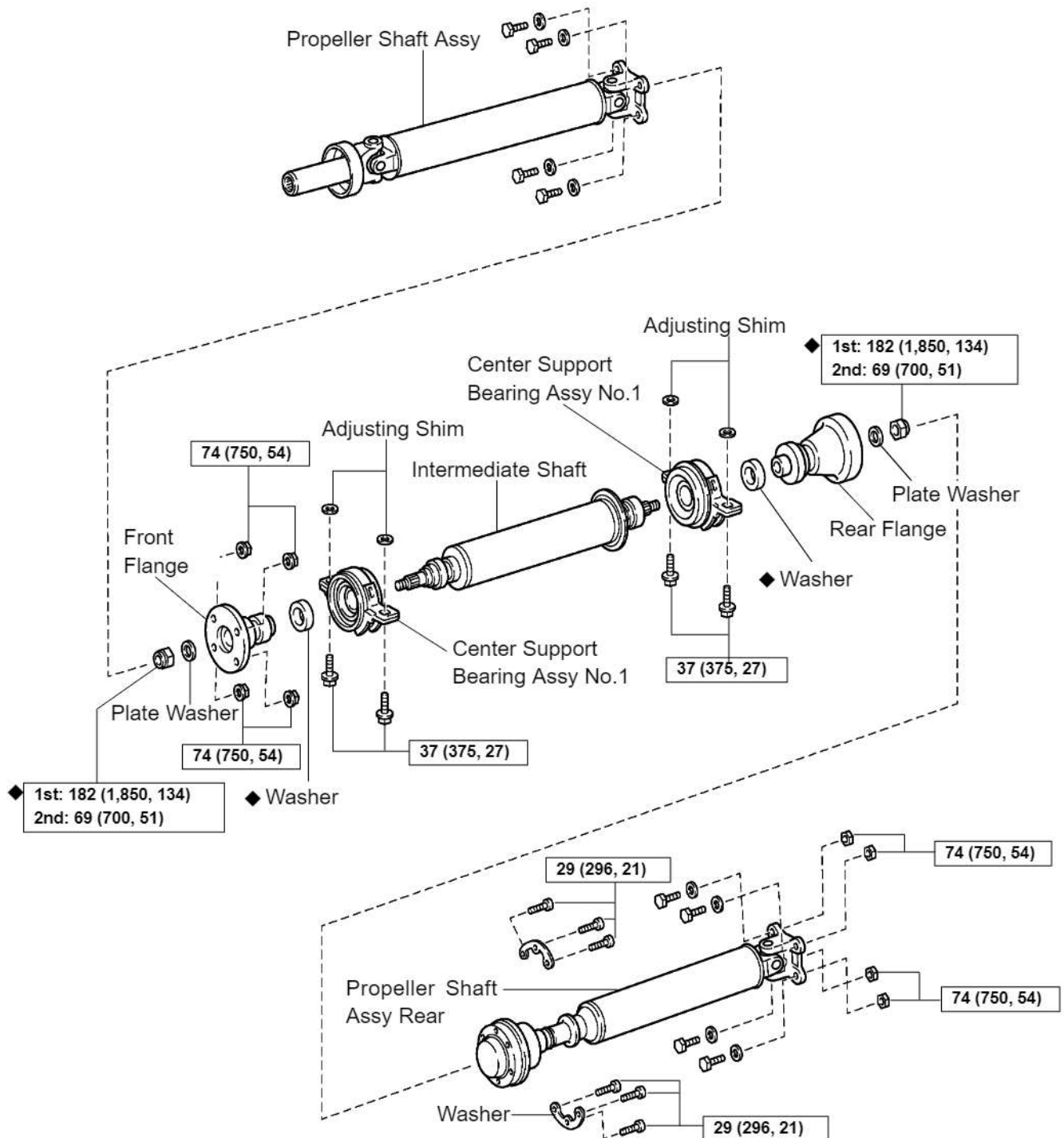


DRIVE SHAFT / PROPELLER SHAFT / AXLE COMPONENTS

3000F-01

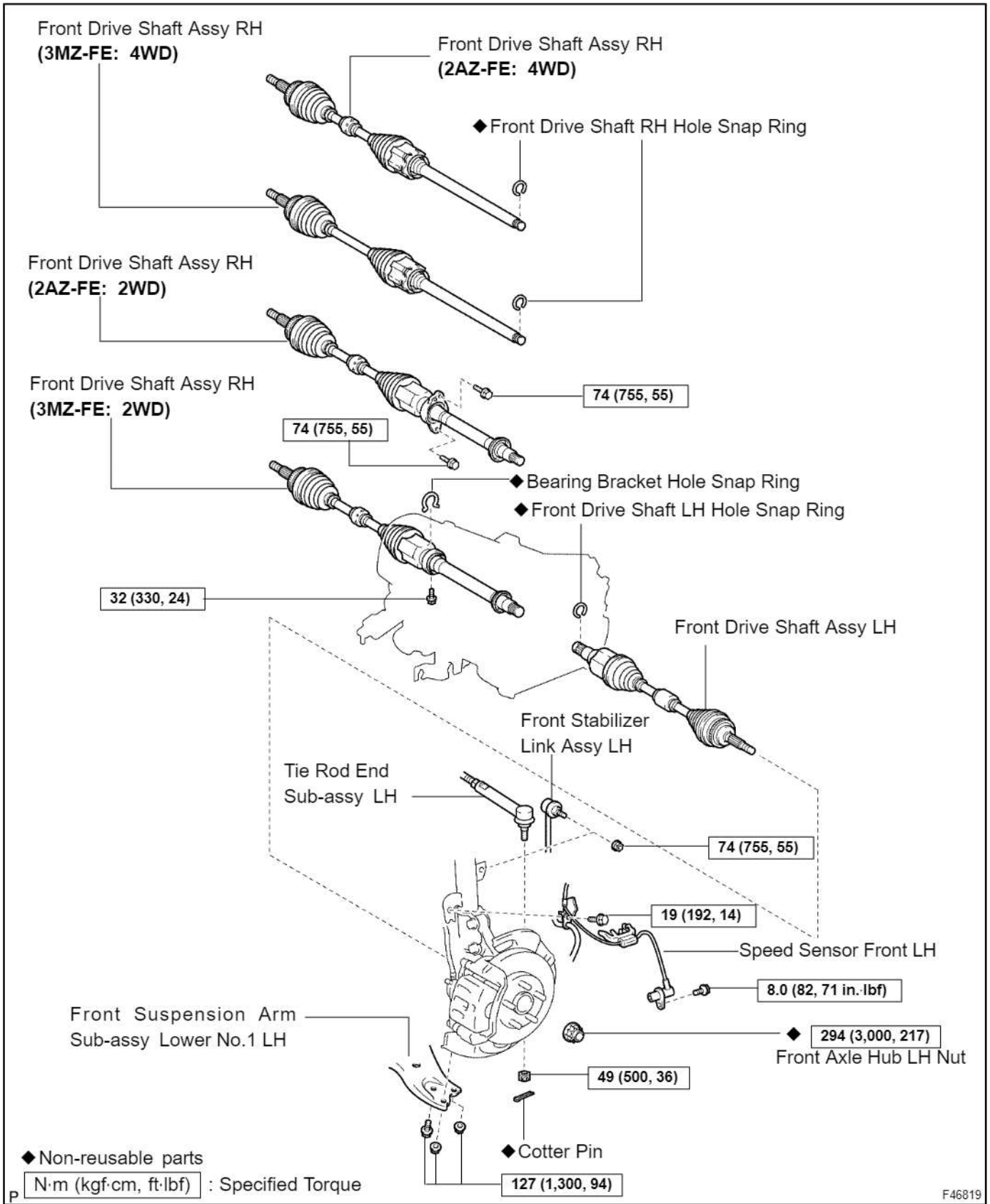


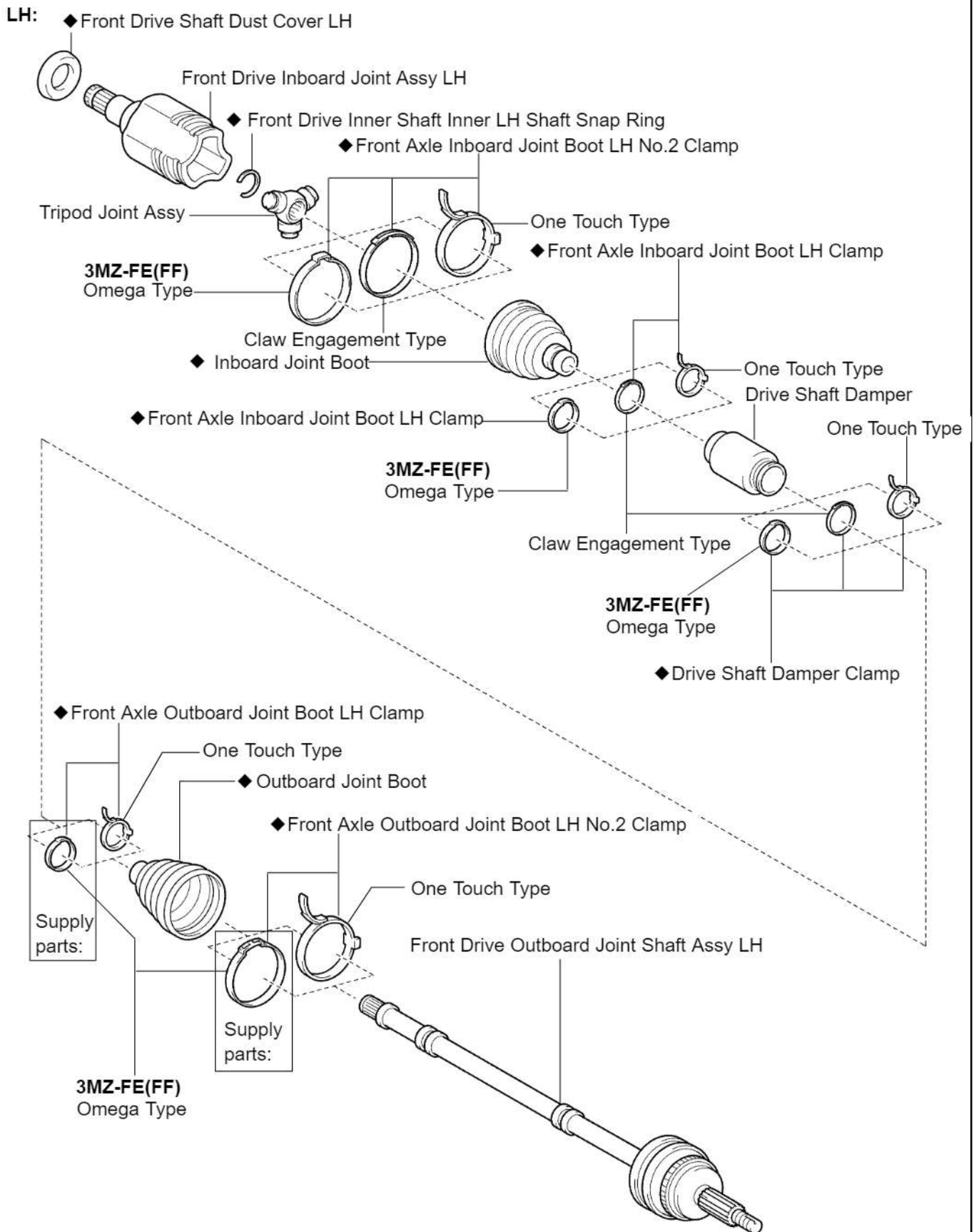
N·m (kgf·cm, ft·lbf) : Specified torque

◆ Non-reusable part

N

G25996





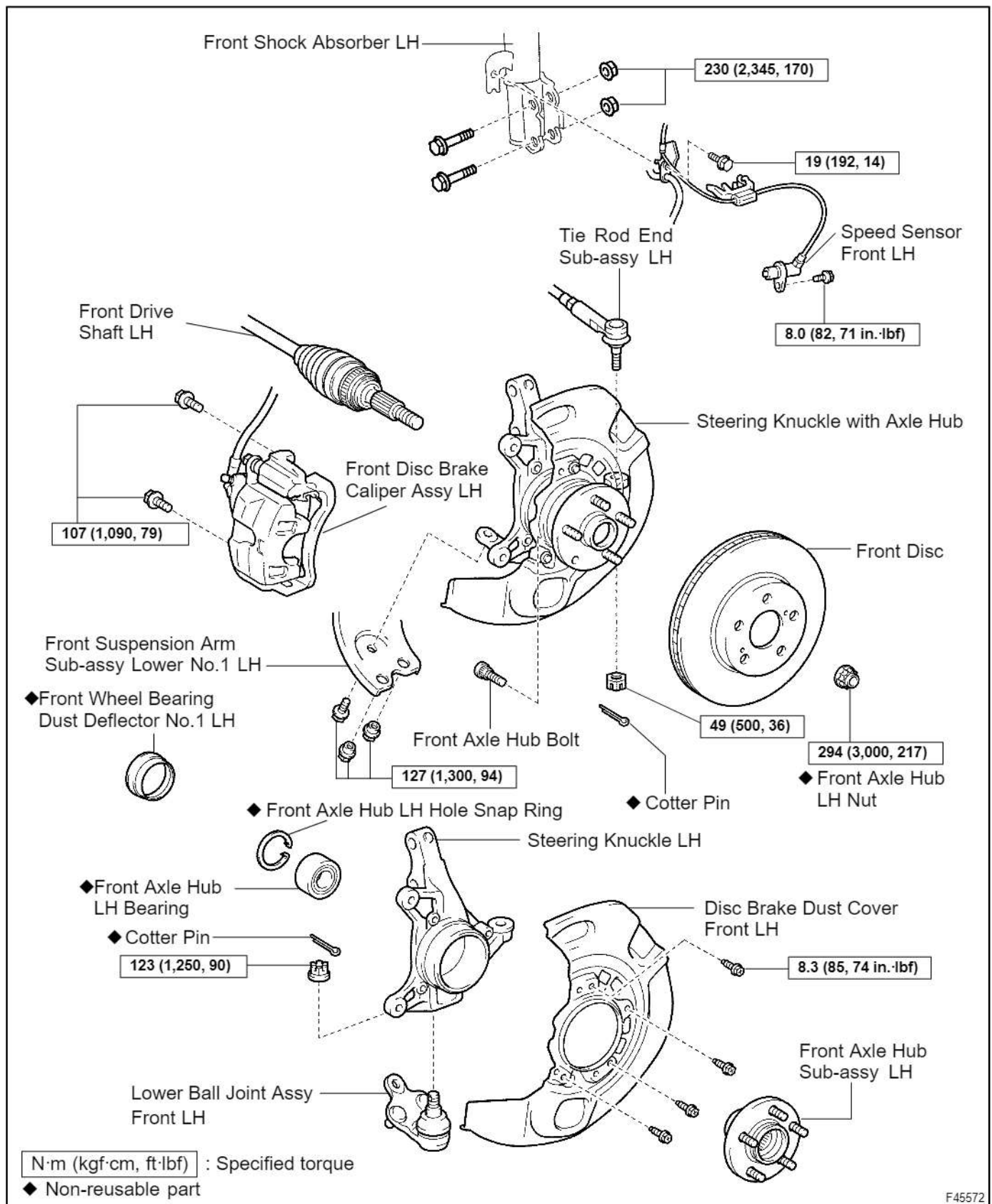
◆ Non-reusable parts

P

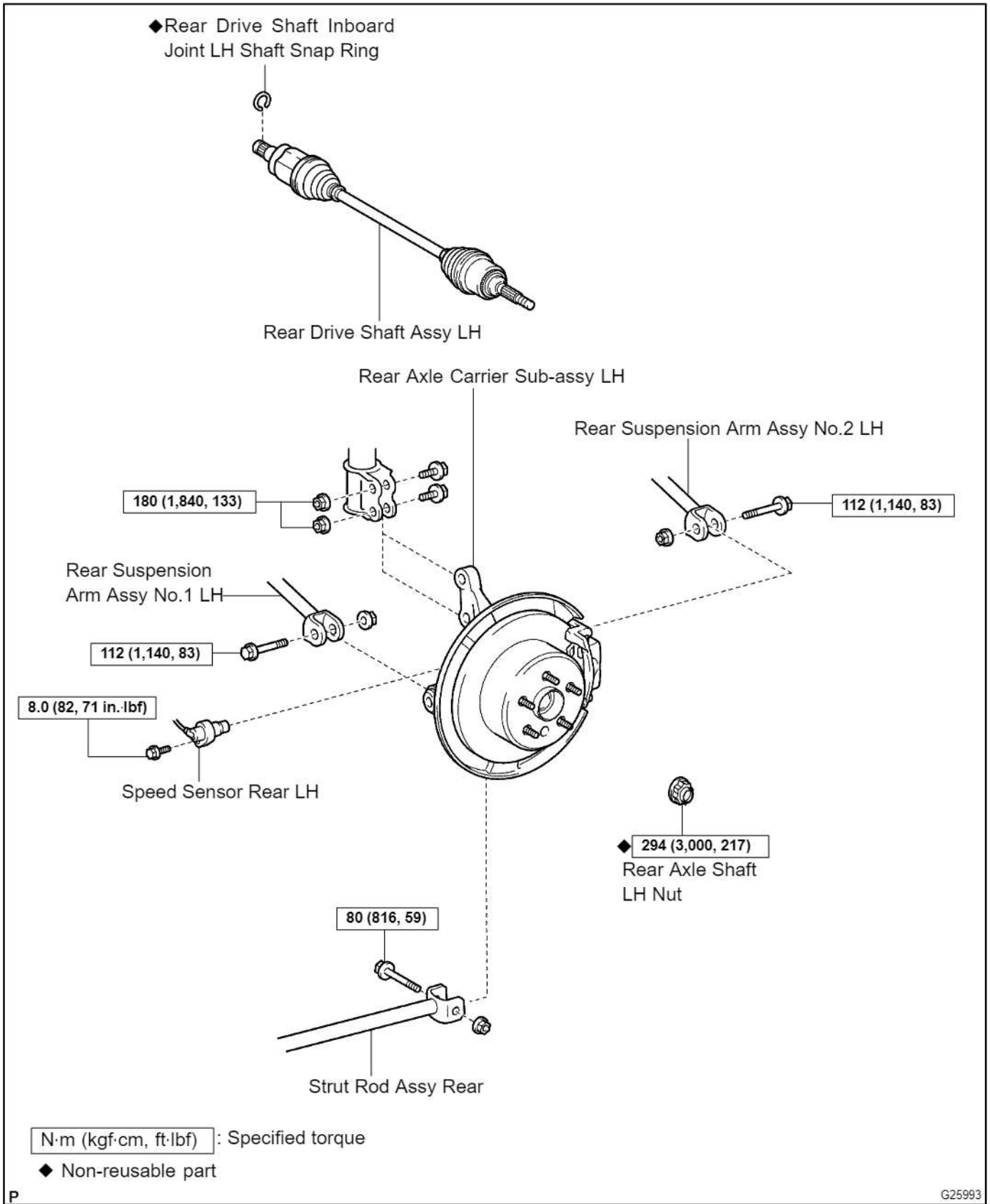
F46820



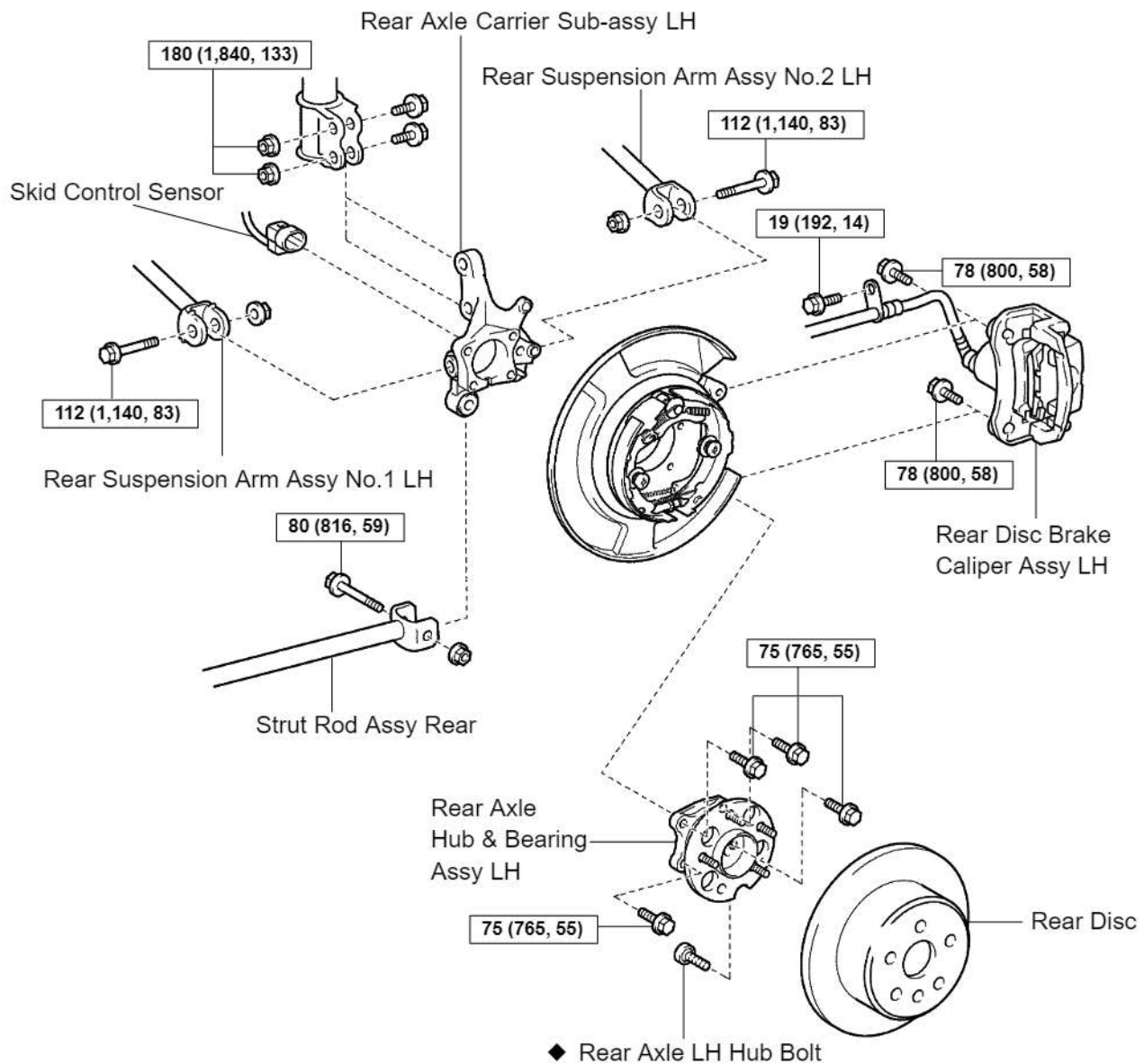
2005 HIGHLANDER REPAIR MANUAL (RM1144U)



F45572



FF:

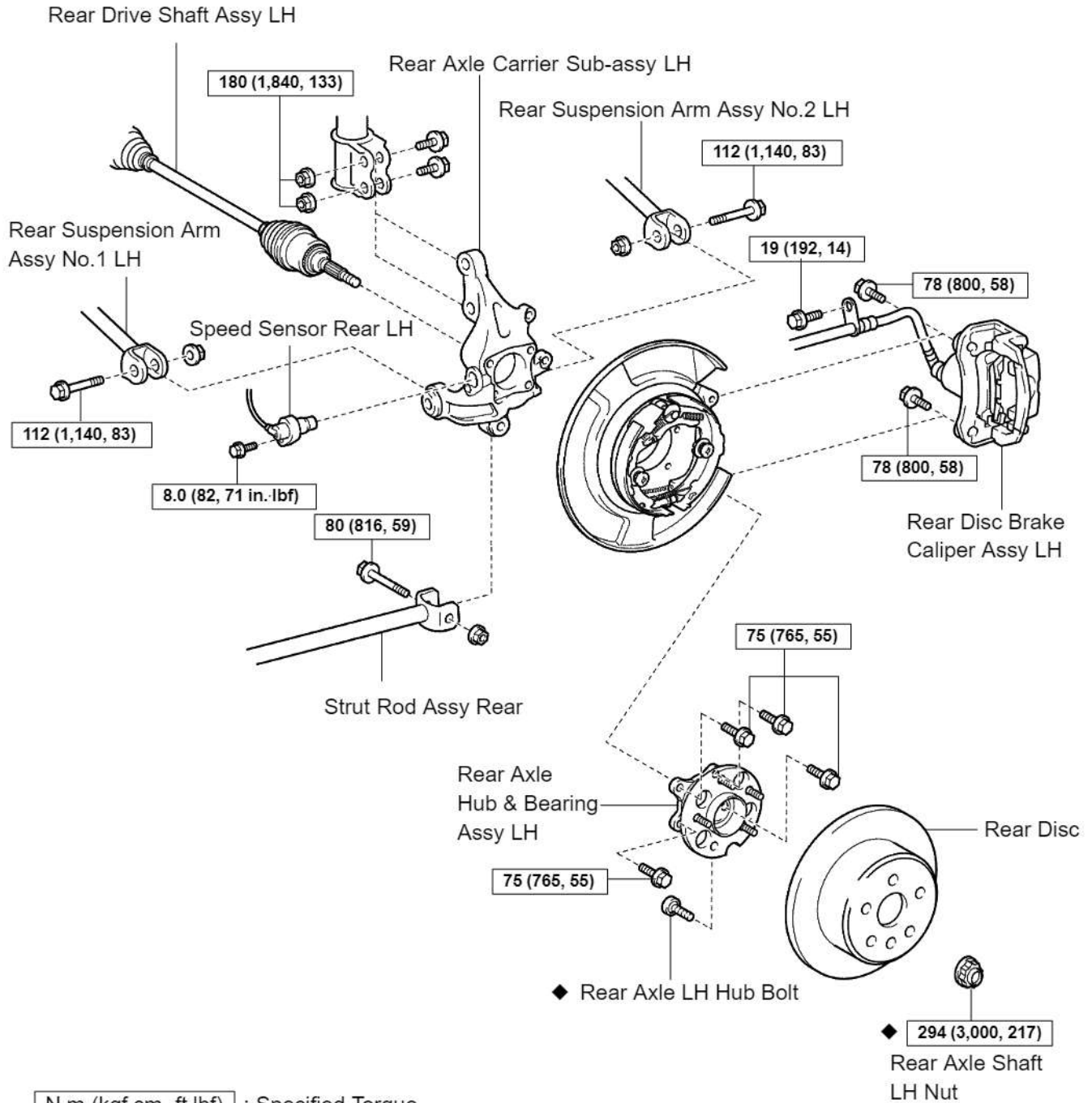


◆ Non-reusable part

P N·m (kgf·cm, ft·lbf) : Specified torque

G25994

4WD:



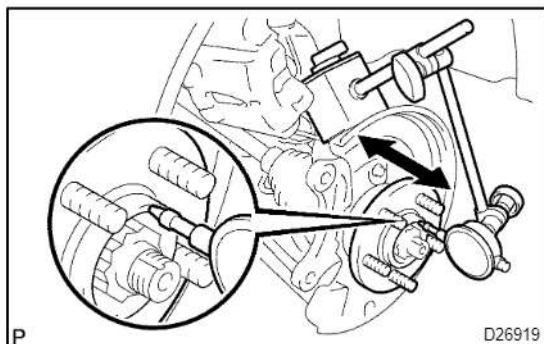
N·m (kgf·cm, ft·lbf) : Specified Torque

◆ Non-reusable parts

P

F45252

ON-VEHICLE INSPECTION



1. INSPECT FRONT AXLE HUB BEARING LOOSENESS

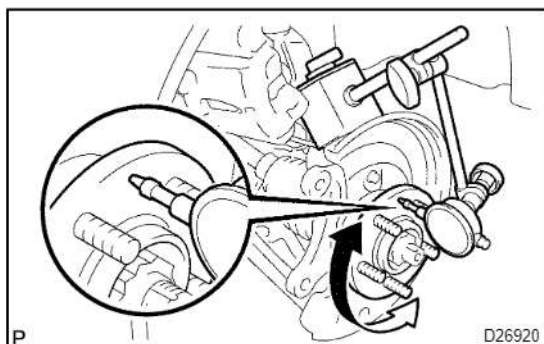
- (a) Using a dial indicator, check for looseness near the center of the axle hub.

Maximum: 0 mm (0 in.)

If looseness exceeds the maximum, replace the bearing.

NOTICE:

Ensure that the dial indicator is set at right angles to the measurement surface.



2. INSPECT FRONT AXLE HUB BEARING RUNOUT

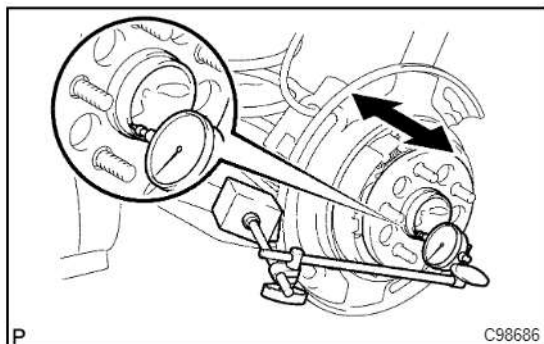
- (a) Using a dial indicator, check for runout in the surface of the axle hub outside the hub bolt.

Maximum: 0.05 mm (0.0020 in.)

If runout exceeds the maximum, replace the axle hub.

NOTICE:

Ensure that the dial indicator is set at right angles to the measurement surface.



3. INSPECT REAR AXLE HUB BEARING LOOSENESS

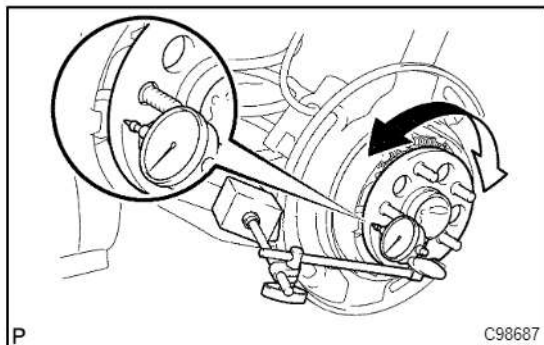
- (a) Using a dial indicator, check for looseness near the center of the axle hub.

Maximum: 0 mm (0 in.)

If looseness exceeds the maximum, replace the axle hub assy.

NOTICE:

Ensure that the dial indicator is set at right angles to the measurement surface.



4. INSPECT REAR AXLE HUB BEARING RUNOUT

- (a) Using a dial indicator, check for runout in the surface of the axle hub outside the hub bolt.

Maximum: 0.08 mm (0.0031 in.)

If runout exceeds the maximum, replace the axle hub assy.

NOTICE:

Ensure that the dial indicator is set at right angles to the measurement surface.

DRIVE SHAFT, PROPELLER SHAFT, AXLE

300K2-04

PRECAUTION

1. NOTICE OF REMOVING AND INSTALLING FRONT DRIVE SHAFT ASSY RH

