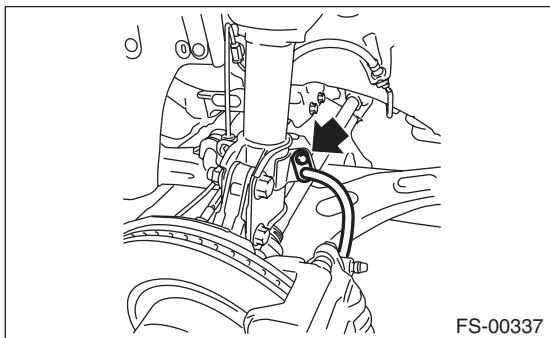


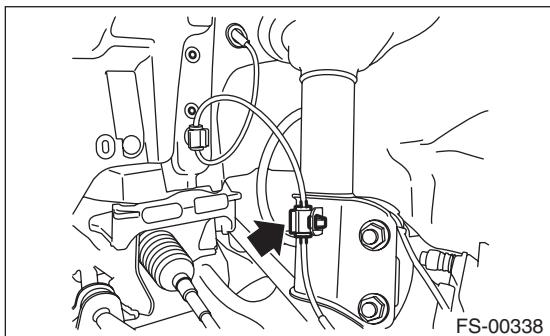
7. Front Strut

A: REMOVAL

- 1) Lift up the vehicle, and then remove the front wheels.
- 2) Remove the front strut.
 - (1) Place an alignment mark on the camber adjusting bolt and strut.
 - (2) Remove the brake hose bracket.



- (3) Remove the ABS wheel speed sensor harness.

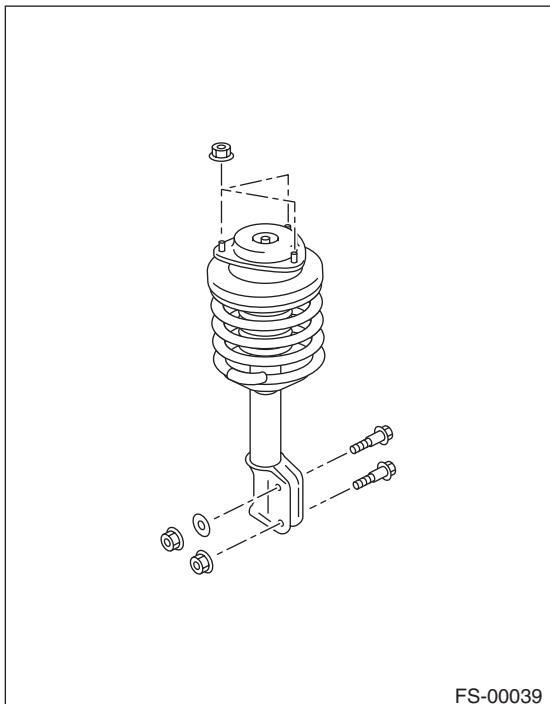


- (4) Remove the two bolts securing the front axle housing to the strut.

NOTE:

While holding the head of the adjusting bolt, loosen the flange nut.

- (5) Remove the three nuts securing strut mount to body.



B: INSTALLATION

- 1) Install the strut mount at the upper side of strut to body, and tighten it with new self-locking nuts.

Tightening torque:

20 N·m (2.04 kgf·m, 14.8 ft-lb)

- 2) Align alignment marks on the camber adjusting bolt and strut.

Using new self-locking nuts, install the strut to the front axle housing.

NOTE:

While holding the head of adjusting bolt, tighten the self-locking nut.

Tightening torque:

155 N·m (15.81 kgf·m, 114.3 ft-lb)

- 3) Secure the ABS wheel speed sensor harness to the strut.

- 4) Install the brake hose bracket.

Tightening torque:

33 N·m (3.36 kgf·m, 24.3 ft-lb)

- 5) Install the front wheels.

