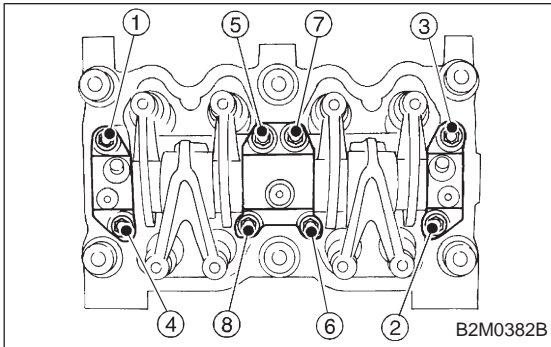
- Do not rotate lash adjuster during installation.
- Be careful not to scratch the oil seal.



B2M0414

CAUTION:

When removing valve rocker assembly, keep the assembly soaked in engine oil, or position it with air bleeding orifice on rocker arm facing upward as shown. This prevents oil leakage from and air entering into the hydraulic lash adjuster. Failure to do so may cause air to enter the hydraulic lash adjuster, causing loss in performance.



B2M0382B

- 7) Temporarily and equally tighten bolts ① through ④. Do not allow knock pin to catch valve rocker assembly.
- 8) Tighten bolts ⑤ through ⑧ to specified torque.
- 9) Tighten bolts ① through ④ to specified torque.

Tightening torque:

$12 \pm 1 \text{ N}\cdot\text{m}$ ($1.2 \pm 0.1 \text{ kg}\cdot\text{m}$, $8.7 \pm 0.7 \text{ ft}\cdot\text{lb}$)

10) Install rocker covers.

Tightening torque:

$5 \pm 1 \text{ N}\cdot\text{m}$ ($0.5 \pm 0.1 \text{ kg}\cdot\text{m}$, $3.6 \pm 0.7 \text{ ft}\cdot\text{lb}$)

11) Connect harness connectors, hoses, etc. to their positions.