- (a) When removing and installing the front drive shaft assy RH in a 4WD vehicle, be sure to first drain all the transaxle oil and transfer oil. If removal and installation is carried out without draining these oils, the transfer oil will flow into the transaxle side. Extensive cleaning will be required if the two oils mix.

PROBLEM SYMPTOMS TABLE

Use the table below to help determine the cause of the problem. The causes of problem are listed in order of probability in the "Suspected Area" column. Check each part in order. If necessary, replace these parts.

Symptom	Suspected Area	See page
Wander	6. Wheel alignment (Front)	26-7
	7. Wheel alignment (Rear)	27-5
	8. Steering linkage (Loosen or worn)	-
	9. Hub bearing (Worn)	30-3
	10. Stabilizer bar (Front [2WD])	26-22
	11. Stabilizer bar (Front [4WD])	26-25
	12. Stabilizer bar (Rear [2WD])	27-27
	13. Stabilizer bar (Rear [4WD])	27-29
Front wheel shimmy	1. Wheel balance	28-1
	2. Shock absorber (Front)	26-12
	3. Shock absorber (Rear)	27-7
	4. Ball joint (Worn)	26-20
	5. Hub bearing (Worn)	30-3
Noise (Front drive shaft)	1. Inboard or outboard joint (Worn) (2WD) 2. Inboard or outboard joint (Worn) (4WD)	30-21 30-21
Noise (Rear drive shaft)	1. Inboard or outboard joint (Worn)	30-45
Noise (Propeller shaft)	1. Sleeve yoke spline (Worn)	30-12
	2. Center support bearing (Worn)	30-12
	3. Spider bearing (Worn or stuck)	30-12
Vibration (Propeller shaft)	1. Propeller and intermediate shafts (Runout)	30-12
	2. Propeller shafts (Imbalance)	30-12
	3. Front flange (Runout)	30-12
	4. Rear flange (Runout)	30-12
	5. Universal joint (Stuck or damaged)	30-12
	6. Sleeve yoke spline (Stuck)	30-12

REAR DRIVE SHAFT (4WD)

OVERHAUL

HINT:

COMPONENTS: SEE PAGE 30-4

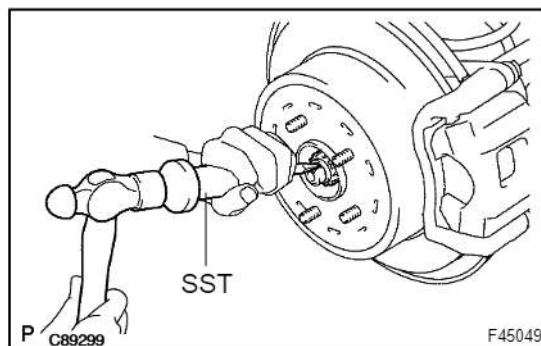
Overhaul the RH side using the same procedures as for the LH side.

1. **REMOVE REAR WHEEL**
2. **SEPARATE SPEED SENSOR REAR LH**

(a) Remove the bolt and the speed sensor from the axle carrier.

NOTICE:

- Be careful not to damage the speed sensor.
- Prevent foreign matter from adhering to the speed sensor.



3. **REMOVE REAR AXLE SHAFT LH NUT**

(a) Using SST and a hammer, unstick the staked part of the axle shaft LH nut.

SST 09930-00010

NOTICE:

Loosen the staked part of the nut completely, otherwise the screw of the drive shaft may be damaged.

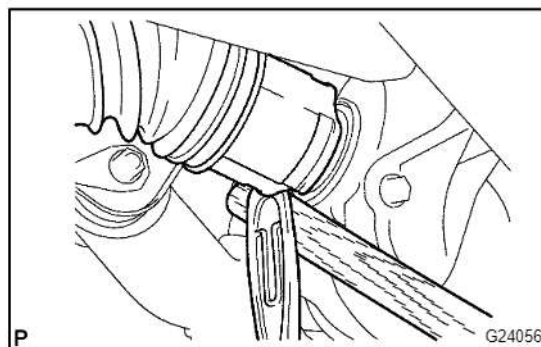
(b) While applying the brakes, remove the lock axle shaft LH nut.

