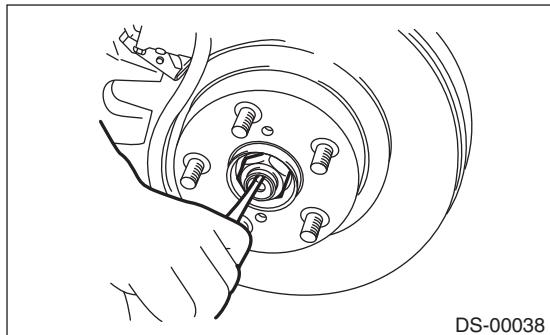


8. Rear Drive Shaft

A: REMOVAL

- 1) Lift up the vehicle, and then remove the rear wheels.
- 2) Lift the crimped section of axle nut.



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

CAUTION:

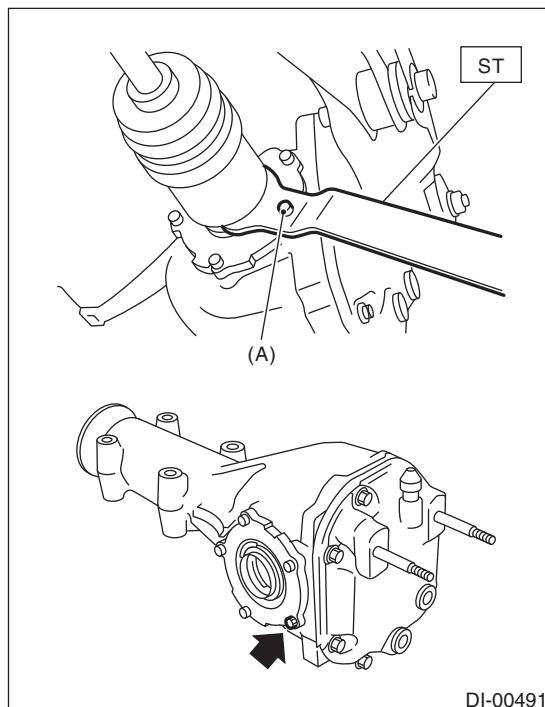
Do not loosen the axle nut while the rear axle is loaded. Doing so may damage the hub bearing.

- 4) Drain differential gear oil.
- 5) Remove the rear trailing link. <Ref. to RS-10, REMOVAL, Rear Trailing Link.>
- 6) Remove the rear lateral link. <Ref. to RS-16, REMOVAL, Rear Lateral Link.>
- 7) Remove the rear drive shaft from the rear differential using ST. (T-type)

ST 28099PA100 DRIVE SHAFT REMOVER

NOTE:

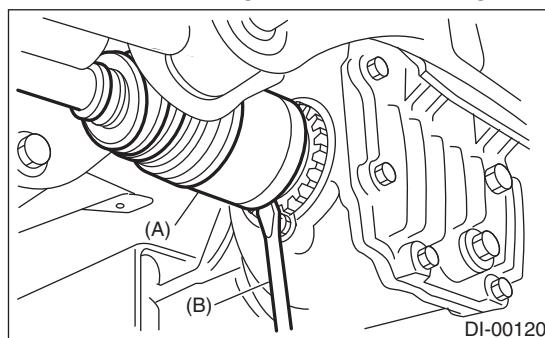
Attach the ST to the bolt as shown in the figure so as not to damage the side bearing retainer.



- 8) Remove the rear drive shaft from the rear differential. (VA-type)

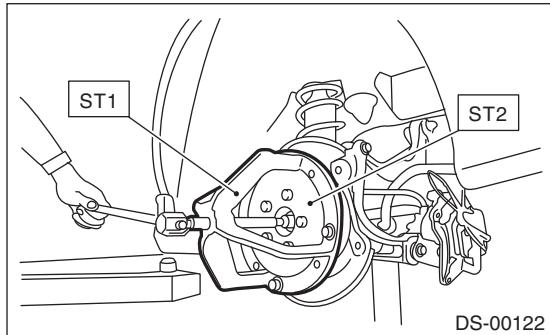
NOTE:

Attach the tire lever to the bolt as shown in the figure so as not to damage the side bearing retainer.



9) Remove the rear drive shaft from the rear axle. If it is hard to remove, use ST1 and ST2.

