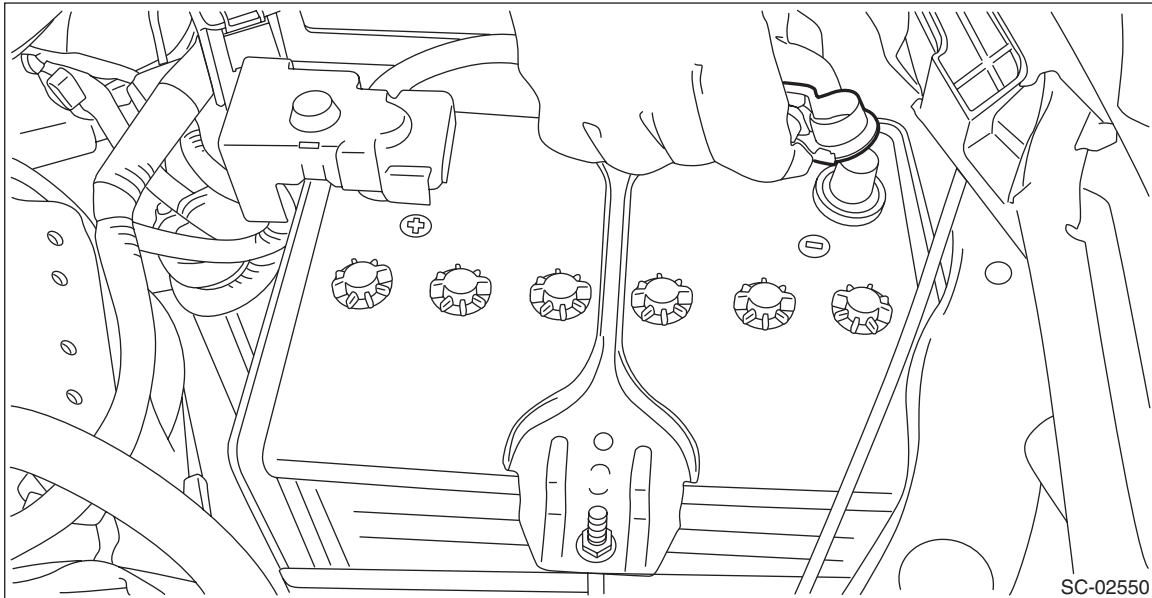


## 5. Oil Pan and Strainer

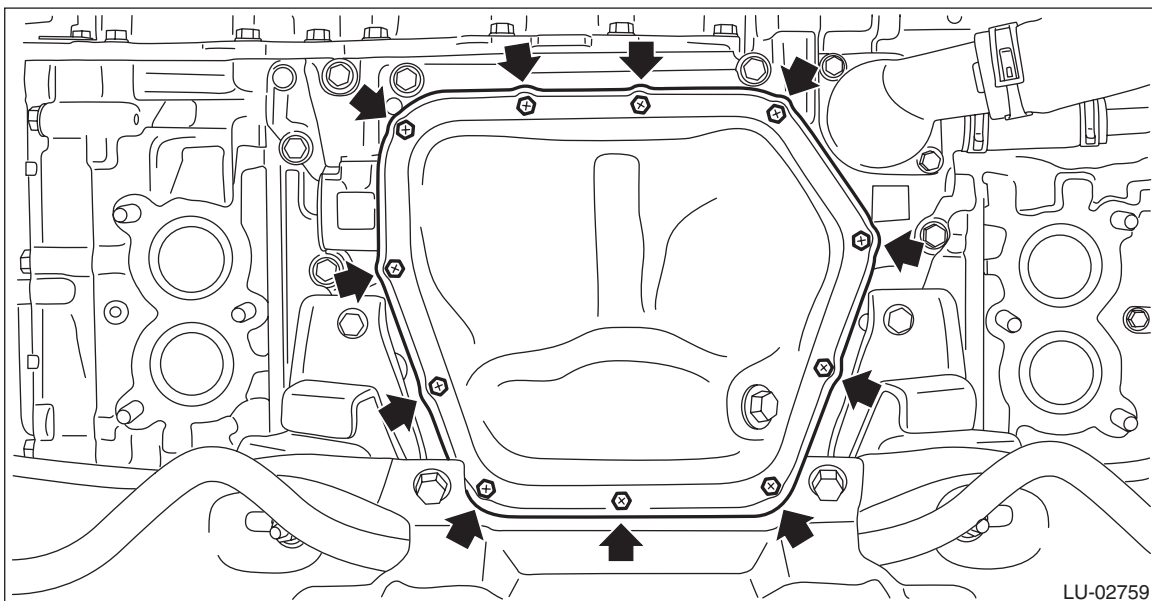
### A: REMOVAL

#### 1. OIL PAN

- 1) Disconnect the ground cable from battery.



