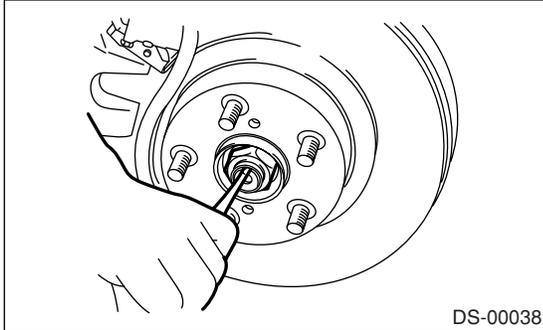


## 3. Front Axle

### A: REMOVAL

- 1) Disconnect the ground cable from battery.
- 2) Lift-up the vehicle and remove the front wheels.
- 3) Unlock the axle nut.

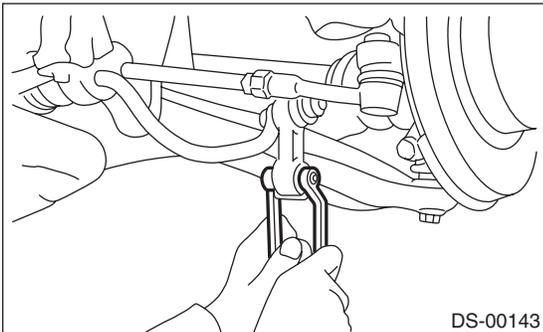


- 4) Remove the axle nut using a socket wrench while depressing the brake pedal.

**CAUTION:**

**Remove the wheel before loosening the axle nut. Failure to follow this rule may damage the wheel bearings.**

- 5) Remove the stabilizer link.

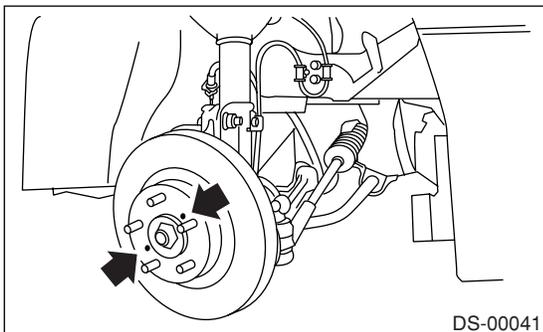


- 6) Remove the disc brake caliper from housing, and suspend it from strut using a wire.

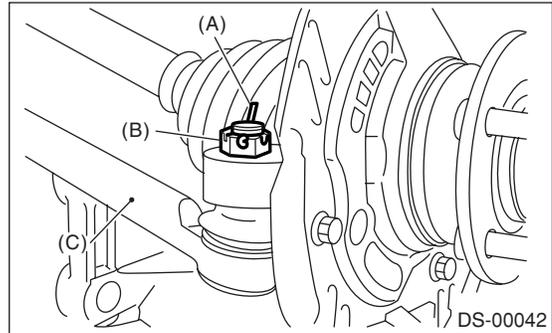
- 7) Remove the disc rotor from hub.

**NOTE:**

If the disc rotor seizes up within hub, drive disc rotor out by installing an 8-mm bolt in screw hole on rotor.

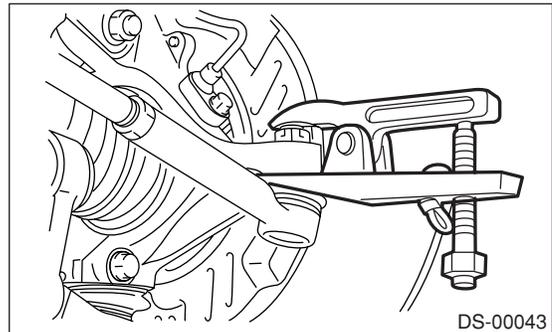


- 8) Remove the cotter pin and castle nut which secure tie-rod end to housing knuckle arm.



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

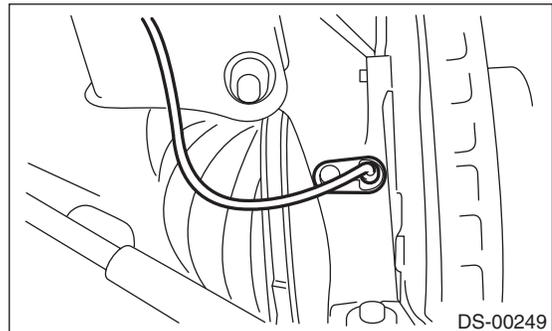
- 9) Using a puller, remove the tie-rod ball joint from knuckle arm.



**CAUTION:**

**When removing tie-rod, do not hit the tie-rod end with hammer.**

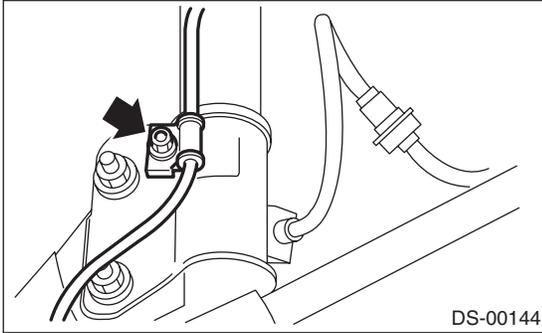
- 10) Remove the ABS wheel speed sensor assembly and harness.