Tightening torque:

120 N·m (12.24 kgf·m, 88.5 ft-lb)

- 6) Inspect the wheel alignment and adjust if necessary. <Ref. to FS-13, ADJUSTMENT, Wheel Alignment.>

CAUTION:

When the wheel alignment has been adjusted, perform the 0 point setting mode for each sensor in the VDCCM&H/U. <Ref. to VDC-20, ADJUSTMENT, VDC Control Module and Hydraulic Control Unit (VDCCM&H/U).>

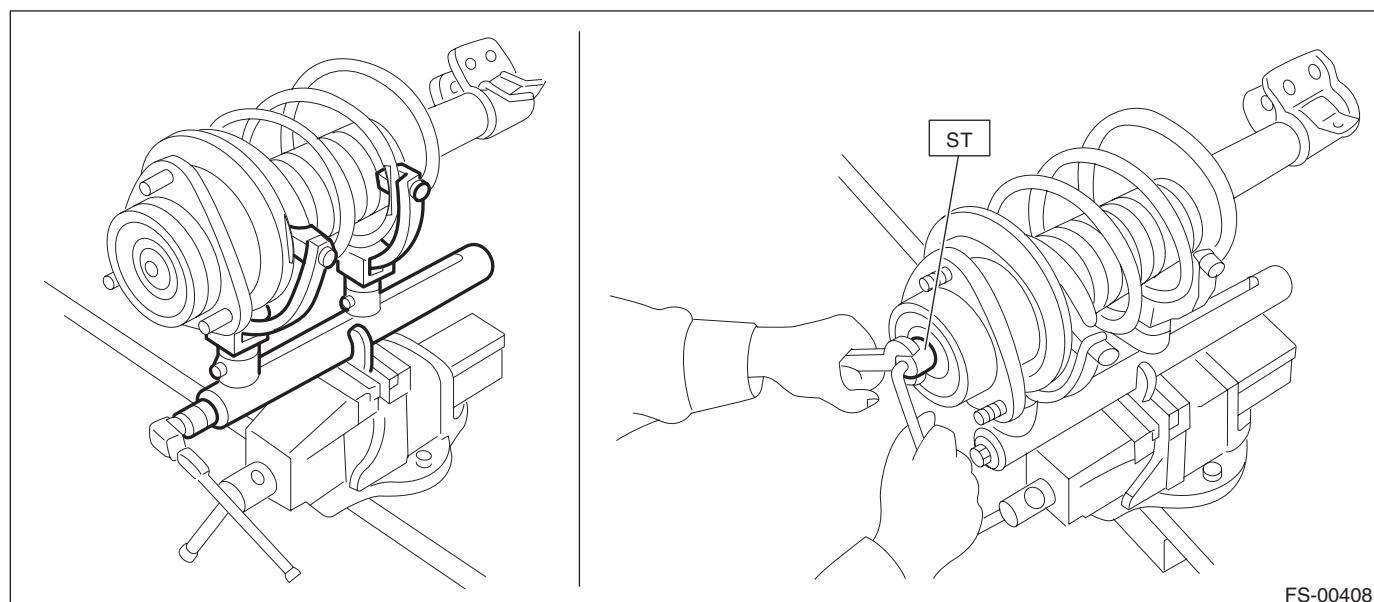
C: DISASSEMBLY

- 1) Using a coil spring compressor, compress the coil spring.

- 2) Using the ST, remove the self-locking nut.

PREPARATION TOOL:

ST: STRUT MOUNT SOCKET (20399AG000)



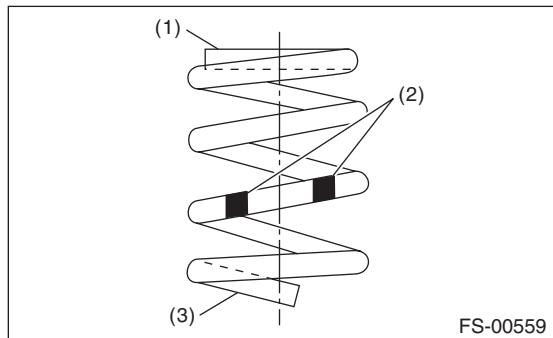
- 3) Remove the strut mount, spacer and upper spring seat from the strut.
- 4) Gradually decrease the compression force of compressor, and remove the coil spring.
- 5) Remove the dust cover and helper.

