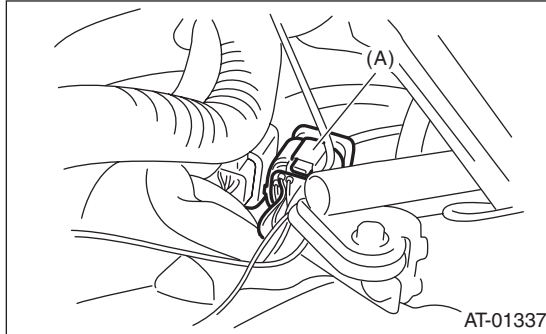


### 14. Front Vehicle Speed Sensor

#### A: REMOVAL

- 1) Set the vehicle on a lift.
- 2) Disconnect the ground cable from the battery.
- 3) Remove the air intake chamber.  
<Ref. to IN(H4SO)-7, REMOVAL, Air Intake Chamber.>
- 4) Disconnect the transmission connector.



(A) Transmission connector

- 5) Remove the pitching stopper. <Ref. to 4AT-41, REMOVAL, Transmission Mounting System.>
- 6) Remove the transmission connector from stay.
- 7) Lift the vehicle.
- 8) Clean the transmission exterior.
- 9) Remove the ATF drain plug to drain ATF.

#### CAUTION:

**After running the engine or after idling for a long time, the ATF is hot. Be careful not to burn yourself.**

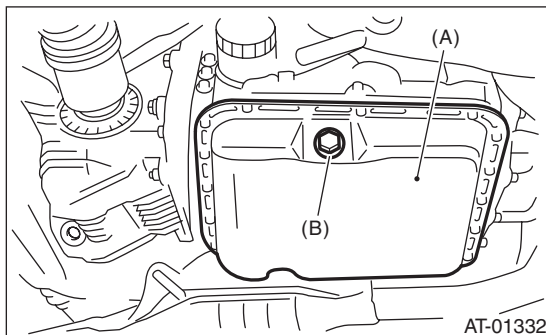
- 10) Tighten the ATF drain plug.

#### NOTE:

Use a new gasket.

#### Tightening torque:

**25 N·m (2.5 kgf-m, 18 ft-lb)**



(A) Oil pan

(B) ATF drain plug

- 11) Remove the front, center and rear exhaust pipes and muffler. <Ref. to EX(H4SO)-4, REMOVAL, Front Exhaust Pipe.> <Ref. to EX(H4SO)-8, REMOVAL, Rear Exhaust Pipe.> <Ref. to EX(H4SO)-10, REMOVAL, Muffler.>

- 12) Remove the shield cover.

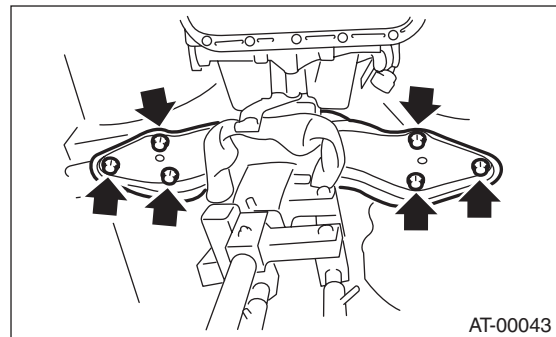
- 13) Remove the propeller shaft. <Ref. to DS-10, REMOVAL, Propeller Shaft.>

- 14) Place the transmission jack under the transmission.

#### NOTE:

Make sure that the support plate of transmission jack does not touch the cross.

- 15) Remove the transmission rear crossmember bolt.



- 16) Lower the transmission jack.

#### NOTE:

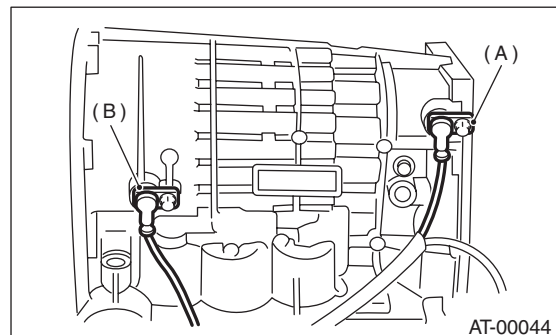
Do not separate the transmission jack and transmission.

