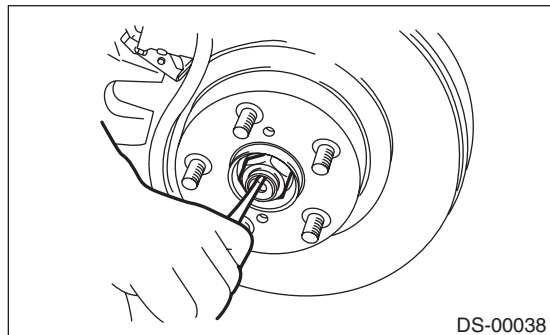


3. Front Axle

A: REMOVAL

- 1) Disconnect the ground cable from battery.
- 2) Lift up the vehicle, and then remove the front wheels.
- 3) Lift the crimped section of axle nut.

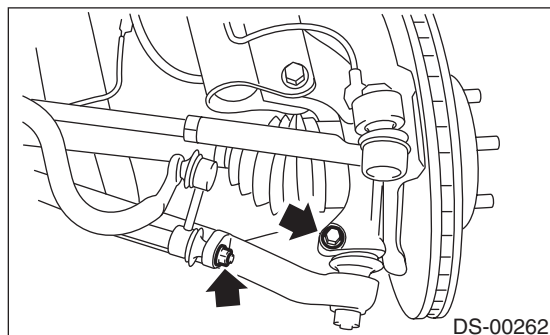


- 4) Remove the axle nut using a socket wrench while depressing the brake pedal.

CAUTION:

Do not loosen the axle nut while the front axle is loaded. Doing so may damage the hub bearing.

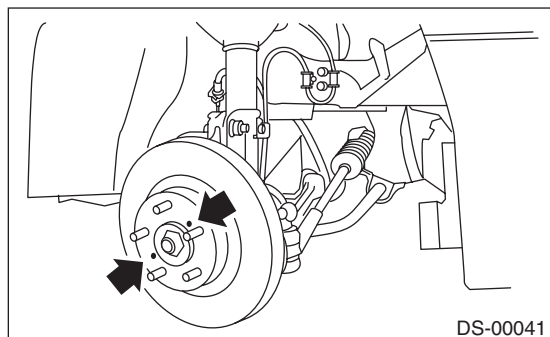
- 5) Remove the stabilizer link.



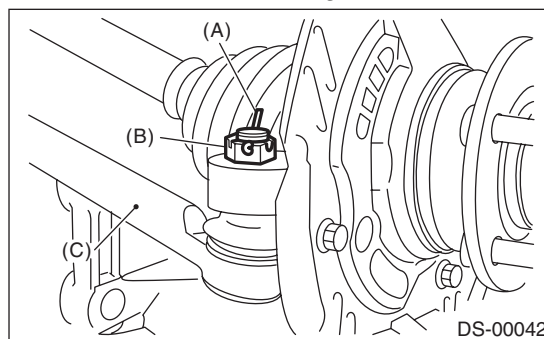
- 6) Remove the disc brake caliper from the housing, and suspend it from strut using a wire.
- 7) Remove the disc rotor from the hub.

NOTE:

If it is difficult to remove the disc rotor from the hub, drive the 8 mm bolt into the threaded end of rotor, and then remove the rotor.

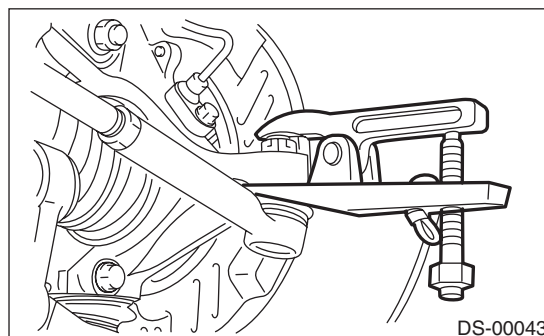


- 8) Remove the cotter pin and castle nut securing the tie-rod end to the housing knuckle arm.

