

5. Front Drive Shaft

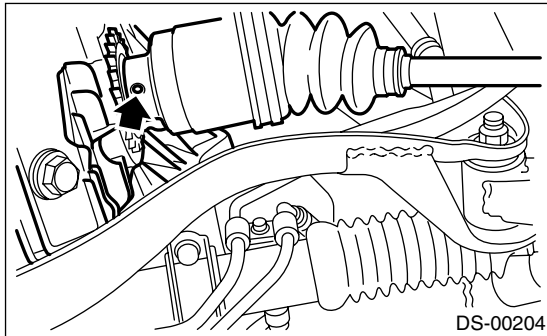
A: REMOVAL

- 1) Jack-up the vehicle, support it with rigid racks, and then remove the front wheel cap and wheels.
- 2) Raise the caulking portion of axle nut.
- 3) Depress the brake pedal and remove the axle nut using a socket wrench.

CAUTION:

Be sure to loosen the axle nut after removing the wheel from vehicle. Failure to follow this rule may damage the wheel bearings.

- 4) Remove the stabilizer link from transverse link.
- 5) Disconnect the transverse link from housing.
- 6) Remove the spring pin which secures the transmission spindle to SFJ.

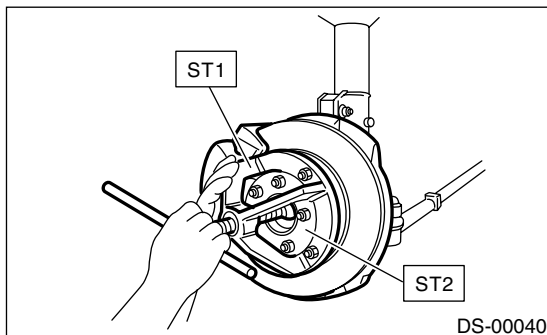


- 7) Remove the front drive shaft assembly. If it is hard to remove, use the ST1 and ST2.

- | | | |
|-----|-----------|-------------------------|
| ST1 | 926470000 | AXLE SHAFT PULLER |
| ST2 | 927140000 | AXLE SHAFT PULLER PLATE |

CAUTION:

- Be careful not to damage the oil seal lip and tone wheel when removing the front drive shaft.
- When the front drive shaft is to be replaced, also replace the inner oil seal.



B: INSTALLATION

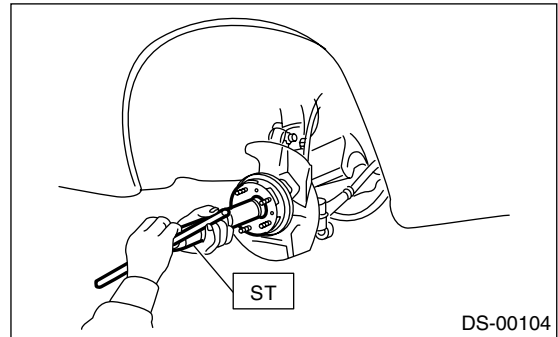
- 1) Insert the BJ into hub splines.

CAUTION:

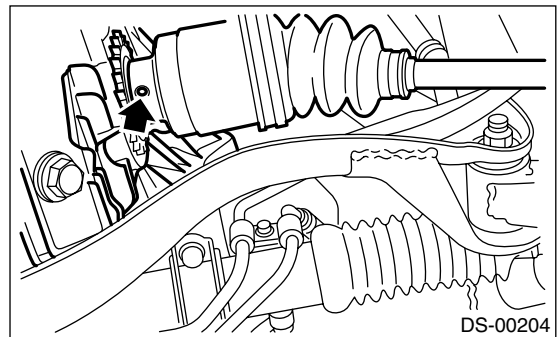
Be careful not to damage the inner oil seal lip and tone wheel.

- 2) Using the ST1 and ST2, pull the drive shaft into place.

- | | | |
|-----|-----------|----------------------|
| ST1 | 922431000 | AXLE SHAFT INSTALLER |
| ST2 | 927390000 | ADAPTER |



- 3) Tighten the axle nut temporarily.
- 4) Install the SFJ on transmission spindle and drive a new spring pin into place.



- 5) Connect the transverse link to housing.

Tightening torque:

50 N·m (5.1 kgf-m, 37 ft-lb)

- 6) Install the stabilizer bracket.
- 7) While depressing the brake pedal, tighten the axle nut to specified torque.

