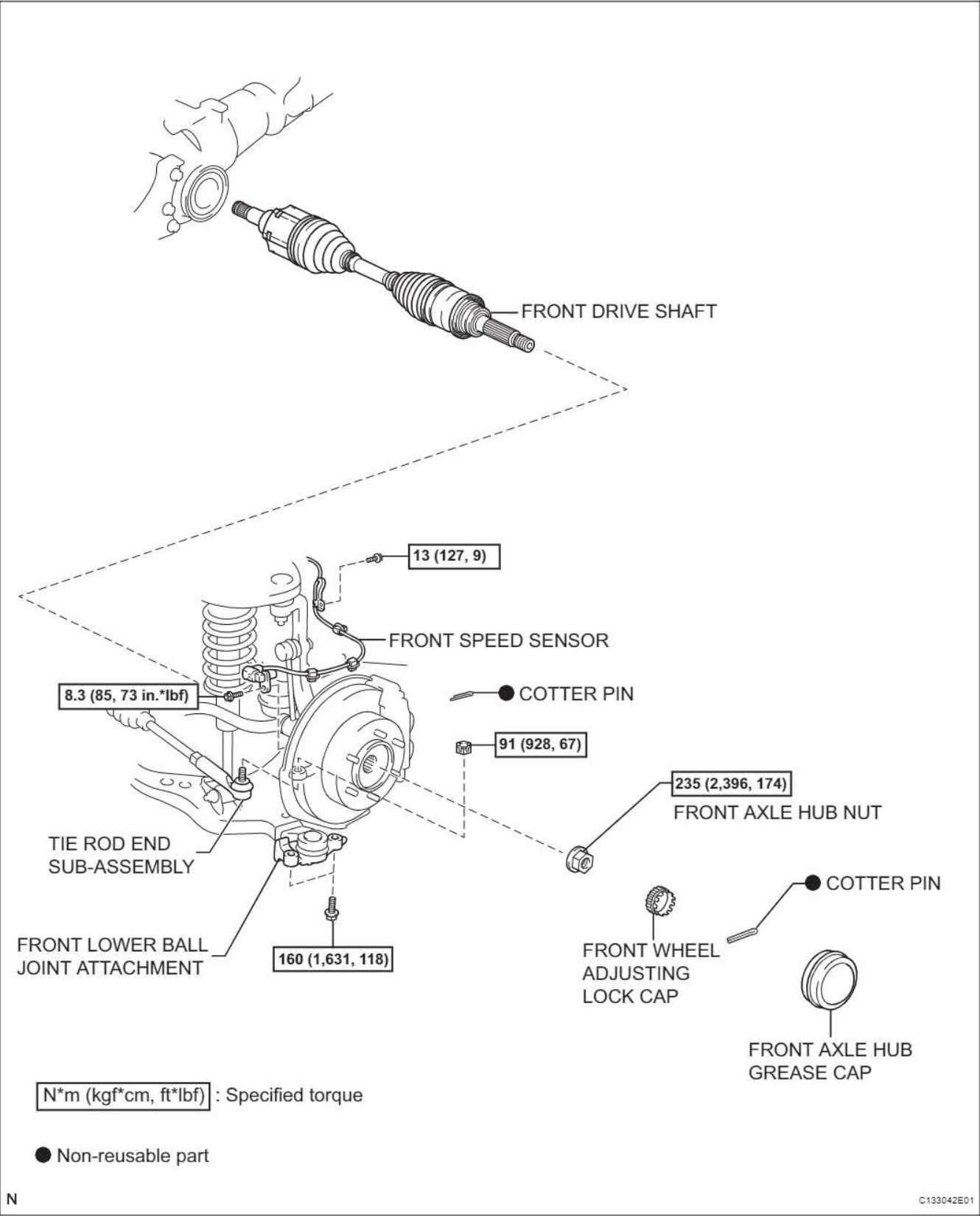


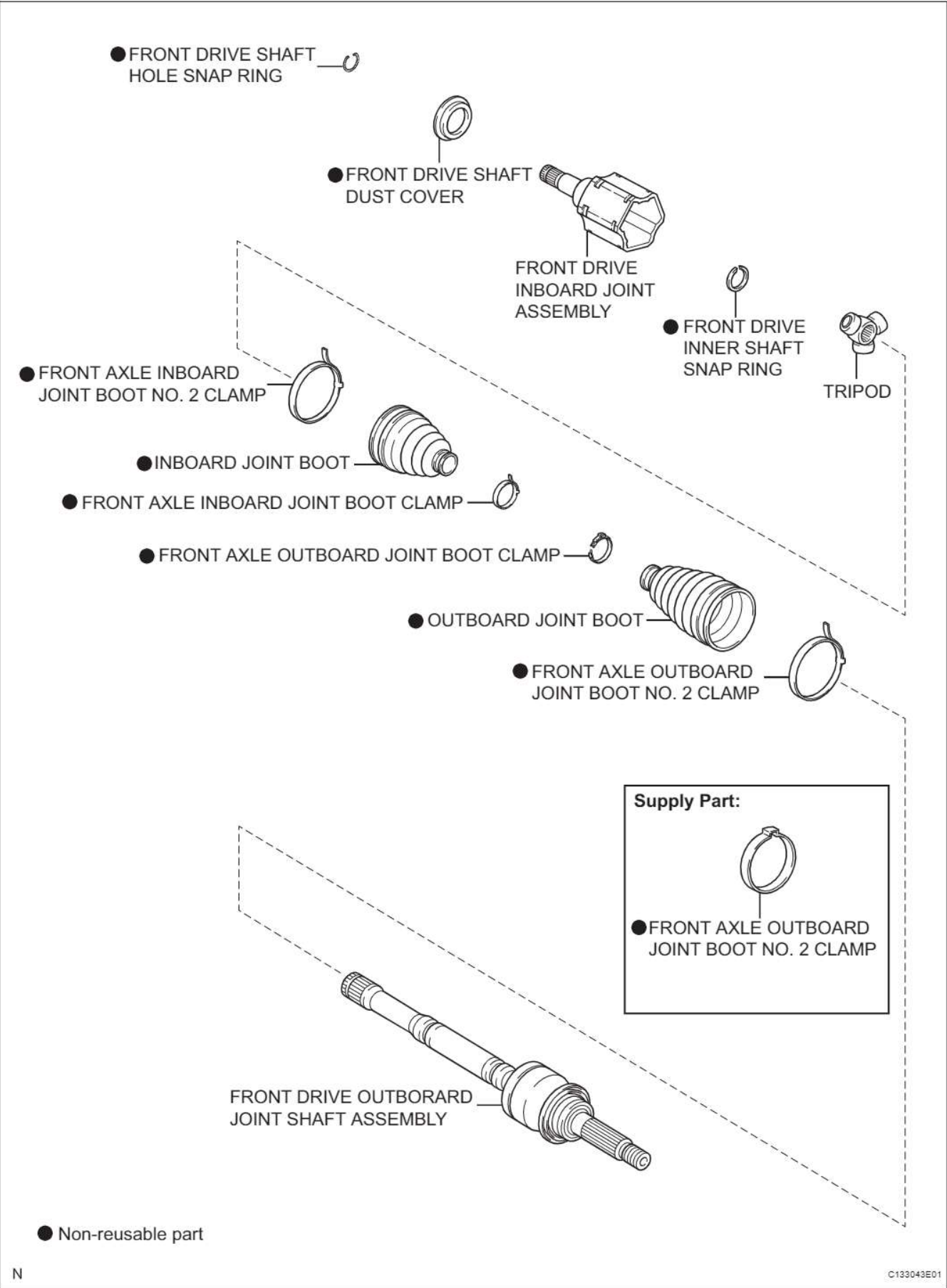
FRONT DRIVE SHAFT (for 4WD)
COMPONENTS



DS

DS-2

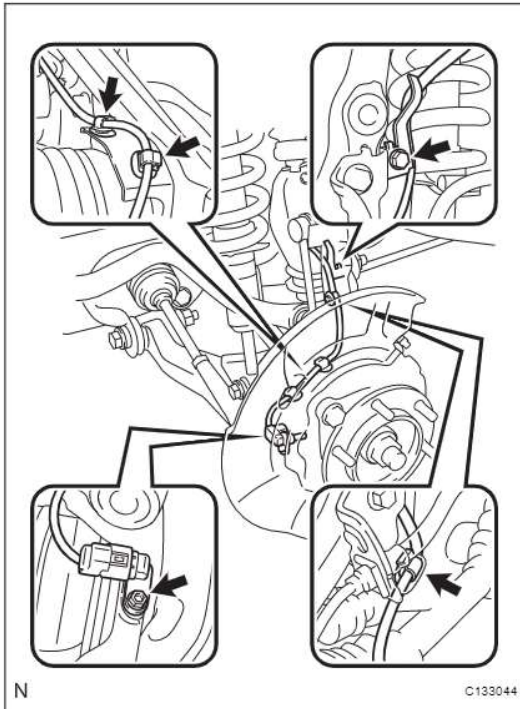
DRIVE SHAFT – FRONT DRIVE SHAFT (for 4WD)



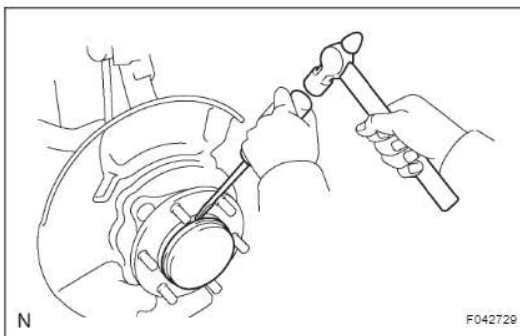
DS

DRIVE SHAFT – FRONT DRIVE SHAFT (for 4WD)**DS-3****REMOVAL****1. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL****2. REMOVE FRONT WHEEL****3. DRAIN DIFFERENTIAL OIL****4. SEPARATE FRONT SPEED SENSOR**

- (a) Using a 5 mm hexagon wrench, remove the bolt and separate the front speed sensor.
- (b) Disengage the 3 clamps.
- (c) Remove the bolt and separate the skid control sensor wire from the steering knuckle.

