

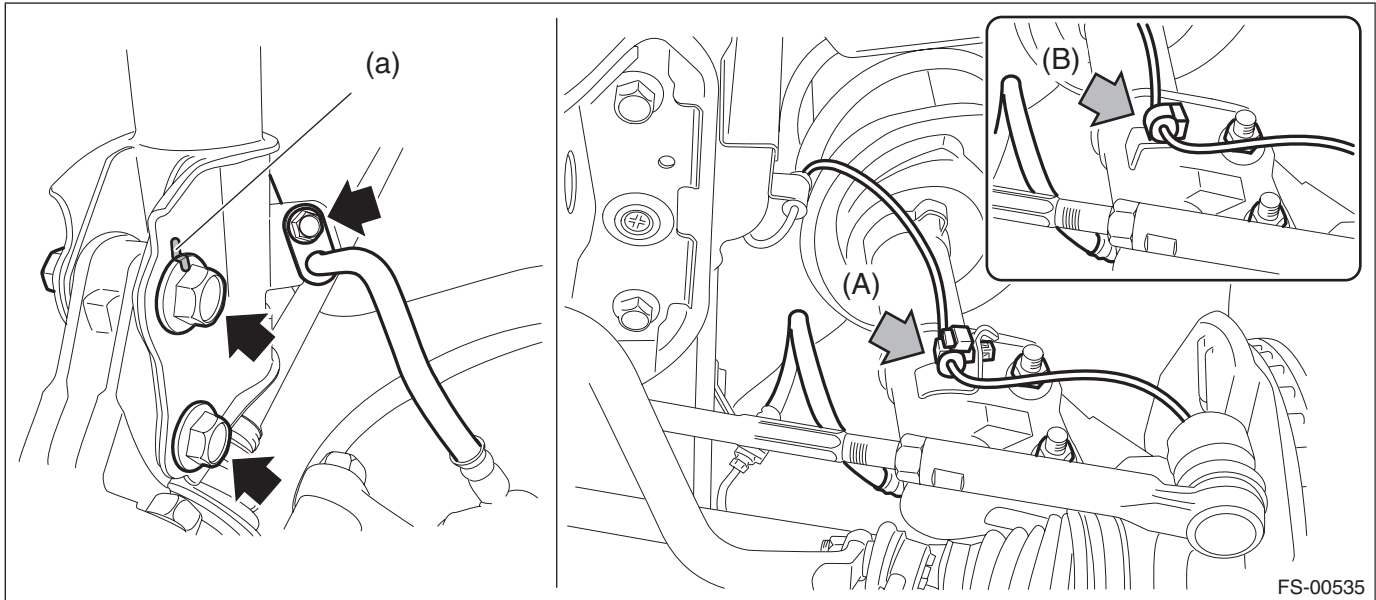
## 8. Front Strut

### A: REMOVAL

- 1) Lift up the vehicle, and then remove the front wheels.
- 2) Remove the front strut assembly.
  - (1) Place an alignment mark (a) on the adjusting bolt and the strut.
  - (2) Remove the brake hose bracket.
  - (3) Remove the clamp of ABS wheel speed sensor harness.
  - (4) Remove the adjusting bolts and flange bolts for the strut assembly.