Tightening torque:

220 N·m (22.4 kgf-m, 162 ft-lb)

CAUTION:

- Always tighten the axle nut before installing wheel on vehicle. If the tire is installed and comes in contact with ground when axle nut is loose, wheel bearings may be damaged.
- Be sure to tighten the axle nut to specified torque. Do not overtighten it as this may damage the wheel bearing.

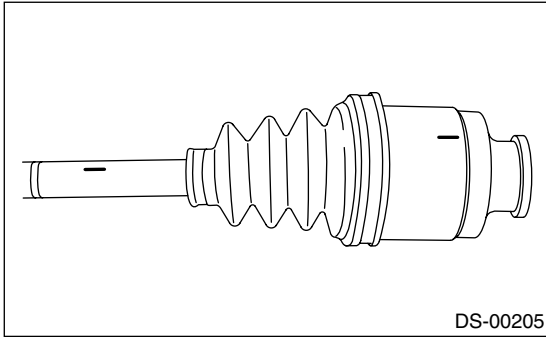
- 8) After tightening the axle nut, caulk and lock it.

FRONT DRIVE SHAFT

DRIVE SHAFT SYSTEM

C: DISASSEMBLY

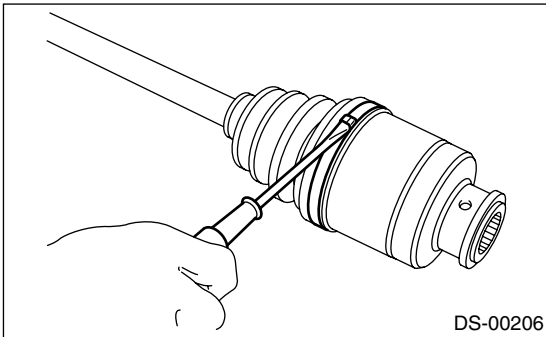
1) Place alignment marks on shaft and outer race.



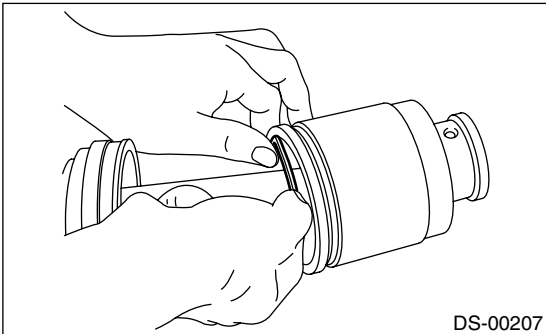
2) Remove the SFJ boot band and boot.

CAUTION:

Be careful not to damage the boot.



3) Remove the circlip from SFJ outer race using a screwdriver.



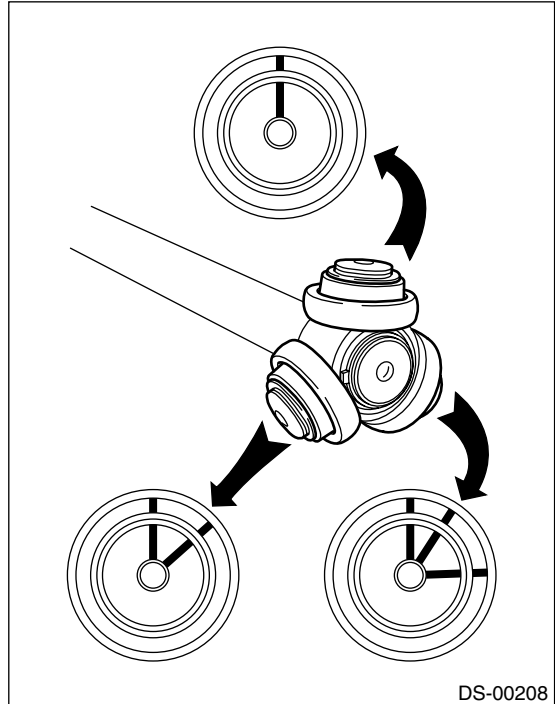
4) Remove the SFJ outer race from shaft assembly.

5) Wipe off the grease.

CAUTION:

The grease is a special grease. Do not confuse with other greases.

6) Place alignment marks on free ring and trunnion.