**5. REMOVE FRONT AXLE HUB GREASE CAP**

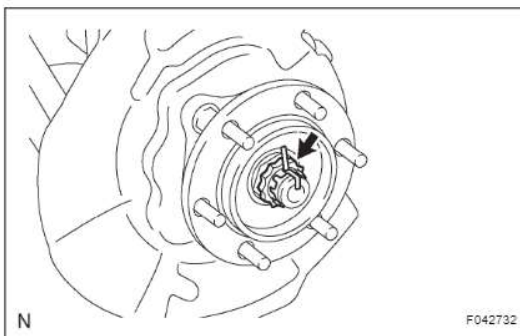
- (a) Using a screwdriver and a hammer, remove the front axle hub grease cap.

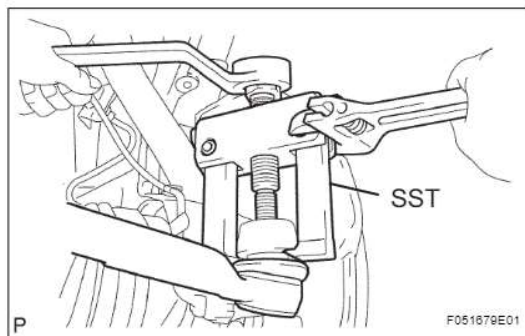
NOTICE:**Do not damage the axle hub.****6. REMOVE FRONT AXLE HUB NUT**

- (a) Remove the cotter pin and adjusting lock cap.
- (b) Remove the front axle hub nut.

7. SEPARATE TIE ROD END SUB-ASSEMBLY

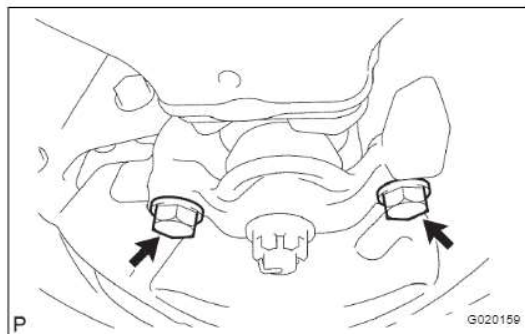
- (a) Remove the cotter pin and nut.

**DS**

DS-4**DRIVE SHAFT – FRONT DRIVE SHAFT (for 4WD)**

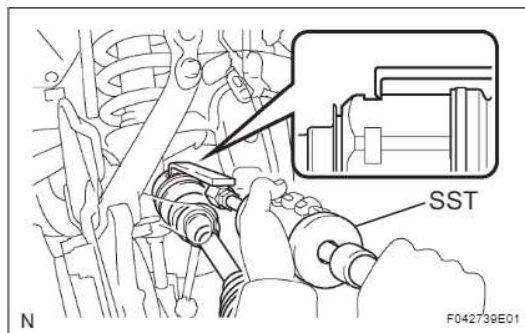
- (b) Using SST, separate the tie rod end from the steering knuckle.

SST 09628-62011



8. SEPARATE FRONT LOWER BALL JOINT ATTACHMENT

- (a) Remove the 2 bolts and separate the front lower ball joint attachment from the steering knuckle.



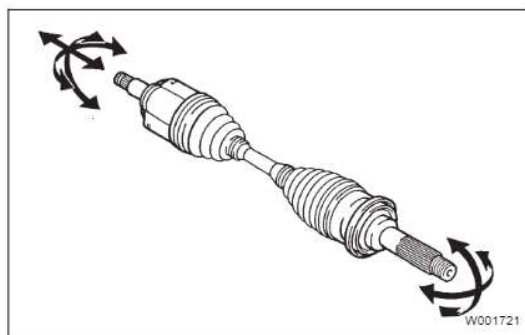
9. REMOVE FRONT DRIVE SHAFT

- (a) Using SST, remove the front drive shaft.

SST 09520-01010, 09520-24010 (09520-32040)

NOTICE:

Do not damage the oil seal.



DISASSEMBLY

1. INSPECT FRONT DRIVE SHAFT

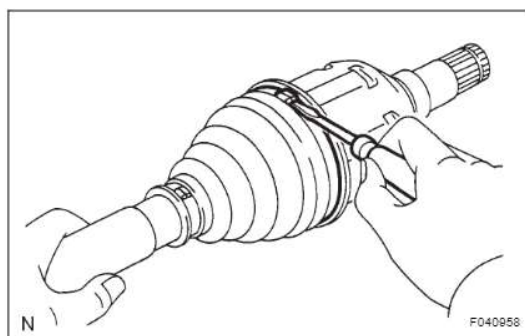
- Check that there is no remarkable play in the outboard joint.
- Check that the inboard joint slides smoothly in the thrust direction.
- Check that there is no remarkable play in the radial direction of the inboard joint.
- Check the boots for damage.