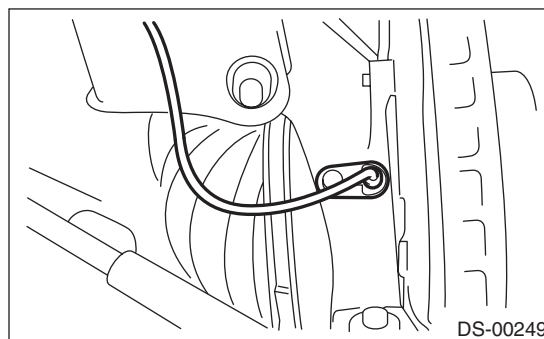


- (A) Cotter pin
- (B) Castle nut
- (C) Tie-rod

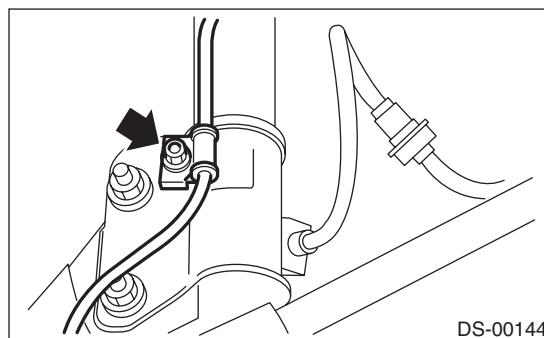
- 9) Using a puller, remove the tie-rod ball joint from knuckle arm.



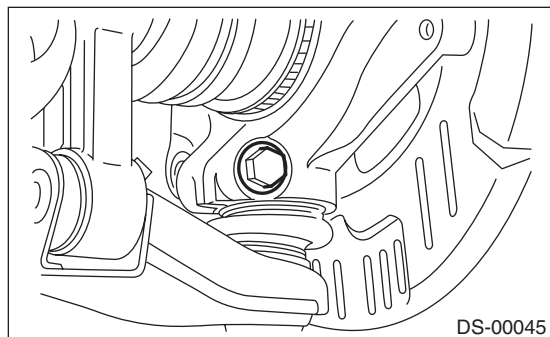
- 10) Remove the ABS wheel speed sensor assembly and harness.



- 11) Remove the bolts which secure the sensor harness to the strut.



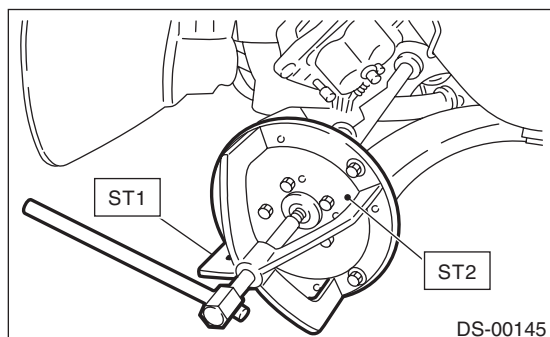
- 12) Remove the front arm ball joint from the housing.



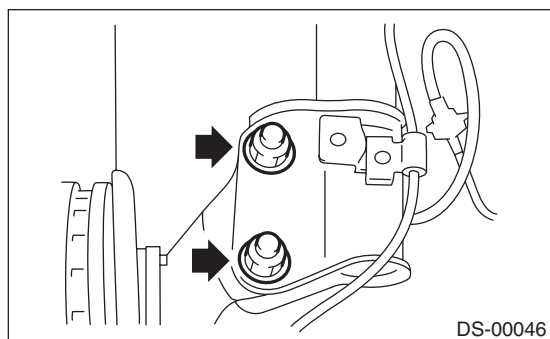
- 13) Remove the front drive shaft from the transmission.

- 14) Remove the front drive shaft assembly from the hub. If it is hard to remove, use the ST.