4. **SEPARATE REAR SUSPENSION ARM ASSY NO.1 LH (SEE PAGE 30-60)**
5. **SEPARATE STRUT ROD ASSY REAR (SEE PAGE 30-60)**
6. **SEPARATE REAR SUSPENSION ARM ASSY NO.2 LH (SEE PAGE 30-60)**
7. **SEPARATE REAR AXLE CARRIER SUB-ASSY LH**

(a) Push the rear axle carrier sub-assy LH toward the outside of the vehicle, using a plastic hammer, separate the rear drive shaft assy LH from the rear axle carrier sub-assy LH.

NOTICE:

- Be careful not to damage the joint boot and speed sensor rotor.
- Do not push out the rear axle carrier sub-assy LH excessively.



8. **REMOVE REAR DRIVE SHAFT ASSY LH**

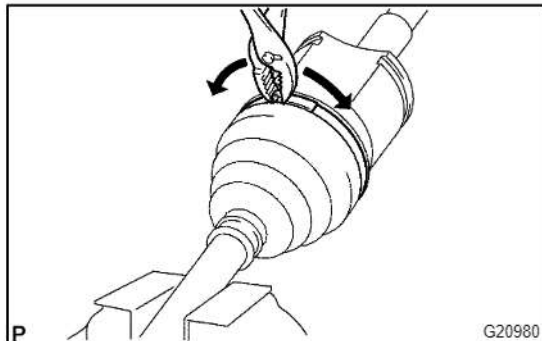
(a) Remove the rear drive shaft, as shown in the illustration.

NOTICE:

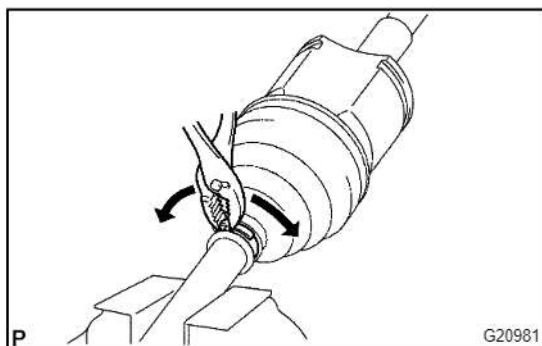
Move the drive shaft assy while keeping it level.

9. INSPECT REAR DRIVE SHAFT ASSY LH

- (a) Check that there is no remarkable play in the radial direction of the outboard joint.
- (b) Check that the inboard joint slides smoothly in the thrust direction.
- (c) Check that there is no remarkable play in the radial direction of the inboard joint.
- (d) Check the boots for damage.

**10. REMOVE REAR DRIVE SHAFT INBOARD JOINT BOOT LH CLAMP**

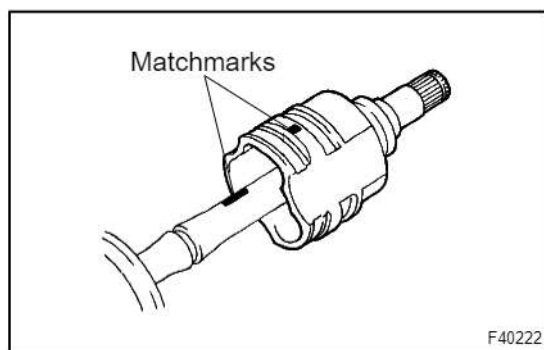
- (a) Using pliers, remove the inboard joint boot LH clamp, as shown in the illustration.

**11. REMOVE REAR DRIVE SHAFT INBOARD JOINT BOOT RH NO.2 CLAMP**

- (a) Using pliers, remove the inboard joint boot LH No.2 clamp, as shown in the illustration.

12. SEPARATE INBOARD JOINT BOOT

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

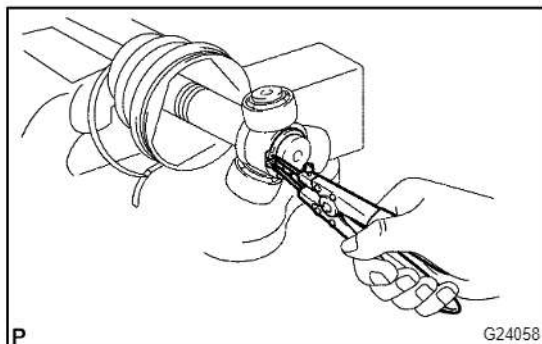
**13. REMOVE REAR DRIVE SHAFT INBOARD JOINT ASSY LH**

- (a) Put matchmarks on the inboard joint assy and outboard joint shaft.

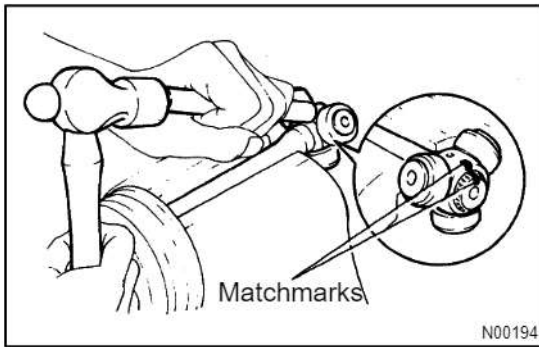
NOTICE:

Do not punch the marks.

- (b) Remove the inboard joint assy from the outboard joint shaft.



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



- (d) Put matchmarks on the outboard joint shaft and tripod joint.

NOTICE:

Do not punch the marks.

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

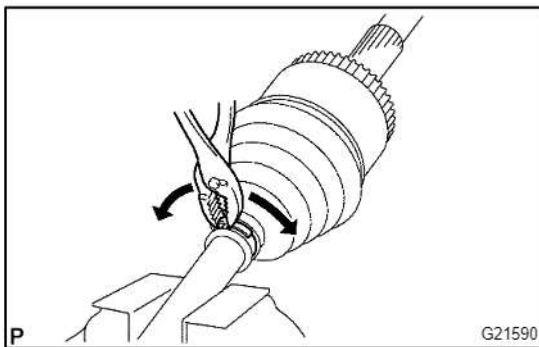
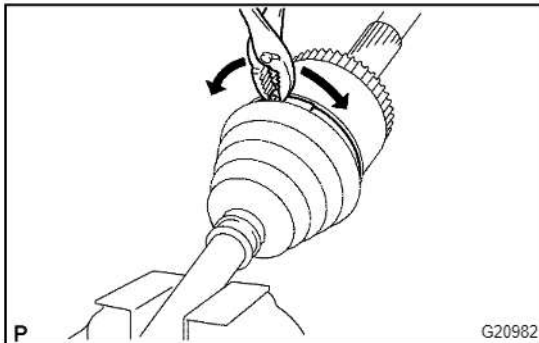
NOTICE:

Do not tap the roller.

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

14. REMOVE REAR DRIVE SHAFT OUTBOARD JOINT BOOT LH CLAMP

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



15. REMOVE REAR DRIVE SHAFT OUTBOARD JOINT BOOT LH NO.2 CLAMP

- (a) Using pliers, remove the outboard joint boot LH No.2 clamp, as shown in the illustration.

16. REMOVE OUTBOARD JOINT BOOT

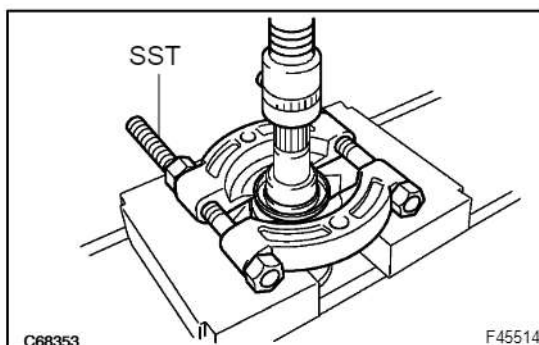
- (a) Remove the outboard joint boot from the outboard joint shaft.
(b) Remove the old grease from the outboard joint.

NOTICE:

Do not disassemble the outboard joint.

17. REMOVE REAR DRIVE SHAFT INBOARD JOINT LH SHAFT SNAP RING

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



18. REMOVE REAR DRIVE SHAFT DUST COVER LH

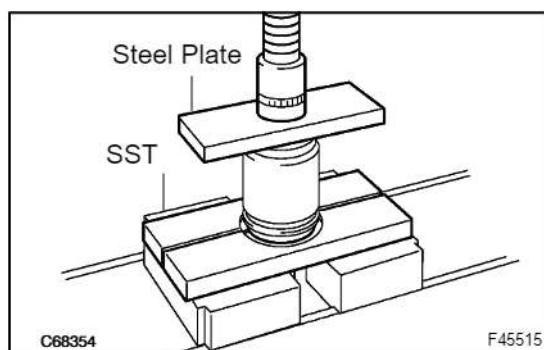
- (a) Using SST and a press, remove the drive shaft dust cover LH.

SST 09950-00020

NOTICE:

Be careful not to drop the inboard joint assy.

Do not overtighten the SST.



19. INSTALL REAR DRIVE SHAFT DUST COVER LH

- (a) Using SST and a steel plate, install a new drive shaft dust cover LH

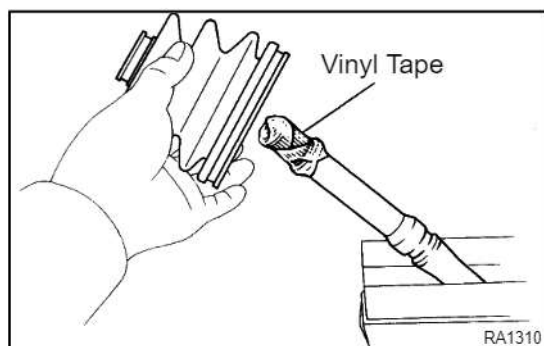
SST 09527-2101 1

NOTICE:

- Dust cover should be completely installed.
- Be careful not to damage the dust cover.

20. INSTALL REAR DRIVE SHAFT INBOARD JOINT LH SHAFT SNAP RING

- (a) Install a new hole snap ring.

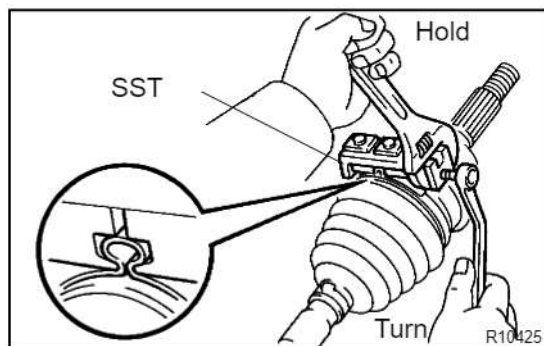


21. INSTALL OUTBOARD JOINT BOOT

HINT:

Before installing the boot, wrap the spline of the outboard joint shaft with vinyl tape to prevent the boot from being damaged.

- (a) Install a new outboard joint boot, 2 outboard joint boot clamps, 2 inboard joint boot clamps and inboard joint boot.
- (b) Make sure that the 2 boots are on the shaft groove.



22. INSTALL REAR DRIVE SHAFT OUTBOARD JOINT BOOT LH CLAMP

- (a) Hold the drive shaft lightly in a soft vise.
- (b) Install the 2 outboard joint boot clamps to the boot.

HINT:

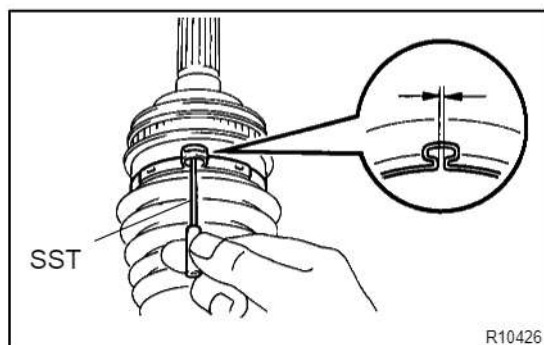
Before installing the clamps, pack the outboard joint and boot with grease in the boot kit.

Grease capacity: 95 to 105 g (3.4 to 3.7 oz.)

- (c) Place SST onto the outboard joint boot LH clamp.
- SST 09521-24010
- (d) Tighten the SST so that the outboard joint boot LH clamp is pinched.

NOTICE:

Do not overtighten the SST.



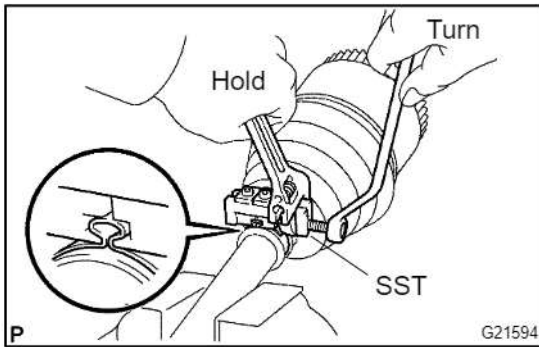
- (e) Using SST, measure the clearance of the outboard joint boot LH clamp.

SST 09240-00020

Clearance: 1.3 mm (0.051 in.) or less

NOTICE:

When the measured value is greater than the specified value, retighten the clamp.

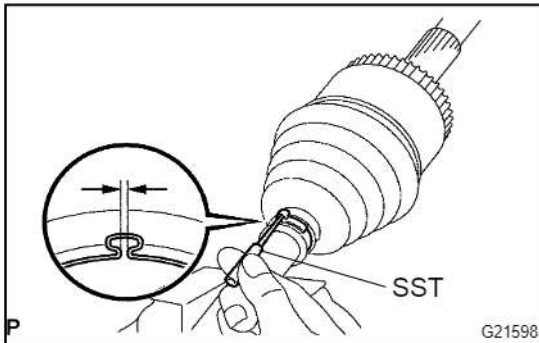


23. INSTALL REAR DRIVE SHAFT OUTBOARD JOINT BOOT LH NO.2 CLAMP

- Place SST onto the outboard joint boot LH No.2 clamp.
SST 09521-24010
- Tighten the SST so that the outboard joint boot LH No.2 clamp is pinched.

NOTICE:

Do not overtighten the SST.



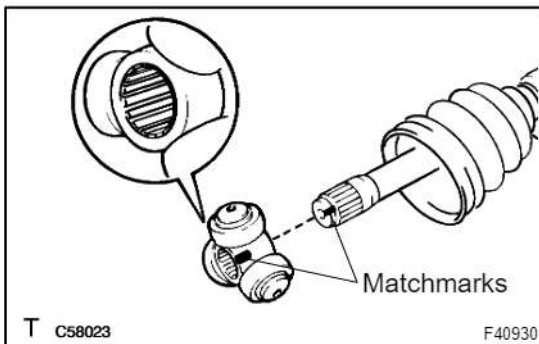
- Using SST, measure the clearance of the outboard joint boot LH No.2 clamp.

SST 09240-00020

Clearance: 1.3 mm (0.051 in.) or less

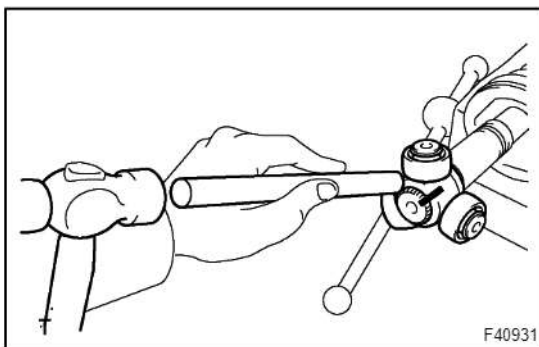
NOTICE:

When the measured value is greater than the specified value, retighten the clamp.



24. INSTALL REAR DRIVE SHAFT INBOARD JOINT ASSY LH

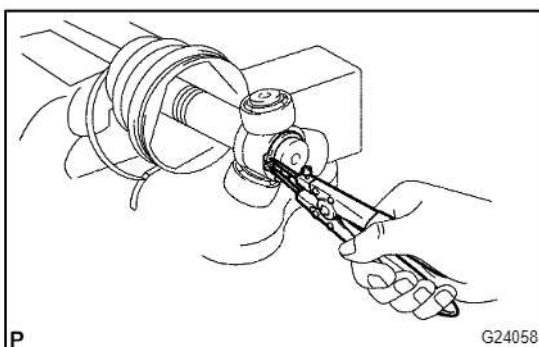
- Place the beveled side of the tripod joint axial spline toward the outboard joint shaft.
- Align the matchmarks.



- Using a brass bar and a hammer, tap in the tripod joint to the outboard joint shaft.

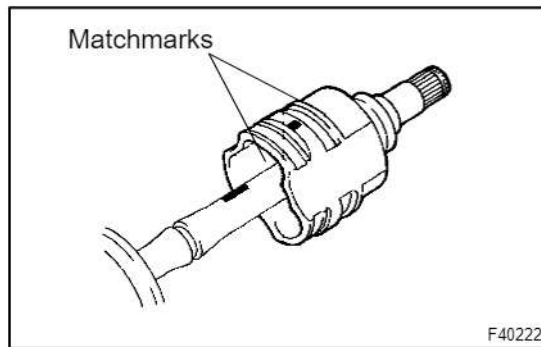
NOTICE:

- Do not tap the roller.**
- Be sure to install the tripod joint assy in the correct direction.**



- Using a snap ring expander, install a new shaft snap ring.
- Pack the outboard joint shaft and boot with grease.

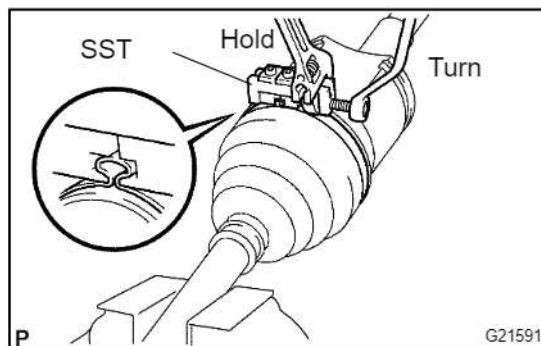
Grease capacity : 125.5 to 135.5 g (4.4 to 4.7 oz.)



- (f) Align the matchmarks, install the inboard joint assy to the outboard joint shaft assy.