NOTICE:

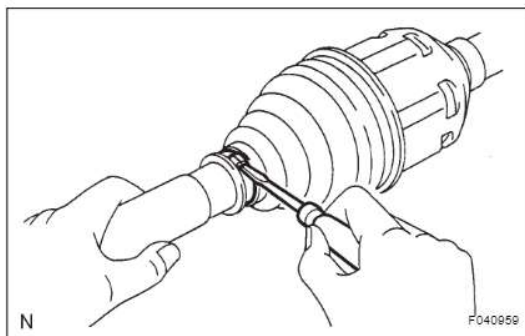
Move the drive shaft while keeping it level.

2. REMOVE FRONT AXLE INBOARD JOINT BOOT NO. 2 CLAMP

- (a) Using a screwdriver, release the staked part of the boot clamp and separate the boot clamp.



DS

DRIVE SHAFT – FRONT DRIVE SHAFT (for 4WD)**DS-5****3. REMOVE FRONT AXLE INBOARD JOINT BOOT CLAMP**

- (a) Using a screwdriver, release the staked part of the boot clamp and separate the boot clamp.

4. SEPARATE INBOARD JOINT BOOT

- (a) Separate the inboard joint boot from the inboard joint.

5. REMOVE FRONT DRIVE INBOARD JOINT ASSEMBLY

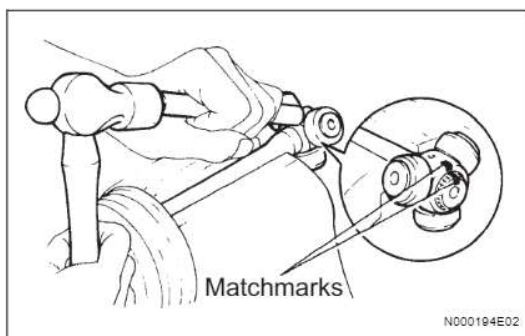
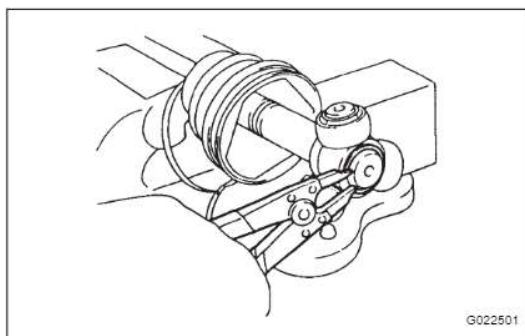
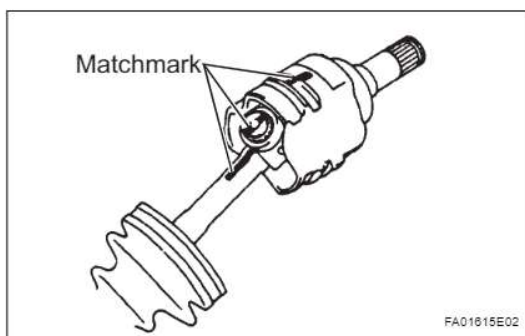
- (a) Remove the old grease from the inboard joint.
 (b) Place matchmarks on the inboard joint, tripod and outboard joint shaft.

NOTICE:**Do not punch the marks.**

- (c) Remove the inboard joint from the outboard joint shaft.
 (d) Fix the outboard joint shaft in a vise between aluminum plates.

NOTICE:**Do not overtighten the vise.**

- (e) Using a snap ring expander, remove the snap ring.



- (f) Place matchmarks on the outboard joint shaft and tripod.

NOTICE:**Do not punch the marks.**

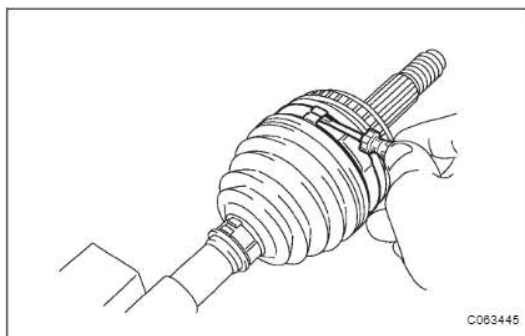
- (g) Using a brass bar and hammer, remove the tripod from the outboard joint shaft.

NOTICE:**Do not tap the roller.**

- (h) Remove the inboard joint boot No. 2 clamp, the inboard joint boot and the inboard joint boot clamp.