ST1 926470000 AXLE SHAFT PULLER
ST2 28099PA110 AXLE SHAFT PULLER
PLATE



- 15) After scribing an alignment mark on camber adjusting bolt head, remove the bolts which connect the housing and strut, and disconnect the housing from strut.



B: INSTALLATION

- 1) Align the alignment mark on the camber adjusting bolt head, and tighten the housing and strut using a new flange nut.

Tightening torque:

155 N·m (15.8 kgf-m, 114.3 ft-lb)

- 2) Install the front drive shaft. <Ref. to DS-26, INSTALLATION, Front Drive Shaft.>

- 3) Install the front arm ball joint to the housing.

Tightening torque:

50 N·m (5.1 kgf-m, 36.9 ft-lb)

- 4) Install the ABS sensor harness to the strut.

- 5) Install the ABS wheel speed sensor on the housing.

Tightening torque:

7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

- 6) Install the disc rotor to hub.

- 7) Install the disc brake caliper on the housing.

Tightening torque:

80 N·m (8.2 kgf-m, 59 ft-lb)

- 8) Install the stabilizer link.

- 9) Connect the tie-rod end ball joint to the knuckle arm with a castle nut.

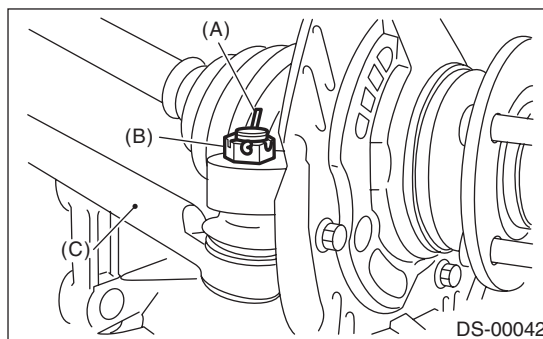
CAUTION:

When connecting the tie-rod, do not hit the cap at bottom of tie-rod end with a hammer.

Tightening torque:

27 N·m (2.8 kgf-m, 19.9 ft-lb)

- 10) Tighten the castle nut to specified torque and tighten further within 60° until the pin hole is aligned with the slot in the nut. Bend the cotter pin to lock.



- (A) Cotter pin
(B) Castle nut
(C) Tie-rod

11) While depressing the brake pedal, tighten a new axle nut to the specified torque and lock it securely.

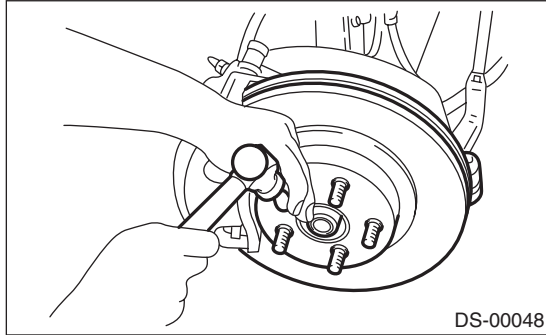
CAUTION:

Do not apply weight to the front axle before tightening the axle nut. Doing so may damage the hub bearing.

Tightening torque:

220 N·m (22.4 kgf-m, 162.3 ft-lb)

12) After tightening the axle nut, lock it securely.



13) Install the wheel.

Tightening torque:

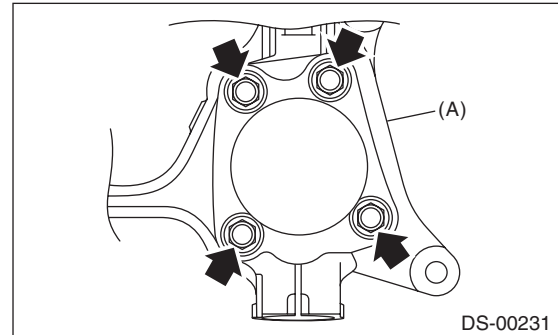
100 N·m (10.2 kgf-m, 73.8 ft-lb)

14) Connect the battery ground terminal.