#### CAUTION:

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

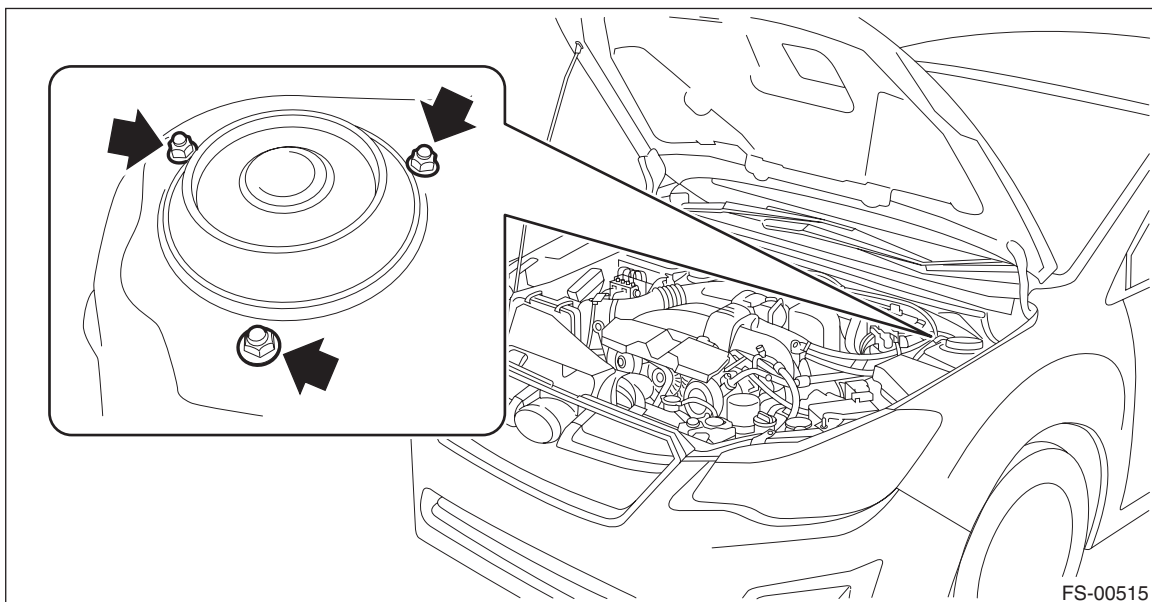


FS-00535

(A) Except for XV model

(B) XV model

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



FS-00515

# Front Strut

## FRONT SUSPENSION

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### **B: INSTALLATION**

1) Install the strut mount - front at the upper side of the strut to the 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 housing assembly - front axle.

**NOTE:**

While holding the head of adjusting bolt, tighten the nut.

***Tightening torque:***

***155 N·m (15.81 kgf-m, 114.3 ft-lb)***

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

**CAUTION:**

**During the installation, make sure that the marking of ABS wheel speed sensor harness does not twist.**

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.

- Inspection: <Ref. to FS-7, INSPECTION, Wheel Alignment.>
- Adjustment: <Ref. to FS-12, ADJUSTMENT, Wheel Alignment.>

**CAUTION:**

**When the wheel alignment has been adjusted, perform “VDC sensor midpoint setting mode” of the VDC.**

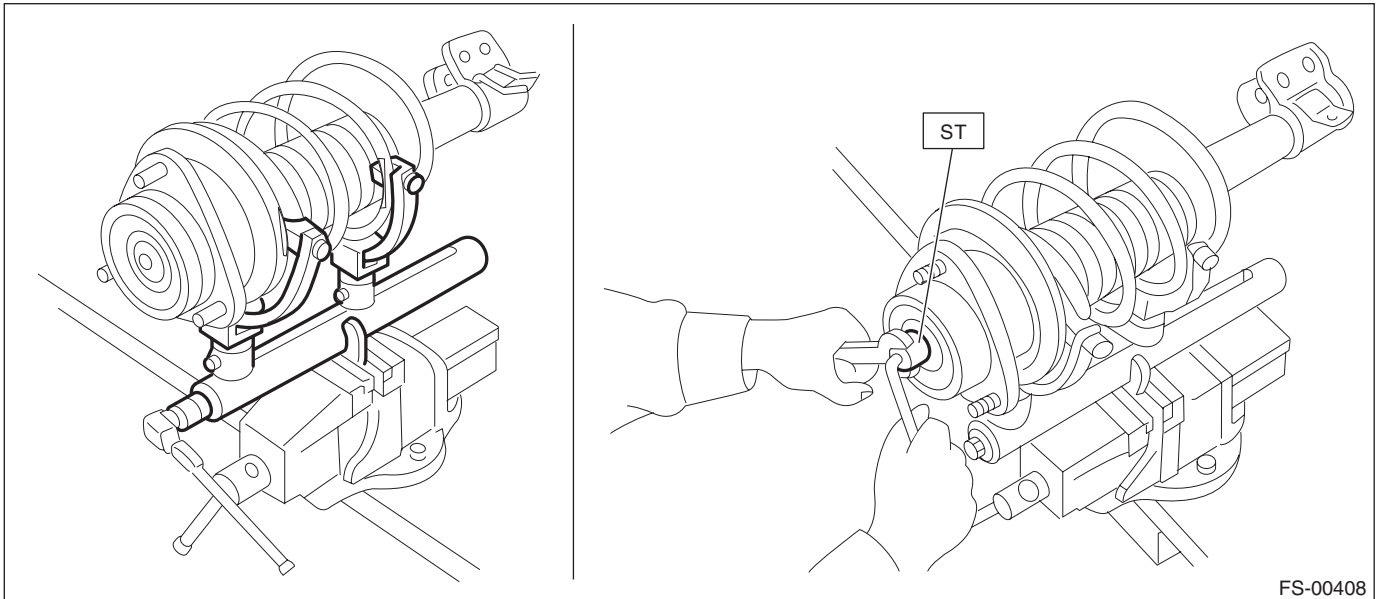
7) Perform reinitialization of the auto headlight beam leveler system. (Model with auto headlight beam leveler) <Ref. to LI-17, PROCEDURE, Auto Headlight Beam Leveler System.>