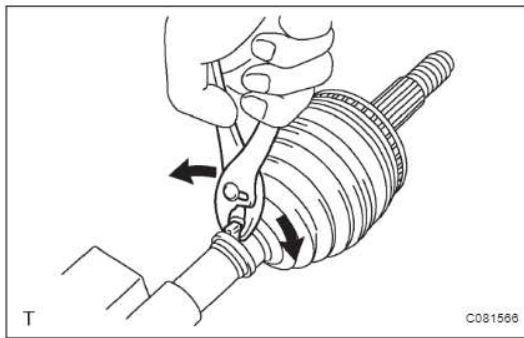
6. REMOVE FRONT AXLE OUTBOARD JOINT BOOT NO. 2 CLAMP

- (a) Using a screwdriver, release the staked part of the boot clamp and remove the boot clamp.

**DS**

DS-6

DRIVE SHAFT – FRONT DRIVE SHAFT (for 4WD)

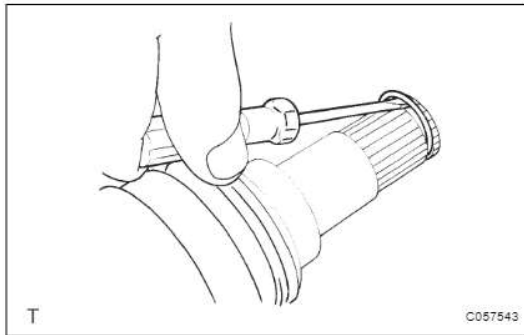


7. REMOVE FRONT AXLE OUTBOARD JOINT BOOT CLAMP

- (a) Using pliers, remove the boot clamp, as shown in the illustration.

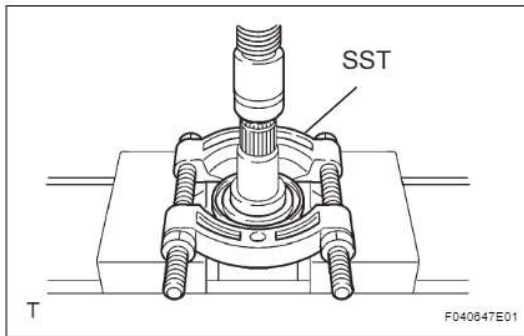
8. REMOVE OUTBOARD JOINT BOOT

- (a) Remove the outboard joint boot from the outboard joint shaft.
(b) Remove the old grease from the outboard joint.



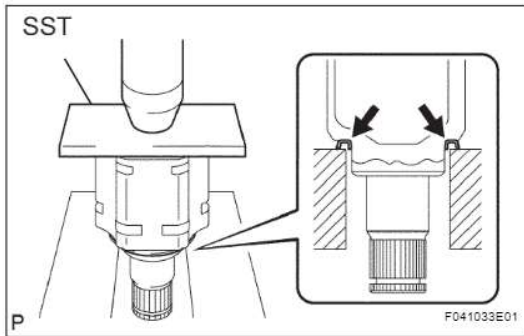
9. REMOVE FRONT DRIVE SHAFT HOLE SNAP RING

- (a) Using a screwdriver, remove the snap ring.



10. REMOVE FRONT DRIVE SHAFT DUST COVER

- (a) Using SST and a press, remove the dust cover.
SST 09950-00020



REASSEMBLY

1. INSTALL FRONT DRIVE SHAFT DUST COVER

- (a) Using SST and a press, install a new dust cover into the inboard joint until it is flush with the end.

SST 09527-10011

NOTICE:

- Install the dust cover in the correct orientation.
- Do not deform the dust cover.

2. INSTALL FRONT DRIVE SHAFT HOLE SNAP RING

- (a) Install a new snap ring.

3. INSTALL OUTBOARD JOINT BOOT

- (a) Wrap the spline of the outboard joint shaft with protective tape.
(b) Install new parts onto the outboard joint shaft in the following order.

1.	Front axle outboard joint boot No. 2 clamp
2.	Front axle outboard joint boot
3.	Front axle outboard joint boot clamp

DRIVE SHAFT – FRONT DRIVE SHAFT (for 4WD)**DS-7**

- (c) Pack the joint portion of the outboard joint shaft and outboard joint boot with grease.

Grease capacity:**260 to 270 g (9.2 to 9.5 oz.)**

- (d) Install the outboard joint boot onto the outboard joint shaft groove.

NOTICE:**Keep the groove free of grease.****4. INSTALL FRONT AXLE OUTBOARD JOINT BOOT NO. 2 CLAMP**

- (a) Fix the outboard joint shaft in a vise between aluminum plates.