25. INSTALL INBOARD JOINT BOOT

- (a) Install the inboard joint boot to the outboard joint shaft.

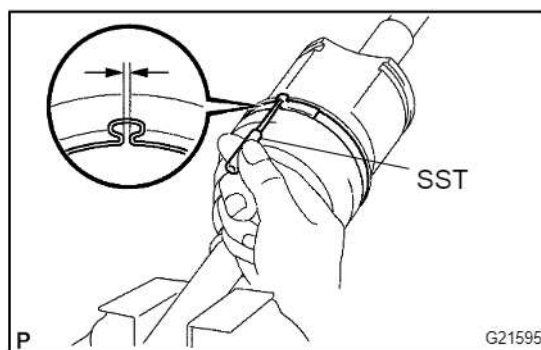


26. INSTALL REAR DRIVE SHAFT INBOARD JOINT BOOT LH CLAMP

- (a) Install the inboard joint boot LH clamp.
- (1) Hold the drive shaft lightly in a soft vise.
 - (2) Install the 2 inboard joint boot clamps to the boot.
 - (3) Place SST onto the inboard joint boot LH clamp.
- SST 09521-24010
- (4) Tighten the SST so that the inboard joint boot LH clamp is pinched.

NOTICE:

Do not overtighten the SST.



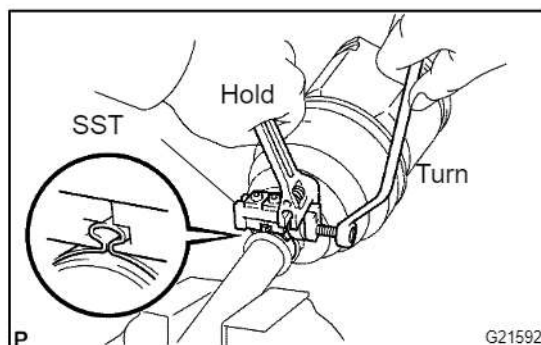
- (5) Using SST, measure the clearance of the inboard joint boot LH clamp.

SST 09240-00020

Clearance: 1.1 mm (0.043 in.) or less

NOTICE:

When the measured value is greater than the specified value, retighten the clamp.

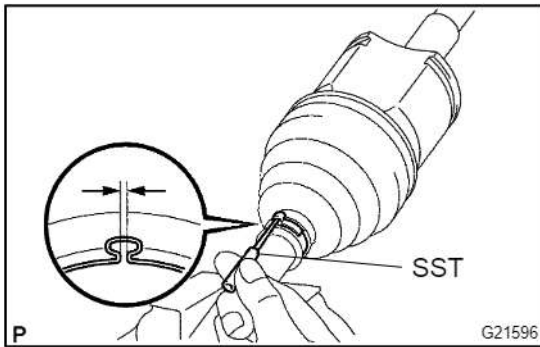


27. INSTALL REAR DRIVE SHAFT INBOARD JOINT BOOT LH NO.2 CLAMP

- (a) Install the inboard joint boot LH No.2 clamp.
 - (b) Place SST onto the inboard joint boot LH No.2 clamp.
- SST 09521-24010
- (c) Tighten the SST so that the inboard joint boot LH No.2 clamp is pinched.

NOTICE:

Do not overtighten the SST.



- (1) Using SST, measure the clearance of the inboard joint boot LH No.2 clamp.

SST 09240-00020

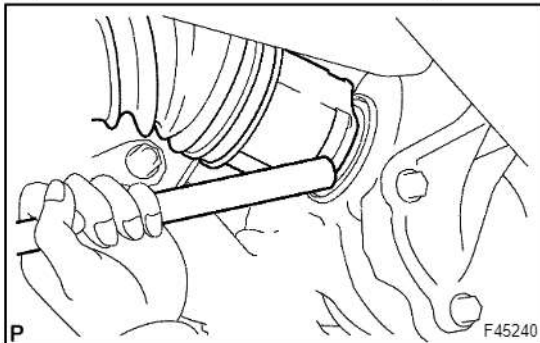
Clearance: 1.1 mm (0.043 in.) or less

NOTICE:

When the measured value is greater than the specified value, retighten the clamp.

28. INSPECT REAR DRIVE SHAFT ASSY LH

- Check that there is no remarkable play in the radial direction of 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.



29. INSTALL REAR DRIVE SHAFT ASSY LH

- Align the shaft splines and install the drive shaft assy with a brass bar and a hammer.

NOTICE:

- Set the snap ring with the opening side facing downward.
- Be careful not to damage the oil seal boot and dust cover.
- Move the drive shaft assy while keeping it level.

30. INSTALL REAR AXLE CARRIER SUB-ASSY LH

- Push the rear axle carrier sub-assy LH toward the inside of the vehicle fitting it to the splined part of the rear drive shaft assy LH and insert.

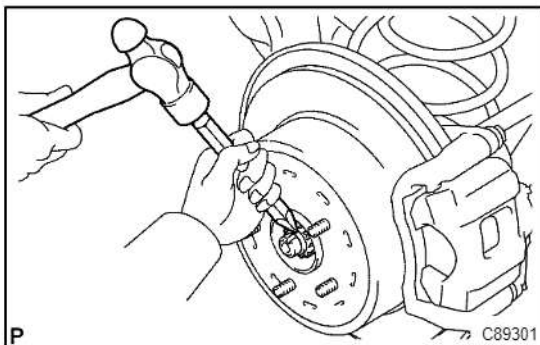
NOTICE:

- Be careful not to damage the joint boot and speed sensor rotor.

31. TEMPORARILY TIGHTEN REAR SUSPENSION ARM ASSY NO.2 LH (SEE PAGE 30-60)

32. TEMPORARILY TIGHTEN STRUT ROD ASSY REAR (SEE PAGE 30-60)

33. TEMPORARILY TIGHTEN REAR SUSPENSION ARM ASSY NO.1 LH (SEE PAGE 30-60)



34. INSTALL REAR AXLE SHAFT LH NUT

- Install a new axle shaft LH nut.
Torque: 294 N·m, (3,000 kgf·cm, 217 ft·lbf)
- Using a chisel and a hammer, stake the axle shaft LH nut.

35. INSTALL SPEED SENSOR REAR LH

- (a) Install the speed sensor with the bolt.

Torque: 8.0 N·m (82 kgf·cm, 71 in·lbf)

NOTICE:

- Be careful not to damage the speed sensor.
- Prevent foreign matter from adhering to the speed sensor.
- Do not twist the sensor wire when installing the sensor.

36. INSTALL REAR WHEEL

Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)

37. STABILIZE SUSPENSION (SEE PAGE 27-29)**38. FULLY TIGHTEN REAR SUSPENSION ARM ASSY NO.2 LH (SEE PAGE 27-25)****39. FULLY TIGHTEN STRUT ROD ASSY REAR (SEE PAGE 27-13)****40. FULLY TIGHTEN REAR SUSPENSION ARM ASSY NO.1 LH (SEE PAGE 27-18)****41. INSPECT AND ADJUST REAR WHEEL ALIGNMENT (SEE PAGE 27-5)****42. CHECK ABS SPEED SENSOR SIGNAL (SEE PAGE 05-765)**

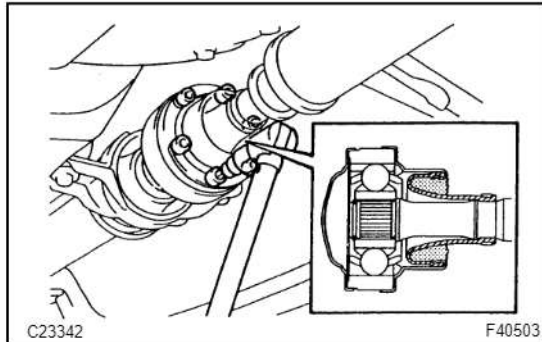
PROPELLER W/CENTER BEARING SHAFT ASSY (4WD) OVERHAUL

3000G-01

HINT:

COMPONENTS:SEE PAGE 30-4

1. REMOVE EXHAUST PIPE ASSY

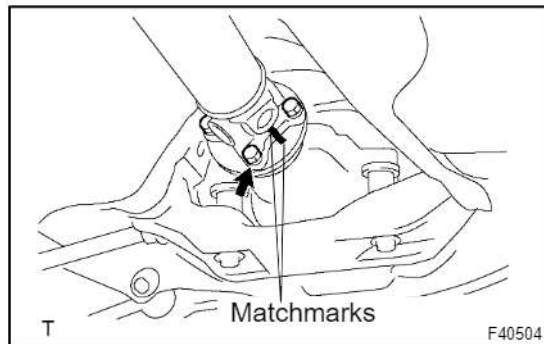


2. REMOVE PROPELLER W/CENTER BEARING SHAFT ASSY

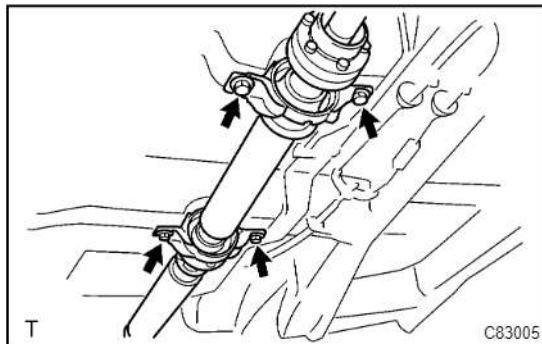
- Depress the brake pedal and hold it.
- Using a hexagon wrench (6 mm), loosen the cross groove joint set bolts 1/2 turn.

HINT:

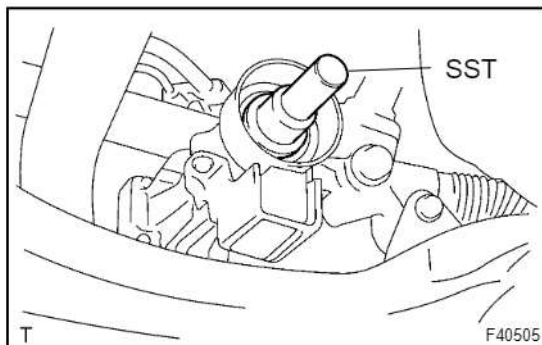
Put a piece of shop rag or equivalent into the inside of the universal joint cover so that the boot does not touch the inside of the universal joint cover.



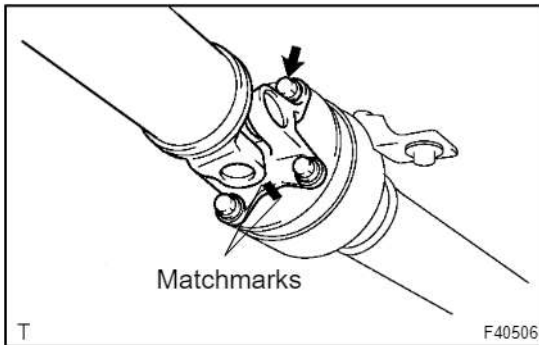
- Place matchmarks on both the flanges.
- Remove the 4 nuts, bolts and washers.



- Remove the 4 bolts, 2 adjusting shims and propeller shaft w/ center bearing shaft assy.

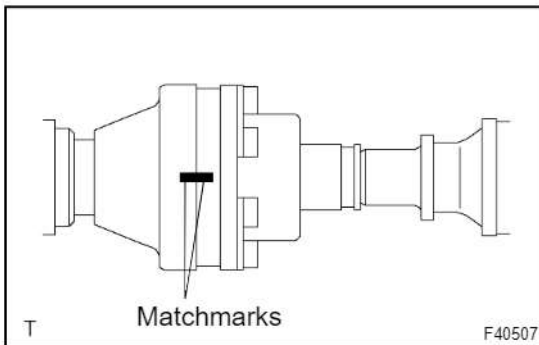


- Insert SST in the transfer to prevent oil leakage.
SST 09325-20010



3. REMOVE PROPELLER SHAFT ASSY

- Place matchmarks on both the flanges.
- Remove the 4 nuts, bolts and washers.



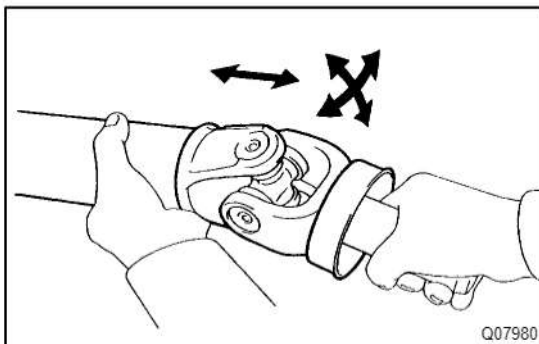
4. REMOVE INTERMEDIATE SHAFT

- Place matchmarks on the joint and flange.

NOTICE:

Do not make matchmarks with a punch.

- Using a hexagon wrench (6 mm), remove the 6 bolts and 2 washers and separate the intermediate shaft from the rear propeller shaft.

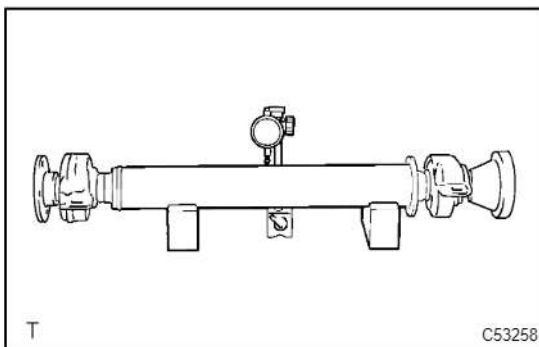


5. INSPECT SPIDER BEARING

- Check the spider bearing axial play by turning the flange while holding the shaft tightly.

HINT:

If necessary, replace the shaft.

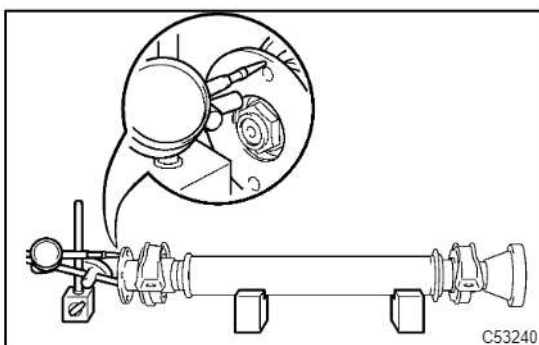


6. INSPECT INTERMEDIATE SHAFT

- Using a dial indicator, inspect the runout of the shaft.
Maximum runout: 0.8 mm (0.031 in.)

HINT:

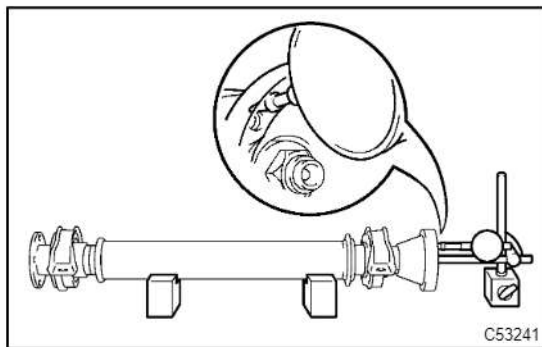
If the shaft runout exceeds the maximum, replace the shaft.



- Using a dial indicator, inspect the front side of the intermediate shaft flange runout.
Maximum runout: 0.1 mm (0.004 in.)

HINT:

If the shaft runout exceeds the maximum, replace the shaft.

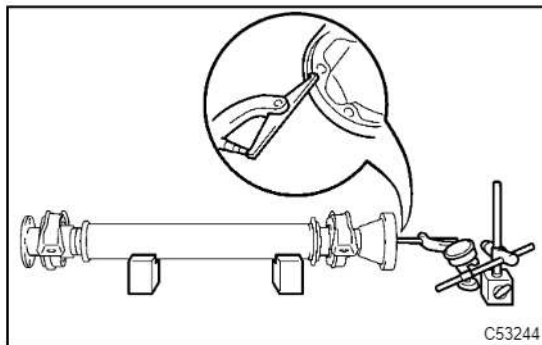


- (c) Using a dial indicator, inspect the rear side of the intermediate shaft flange runout in the horizontal direction.

Maximum runout: 0.1 mm (0.004 in.)

HINT:

If the intermediate shaft flange runout exceeds the maximum, replace the intermediate shaft.

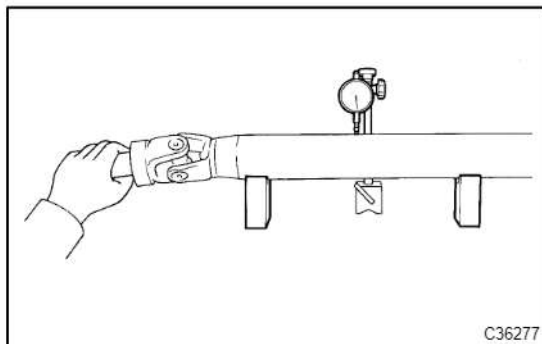


- (d) Using a dial indicator, inspect the rear side of the intermediate shaft flange runout in the vertical direction.

Maximum runout: 0.1 mm (0.004 in.)

HINT:

If the intermediate shaft flange runout exceeds the maximum, replace the intermediate shaft.



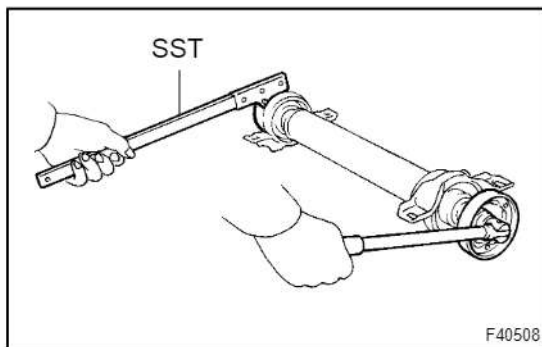
7. INSPECT PROPELLER SHAFT ASSY

- (a) Using a dial indicator, inspect the runout of the propeller shaft.