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



B: INSTALLATION

1) Replace the rear differential side oil seal. <Ref. to DI-74, REPLACEMENT, Rear Differential Side Oil Seal.>

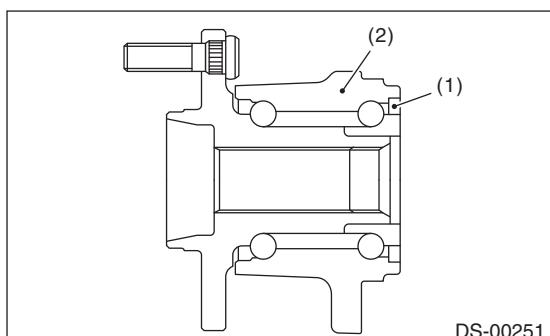
NOTE:

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

2) Insert the drive shaft into the rear hub spline, and pull the drive shaft into specified position.

CAUTION:

- Be careful not to damage the magnetic encoder.
- Do not get closer the tool which charged magnetism to magnetic encoder.
- Do not hammer drive shaft when installing it.

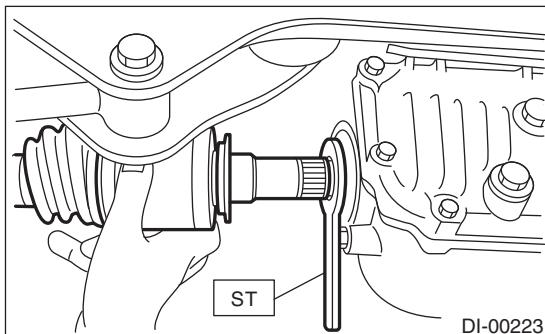


(1) Magnetic encoder
(2) Rear hub unit bearing

3) Tighten the axle nut temporarily.

4) Using the ST, install the rear drive shaft to the rear differential.

ST 28099PA090 OIL SEAL PROTECTOR



5) Attach the links to the rear housing and tighten them to the specified torque.

Tightening torque:

Stabilizer link

33 N·m (3.4 kgf·m, 24.3 ft-lb)

Shock absorber

120 N·m (12.2 kgf·m, 88.5 ft-lb)

Rear lateral link

80 N·m (8.2 kgf·m, 59 ft-lb)

Trailing link to Rear sub frame

120 N·m (12.2 kgf·m, 88.5 ft-lb)

Trailing link to Rear housing

80 N·m (8.2 kgf·m, 59 ft-lb)

6) While pressing the brake pedal, tighten the new axle nuts to the specified torque.

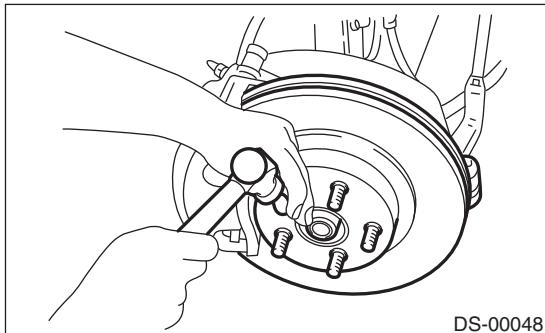
Tightening torque:

240 N·m (24.5 kgf·m, 177 ft-lb)

CAUTION:

Do not load the rear axle before tightening the axle nut. Doing so may damage the hub bearing.

7) Lock the axle nut securely.



8) Fill differential gear oil.

9) Install the rear wheels.

Tightening torque:

120 N·m (12.2 kgf·m, 88.5 ft-lb)

10) Inspect the wheel alignment and adjust if necessary.

Rear Drive Shaft

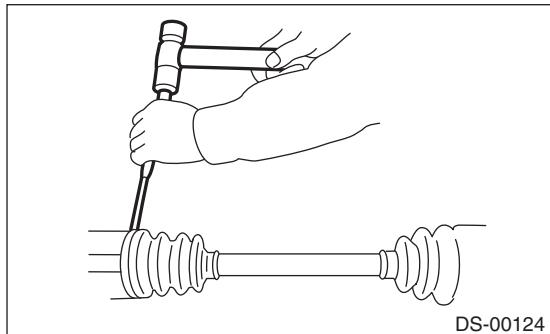
DRIVE SHAFT SYSTEM

C: DISASSEMBLY

1) Loosen the boot band at the large end of DOJ boot using the flat tip screwdriver or pliers.

CAUTION:

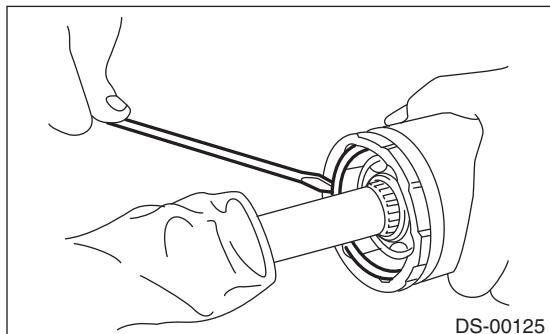
Be careful not to damage the boot.



