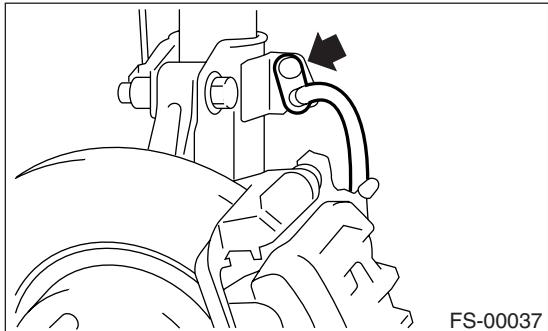


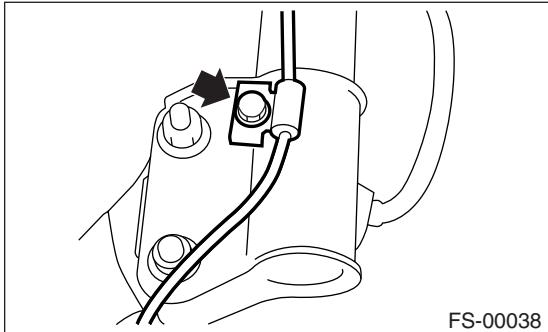
6. Front Strut

A: REMOVAL

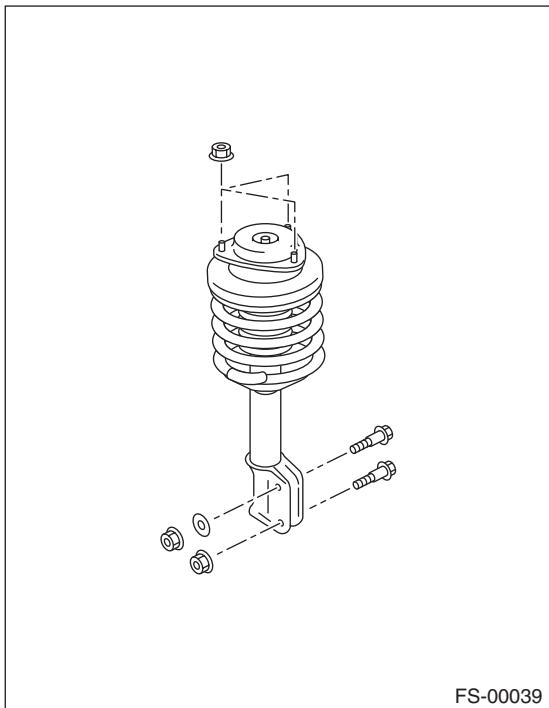
- 1) Remove the front wheel.
- 2) Remove the bolt securing brake hose from strut.



- 3) Scribe an alignment mark on the camber adjusting bolt which secures strut to housing.
- 4) Remove the bolt securing the ABS sensor harness.



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



- 5) Remove the two bolts securing housing to strut.

CAUTION:

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

FRONT STRUT

FRONT SUSPENSION

B: INSTALLATION

- 1) Install the strut mount at upper side of strut to body and tighten with nuts.

Tightening torque:

20 N·m (2.0 kgf·m, 14.5 ft-lb)

- 2) Position the aligning mark on camber adjustment bolt with aligning mark on lower side of strut.

CAUTION:

- While holding the head of adjusting bolt, tighten self-locking nut.
- Be sure to use a new self-locking nut.

Tightening torque:

175 N·m (17.8 kgf·m, 129 ft-lb)

- 3) Install the ABS sensor harness to strut.

Tightening torque:

33 N·m (3.4 kgf·m, 24.3 ft-lb)

- 4) Install bolts which secure the brake hose to strut.

Tightening torque:

33 N·m (3.4 kgf·m, 24.3 ft-lb)

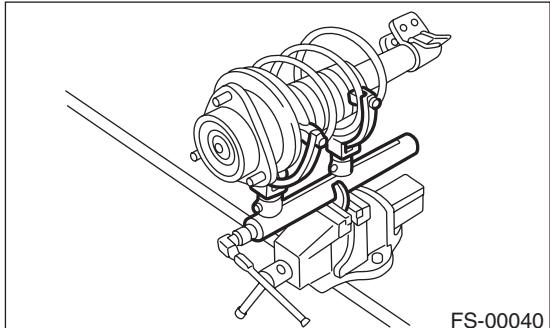
- 5) Install the front wheels.