Maximum runout: 0.8 mm (0.031 in.)

HINT:

If the shaft runout exceeds the maximum, replace the propeller shaft.

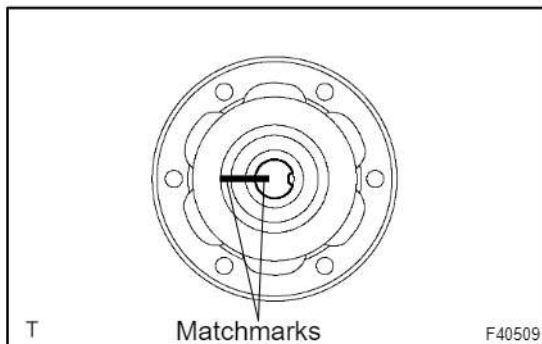


8. REMOVE CENTER SUPPORT BEARING ASSY NO.2

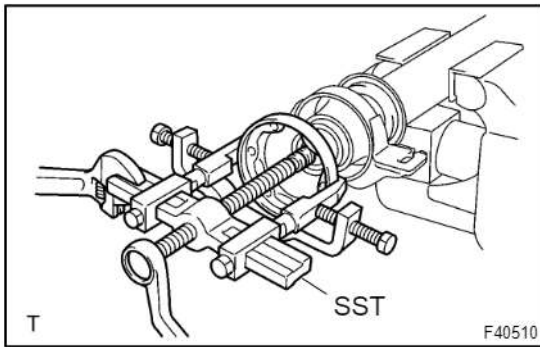
- (a) Using a chisel and a hammer, loosen the staked part of the nut.

- (b) Using SST to hold the front flange, remove the nut and plate washer.

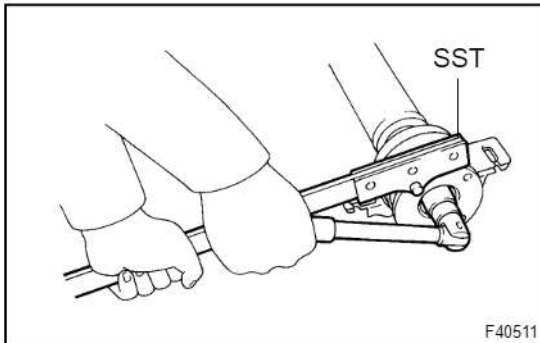
SST 09330-00021



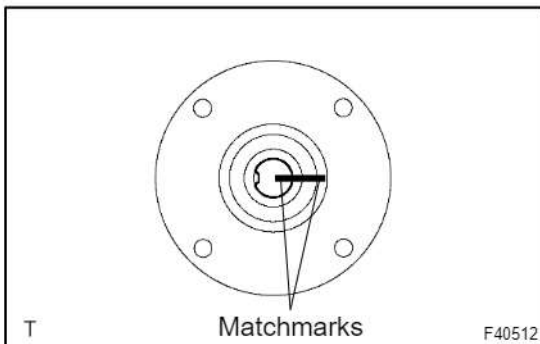
- (c) Place matchmarks on the rear flange and shaft.



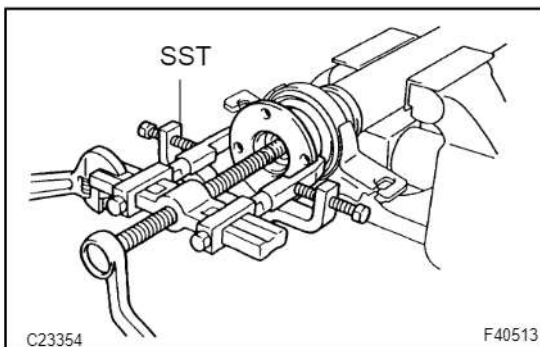
- (d) Using SST, remove the rear flange.
SST 09950-40011 (09951-04020, 09952-04010, 09953-04030, 09954-04010, 09955-04061, 09957-04010, 09958-04011)
- (e) Remove the center support bearing assy No.2 and plate washer.



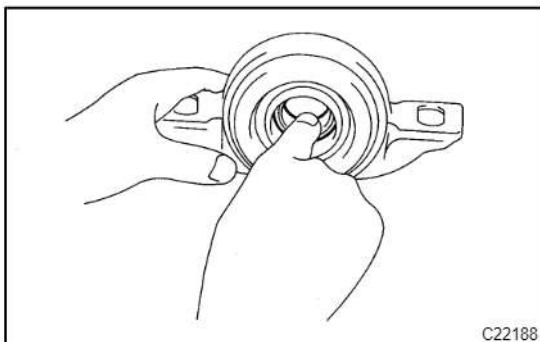
- 9. REMOVE CENTER SUPPORT BEARING ASSY NO.1**
- (a) Using a chisel and a hammer, loosen the staked part of the nut.
- (b) Using SST to hold the front flange, remove the nut and plate washer.
SST 09330-00021



- (c) Place matchmarks on the front flange and shaft.



- (d) Using SST, remove the front flange.
SST 09950-40011 (09951-04020, 09952-04010, 09953-04030, 09954-04010, 09955-04061, 09957-04010, 09958-04011)
- (e) Remove the center support bearing assy No.1 and plate washer.

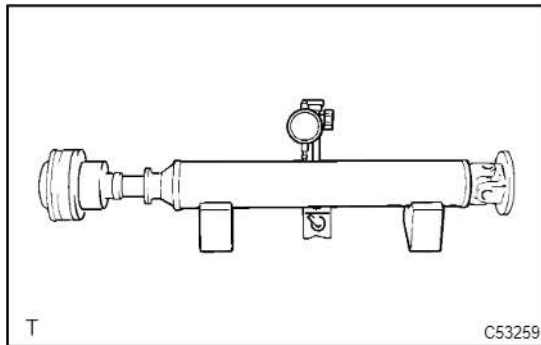


- 10. INSPECT CENTER SUPPORT BEARING ASSY NO.2**
- (a) Turn the bearing by hand with applying force in the rotation direction. Check the bearing turns smoothly.
- (b) Check that the seals are not cracked or damaged.

HINT:

If the bearing is damaged, worn, or does not turn freely, replace it.

- 11. INSPECT CENTER SUPPORT BEARING ASSY NO.1**
- (a) Inspect the center support bearing assy No.1 by the same procedures with center support bearing assy No.2.

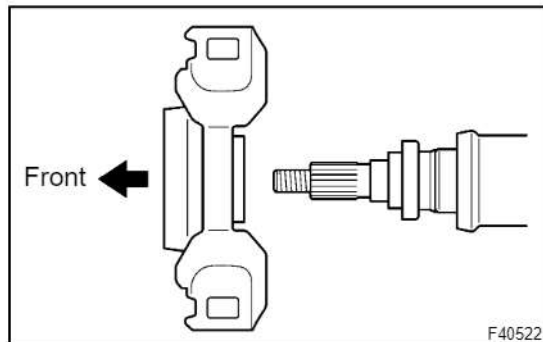
**12. INSPECT PROPELLER SHAFT**

- (a) Using a dial indicator, inspect the runout of the rear propeller shaft.

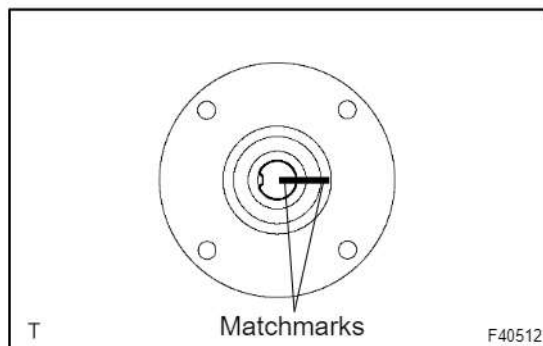
Maximum runout: 0.8 mm (0.031 in.)

HINT:

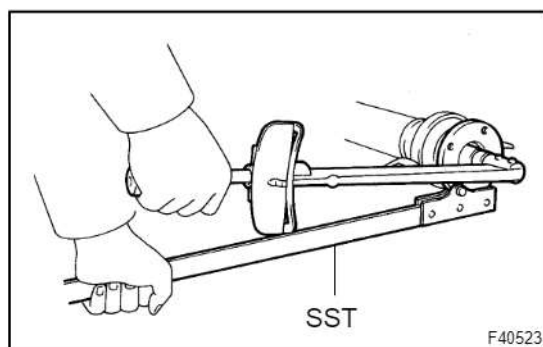
If the shaft runout exceeds the maximum, replace the rear propeller shaft.

**13. INSTALL CENTER SUPPORT BEARING ASSY NO.1**

- (a) Set the center support bearing assy No.1 on the intermediate shaft, as shown in the illustration.
(b) Install the plate washer to the intermediate shaft.



- (c) Align the matchmarks on the front flange and shaft and place the flange on the shaft.

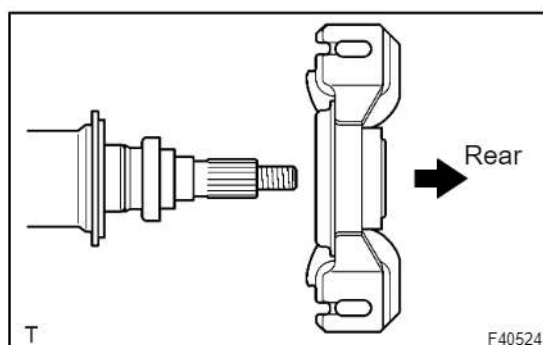


- (d) Using SST to hold the front flange, press the center support bearing assy No.1 into position by tightening down a new nut and plate washer.

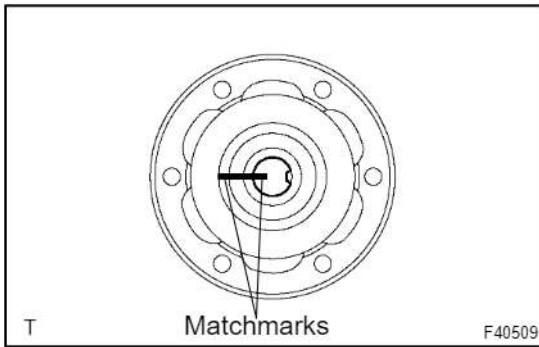
SST 09330-00021

Torque: 182 N·m (1,850 kgf·cm, 134 ft·lbf)

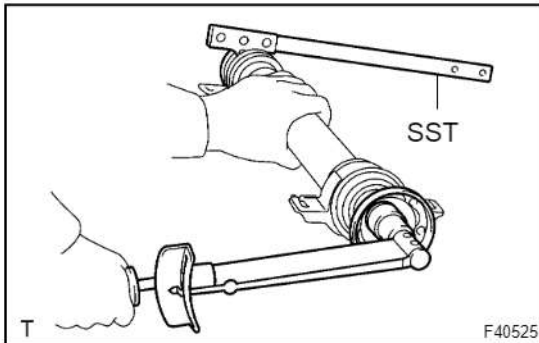
- (e) Loosen the nut.
(f) Torque the nut again.
Torque: 69 N·m (700 kgf·cm, 51 ft·lbf)
(g) Using a chisel and a hammer, stake the nut.

**14. INSTALL CENTER SUPPORT BEARING ASSY NO.2**

- (a) Set the center support bearing assy No.2 on the shaft as shown in the illustration.
(b) Install the plate washer to the shaft.



- (c) Align the matchmarks on the rear flange and shaft and place the flange on the shaft.

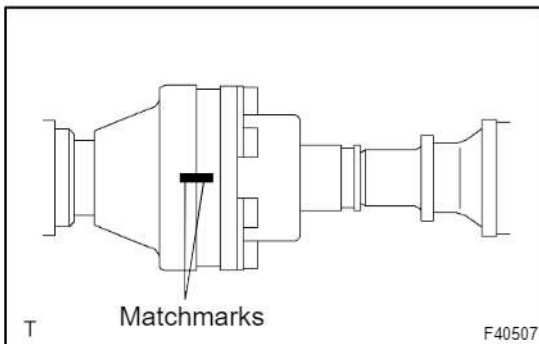


- (d) Using SST to hold the front flange, press the center support bearing assy No.2 into position by tightening down a new nut and plate washer.

SST 09330-00021

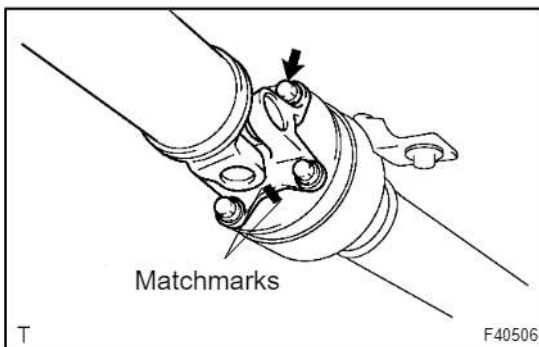
Torque: 182 N·m (1,850 kgf·cm, 134 ft·lbf)

- (e) Loosen the nut.
(f) Torque the nut again.
Torque: 69 N·m (700 kgf·cm, 51 ft·lbf)
(g) Using a chisel and a hammer, stake the nut.



15. INSTALL INTERMEDIATE SHAFT

- (a) Align the matchmarks on the intermediate shaft and rear propeller shaft, then install the 2 washers and 6 bolts.
(b) Using a hexagon wrench (6 mm), tighten the 6 bolts temporarily.

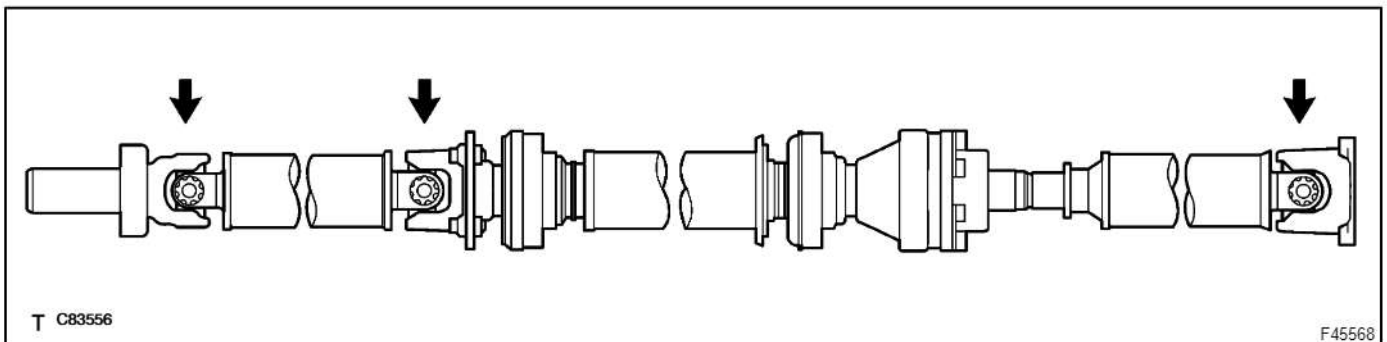


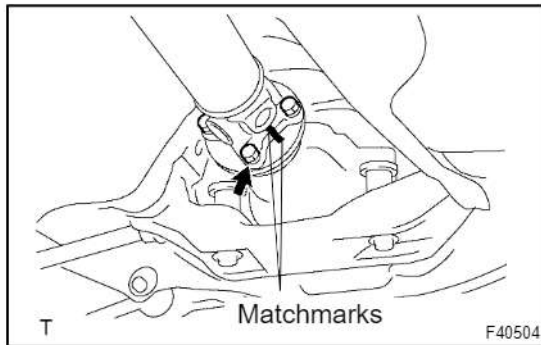
16. INSTALL PROPELLER SHAFT ASSY

- (a) Align the matchmarks on the propeller shaft flange and differential companion flange, and connect the shaft with the 4 bolts, washers and nuts.

Torque: 74 N·m (750 kgf·cm, 54 ft·lbf)

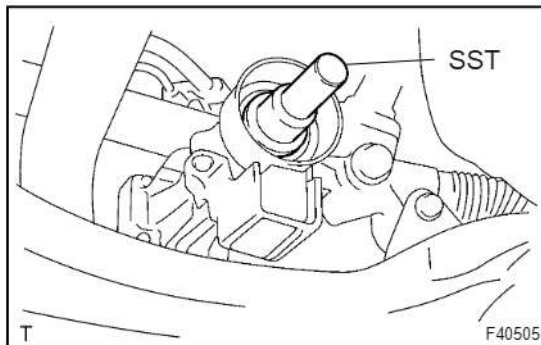
- (b) Check that the each joint of the propeller shaft is facing to the direction, as shown in the illustration.



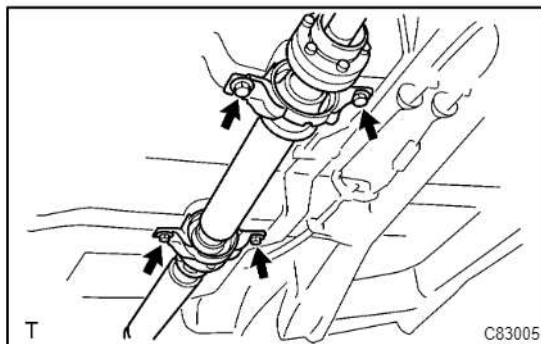


17. INSTALL PROPELLER W/CENTER BEARING SHAFT ASSY

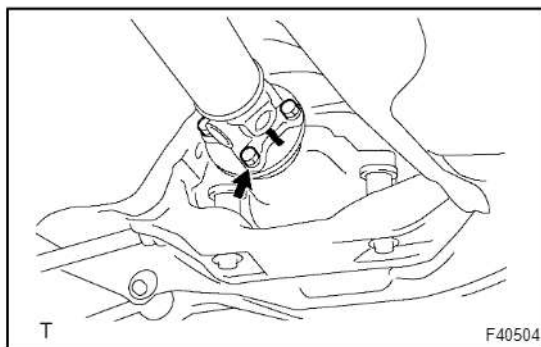
- (a) Align the matchmarks on the propeller shaft flange and differential companion flange, and connect the shaft with the 4 bolts, washers and nuts.



