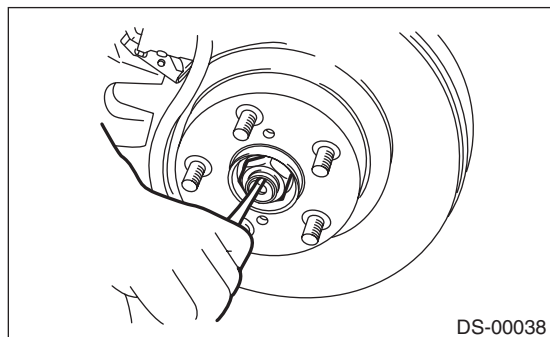


7. Front Drive Shaft

A: REMOVAL

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

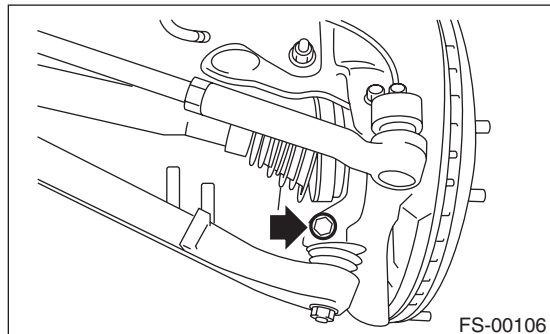


- 5) Remove the axle nut using a socket wrench while depressing the brake pedal.

CAUTION:

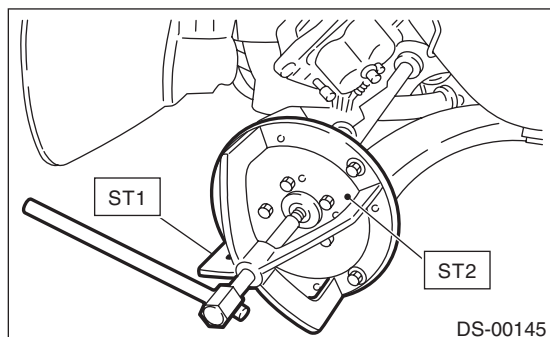
Remove the wheel before loosening the axle nut. Failure to follow this rule may damage the wheel bearings.

- 6) Remove the stabilizer link from front arm.
- 7) Disconnect the front arm ball joint from the front housing.



- 8) Remove the front drive shaft assembly. If it is hard to remove, use ST1 and ST2.

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



- 9) Using a bar, remove the front drive shaft from transmission.

CAUTION:

Be careful not to allow the bar to damage holder area.

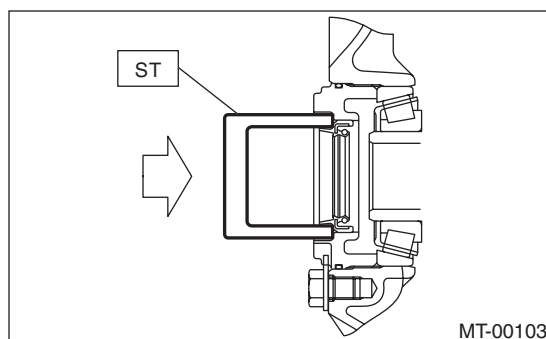
B: INSTALLATION

- 1) Using the ST, replace the differential side retainer oil seal with a new seal.

ST 18675AA000 DIFFERENTIAL SIDE OIL SEAL INSTALLER

NOTE:

After pulling out the drive shaft, be sure to replace with a new oil seal.



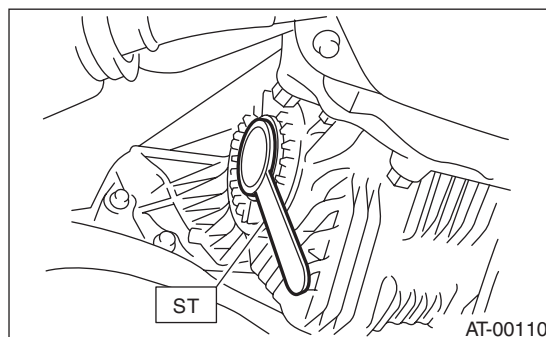
- 2) Insert the EBJ into hub splines.
- 3) Draw the drive shaft into specified position.

CAUTION:

Do not hammer drive shaft when installing it.