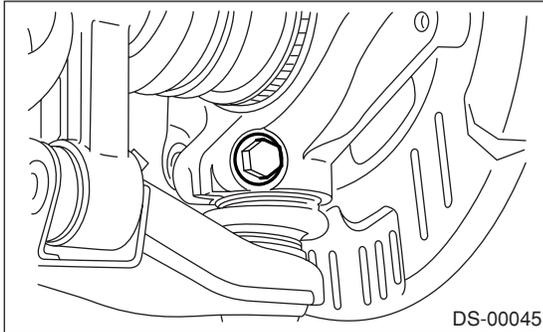
## Front Axle

### DRIVE SHAFT SYSTEM

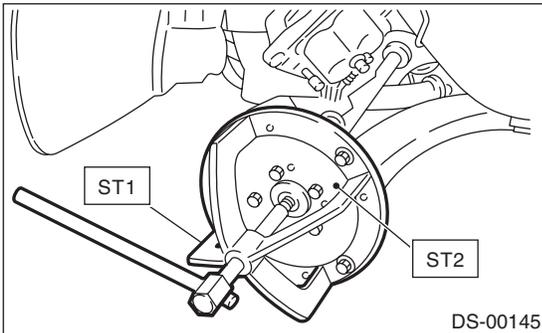
- 11) Remove the bolts which secure sensor harness to strut.



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

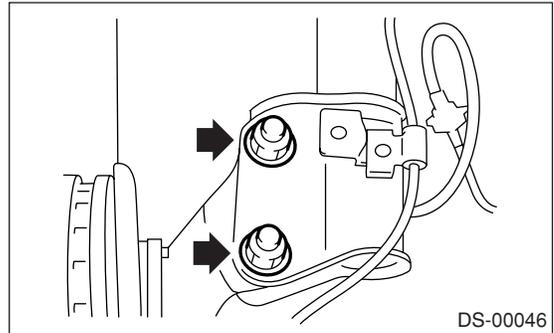


- 13) Remove the PTJ from transmission.  
14) Remove the front drive shaft assembly from hub. If it is hard to remove, use STs.  
ST1 926470000 AXLE SHAFT PULLER  
ST2 927140000 AXLE SHAFT PULLER PLATE



- 15) After scribing an alignment mark on camber adjusting bolt head, remove the bolts which connect

housing and strut, and disconnect the housing from strut.



### B: INSTALLATION

- 1) While aligning the alignment mark on the camber adjusting bolt head, tighten the housing and strut using a new self-locking nut.

#### **Tightening torque:**

**177 N·m (18.0 kgf-m, 130 ft-lb)**

- 2) Install the front drive shaft. <Ref. to DS-22, INSTALLATION, Front Drive Shaft.>  
3) Install the front arm ball joint to housing.

#### **Tightening torque:**

**49 N·m (5.0 kgf-m, 36 ft-lb)**

- 4) Install the ABS wheel speed sensor harness to strut.  
5) Install the ABS wheel speed sensor on housing.

#### **Tightening torque:**

**32 N·m (3.3 kgf-m, 23.9 ft-lb)**

- 6) Install the disc rotor on hub.  
7) Install the disc brake caliper on housing.

#### **Tightening torque:**

**78 N·m (8.0 kgf-m, 57.9 ft-lb)**

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

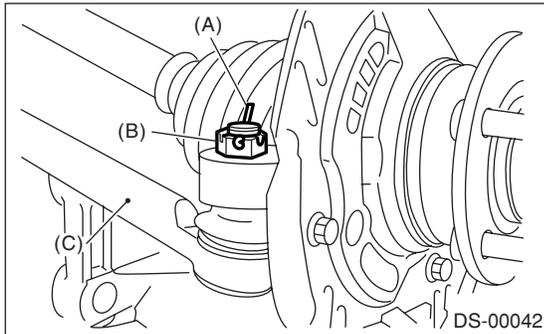
#### **Tightening torque:**

**27.0 N·m (2.75 kgf-m, 19.9 ft-lb)**

### CAUTION:

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

10) Tighten the castle nut to specified torque and tighten further within 60° until the pin hole is aligned with the slot in 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 (olive color) to specified torque and lock it securely.

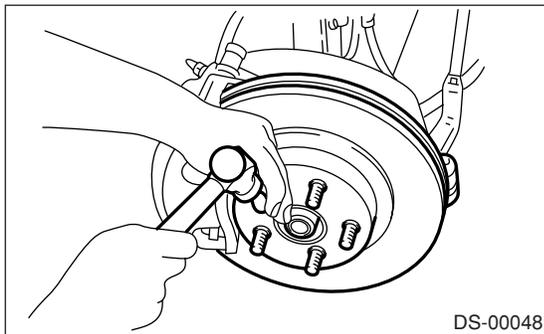
**Tightening torque:**

**220 N·m (22.4 kgf·m, 162 ft·lb)**

**CAUTION:**

- Install the wheel after installation of axle nut. Failure to follow this rule may damage the wheel bearing.
- Be sure to tighten the axle nut to specified torque. Do not overtighten it as this may damage wheel bearing.