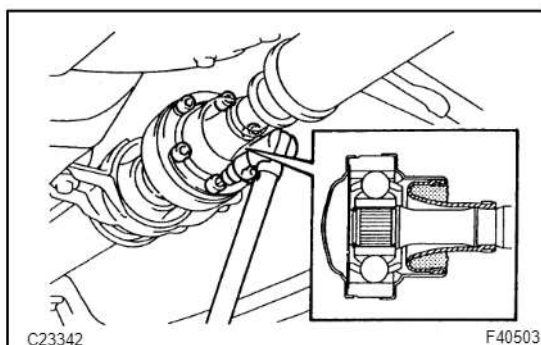
- (b) Remove SST from the transaxle.
(c) Insert the yoke into the transaxle.



- (d) Install the 2 adjusting shims and propeller shaft w/ center bearing, and temporarily tighten the 4 bolts.

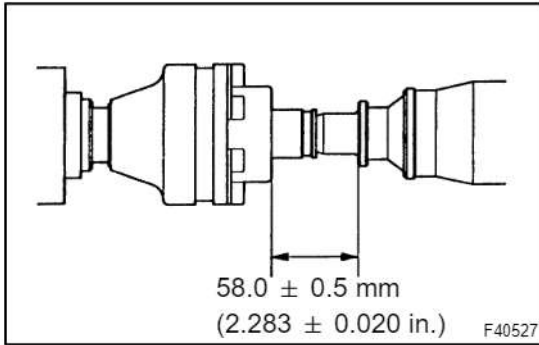


- (e) Tighten the 4 nuts.
Torque: 74 N·m (750 kgf·cm, 54 ft·lbf)

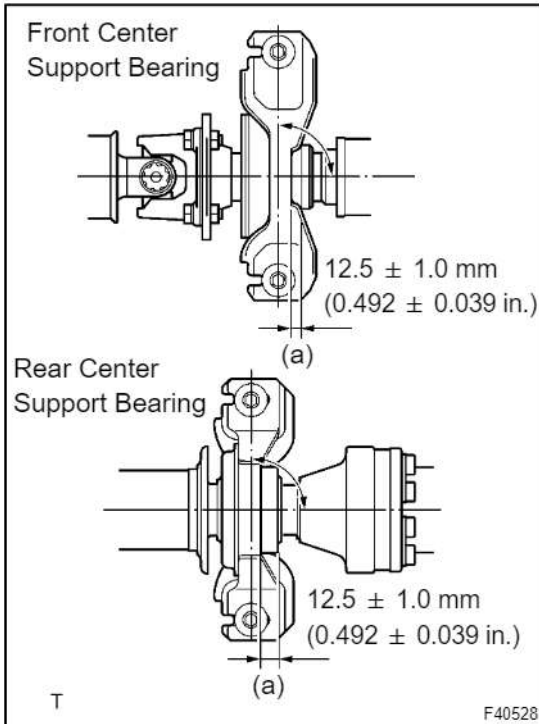


18. FULLY TIGHTEN PROPELLER W/CENTER BEARING SHAFT ASSY

- (a) Remove the shop rag to the joint.
(b) Using a hexagon wrench (6 mm), tighten the 6 bolts.
Torque: 29 N·m (296 kgf·cm, 21 ft·lbf)



- (c) With the vehicle unloaded, adjust the dimension between the rear side of the cover and shaft, as shown in the illustration.



- (d) Under the same condition as (a), adjust the front and rear dimensions between edge surface of the center support bearing and the edge surface of the cushion to 12.5 ± 1.0 mm (0.492 ± 0.039 in.) respectively as shown, then torque the bolts.

Torque: 37 N·m (375 kgf·cm, 27 ft·lbf)

- (e) Check that the center line of the bracket is at the right angle in the shaft axial direction.

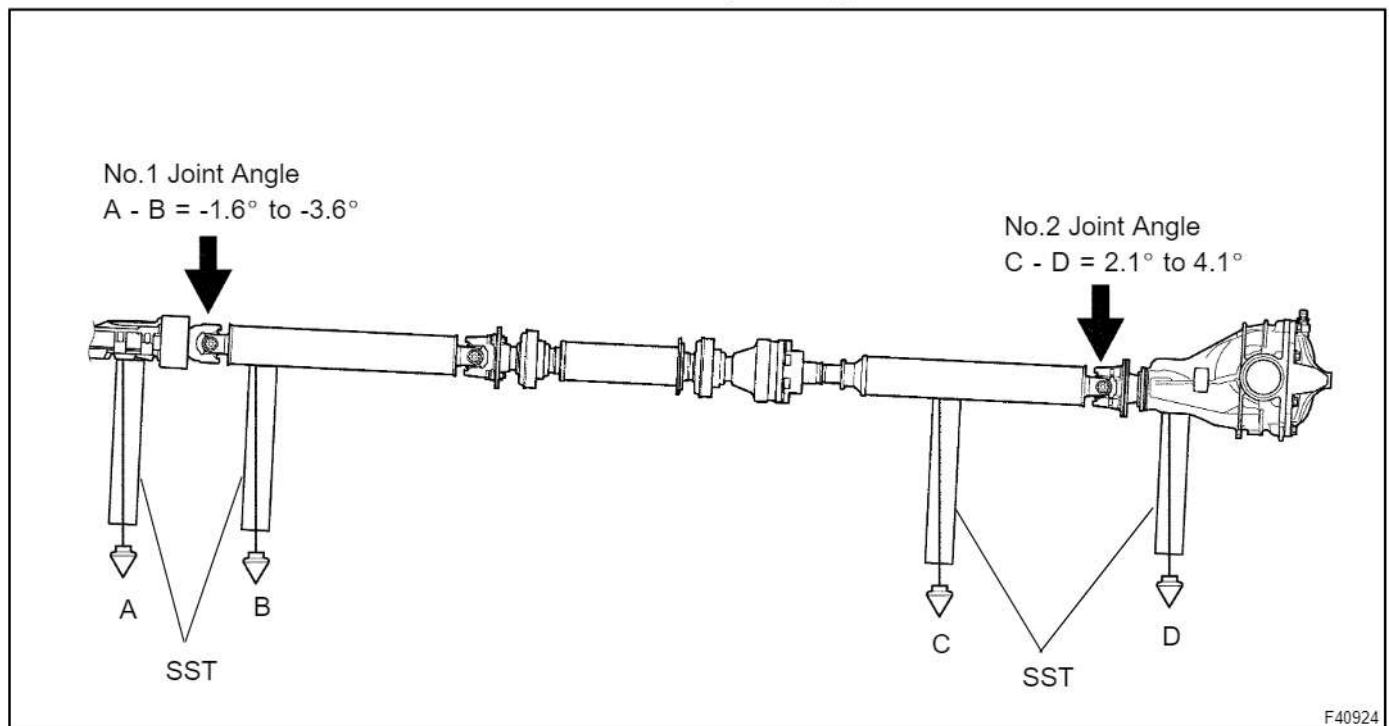
- (f) If any vibration or noise occurs, perform joint angle check as follows and replace the adjusting shim with proper one.
- (1) Turn the propeller shaft several times by hand to stabilize the center support bearings.
 - (2) Using a jack, raise and lower the differential to stabilize the differential mounting cushion.
 - (3) Remove the transfer dynamic damper.
 - (4) Using SST, measure the installation angle of the transfer (A) and front propeller shaft (B).

SST 09370-50010

No.1 joint angle: $A - B = -1.6^{\circ}$ to -3.6°

- (5) Using SST, measure the installation angle of the rear propeller shaft (C) and rear differential (D).

SST 09370-50010

No.2 joint angle: $C - D = 2.1^{\circ}$ to 4.1° **HINT:**

If the measured angle is not within the specification, adjust it with the center support bearing adjusting shim.

Center support bearing adjusting shim thickness:

Thickness mm (in.)	Thickness mm (in.)
3.2 (0.126)	11.0 (0.433)
4.5 (0.177)	13.5 (0.531)
6.5 (0.256)	15.5 (0.610)
9.0 (0.354)	17.5 (0.689)

- (g) Install the transfer dynamic damper.
Torque: 26 N·m (260 kgf·cm, 19 ft·lbf)
19. **INSTALL EXHAUST PIPE ASSY**
 20. **CHECK FOR EXHAUST GAS LEAKS**
 21. **INSPECT AND ADJUST TRANSFER OIL**

FRONT DRIVE SHAFT OVERHAUL

3000H-02

HINT:

COMPONENTS: SEE PAGE 30-4

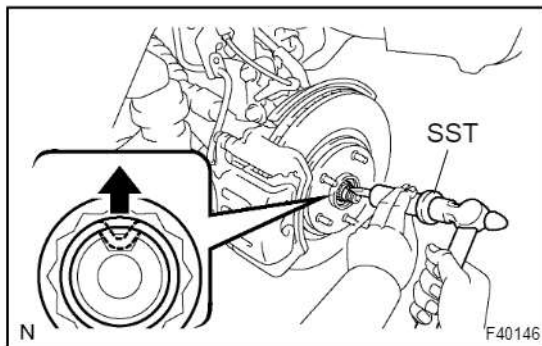
Overhaul the RH side following the same procedures as for the LH side.

1. **DRAIN AUTOMATIC TRANSAXLE FLUID (SEE PAGE 40-2)**
2. **DRAIN TRANSFER OIL (4WD DRIVE TYPE) (SEE PAGE 31-9)**

HINT:

Perform the procedure only when removing the RH side.

3. **REMOVE FRONT WHEEL**



4. REMOVE FRONT AXLE HUB LH NUT

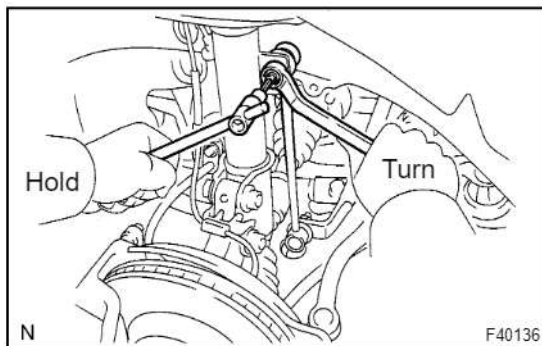
- (a) Using SST and a hammer, unstack the staked part of the axle hub LH nut.

SST 09930-00010

NOTICE:

Loosen the staked part of the nut completely, otherwise the screw of the drive shaft may be damaged.

- (b) While applying the brakes, remove the lock axle hub LH nut.

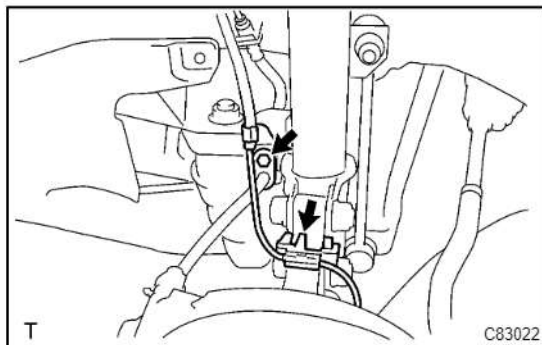


5. SEPARATE FRONT STABILIZER LINK ASSY LH

- (a) Remove the nut, and separate the stabilizer link assy LH.

HINT:

If the ball joint turns together with the nut, use a hexagon wrench (6 mm) to hold the stud.

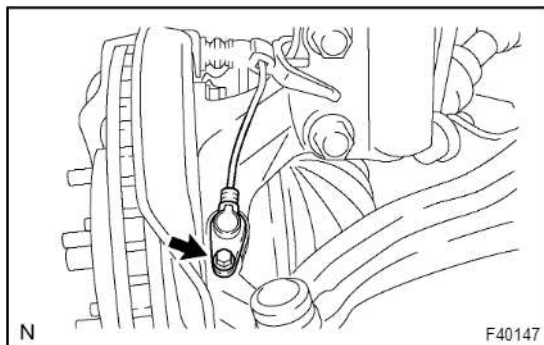


6. SEPARATE SPEED SENSOR FRONT LH

- (a) Remove the bolt and clip, and separate the sensor wire and hose from the shock absorber.

NOTICE:

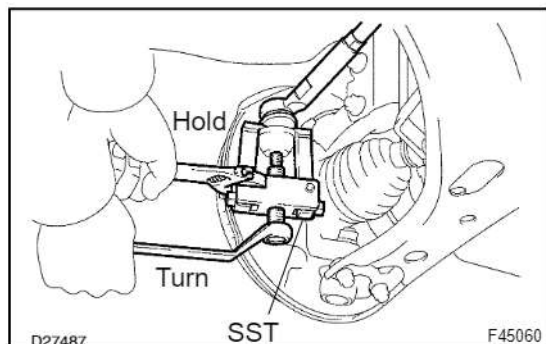
Be careful not to damage the speed sensor.



- (b) Remove the bolt, and separate the speed sensor front LH from the steering knuckle.

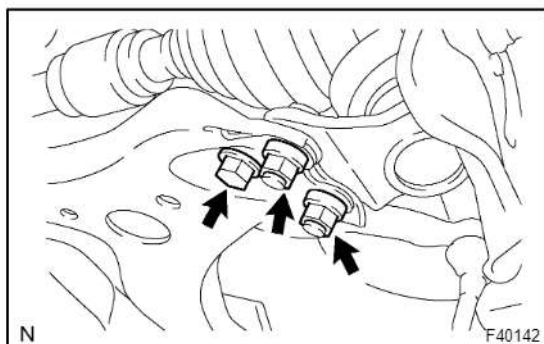
NOTICE:

Prevent foreign matter from adhering to the speed sensor.

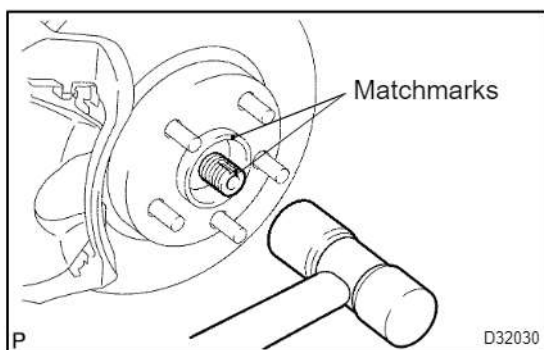
**7. SEPARATE TIE ROD END SUB-ASSY LH**

- (a) Remove the cotter pin and nut.
(b) Using SST, separate the tie rod end from the steering knuckle.

SST 09628-6201 1

**8. SEPARATE FRONT SUSPENSION ARM SUB-ASSY LOWER NO.1 LH**

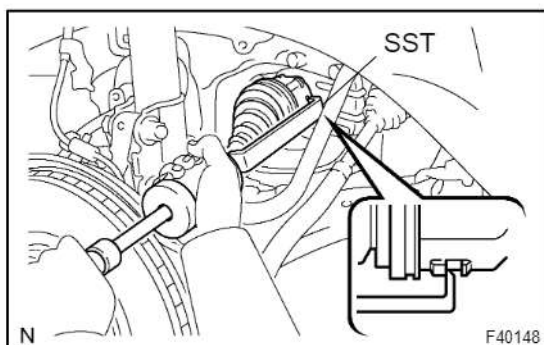
- (a) Remove the bolt and 2 nuts, and separate the front suspension arm sub-assy lower No.1 LH from the lower ball joint.

**9. SEPARATE FRONT AXLE ASSY LH**

- (a) Put matchmarks on the drive shaft and the axle hub.
(b) Using a plastic hammer, separate the drive shaft from the axle hub.

NOTICE:

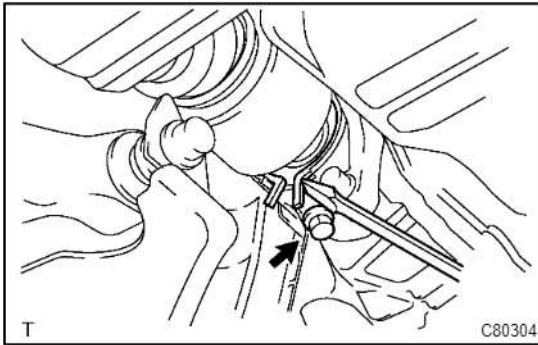
Be careful not to damage the boot and speed sensor rotor.

**10. REMOVE FRONT DRIVE SHAFT ASSY LH**

- (a) Using SST, remove the front drive shaft assy LH.
SST 09520-01010, 09520-24010 (09520-32040)

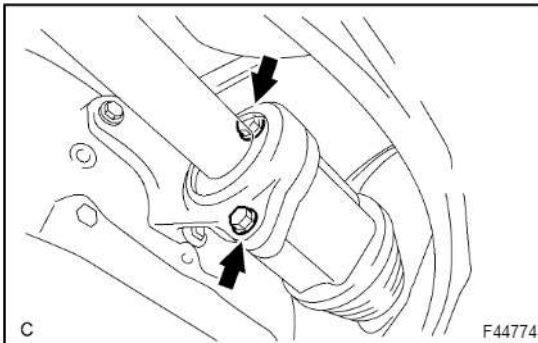
NOTICE:

- Be careful not to damage the transaxle case oil seal, inboard joint boot and drive shaft dust cover.
- Be careful not to drop the drive shaft assy.



11. REMOVE FRONT DRIVE SHAFT ASSY RH (3MZ-FE for 2WD DRIVE TYPE)

- Using a screwdriver, remove the bearing bracket hole snap ring.
- Remove the bolt and front drive shaft assy RH from the drive shaft bearing bracket.