- 4) Tighten the axle nut temporarily.
- 5) Using the ST, install the front drive shaft to transmission.

ST 28399SA010 OIL SEAL PROTECTOR



- 6) Connect the front arm ball joint to the front housing.

Tightening torque:

50 N·m (5.1 kgf-m, 36.9 ft-lb)

Front Drive Shaft

DRIVE SHAFT SYSTEM

7) Install the stabilizer link.

Tightening torque:

60 N·m (6.1 kgf-m, 44.3 ft-lb)

CAUTION:

Be sure to use a new self-locking nut.

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

Tightening torque:

240 N·m (24.5 kgf-m, 177 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 axle nut to specified torque. Do not overtighten it as this may damage the wheel bearing.

9) After tightening axle nut, lock it securely.

10) Fill the differential gear oil.

11) Install the front wheel and tighten the wheel nuts to specified torque.

Tightening torque:

Chromed wheel

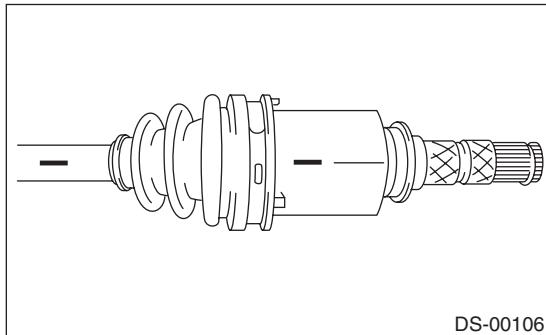
150 N·m (15.3 kgf-m, 110.6 ft-lb)

Other than above

120 N·m (12.2 kgf-m, 88.5 ft-lb)

C: DISASSEMBLY

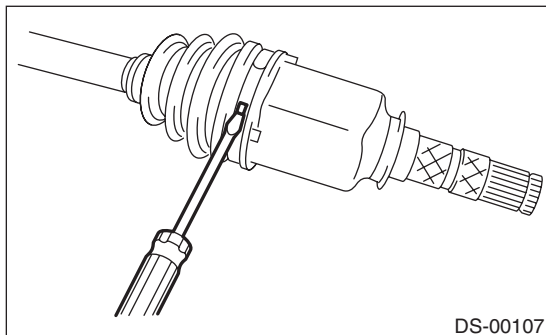
1) Place alignment marks on the shaft and outer race.



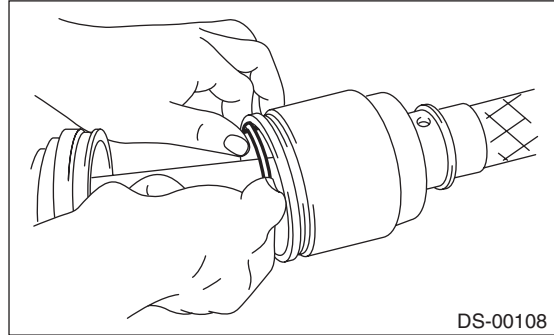
2) Remove the PTJ boot band and boot.

CAUTION:

Be careful not to damage the boot.



3) Remove the snap ring from PTJ outer race.



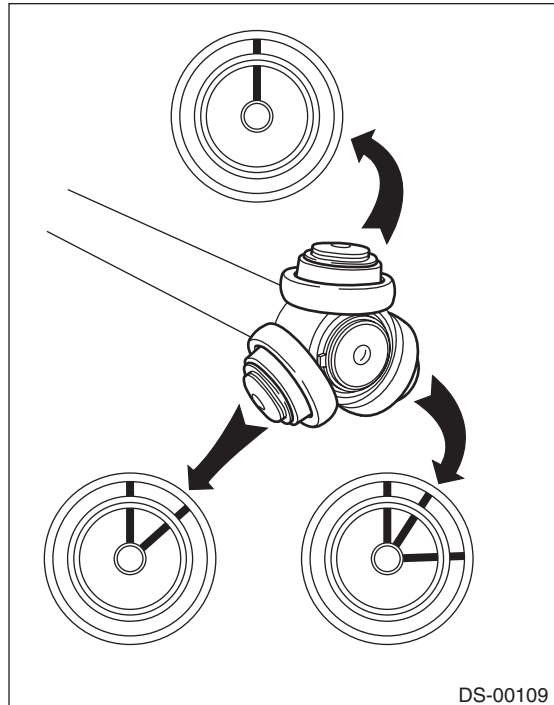
4) Remove the PTJ outer race from shaft assembly.