2) Remove the boot band on the small end of DOJ boot in the same manner.

3) Remove the large end of DOJ boot from DOJ outer race.

4) Remove the round snap ring at the neck of DOJ outer race with a screwdriver.



5) Take out the DOJ outer race from the shaft assembly.

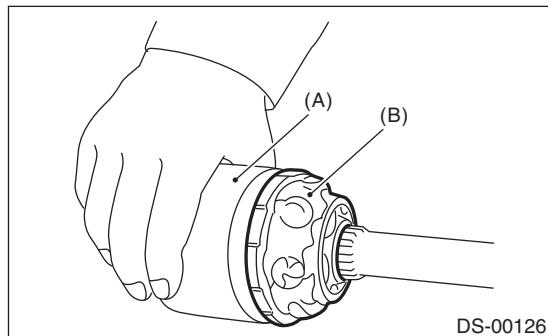
6) Wipe off the grease and take out the ball bearings.

CAUTION:

The grease is a special grease (grease for constant velocity joints). Do not mix with other greases.

NOTE:

Disassemble while taking care not to lose balls.



(A) Outer race

(B) Grease

7) To remove the cage from inner race, turn the cage by a half pitch to the track groove of inner race and shift the cage.

8) Using pliers, remove the snap ring fixing the inner race to the shaft.

9) Take out the DOJ inner race.

10) Take off the DOJ cage from shaft and remove the DOJ boot.

CAUTION:

Wrap shaft splines with vinyl tape to protect the boot from scratches.

11) Remove the BJ boot or EBJ boot in the same procedure as the DOJ boot.

NOTE:

Further disassembly of the drive shaft is impossible because the BJ and EBJ cannot be disassembled.

D: ASSEMBLY

CAUTION:

Wrap shaft splines with vinyl tape to protect the boot from scratches.

NOTE:

Use specified grease.

BJ, EBJ side:

NKG106

DOJ side:

NKG205

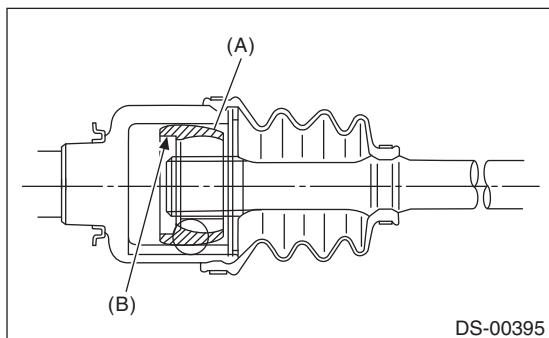
1) Install the BJ or EBJ boot in specified position, and fill it with 50 to 60 g (1.76 to 2.12 oz.) of specified grease.

2) Place the DOJ boot at the center of shaft.

3) Insert the DOJ cage onto shaft.

NOTE:

Insert the cage with the cutout portion facing the shaft end, since the cage has an orientation.



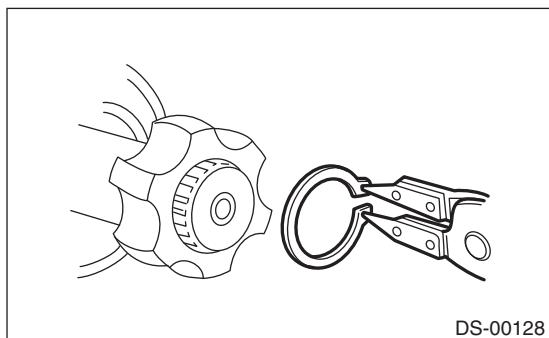
DS-00395

(A) Cage
(B) Cutout portion

4) Install the DOJ inner race on shaft and fix the snap ring in place with pliers.

NOTE:

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

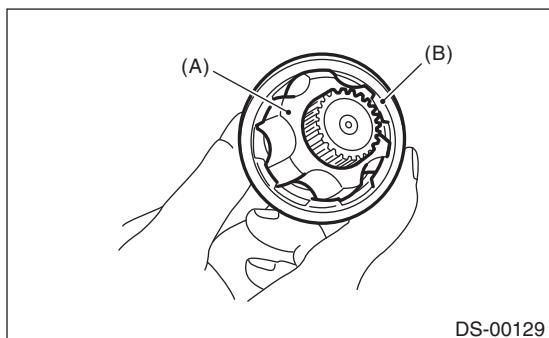


DS-00128

5) Install the cage to inner race fixed upon shaft.

NOTE:

Fit the cage with the protruding section aligned with the track on the inner race, and turn by a half pitch.