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



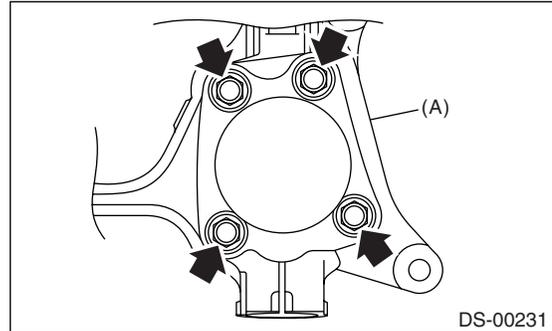
13) Install the wheel and tighten the wheel nuts to specified torque.

**Tightening torque:**

**90 N·m (9.2 kgf·m, 66 ft·lb)**

### C: DISASSEMBLY

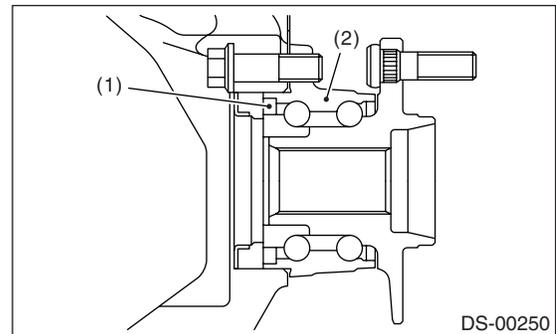
1) Remove the four bolts from housing, and remove the front hub unit bearing and disc cover.



- (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.>

### D: ASSEMBLY

1) Assemble the front hub unit bearing. <Ref. to DS-18, ASSEMBLY, Front Hub Unit Bearing.>

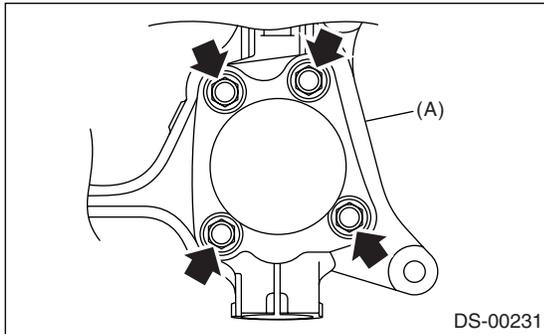
2) Place the disc cover between housing and front hub unit, and tighten the four bolts.

# Front Axle

## DRIVE SHAFT SYSTEM

### Tightening torque:

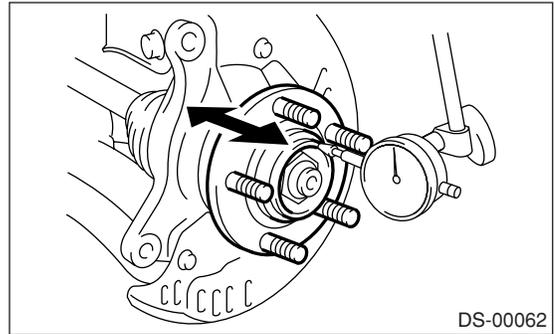
65 N·m (6.6 kgf-m, 47.9 ft-lb)



(A) Housing

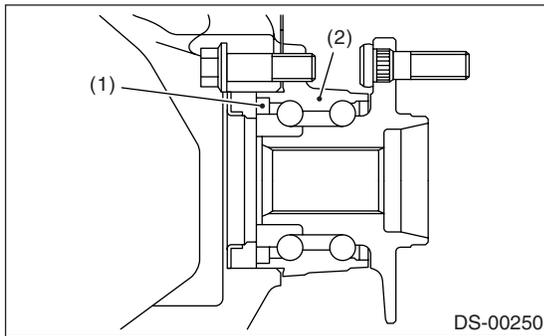
### Service limit:

Maximum: 0.05 mm (0.0020 in)



### CAUTION:

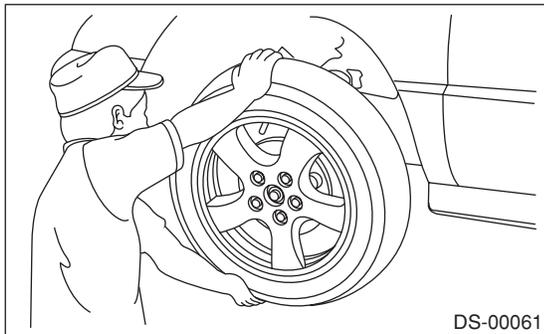
- Do not get closer the tool which charged magnetism to magnetic encoder.
- Be careful not to damage the magnetic encoder.



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

## E: INSPECTION

1) Moving the front tire up and down by hand, check there is no backlash 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.