NOTICE:**Do not overtighten the vise.**

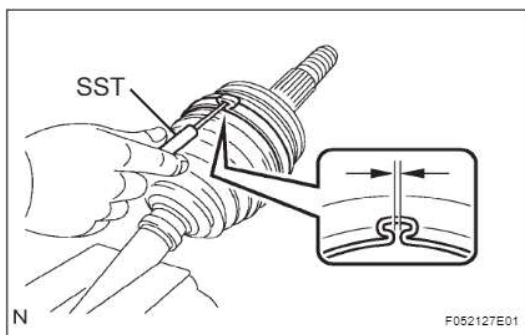
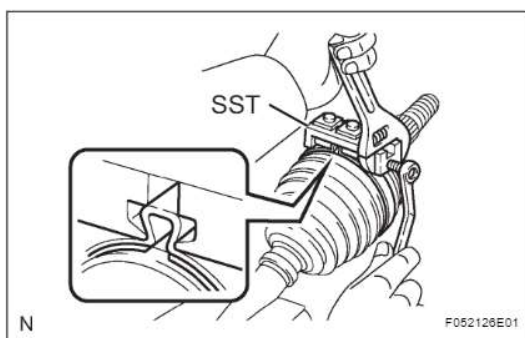
- (b) Place SST onto the boot clamp, press it against the boot and slightly tighten SST.

SST 09521-24010

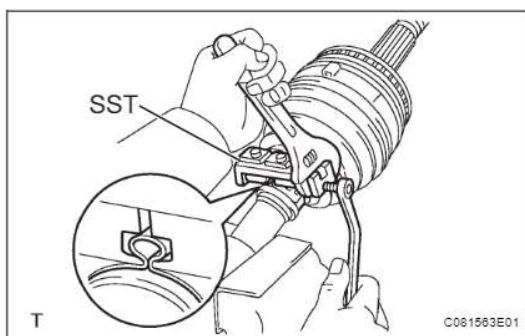
- (c) Fix SST and tighten it so that the clearance comes to within the specified range.

Clearance:**0.8 mm (0.031 in.) or less**

- (d) Remove SST.



- (e) Using SST, measure the clearance of the boot clamp as shown in the illustration.

SST 09240-00020**Clearance:****0.8 mm (0.031 in.) or less****NOTICE:****If the clearance is outside the specified range, retighten it.****5. INSTALL FRONT AXLE OUTBOARD JOINT BOOT CLAMP**

- (a) Place SST onto the boot clamp, press it against the boot and slightly tighten SST.

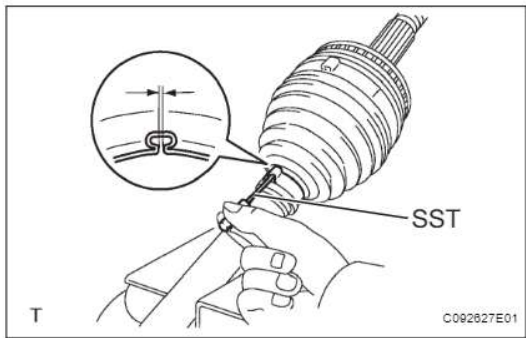
SST 09521-24010

- (b) Fix SST and tighten it so that the clearance comes to within the specified range.

Clearance:**0.8 mm (0.031 in.) or less**

- (c) Remove SST.

DS



- (d) Using SST, measure the clearance of the boot clamp as shown in the illustration.

SST 09240-00020

Clearance:

0.8 mm (0.031 in.) or less

NOTICE:

If the clearance is outside the specified range, retighten it.

6. INSTALL FRONT DRIVE INBOARD JOINT ASSEMBLY

- (a) Install new parts onto the outboard joint shaft in the following order.

1.	Front axle inboard joint boot clamp
2.	Front axle inboard joint boot
3.	Front axle inboard joint boot No. 2 clamp

- (b) Fix the outboard joint shaft in a vise between aluminum plates.

NOTICE:

Do not overtighten the vise.

- (c) Remove the protective tape.

- (d) Align the matchmarks and install the tripod joint onto the outboard joint shaft.

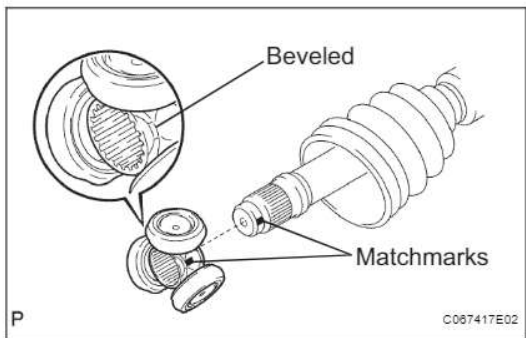
NOTICE:

Place the beveled side of the tripod toward the inboard joint.

- (e) Using a brass bar and hammer, install the tripod joint.

NOTICE:

- **Do not hit the roller portion.**
- **Keep the tripod joint free of foreign matter.**



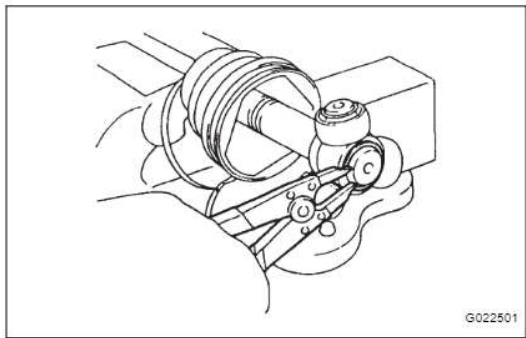
- (f) Using a snap ring expander, install a new snap ring.