- 2) Lift up the vehicle.
- 3) Remove the under cover. <Ref. to EI-27, REMOVAL, Front Under Cover.>
- 4) Drain the engine oil. <Ref. to LU(H4DO)-10, REPLACEMENT, Engine Oil.>
- 5) Remove the front exhaust pipe. <Ref. to EX(H4DO)-7, REMOVAL, Front Exhaust Pipe.>
- 6) Remove the bolts which secure oil pan to oil pan upper.



- 7) Insert an oil pan cutter blade into the gap between oil pan upper and oil pan, and remove the oil pan.

#### **CAUTION:**

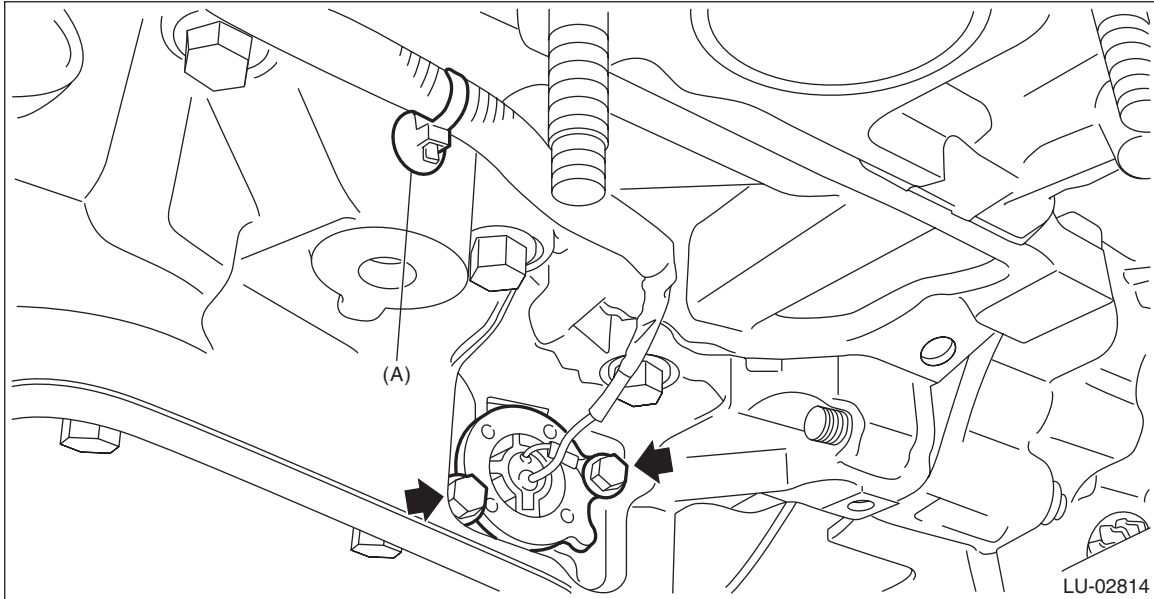
**Do not use a screwdriver or similar tool in place of oil pan cutter.**