- 17) Remove the oil cooler inlet and outlet pipes.

#### NOTE:

When removing the outlet pipe, be careful not to lose the ball and spring used with retaining screw.

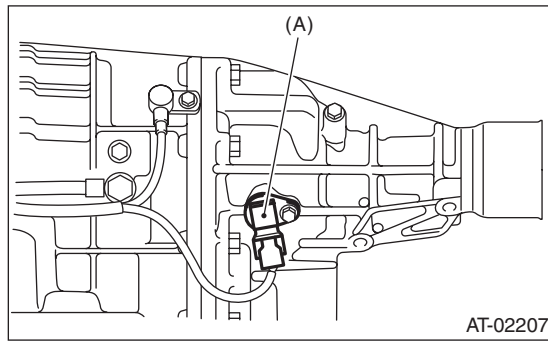
- 18) Remove the front vehicle speed sensor and torque converter turbine speed sensor.



(A) Front vehicle speed sensor

(B) Torque converter turbine speed sensor

- 19) Disconnect the connector from the rear vehicle speed sensor.



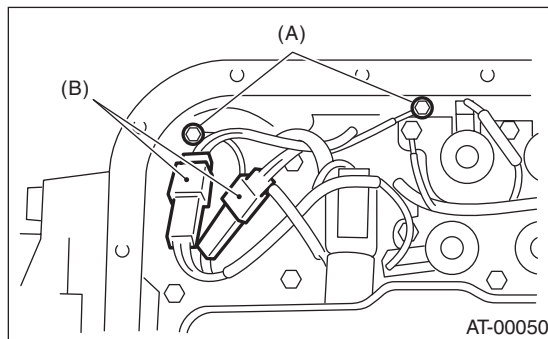
(A) Rear vehicle speed sensor

- 20) Remove the oil pan.

**NOTE:**

Be careful not to allow foreign matter such as dust or dirt to enter the oil pan.

- 21) Disconnect the harness connector and transmission ground terminal.

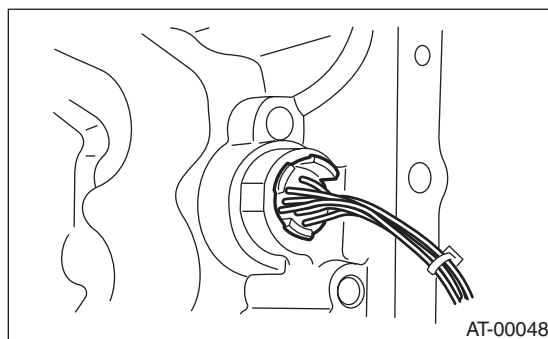


(A) Transmission ground  
(B) Harness connector

- 22) Remove the harness assembly.

**B: INSTALLATION**

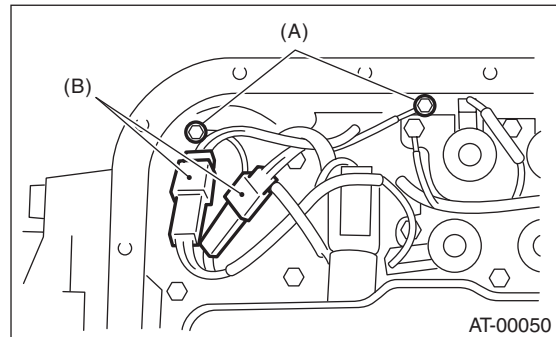
- 1) Pass the harness assembly through the hole in transmission case.



- 2) Connect the harness connector and transmission ground.

**Tightening torque:**

**8 N·m (0.8 kgf-m, 5.8 ft-lb)**

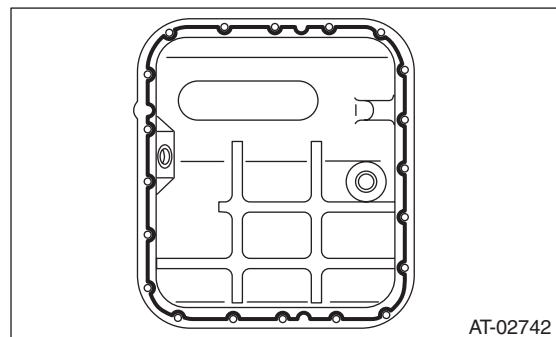


(A) Transmission ground  
(B) Harness connector

- 3) Apply proper amount of liquid gasket to the entire oil pan mating surface.