D: ASSEMBLY

- 1) Before assembly, check each part. <Ref. to FS-46, INSPECTION, Front Strut.>
- 2) Using a coil spring compressor, compress the coil spring.

NOTE:

Make sure that the vertical install direction of the coil spring is as shown in the figure.



(1) Diameter is small (upper part)

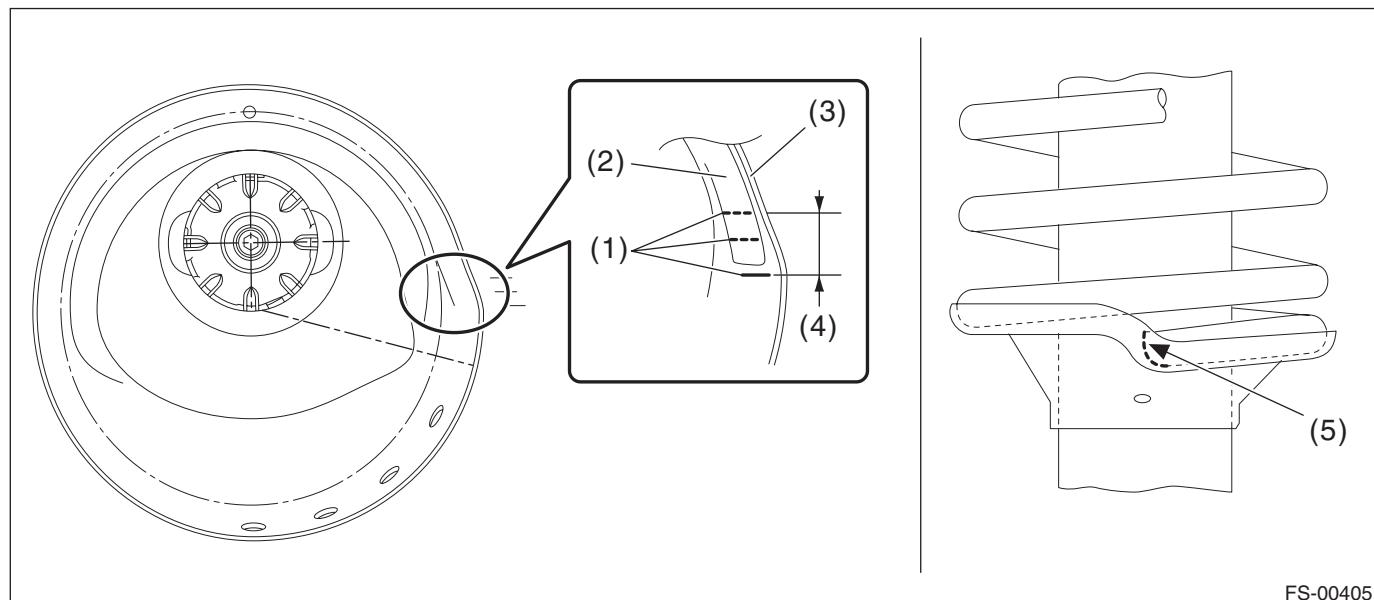
(2) Identification paint

(3) Diameter is large (bottom part)

- 3) Set the coil spring correctly so that its end face seats well in the spring seat as shown in the figure.

CAUTION:

Install the coil spring so that the end of spring is between the marks on the spring seat.



(1) Mark

(2) Spring

(3) Spring seat

(4) Install the spring within this area

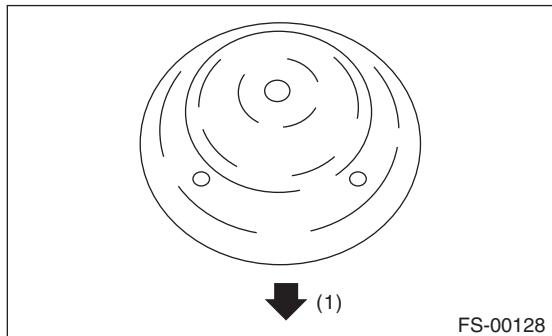
(5) Coil spring end face

- 4) Install the dust cover and helper to the piston rod.