- (g) Pack the inboard joint with grease.

Grease capacity:

231 to 241 g (8.1 to 8.5 oz.)

- (h) Align the matchmarks and install the inboard joint onto the outboard joint shaft.



7. INSTALL INBOARD JOINT BOOT

- (a) Install the inboard joint boot into the grooves of the inboard joint and outboard joint shaft.

NOTICE:

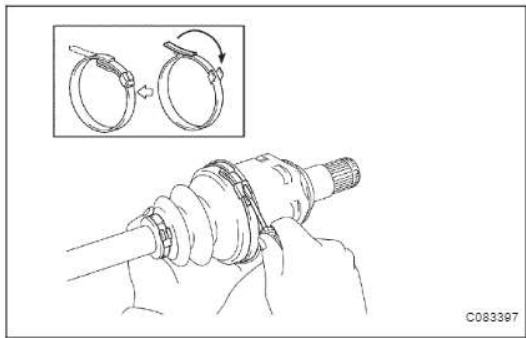
Keep the grooves free of grease.

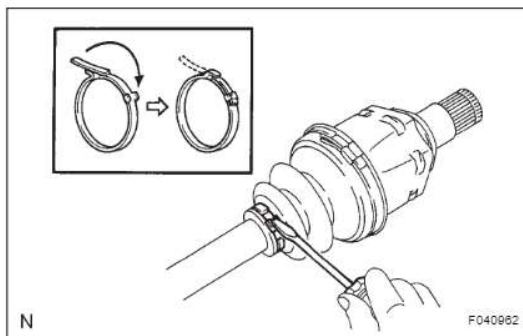
8. INSTALL FRONT AXLE INBOARD JOINT BOOT NO. 2 CLAMP

- (a) Install the boot clamp onto the inboard joint boot and caulk the boot clamp with a screwdriver.

NOTICE:

Do not damage the boot.

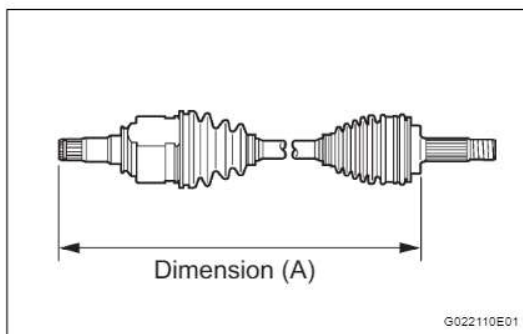


DRIVE SHAFT – FRONT DRIVE SHAFT (for 4WD)**DS-9****9. INSTALL FRONT AXLE INBOARD JOINT BOOT CLAMP**

- (a) Install the boot clamp onto the inboard joint boot and caulk the boot clamp with a screwdriver.

NOTICE:

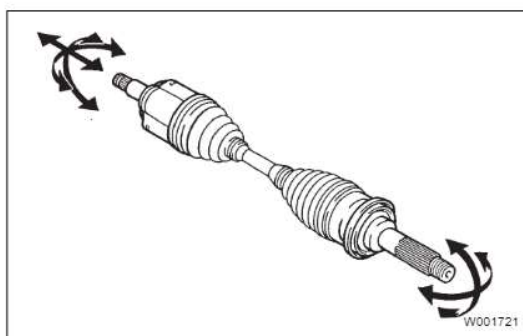
Do not damage the boot.

**10. INSPECT FRONT DRIVE SHAFT**

- (a) Check whether the drive shaft dimensions are within the following specifications.

Dimension (A):

577.5 mm (22.74 in.)

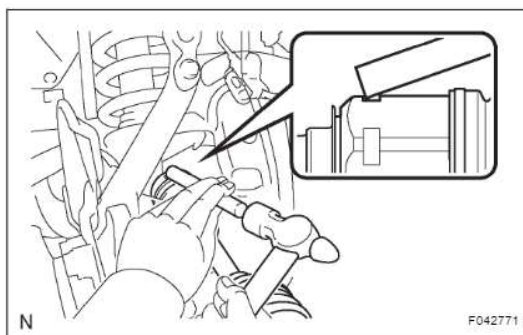


- (b) Check for noticeable looseness when turning the joint up and down, left and right, and in the thrust direction.

- (c) Check for cracks, damage and grease leakage on the boot joint.

NOTICE:

Keep the drive shaft level while moving it.

**INSTALLATION****1. INSTALL FRONT DRIVE SHAFT**

- (a) Coat the spline of the inboard joint shaft with ATF.
(b) Align the shaft splines and install the drive shaft with a brass bar and hammer.