DS-00129

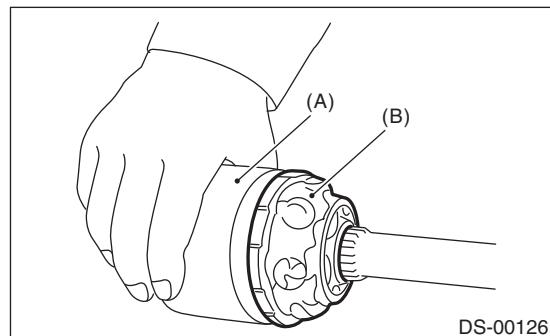
(A) Inner race
(B) Cage

6) Fill 80 to 90 g (2.82 to 3.17 oz) of specified grease into the inner side of the DOJ outer race.

7) Apply a thin coat of specified grease to the cage pocket and balls.

8) Insert balls into the cage pocket.

9) Align the outer race track and ball positions, and place the shaft, inner race, cage and ball bearings in the original positions, and then fix outer race in place.



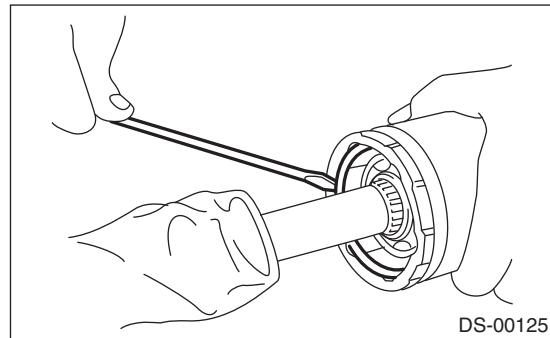
DS-00126

(A) Outer race
(B) Grease

10) Install the snap ring in the groove on the DOJ outer race.

NOTE:

- Assure that the balls, cage and inner race are completely fitted in the outer race of DOJ.
- Use care not to place the matched position of snap ring in the ball groove of outer race.
- Pull the shaft lightly and assure that the circlip is completely fitted in the groove.



DS-00125

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

12) Install the DOJ boot taking care not to twist it.

NOTE:

- The inside of the large end of DOJ boot and the boot groove shall be cleaned so as to be free from grease and other substances.

- When installing the DOJ boot, position the outer race of DOJ at center of the stroke.

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

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

Rear Drive Shaft

DRIVE SHAFT SYSTEM

NOTE:

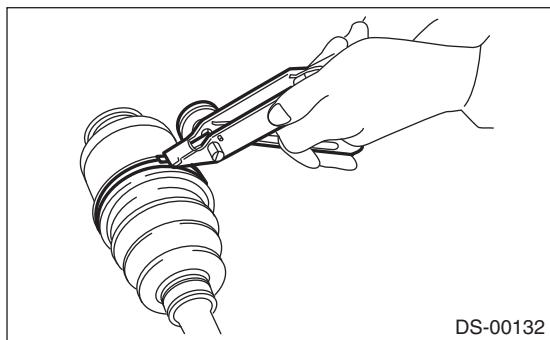
When tightening boot, use care so that the air within the boot is appropriate.

15) Tighten the band using the ST.

ST 925091000 BAND TIGHTENING TOOL

NOTE:

Tighten the band until it cannot be moved by hand.



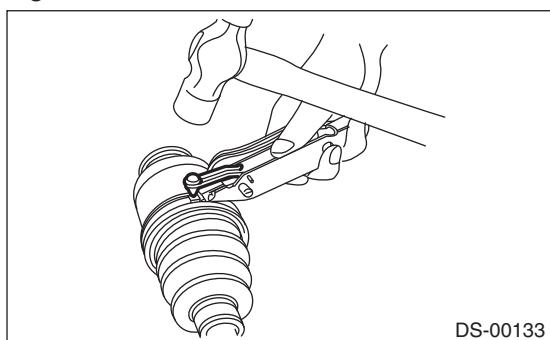
DS-00132

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

ST 925091000 BAND TIGHTENING TOOL

NOTE:

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



DS-00133

17) 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.

NOTE:

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

18) Install the BJ boot or EBJ boot in the same procedure as a DOJ boot.

19) Extend and retract the DOJ repeatedly to provide an equal coating of grease.

E: INSPECTION

Check the removed parts for damage, wear, corrosion etc. Repair or replace if defective.

- DOJ (Double Offset Joint)

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

- EBJ (High-efficiency Compact Ball Fixed Joint)

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

- Shaft

Check for excessive bending, twisting, damage and wear.

- BJ (Bell Joint)

Check for seizure, corrosion, damage and excessive play.

- Boot

Check for wear, warping, breakage and scratches.

- Grease

Check for discoloration and fluidity.