**Liquid gasket:**

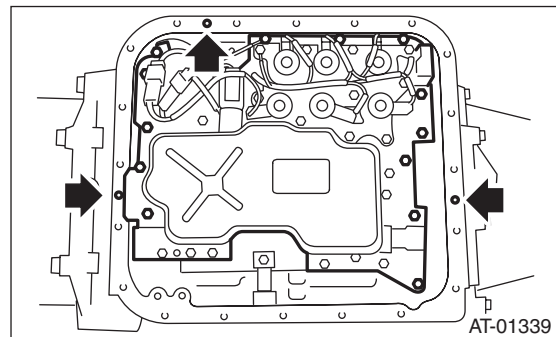
**THREE BOND 1217B (Part No. K0877YA020) or equivalent**



- 4) Apply an adequate amount of liquid gasket to the three holes excluding the screw holes of the transmission case.

**Liquid gasket:**

**THREE BOND 1217B (Part No. K0877YA020) or equivalent**



- 5) Install the oil pan.

**Tightening torque:**

**5 N·m (0.5 kgf-m, 3.6 ft-lb)**

## Front Vehicle Speed Sensor

### AUTOMATIC TRANSMISSION

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6) Install the front vehicle speed sensor and torque converter turbine speed sensor.

**Tightening torque:**

**7 N·m (0.7 kgf-m, 5.1 ft-lb)**

7) Connect the connector to the rear vehicle speed sensor.

8) Install the oil cooler pipe.

NOTE:

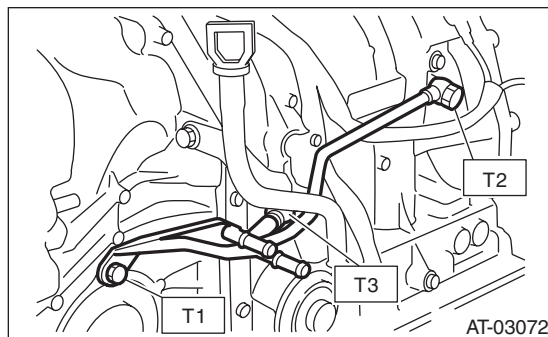
Use a new copper washer.

**Tightening torque:**

**T1: 25 N·m (2.5 kgf-m, 18 ft-lb)**

**T2: 40 N·m (4.1 kgf-m, 29.5 ft-lb)**

**T3: 44 N·m (4.5 kgf-m, 32.5 ft-lb)**



9) Install the transmission rear crossmember bolt.

**Tightening torque:**

**75 N·m (7.6 kgf-m, 55 ft-lb)**

10) Install the propeller shaft. <Ref. to DS-11, INSTALLATION, Propeller Shaft.>

11) Install the shield cover.

12) Install the front, center and rear exhaust pipes, and the muffler.

<Ref. to EX(H4SO)-5, INSTALLATION, Front Exhaust Pipe.> <Ref. to EX(H4SO)-8, INSTALLATION, Rear Exhaust Pipe.> <Ref. to EX(H4SO)-10, INSTALLATION, Muffler.>

13) Lower the vehicle.

14) Install the transmission connector to the stay.

15) Install the pitching stopper. <Ref. to 4AT-41, INSTALLATION, Transmission Mounting System.>

16) Install the air intake chamber.

<Ref. to IN(H4SO)-7, INSTALLATION, Air Intake Chamber.>

17) Fill with the same amount of ATF as drained.

18) Bleed the air of control valve.

<Ref. to 4AT-58, Air Bleeding of Control Valve.>

19) Inspect the level of ATF. <Ref. to 4AT-26, Automatic Transmission Fluid.>

20) Execute the learning control promotion. <Ref. to 4AT(diag)-17, FACILITATION OF LEARNING CONTROL, OPERATION, Subaru Select Monitor.>