NOTE:

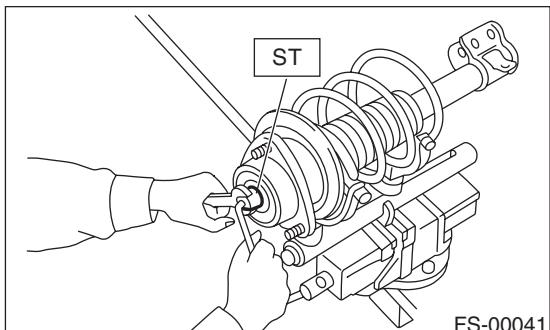
Check wheel alignment and adjust if necessary.

C: DISASSEMBLY

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



- 2) Using the ST, remove the self-locking nut.
ST 927760000 STRUT MOUNT SOCKET



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

D: ASSEMBLY

1) Before installing the coil spring, strut mount, etc., on the strut, check for the presence of air in the dampening force generating mechanism of the strut since air prevents proper dampening force from being produced.

2) Checking for the presence of air:

- (1) Place the strut vertically with the piston rod facing up.
- (2) Move the piston rod to the center of its entire stroke.
- (3) While holding the piston rod end with fingertips, move the rod up and down.
- (4) If the piston rod moves at least 10 mm (0.39 in) in the former step, purge air from the strut.

3) Air purging procedure:

- (1) Place the strut vertically with the piston rod facing up.
- (2) Fully extend the piston rod.
- (3) With the piston rod fully extended, place the piston rod side down. The strut must stand vertically.
- (4) Fully contract the piston rod.
- (5) Repeat 3 or 4 times from the first step.

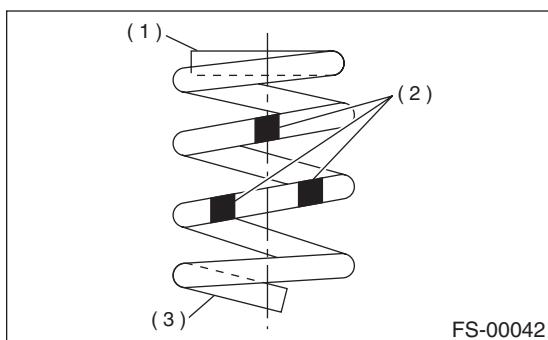
NOTE:

After completely purging air from the strut, be sure to place the strut with the piston rod facing up. If it is laid down, check for entry of air in the strut as outlined under "Checking for the presence of air".

4) Using a coil spring compressor, compress the coil spring.

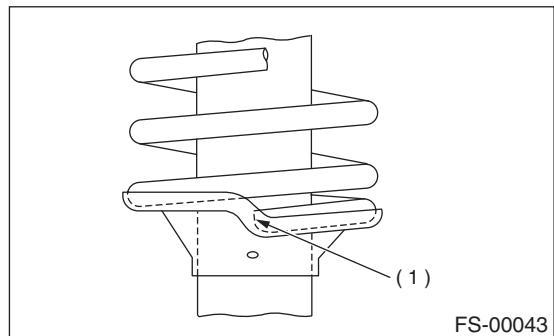
NOTE:

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



- (1) Flat (top side)
- (2) Identification paint
- (3) Inclined (bottom side)

5) Set the coil spring correctly so that its end face fits well into the spring seat as shown.

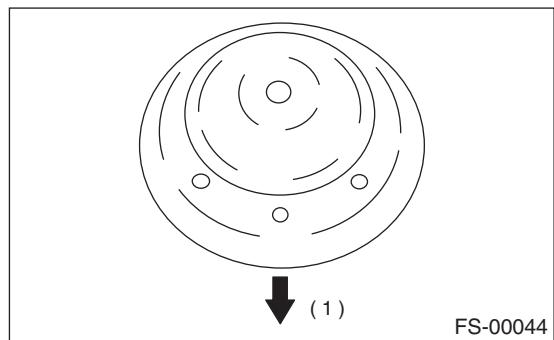


6) Install the helper and dust cover to the piston rod.

7) Pull the piston rod fully upward, and install the rubber seat and spring seat.

NOTE:

Ensure the upper spring seat is positioned as shown in the figure.



- (1) Outside of body

8) Install the strut mount to the piston rod, and tighten the self-locking nut temporarily.