5) Wipe off grease.

CAUTION:

The grease is a special type of grease. Do not mix with other grease.

6) Place alignment marks on the roller kit and trunnion.

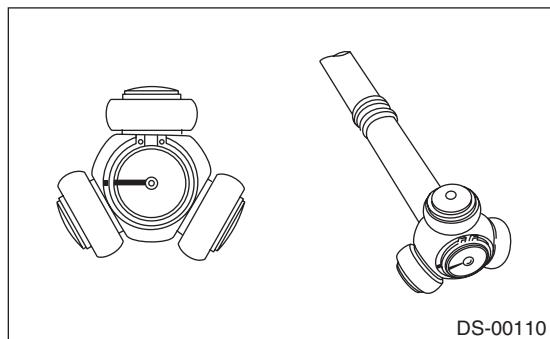


7) Remove the roller kit from trunnion.

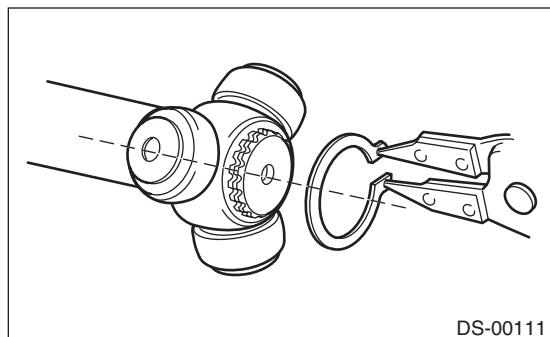
CAUTION:

Be careful with the roller kit position.

- 8) Place alignment marks on the trunnion and shaft.



- 9) Remove the snap ring and trunnion.



CAUTION:
Be sure to wrap shaft splines with vinyl tape to protect the boot from scratches.

- 10) Remove the PTJ boot.

NOTE:

The EBJ is a non-disassembly part, so the drive shaft disassembly stops here.

D: ASSEMBLY

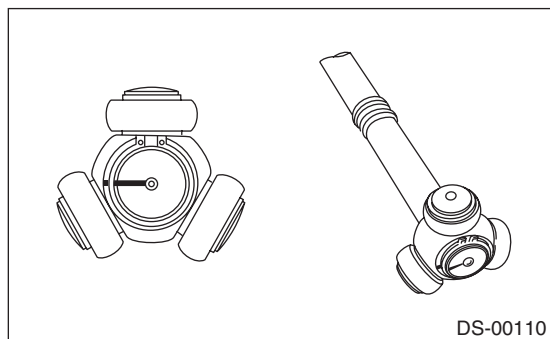
NOTE:

Use specified grease.

PTJ side:

NKG302

- 1) Place the PTJ boot at the center of shaft.
- 2) Align alignment marks and install the trunnion on the shaft.



- 3) Install the snap ring to shaft.

CAUTION:

Confirm that the snap ring is completely fitted in shaft groove.

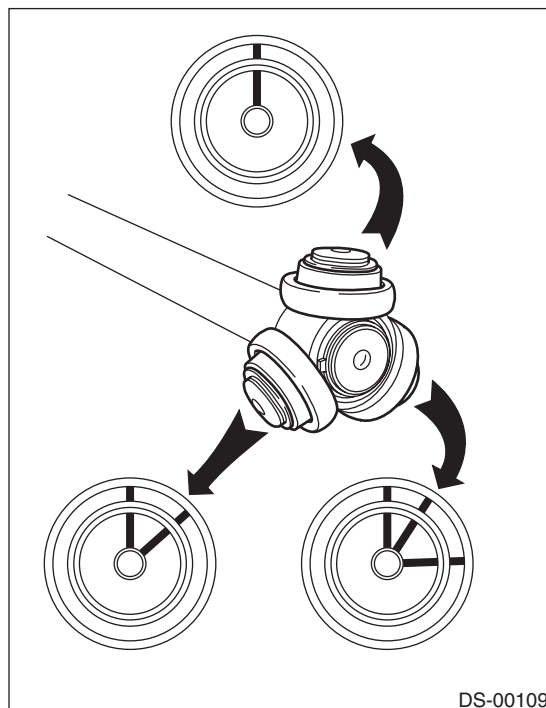
- 4) Fill 100 to 110 g (3.53 to 3.88 oz) of specified grease into the interior of PTJ outer race.