NOTICE:

- **Set the snap ring with the opening side facing downward.**
- **Do not damage the oil seal.**

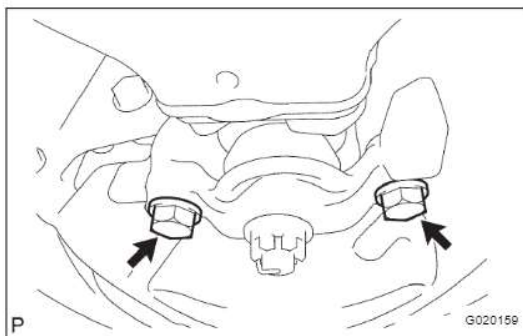
HINT:

Whether the inboard joint shaft is in contact with the pinion shaft or not can be confirmed from the sound or feeling when driving it.

DS

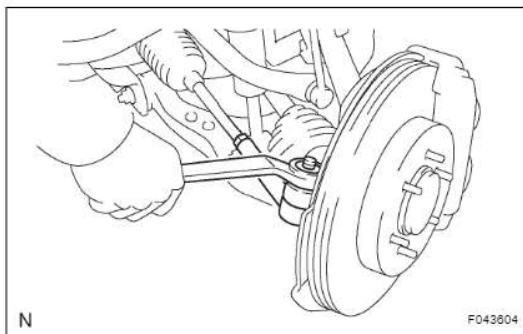
DS-10

DRIVE SHAFT – FRONT DRIVE SHAFT (for 4WD)

**2. INSTALL FRONT LOWER BALL JOINT ATTACHMENT**

- (a) Install the front lower ball joint attachment with the 2 bolts.

Torque: 160 N*m (1,631 kgf*cm, 118 ft.*lbf)

**3. INSTALL TIE ROD END SUB-ASSEMBLY**

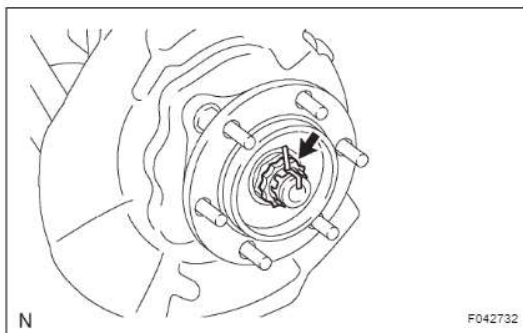
- (a) Install the tie rod end onto the steering knuckle.
(b) Install the nut.

Torque: 91 N*m (928 kgf*cm, 67 ft.*lbf)

- (c) Install a new cotter pin.

NOTICE:

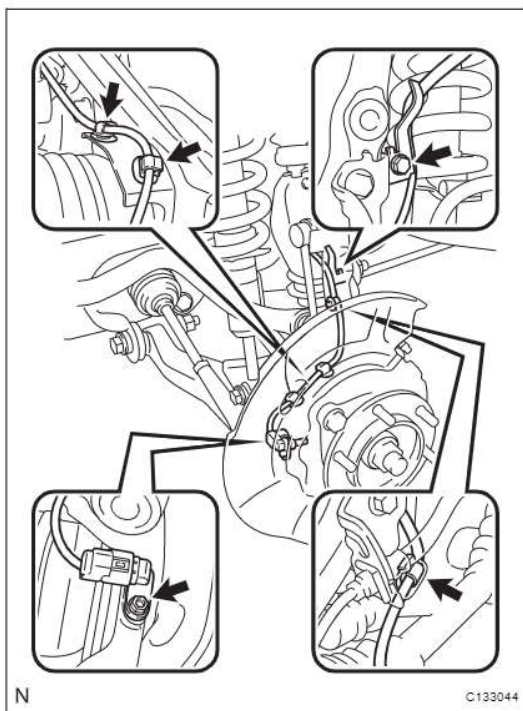
If the holes in the cotter pin are not aligned, tighten the nut an additional 60°.

**4. INSTALL FRONT AXLE HUB NUT**

- (a) Install the hub nut.

Torque: 235 N*m (2,396 kgf*cm, 174 ft.*lbf)

- (b) Install the adjusting lock cap and a new cotter pin.

5. INSTALL FRONT AXLE HUB GREASE CAP**6. INSTALL FRONT SPEED SENSOR**

- (a) Install the skid control sensor wire onto the steering knuckle with the bolt.

Torque: 13 N*m (127 kgf*cm, 9 ft.*lbf)

- (b) Engage the 3 clamps.

- (c) Using a 5 mm hexagon wrench, install the speed sensor with the bolt.

Torque: 8.3 N*m (85 kgf*cm, 73 in.*lbf)

7. INSTALL FRONT WHEEL

Torque: 112 N*m (1,137 kgf*cm, 82 ft.*lbf)

8. INSPECT DIFFERENTIAL OIL (See page [DF-3](#))**9. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**

Torque: 3.9 N*m (40 kgf*cm, 35 in.*lbf)

10. CHECK VSC SENSOR SIGNAL

(See page [BC-28](#))

11. CHECK FOR DIFFERENTIAL OIL LEAKAGE**12. INSPECT AND ADJUST FRONT WHEEL ALIGNMENT (See page [SP-2](#))**