# Oil Pan and Strainer

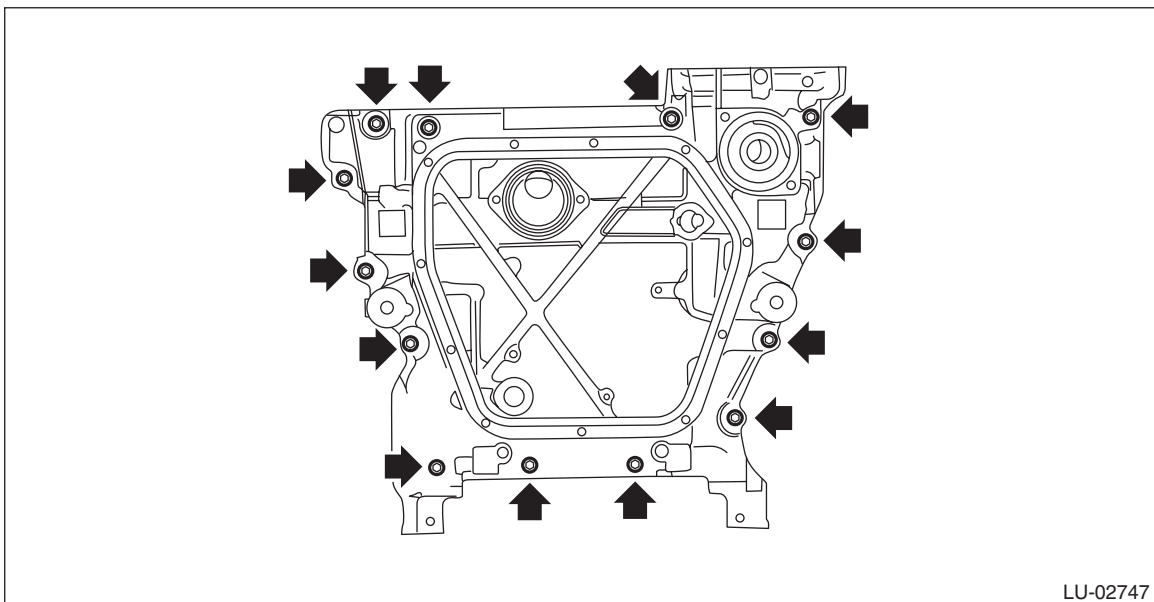
## LUBRICATION

### 2. OIL PAN UPPER

- 1) Remove the engine from the vehicle. <Ref. to ME(H4DO)-43, REMOVAL, Engine Assembly.>
- 2) Remove the water pump. <Ref. to CO(H4DO)-16, REMOVAL, Water Pump.>
- 3) Remove the thermostat cover. <Ref. to CO(H4DO)-20, REMOVAL, Thermostat.>
- 4) Remove the water pipe assembly. <Ref. to CO(H4DO)-3, WATER PUMP, COMPONENT, General Description.>
- 5) Remove the oil pan. <Ref. to LU(H4DO)-13, OIL PAN, REMOVAL, Oil Pan and Strainer.>
- 6) Remove clip (A) from the oil pan upper, and remove the oil level switch.

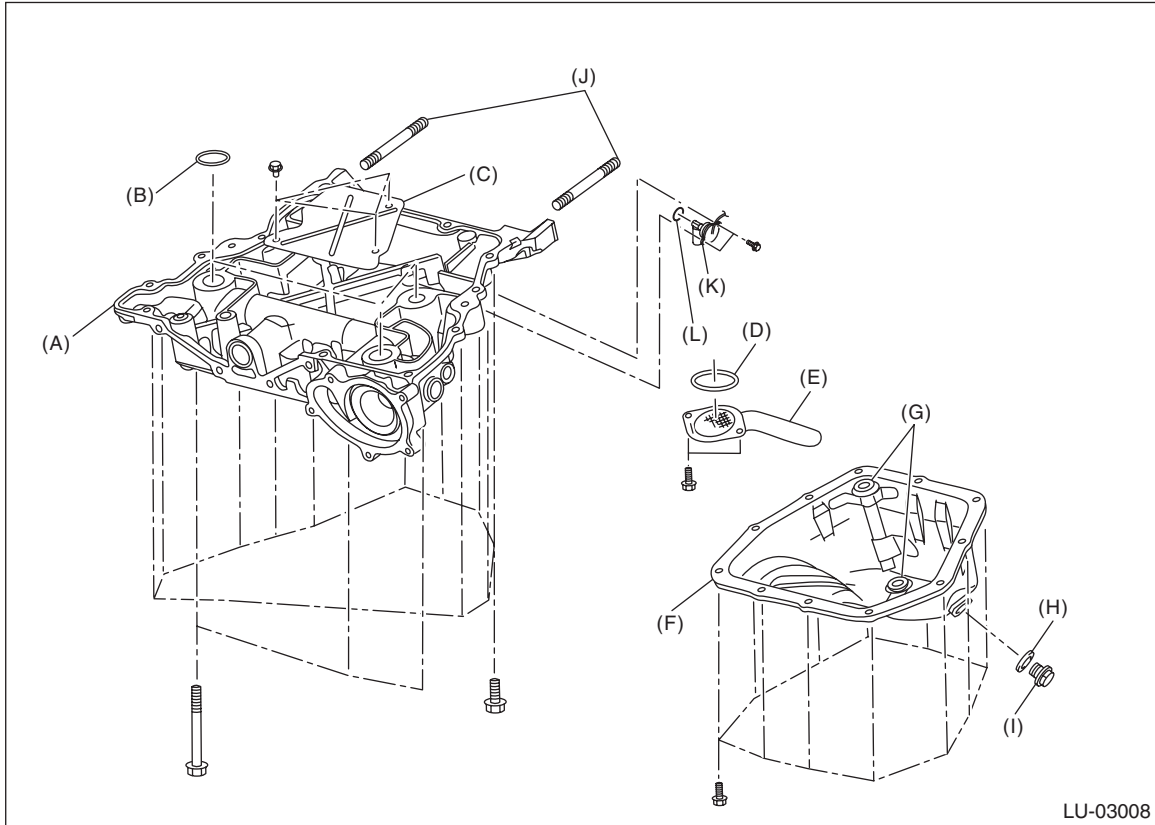


- 7) Remove the chain cover. <Ref. to ME(H4DO)-92, REMOVAL, Chain Cover.>
- 8) Remove the bolts which secure oil pan upper to cylinder block, and remove the oil pan upper.