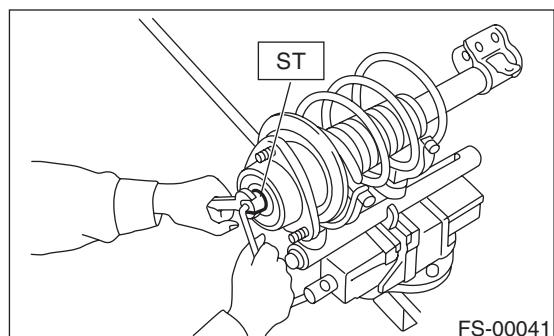
CAUTION:

Be sure to use a new self-locking nut.

9) Using a hexagon wrench to prevent strut rod from turning, tighten self-locking nut with ST.
ST 927760000 STRUT MOUNT SOCKET

Tightening torque:

55 N·m (5.6 kgf·m, 41 ft·lb)



FRONT STRUT

FRONT SUSPENSION

10) Loosen the coil spring carefully.

E: INSPECTION

Check the disassembled parts for cracks, damage and wear, and replace with new parts if defective.

1. DAMPER STRUT

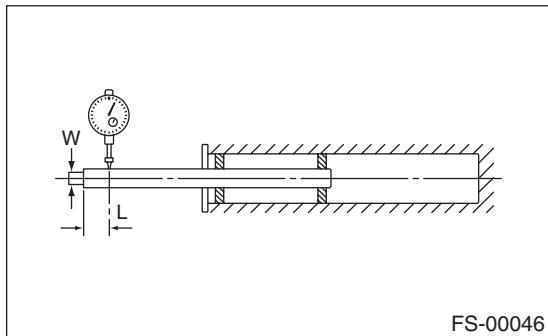
1) Check for oil leakage.

2) Move the piston rod up and down to check that it operates smoothly without any binding.

3) Play of piston rod

• Measure the play as follows:

Fix the outer shell and fully extend the rod. Set a dial gauge at the end of the rod: L [10 mm (0.39 in)], then apply a force of W [20 N (2 kgf, 4 lb)] to threaded portion. With the force of 20 N (2 kgf, 4 lb) applied, read the dial gauge indication: P_1 . Apply a force of 20 N (2 kgf, 4 lb) in the opposite direction of "W", then read the dial gauge indication: P_2 .



The free play is determined by the following equation:

$Play = P_1, P_2$

Limit of play:

Less than 0.8 mm (0.031 in)

If the play is greater, replace the strut.

2. STRUT MOUNT

Check the rubber part for creep, cracks and deterioration, and replace it with a new one if defective.

3. DUST COVER

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

4. COIL SPRING

One having permanent strain should be replaced with a new one. When the vehicle posture is uneven, although there are no considerable reasons like tire puncture, uneven loading, etc., check the coil spring for its free length referring to specifications, cracks, etc., and replace it with a new one if defective.

5. HELPER

Replace it with a new one if cracked or damaged.

F: DISPOSAL

CAUTION:

• On struts which have "GAS FILLED" marked on the outer housing under spring seat, completely discharge the gas before disposing, following the methods below.

• Do not disassemble the strut damper or place into a fire.

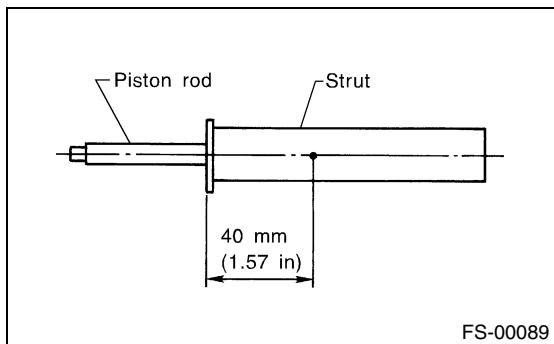
• Drill holes before disposing of gas filled struts.

• Before handling gas filled struts, be sure to wear goggles to protect eyes from gas, oil and/or filings.

**GAS FILLED
DO NOT OPEN
DO NOT HEAT**

FS-00088

- 1) Place the gas filled strut on a flat and level surface with piston rod fully extended.
- 2) Using a 2 to 3 mm (0.08 to 0.12 in) dia. drill, make holes in areas shown in the figure.



FS-00089