12. REMOVE FRONT DRIVE SHAFT ASSY RH (2AZ-FE for 2WD DRIVE TYPE)

- Remove the 2 bolts and pull out the drive shaft together with the center bearing bracket.
- Remove the drive shaft assy RH.

13. REMOVE FRONT DRIVE SHAFT ASSY RH (RH for 4WD DRIVE TYPE)

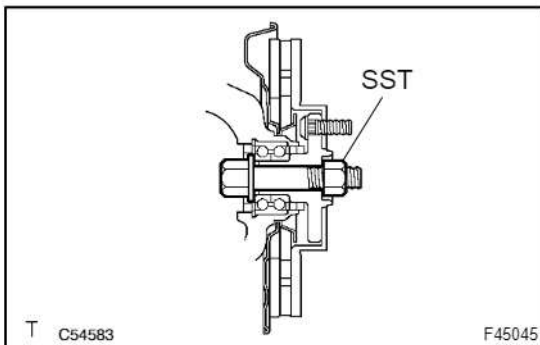
SST 09520-01010, 09520-24010 (09520-32040)

HINT:

Overhaul the RH side following the same procedures as for the LH side.

NOTICE:

- When removing and installing the front drive shaft assy RH in a 4WD vehicle, be sure to first drain all the transaxle oil and transfer oil. If removal and installation is carried out without draining these oils, the transfer oil will flow into the transaxle side. Extensive cleaning will be required if the two oils mix.
- Do not damage the oil seal and dust cover.
- Move the drive shaft assy while keeping it level.



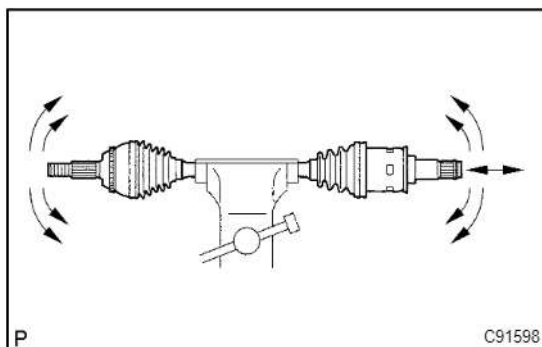
14. FIX FRONT AXLE ASSY LH

SST 09608-16042 (09608-02021, 09608-02041)

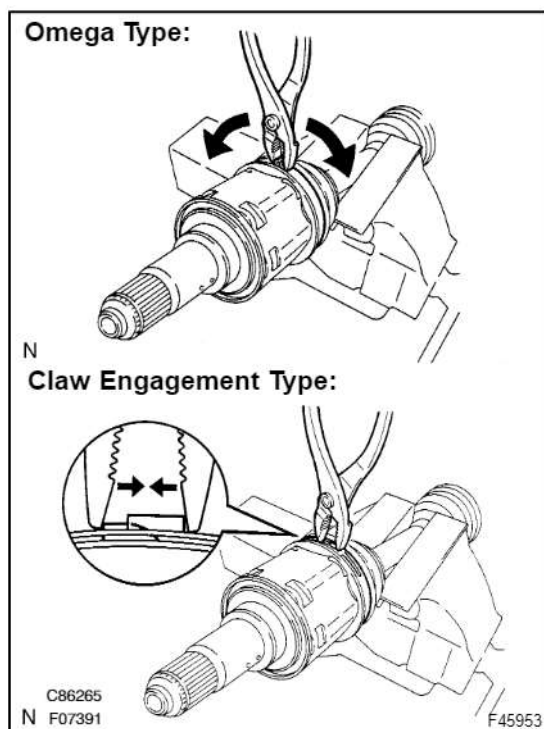
NOTICE:

The hub bearing could be damaged if it is subjected to the vehicle's full weight, such as when moving the vehicle with the drive shaft removed.

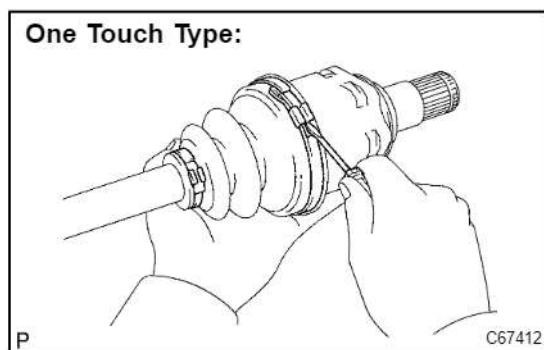
Therefore, if it is absolutely necessary to place the vehicle weight on the hub bearing, first support it with SST.

**15. INSPECT FRONT DRIVE SHAFT ASSY LH**

- (a) Check that there is no remarkable play in the radial direction of the outboard joint.
- (b) Check that the inboard joint slides smoothly in the thrust direction.
- (c) Check that there is no remarkable play in the radial direction of the inboard joint.
- (d) Check the boots for damage.

**16. REMOVE FRONT AXLE INBOARD JOINT BOOT LH NO.2 CLAMP**

- (a) Omega Type:
Using pliers, remove the inboard joint boot LH No.2 clamp, as shown in the illustration.
- (b) Claw Engagement Type:
Using pliers, remove the inboard joint boot LH No.2 clamp, as shown in the illustration.



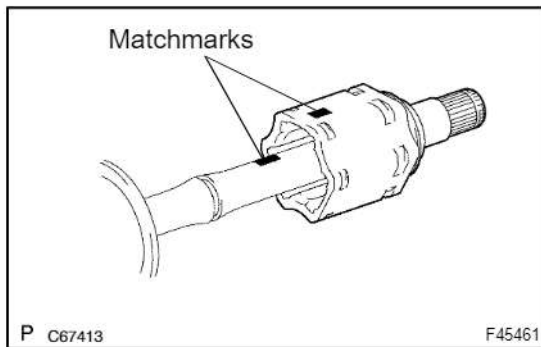
- (c) One Touch Type:
Using a screwdriver, remove the inboard joint boot LH No.2 clamp, as shown in the illustration.

17. REMOVE FRONT AXLE INBOARD JOINT BOOT LH CLAMP

- (a) Remove the inboard joint boot LH clamp using the same procedures as for the inboard joint boot LH No.2 clamp.

18. SEPARATE FR AXLE INBOARD JOINT BOOT

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

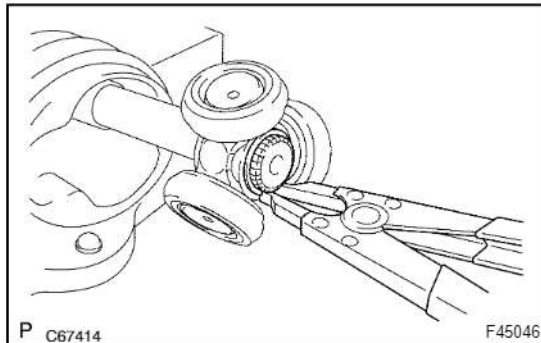


- 19. REMOVE FRONT DRIVE INBOARD JOINT ASSY LH**
 (a) Put matchmarks on the inboard joint assy and outboard joint shaft.

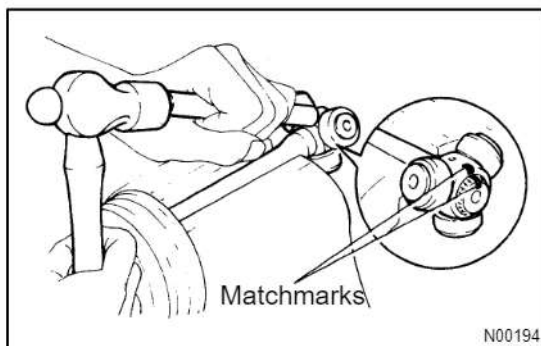
NOTICE:

Do not use a punch for the marks.

- (b) Remove the inboard joint assy from the outboard joint shaft.



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



- (d) Put matchmarks on the outboard joint shaft and tripod joint.

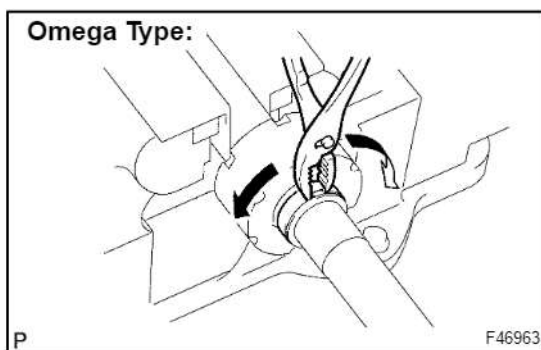
NOTICE:

Do not use a punch for the marks.

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

NOTICE:

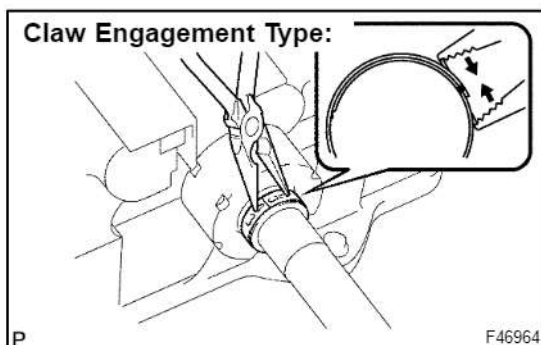
Do not tap the roller.

**20. REMOVE FRONT DRIVE SHAFT DAMPER LH****HINT:**

This procedure is unnecessary for a 3MZ-FE 4WD drive type vehicle (Front drive shaft RH) because it does not have a drive shaft damper.

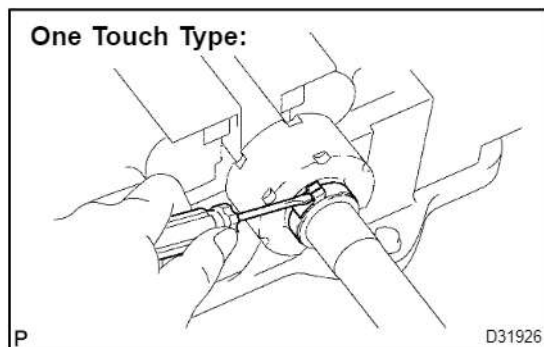
- (a) Omega Type:

Using pliers, remove the drive shaft damper clamp, as shown in the illustration.

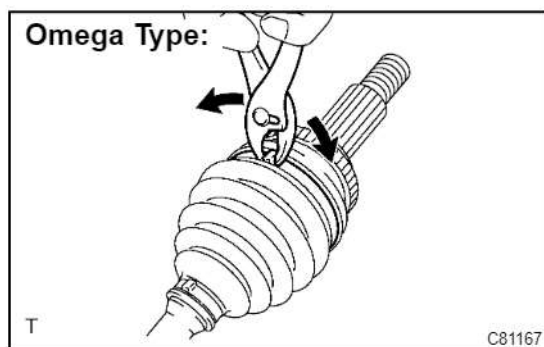


- (b) Claw Engagement:

Using needle-nose pliers, remove the drive shaft damper clamp, as shown in the illustration.

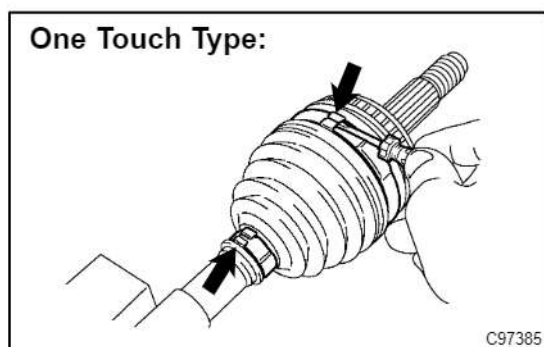


- (c) One Touch Type:
Using a screwdriver, remove the drive shaft damper clamp, as shown in the illustration.
- (d) Remove the drive shaft damper.



21. REMOVE FRONT AXLE OUTBOARD JOINT BOOT LH NO.2 CLAMP

- (a) Omega Type:
Using pliers, remove the outboard joint boot LH No.2 clamp, as shown in the illustration.



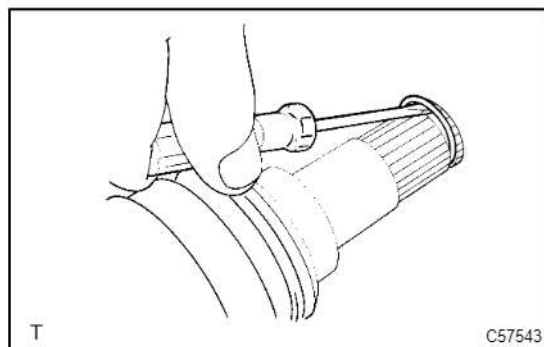
- (b) One Touch Type:
Using a screwdriver, remove the outboard joint boot LH No.2 clamp, as shown in the illustration.

22. REMOVE FRONT AXLE OUTBOARD JOINT BOOT LH CLAMP

- (a) Remove the outboard joint boot LH clamp using the same procedures as for the outboard joint boot LH No.2 clamp.

23. REMOVE OUTBOARD JOINT BOOT

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

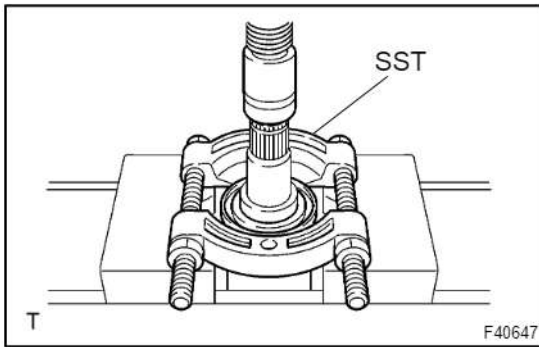


24. REMOVE FRONT DRIVE INNER SHAFT INNER LH SHAFT SNAP RING

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

25. REMOVE FRONT DRIVE INNER SHAFT INNER RH SHAFT SNAP RING (RH for 4WD DRIVE TYPE)

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



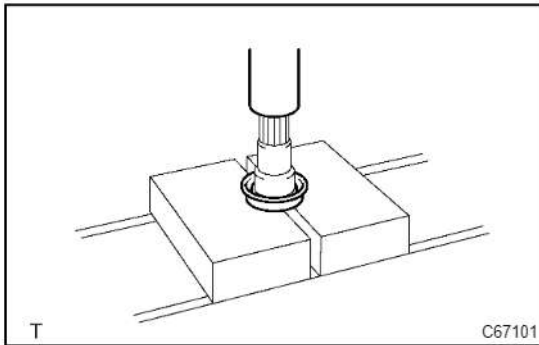
26. REMOVE FRONT DRIVE SHAFT DUST COVER LH

- (a) Using SST and a press, remove the drive shaft dust cover LH.

SST 09950-00020

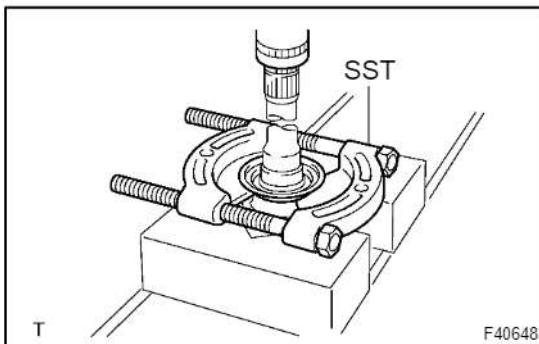
NOTICE:

Be careful not to drop the inboard joint assy.



27. REMOVE FRONT DRIVE SHAFT DUST COVER RH (RH for 2WD DRIVE TYPE)

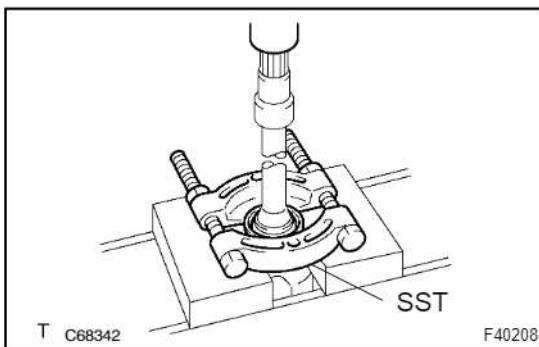
- (a) Using a press, remove the drive shaft dust cover RH.



28. REMOVE FRONT DRIVE SHAFT DUST COVER RH (RH for 4WD DRIVE TYPE)

- (a) Using SST and a press, remove the drive shaft dust cover RH.

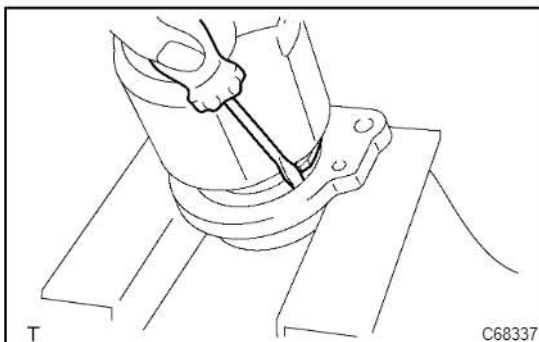
SST 09950-00020



29. REMOVE FRONT DRIVE SHAFT DUST COVER (RH for 2WD DRIVE TYPE)

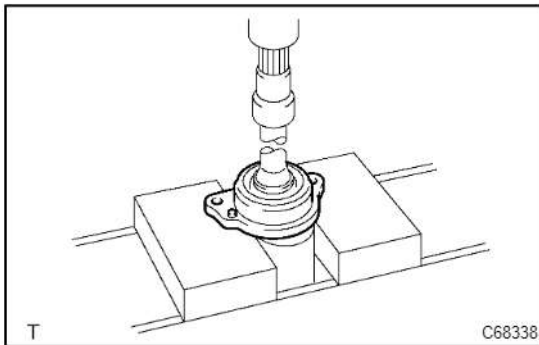
- (a) Using SST and a press, remove the drive shaft dust cover.