- 9) Remove the baffle plate from the oil pan upper.
- 10) Remove the oil strainer from the oil pan upper.

11) Remove stud bolts from the oil pan upper.



LU-03008

- |                       |                       |                  |
|-----------------------|-----------------------|------------------|
| (A) Oil pan upper     | (B) O-ring            | (C) Baffle plate |
| (D) O-ring            | (E) Oil strainer      | (F) Oil pan      |
| (G) Oil pan seal ring | (H) Drain plug gasket | (I) Drain plug   |
| (J) Stud bolt         | (K) Oil level switch  | (L) O-ring       |

# Oil Pan and Strainer

LUBRICATION

## B: INSTALLATION

### 1. OIL PAN

NOTE:

- Before installing the oil pan, wipe and clean the mating surface of oil pan and oil pan upper.
- Use a new oil pan seal ring.

1) Apply liquid gasket to the mating surfaces of oil pan upper, and install the oil pan.

NOTE:

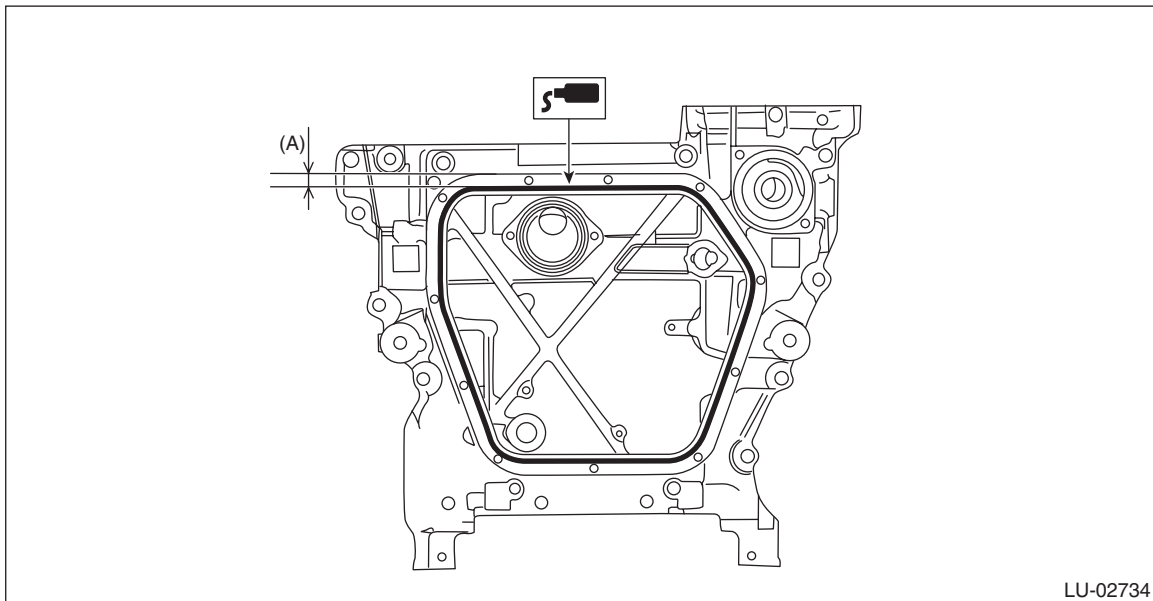
Install within 5 min. after applying liquid gasket.