15) Inspect the wheel alignment and adjust if necessary.

C: DISASSEMBLY

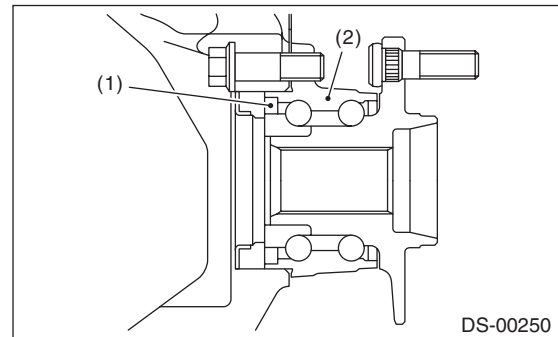
1) Remove the four bolts from the housing, and remove the front hub unit bearing and disc cover.



(A) Housing

CAUTION:

- Do not get closer the tool which charged magnetism to magnetic encoder.
- Be careful not to damage the magnetic encoder.



(1) Magnetic encoder

(2) Front hub unit bearing

2) Disassemble the front hub unit bearing. <Ref. to DS-18, DISASSEMBLY, Front Hub Unit Bearing.>

Front Axle

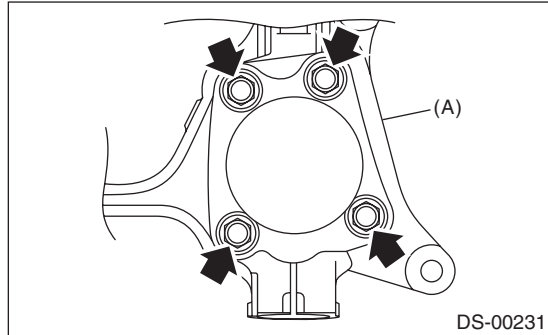
DRIVE SHAFT SYSTEM

D: ASSEMBLY

- 1) Assemble the front hub unit bearing. <Ref. to DS-18, ASSEMBLY, Front Hub Unit Bearing.>
- 2) Place the disc cover between housing and front hub unit, and tighten the four bolts.

Tightening torque:

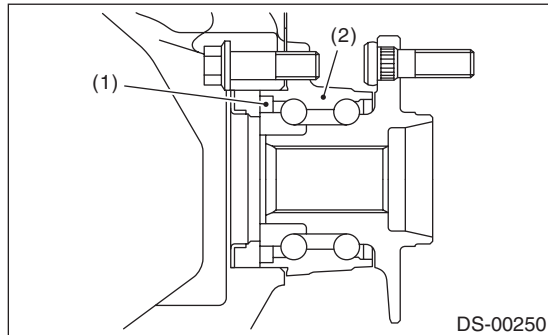
65 N·m (6.6 kgf-m, 47.9 ft-lb)



(A) Housing

CAUTION:

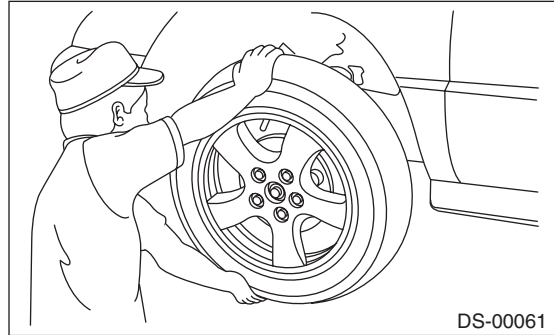
- Do not get closer the tool which charged magnetism to magnetic encoder.
- Be careful not to damage the magnetic encoder.



- (1) Magnetic encoder
- (2) Front hub unit bearing

E: INSPECTION

- 1) Moving the front tire up and down by hand, check there is no play in bearing, and check the wheel rotates smoothly.



- 2) Inspect the lean of axis direction using a dial gauge. Replace the bearing if the load range exceeds the limitation.

Service limit:

Maximum: 0.05 mm (0.0020 in)