- 5) Pull the piston rod fully upward, and install the spring seat.

NOTE:

Position the upper spring seat as shown in the figure.

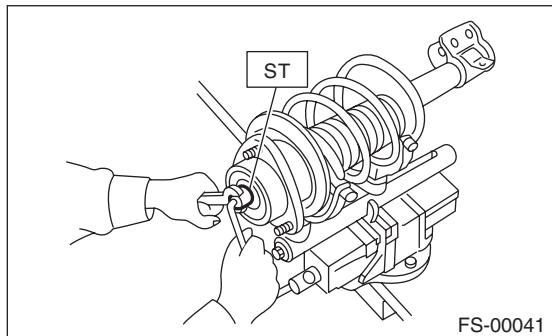


(1) Outside of body

- 6) Install the spacer and strut mount to the piston rod, and temporarily tighten a new self-locking nut.
- 7) Using a hexagon wrench to prevent strut rod from turning, tighten the new self-locking nut with ST.

Preparation tool:

ST: STRUT MOUNT SOCKET (20399AG000)



Tightening torque:

55 N·m (5.61 kgf·m, 40.6 ft-lb)

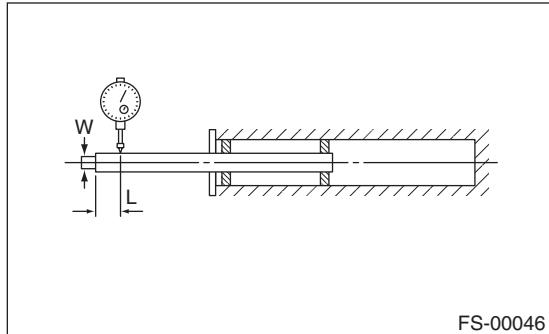
- 8) Loosen the coil spring compressor carefully.

E: INSPECTION

Check the removed part for wear, damage and cracks, and then repair or replace it if defective.

1. STRUT

- 1) Check for oil leaks.
- 2) Move the piston rod up and down to check that it operates smoothly without any hitch.
- 3) Check the piston rod for play as follows:
 1. Fix the outer shell in place and fully extend the rod.
 2. Set the dial gauge on the end of the rod L [10 mm (0.39 in)].
 3. While applying a force of W [20 N (2 kgf, 4 lbf)] to the threaded part, read the dial gauge indication P_1 .
 4. Apply a force of 20 N (2 kgf, 4 lbf) from the opposite direction of "W", and then read the dial gauge indication P_2 .



Play limit ($P_1 + P_2$): 0.8 mm (0.031 in)

- 4) Replace the strut if faulty is found in the inspection or limit value is exceeded.

2. STRUT MOUNT

Check the rubber part for deformation, cracks or deterioration, and then replace it with a new part if defective.

3. DUST COVER

If cracks or damage are found, replace it with a new part.

4. COIL SPRING

If a permanent strain is found, replace it with a new part.

5. HELPER

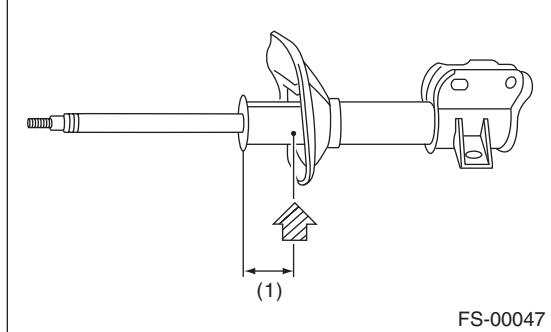
If major cracks or damage are found, replace it with a new part.

F: DISPOSAL

CAUTION:

- Before handling struts, be sure to wear goggles to protect eyes from gas, oil and cutting powder.
- Do not disassemble the strut damper or throw into flames.
- When discarding gas filled struts, drill holes in them to purge the gas.

- 1) Place the strut on a level surface with the piston rod fully expanded.
- 2) Using a 2 — 3 mm (0.08 — 0.12 in) dia. drill, make holes in areas shown in the figure.



(1) 40 mm (1.57 in)