**Liquid gasket:**

**THREE BOND 1217G (Part No. K0877Y0100) or equivalent**

**Liquid gasket applying diameter:**

**$5\pm 1$  mm (0.1969 $\pm$ 0.0394 in)**

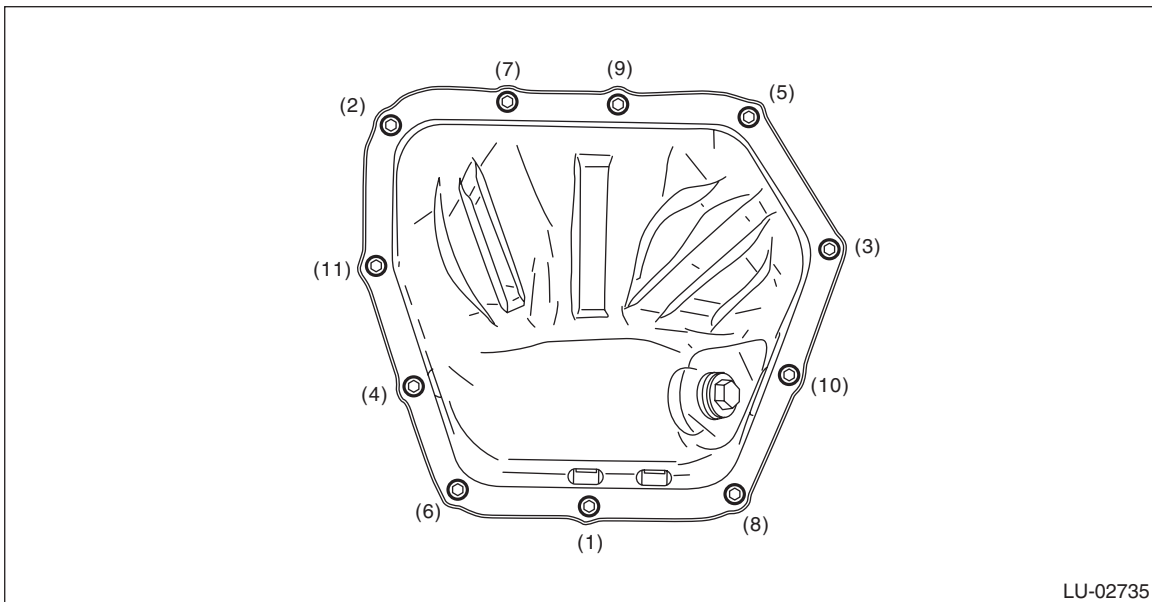


(A) 9.5 mm (0.374 in)

2) Tighten the bolts to install the oil pan to the oil pan upper in the numerical order.

**Tightening torque:**

**6.4 N·m (0.7 kgf·m, 4.7 ft·lb)**

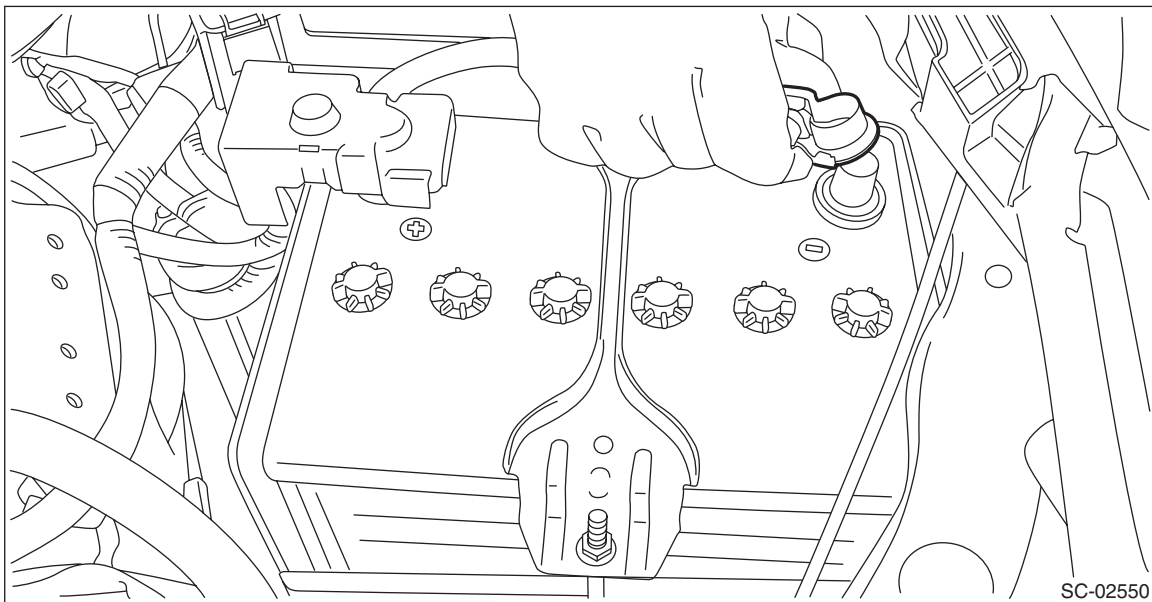


3) Install the front exhaust pipe. <Ref. to EX(H4DO)-10, INSTALLATION, Front Exhaust Pipe.>

4) Install the under cover. <Ref. to EI-27, INSTALLATION, Front Under Cover.>

5) Lower the vehicle.

6) Connect the battery ground terminal.



7) Refill the engine oil. <Ref. to LU(H4DO)-10, REPLACEMENT, Engine Oil.>

# Oil Pan and Strainer

## LUBRICATION

### 2. OIL PAN UPPER

#### NOTE:

Before installing the oil pan upper, clean the mating surface of oil pan upper and cylinder block.

- 1) Attach the stud bolts to the oil pan upper.
- 2) Attach the oil strainer to the oil pan upper.

#### NOTE:

Use new O-rings.

- 3) Attach the baffle plate to the oil pan upper.