- 5) Apply a thin coat of specified grease to the roller kit and trunnion.

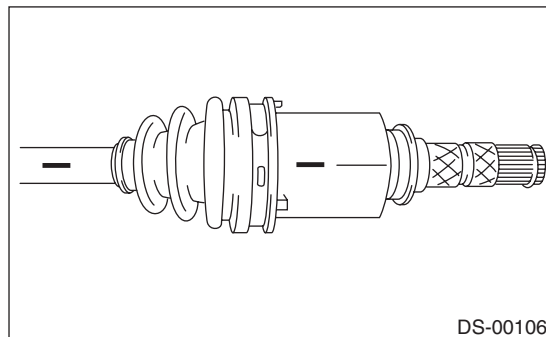
- 6) Align alignment marks on roller kit and trunnion and install the roller kit.

CAUTION:

Be careful with the roller kit position.



- 7) Align the alignment marks of the shaft and outer race, and install the outer race.



- 8) Install the snap ring in the groove on PTJ outer race.

CAUTION:

Pull the shaft lightly and assure that the snap ring is completely fitted in the groove.

- 9) Apply an even coat of the specified grease 30 to 40 g (1.06 to 1.41 oz) to the entire inner surface of boot.

Front Drive Shaft

DRIVE SHAFT SYSTEM

10) Install the PTJ boot taking care not to twist it.

CAUTION:

- The large end of PTJ boot and the boot groove shall be cleaned completely so as to be free from grease and other substances.
- When installing PTJ boot, position outer race of PTJ at center of its travel.

11) Put a new band through the clip and wind twice in the band groove of the boot.

12) Pinch the end of band with pliers. Hold the clip and tighten securely.

NOTE:

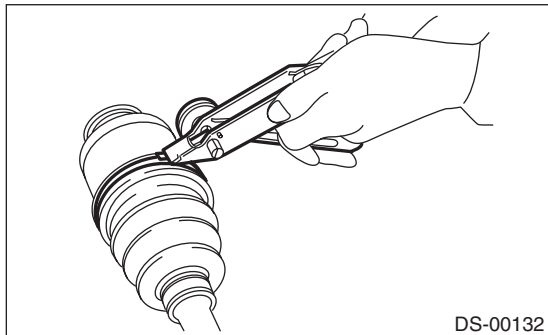
When tightening boot, use care so that the air within the boot is appropriate.

13) Tighten the band using the ST.

ST 925091000 BAND TIGHTENING TOOL

NOTE:

Tighten the band until it cannot be moved by hand.

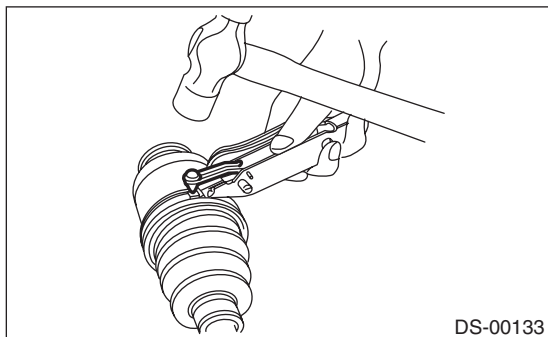


14) Tap the clip with the punch provided at the end of the ST.

ST 925091000 BAND TIGHTENING TOOL

CAUTION:

Tap to an extent that the boot underneath is not damaged.



15) Cut off the band with an allowance of about 10 mm (0.39 in) left from the clip and bend this allowance over the clip.

CAUTION:

Make sure that the end of the band is in close contact with clip.

16) Extend and retract the PTJ to provide equal grease coating.

E: INSPECTION

Check the removed parts for damage, wear, corrosion etc. If faulty, repair or replace.

- PTJ (pillow tripod joint)

Check for seizure, corrosion, damage, wear and excessive play.

- EBJ (high-efficiency compact ball fixed joint)

Check for seizure, corrosion, damage and excessive play.

- Shaft

Check for excessive bending, twisting, damage and wear.

- Boot

Check for wear, warping, breakage and scratches.

- Grease

Check for discoloration and fluidity.