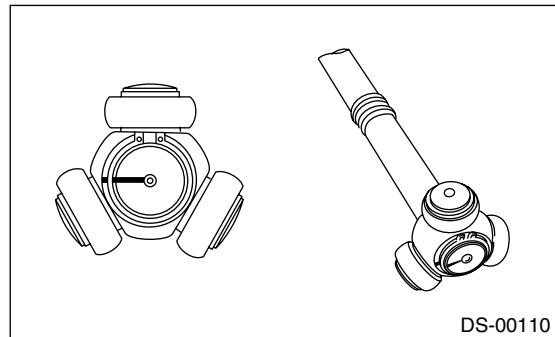


7) Remove the free ring from trunnion.

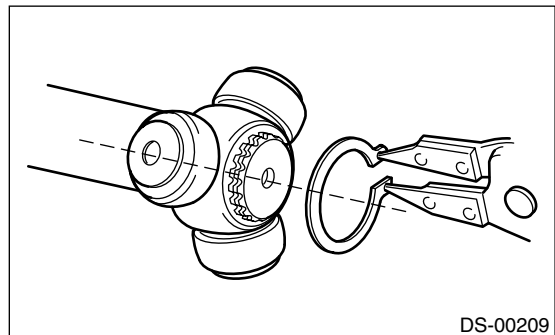
CAUTION:

Be careful with the free ring position.

8) Place an alignment mark on trunnion and shaft.



9) Remove the snap ring and trunnion.



CAUTION:

Be sure to wrap the shaft splines with vinyl tape to prevent the boot from scratches.

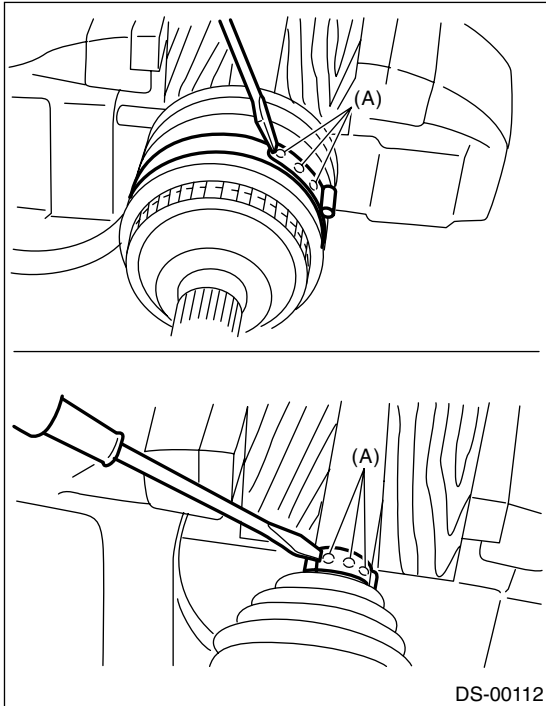
10) Remove the SFJ boot.

11) Place the drive shaft in a vise between wooden blocks.

CAUTION:

Do not place the drive shaft directly in a vise; use wooden block.

12) Raise the boot band claws by means of screwdriver and hammer.

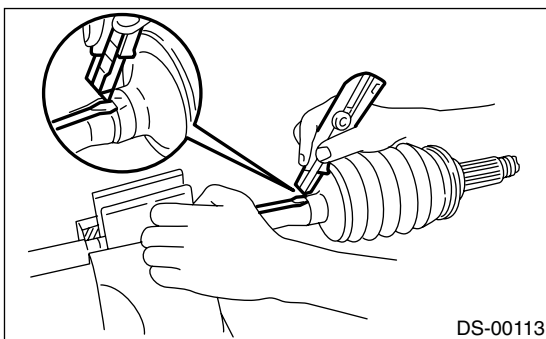


(A) Boot band claws

13) Cut and remove the boot.

CAUTION:

The boot must be replaced with a new one whenever it is removed.



NOTE:

Further disassembly of axle is impossible because the BJ cannot be disassembled.

D: ASSEMBLY

NOTE:

Use specified grease.

BJ side:

NTG2218 (Part No. 28093AA000)

SFJ side:

SSG6003 (Part No. 28093TA000)

DOJ side:

VU-3A702 (Part No. 23223GA050)

1) Place the BJ boot and small boot band on BJ side of shaft.

CAUTION:

Be sure to wrap the shaft splines with vinyl tape to prevent the boot from scratches.

2) Place the drive shaft in a vise.

CAUTION:

Do not place the drive shaft directly in a vise; use wooden blocks.