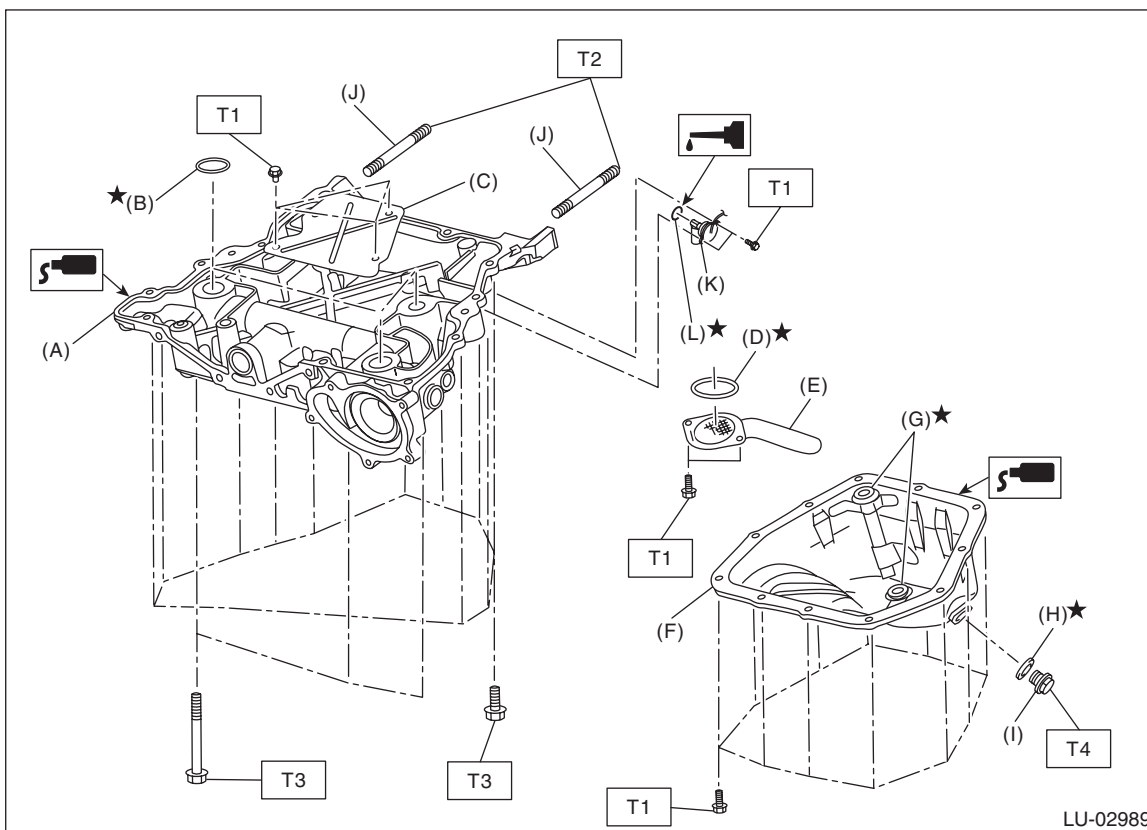
#### Tightening torque:

**T1: 6.4 N·m (0.7 kgf-m, 4.7 ft-lb)**

**T2: 10 N·m (1.0 kgf-m, 7.4 ft-lb)**

**T3: 18 N·m (1.8 kgf-m, 13.3 ft-lb)**

**T4: 41.7 N·m (4.3 kgf-m, 30.8 ft-lb)**



- |                       |                       |                  |
|-----------------------|-----------------------|------------------|
| (A) Oil pan upper     | (B) O-ring            | (C) Baffle plate |
| (D) O-ring            | (E) Oil strainer      | (F) Oil pan      |
| (G) Oil pan seal ring | (H) Drain plug gasket | (I) Drain plug   |
| (J) Stud bolt         | (K) Oil level switch  | (L) O-ring       |

4) Apply liquid gasket to the mating surface of the oil pan upper as shown in the figure, and install the oil pan upper to the cylinder block.