## C: DISASSEMBLY

- 1) Using a coil spring compressor, compress the coil spring - front.
- 2) Using the ST, remove the self-locking nut.

### PREPARATION TOOL:

**ST: STRUT MOUNT SOCKET (20399AG000)**



FS-00408

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

# Front Strut

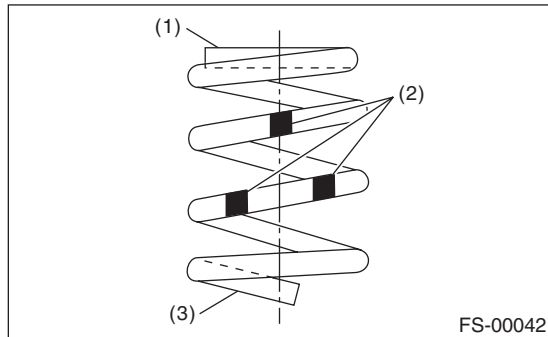
## FRONT SUSPENSION

### D: ASSEMBLY

- 1) Before assembly, check each part. <Ref. to FS-48, INSPECTION, Front Strut.>
- 2) Using a coil spring compressor, compress the coil spring - front.

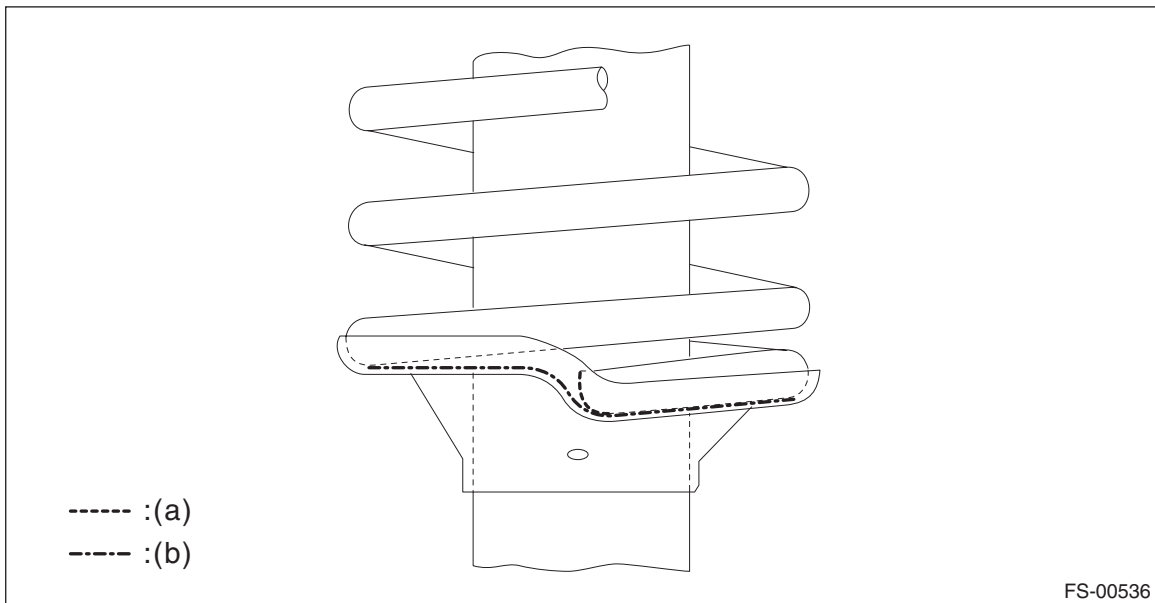
#### NOTE:

Make sure that the vertical installation direction of the coil spring - front 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 - front correctly so that its end face (a) contacts the vertical surface (b) of the spring seat - front strut UPR as shown in the figure.

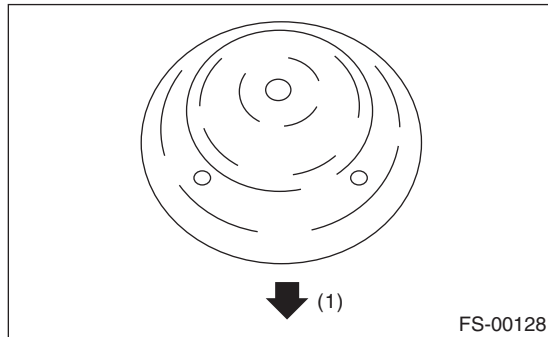


- 4) Install the dust cover - inner and the helper - front strut to the piston rod.

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

**NOTE:**

Position the spring seat - front strut UPR as shown in the figure.



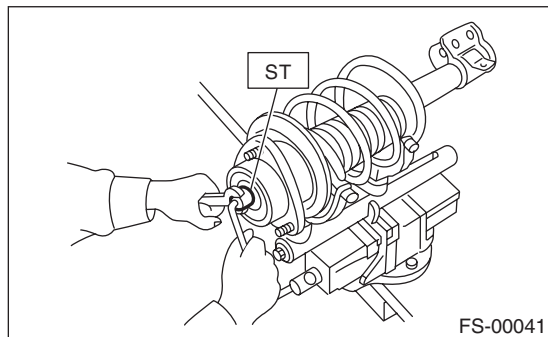
(1) Outside of body

6) Install the spacer - front strut and the strut mount - front 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.

# Front Strut

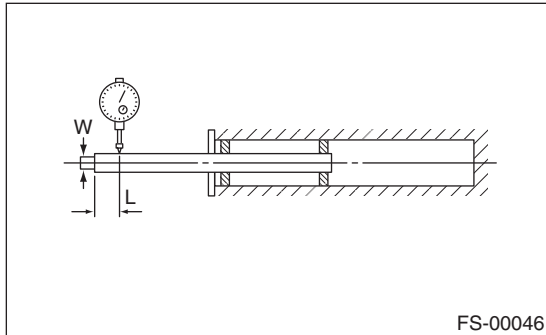
## FRONT SUSPENSION

### 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.
  - (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 - FRONT

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

#### 3. DUST COVER - INNER

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

#### 4. COIL SPRING - FRONT

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

#### 5. HELPER - FRONT STRUT

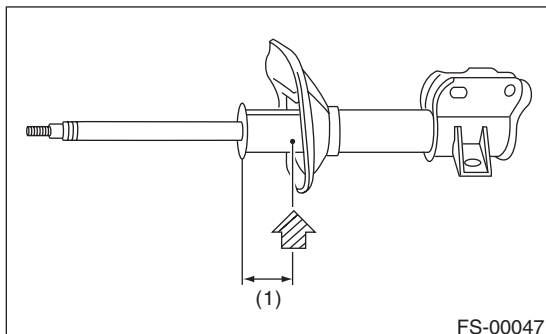
If major cracks or damage are found, replace it with a new part.

### 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)