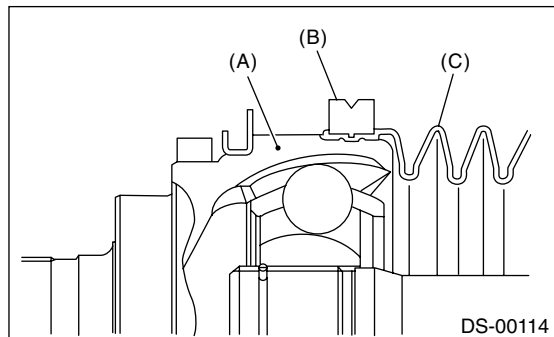
3) Apply a coat of specified grease [60 to 70 g (2.12 to 2.47 oz)] to BJ.

4) Apply an even coat of specified grease [20 to 30 g (0.71 to 1.06 oz)] to entire inner surface of boot. Also apply grease to shaft.

NOTE:

BJ installation surface of BJ boot shall be cleaned so as to be free from grease and other substances.

5) Install the boot projecting portion to BJ groove.



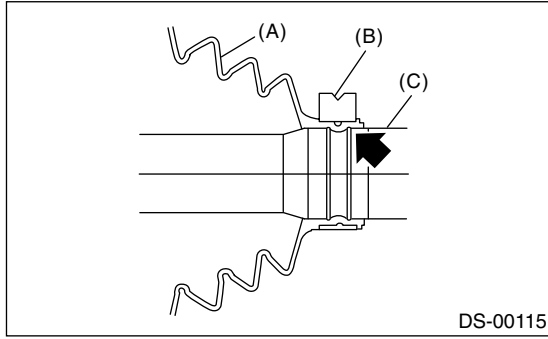
(A) BJ
(B) Large boot band
(C) Boot

6) Set the large boot band in place.

FRONT DRIVE SHAFT

DRIVE SHAFT SYSTEM

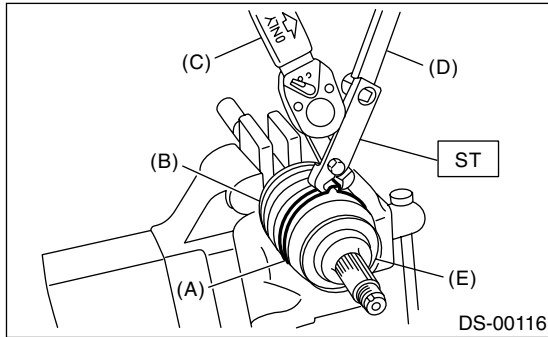
7) Install the boot projecting portion to shaft groove.



- (A) Boot
- (B) Small boot band
- (C) Shaft

8) Tighten the boot bands using the ST, torque wrench and socket flex handle.

ST 28099AC000 BOOT BAND PLIER



- (A) Large boot band
- (B) Boot
- (C) Torque wrench
- (D) Socket flex handle
- (E) BJ

Tightening torque:

Large boot band

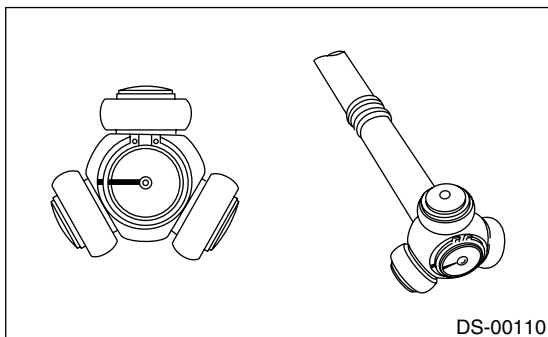
157 N·m (16.0 kgf·m, 116 ft·lb) or more

Small boot band

133 N·m (13.6 kgf·m, 98 ft·lb) or more

9) Place the SFJ boot at the center of shaft.

10) Align the alignment marks, and then install the trunnion on shaft.



11) Install the snap ring to shaft.