**CAUTION:**

**Be careful not to apply any liquid gasket to the O-ring.**

**NOTE:**

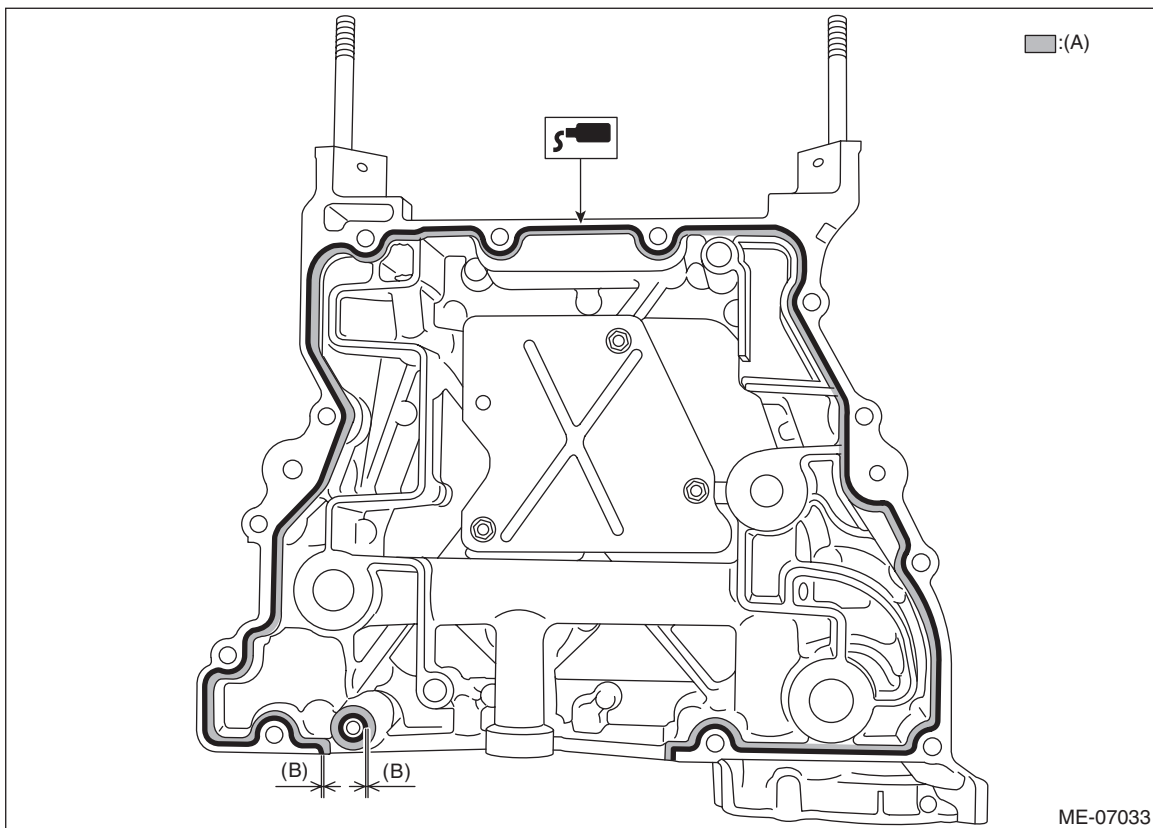
- Use new O-rings.
- Install within 5 min. after applying liquid gasket.
- Apply liquid gasket 1.5 mm (0.0591 in) outside from the chamfer surface. However, application of liquid gasket on the chamfer surface around the bolt hole is allowed.

**Liquid gasket:**

**THREE BOND 1217G (Part No. K0877Y0100) or equivalent**

**Liquid gasket applying diameter:**

**5±1 mm (0.1969±0.0394 in)**



(A) Chamfer surface

(B) 1.5 mm (0.0591 in)

## Oil Pan and Strainer

### LUBRICATION

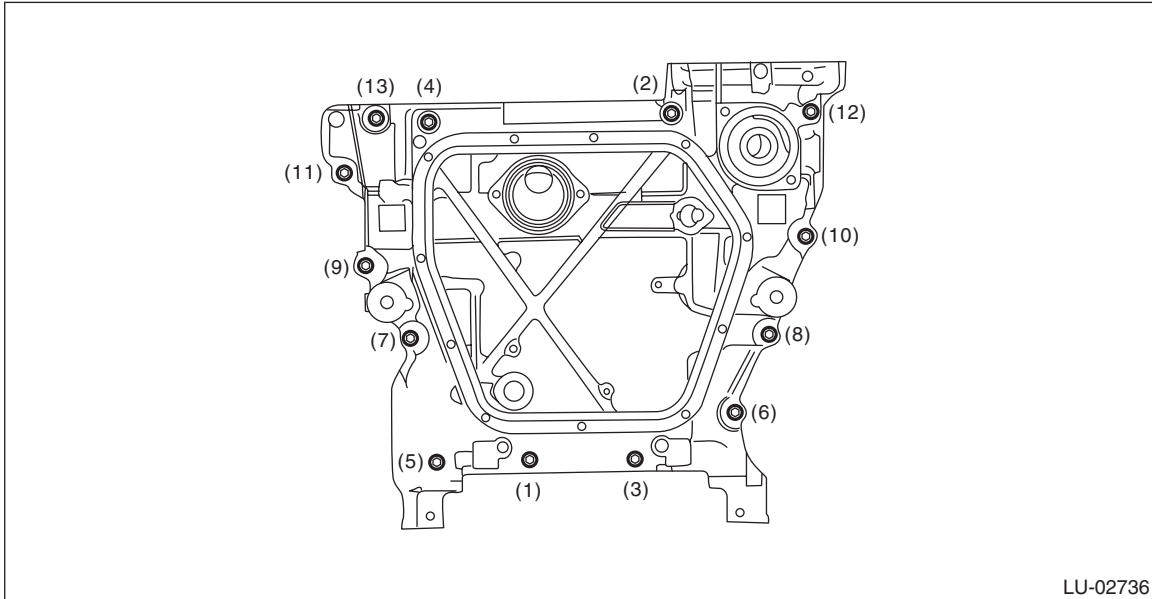
5) Tighten the bolts to install the oil pan upper to the cylinder block in the numerical order.