CAUTION:

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

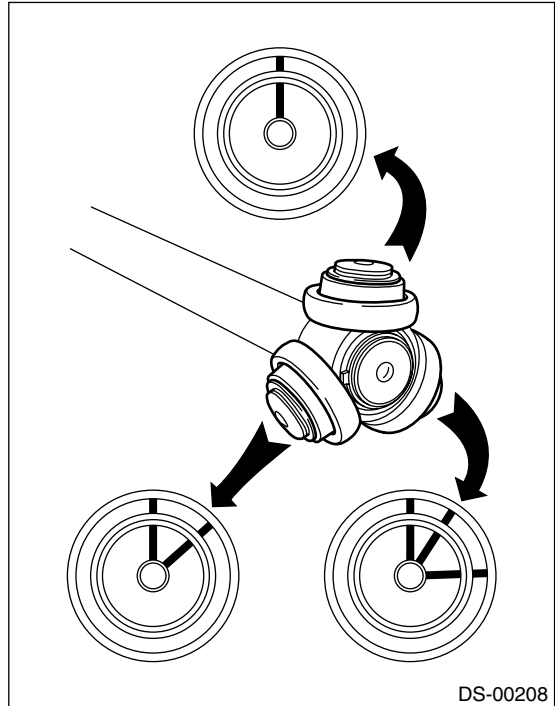
12) Fill 100 to 110 g (3.53 to 3.88 oz) of specified grease into the interior of SFJ outer race.

13) Apply a coat of specified grease to free ring and trunnion.

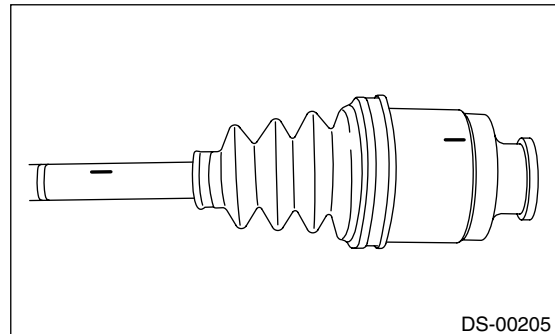
14) Align the alignment marks on free ring and trunnion, and then install the free ring.

CAUTION:

Be careful with the free ring position.



15) Align the alignment marks on shaft and outer race, and then install the outer race.



16) Install the circlip in the groove on SFJ outer race.

CAUTION:

Pull the shaft lightly and assure the circlip is completely fitted in groove.

17) 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.

18) Install the SFJ boot taking care not to twist it.

CAUTION:

- SFJ installation surface of SFJ boot shall be cleaned so as to be free from grease and other substances.

- When installing the SFJ boot, position the outer race of SFJ at center of its travel.

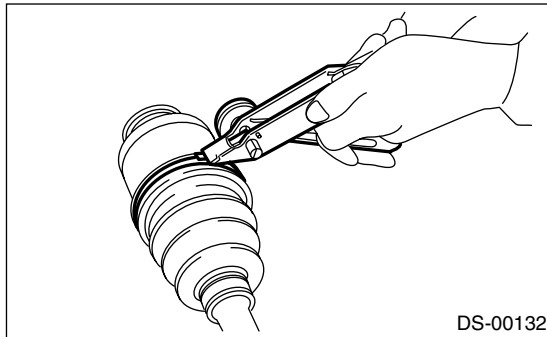
19) Put a new band through the clip and wind twice in alignment with band groove of boot.

20) Tighten the band by using the ST.

ST 925091000 BAND TIGHTENING TOOL

NOTE:

Tighten the band until it cannot be moved by hand.

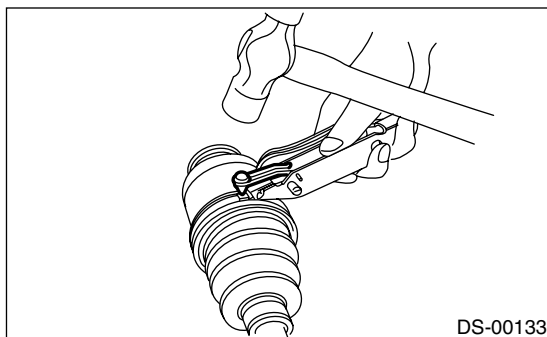


21) Tap on the clip with punch provided at the end of ST.

ST 925091000 BAND TIGHTENING TOOL

CAUTION:

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



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

CAUTION:

Be careful so that the end of band is in close contact with clip.

23) Extend and retract the SFJ to provide equal grease coating.

E: INSPECTION

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

1) DOJ (Double Offset Joint)

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

2) SFJ (Shudder-less Freering tripod Joint)

Check seizure, corrosion, damage and excessive play.

3) Shaft

Check excessive bending, twisting, damage and wear.

4) BJ (Bell Joint)

Check seizure, corrosion, damage and excessive play.

5) Boot

Check for wear, warping, breakage or scratches.

6) Grease

Check for discoloration or fluidity.