#### NOTE:

After tightening, if the liquid gasket is squeezed out onto the seal surface of the chain cover, completely remove any squeezed-out liquid gasket.

#### Tightening torque:

**18 N·m (1.8 kgf-m, 13.3 ft-lb)**



6) Install the chain cover. <Ref. to ME(H4DO)-97, INSTALLATION, Chain Cover.>

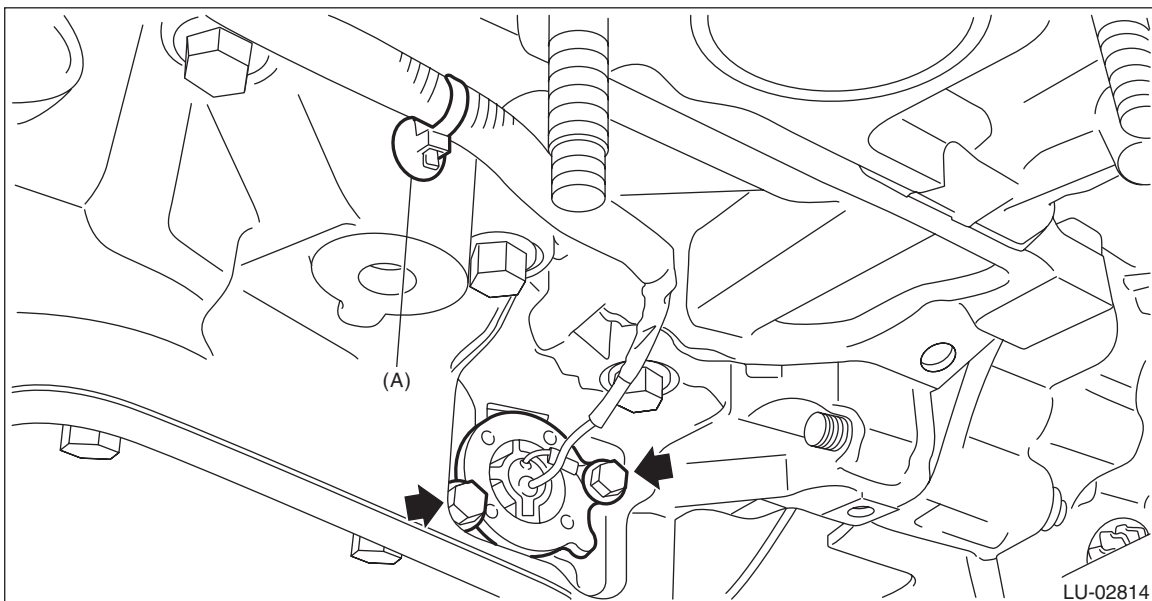
7) Install the oil level switch on the oil pan upper, and secure the harness with clips (A).

#### NOTE:

- Use new O-rings.
- Apply a coat of engine oil to the O-rings.

#### Tightening torque:

**6.4 N·m (0.7 kgf-m, 4.7 ft-lb)**



8) Install the oil pan. <Ref. to LU(H4DO)-16, OIL PAN, INSTALLATION, Oil Pan and Strainer.>

9) Install the water pipe assembly. <Ref. to CO(H4DO)-3, WATER PUMP, COMPONENT, General Description.>



- 10) Install the thermostat cover. <Ref. to CO(H4DO)-26, INSTALLATION, Thermostat.>
- 11) Install the water pump. <Ref. to CO(H4DO)-17, INSTALLATION, Water Pump.>
- 12) Lower the vehicle.
- 13) Install the engine to the vehicle. <Ref. to ME(H4DO)-59, INSTALLATION, Engine Assembly.>
- 14) Refill the engine oil. <Ref. to LU(H4DO)-10, REPLACEMENT, Engine Oil.>

## **C: INSPECTION**

Check that the oil pan, oil pan upper, oil strainer and baffle plate do not have deformation, cracks or damage.