SST 09950-00020



30. REMOVE CASE SUB ASSY, DRIVE SHAFT BEARING SNAP RING (2AZ-FE for 2WD DRIVE TYPE)

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

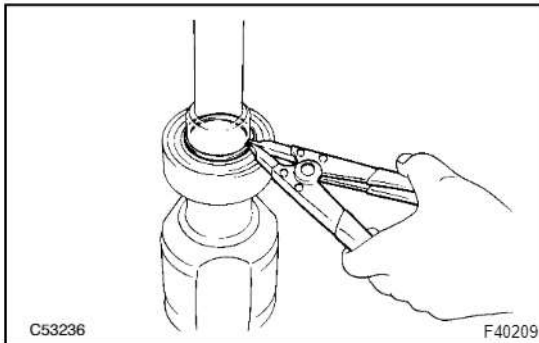


31. REMOVE DRIVE SHAFT BEARING CASE SUB ASSY (2AZ-FE for 2WD DRIVE TYPE)

- (a) Using a press, remove the bearing case snap ring.

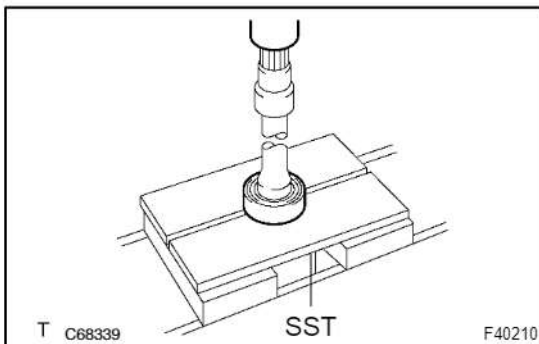
NOTICE:

Be careful not to drop the inboard joint assy.



32. REMOVE FRONT DRIVE SHAFT BEARING (RH for 2WD DRIVE TYPE)

- (a) Using a snap ring expander, remove the drive shaft hole snap ring.



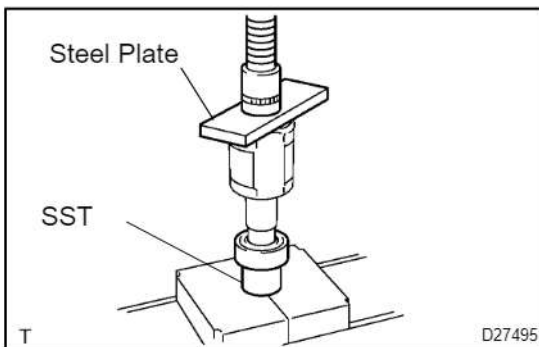
- (b) Using SST and a press, remove the bearing.

SST 09527-1001 1

- (c) Remove the bearing bracket hole snap ring.

NOTICE:

Be careful not to drop the inboard joint assy.



33. INSTALL FRONT DRIVE SHAFT BEARING (3MZ-FE for 2WD DRIVE TYPE)

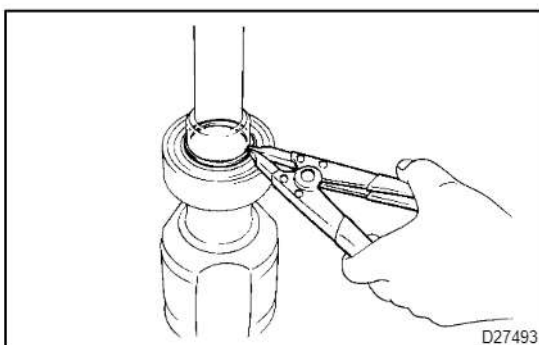
- (a) Install a new bearing bracket hole snap ring to the front driver shaft assy RH.

- (b) Using SST and a steel plate, install a new front drive shaft bearing.

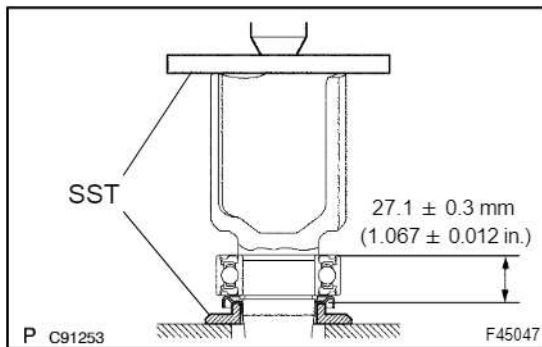
SST 09710-30021 (09710-03141)

NOTICE:

Bearing should be completely installed.



- (c) Using a snap ring expander, install a new drive shaft hole snap ring.



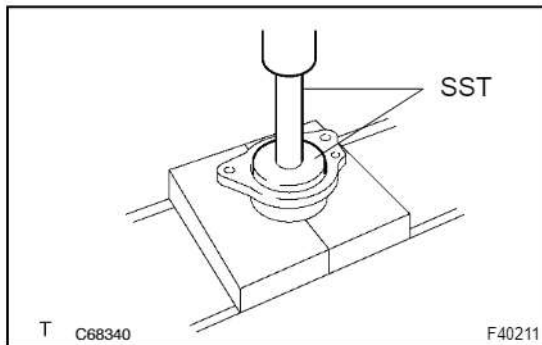
34. INSTALL FRONT DRIVE SHAFT DUST COVER (3MZ-FE for 2WD DRIVE TYPE)

- (a) Using SST and a press, install a new drive shaft dust cover.

SST 09726-40010, 09527-10011

NOTICE:

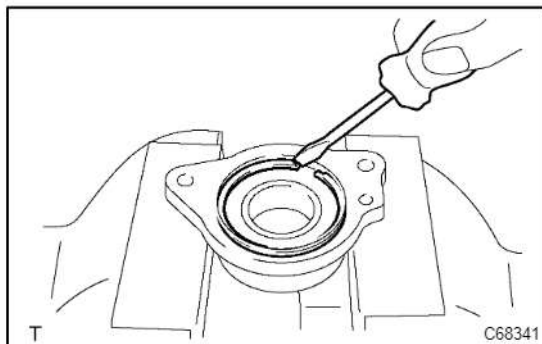
- Dust cover should be completely installed.
- Be careful not to damage the dust cover.



35. INSTALL FRONT DRIVE SHAFT BEARING (2AZ-FE for 2WD DRIVE TYPE)

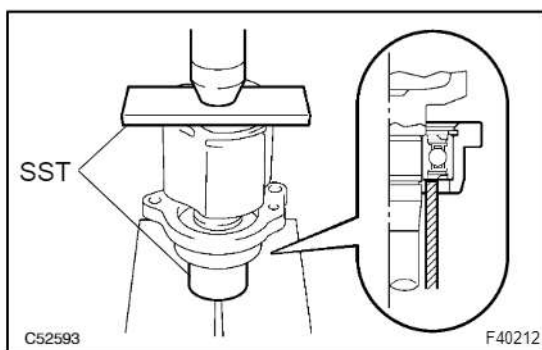
- (a) Using SST and a press, install a new drive shaft bearing.

SST 09950-60020 (09951-00710), 09950-70010 (09951-07100)



36. INSTALL CASE SUB ASSY, DRIVE SHAFT BEARING SNAP RING (2AZ-FE for 2WD DRIVE TYPE)

- (a) Using a screwdriver, install a new bearing case snap ring.



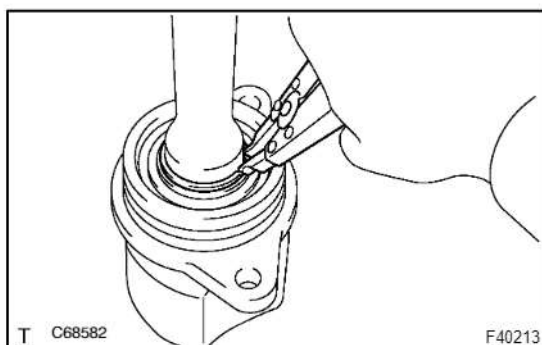
37. INSTALL DRIVE SHAFT BEARING CASE SUB ASSY (2AZ-FE for 2WD DRIVE TYPE)

- (a) Using SST and a press, install the drive shaft bearing case to the inboard joint assy RH.

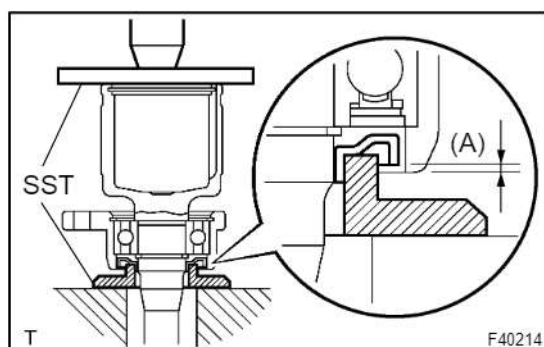
SST 09527-10011, 09710-04081

NOTICE:

Bearing should be installed completely.



- (b) Using a snap ring expander, install a new drive shaft hole snap ring.



38. INSTALL FRONT DRIVE SHAFT DUST COVER (2AZ-FE for 2WD DRIVE TYPE)

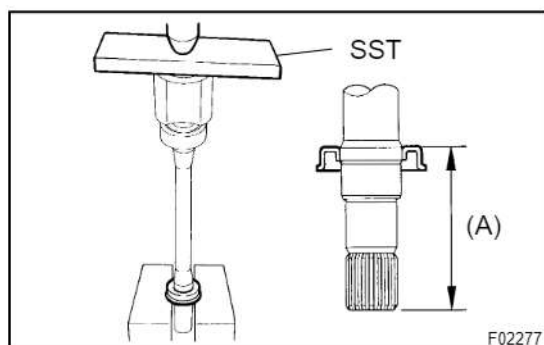
- (a) Using SST and a press, install a new driver shaft dust cover.

SST 09726-40010, 09527-10011

Distance (A): 0.5 ± 0.5 mm (0.020 ± 0.020 in.)

NOTICE:

Be careful not to damage the dust cover.



39. INSTALL FRONT DRIVE SHAFT DUST COVER RH (RH for 2WD DRIVE TYPE)

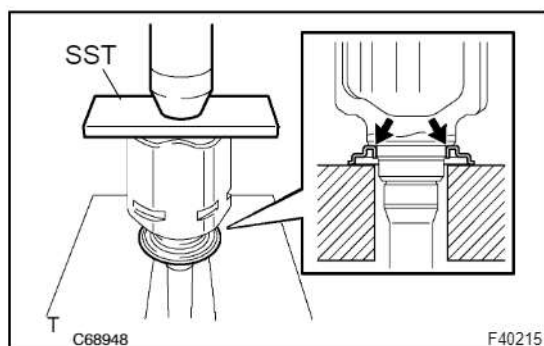
- (a) Using SST and a press, install a new drive shaft dust cover RH until the distance from the tip of the center drive shaft to the drive shaft dust cover RH meets the specification, as shown in the illustration.

SST 09527-1001 1

Type	Distance (A)
2AZ-FE	91.5 mm (3.602 in.)
3MZ-FE	110.5 mm (4.350 in.)

NOTICE:

- Dust cover should be completely installed.
- Be careful not to damage the dust cover.



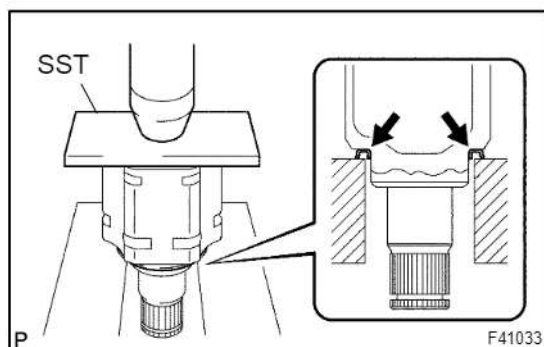
40. INSTALL FRONT DRIVE SHAFT DUST COVER RH (RH for 4WD DRIVE TYPE)

- (a) Using SST and a press, install a new drive shaft dust cover RH.

SST 09527-1001 1

NOTICE:

- Dust cover should be completely installed.
- Be careful not to damage the dust cover.



41. INSTALL FRONT DRIVE SHAFT DUST COVER LH

- (a) Using SST and a press, install a new drive shaft dust cover LH.

SST 09527-1001 1

NOTICE:

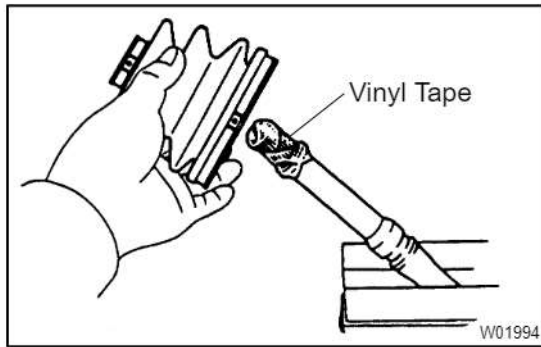
- Dust cover should be completely installed.
- Be careful not to damage the dust cover.

42. INSTALL FRONT DRIVE INNER SHAFT INNER LH SHAFT SNAP RING

- (a) Install a new hole snap ring.

43. INSTALL FRONT DRIVE INNER SHAFT INNER RH SHAFT SNAP RING (RH for 4WD DRIVE TYPE)

- (a) Install a new hole snap ring.



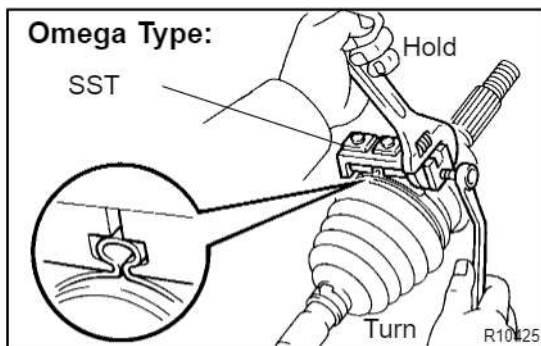
44. INSTALL OUTBOARD JOINT BOOT

HINT:

Before installing the boots, wrap the spline of the drive shaft with vinyl tape to prevent the boots from being damaged.

- Hold the drive shaft lightly in a soft vise.
- Temporarily install a new outboard joint boot with 2 clamps to the drive shaft.
- Pack the outboard joint shaft and boot with grease.

Type	Grease capacity g (oz.)
3MZ-FE (FF)	205 to 225 g (7.3 to 8.0 oz.)
EXCEPT 3MZ-FE (FF)	190 to 200 g (6.7 to 7.0 oz.)



45. INSTALL FRONT AXLE OUTBOARD JOINT BOOT LH NO.2 CLAMP

- Omega Type:
Secure the 2 outboard joint boot clamps onto the boot.
- Place SST onto the outboard joint boot LH No.2 clamp.
SST 09521-24010
- Tighten the SST so that the outboard joint boot LH No.2 clamp is pinched.

NOTICE:

Do not overtighten the SST.

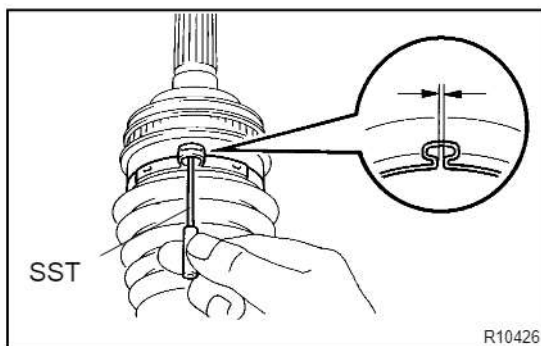
- Using SST, measure the clearance of the outboard joint boot LH No.2 clamp.

SST 09240-00020

Clearance: 0.8 mm (0.031 in.) or less

NOTICE:

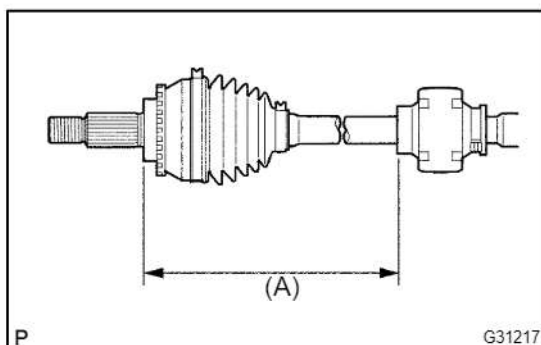
When the measured value is greater than the specified value, retighten the clamp.



46. INSTALL FRONT AXLE OUTBOARD JOINT BOOT LH CLAMP

- The procedure for the outboard joint boot LH clamp is the same as above.

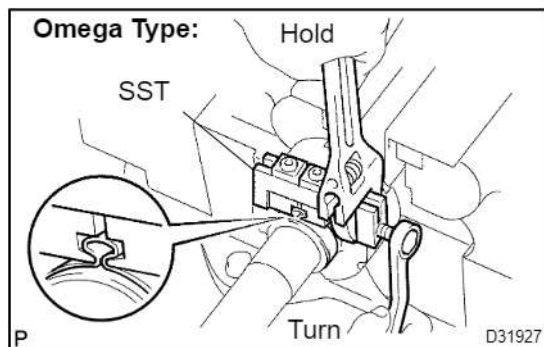
SST 09521-24010, 09240-00020



47. INSTALL FRONT DRIVE SHAFT DAMPER LH

- Install the drive shaft damper LH to the drive shaft.
- Make sure that the damper is on the shaft groove.
- Set the distance, as described below.

Type	Distance (A)
3MZ-FE (FF)	227.5 ± 2.0 mm (8.957 ± 0.079 in.)
EXCEPT 3MZ-FE (FF)	225.4 ± 2.0 mm (8.874 ± 0.079 in.)

**48. INSTALL FRONT DRIVE SHAFT DAMPER RH CLAMP**

- (a) Omega Type:
Hold the front drive shaft lightly in a soft vise.
- (b) Install the drive shaft damper clamp to the damper.

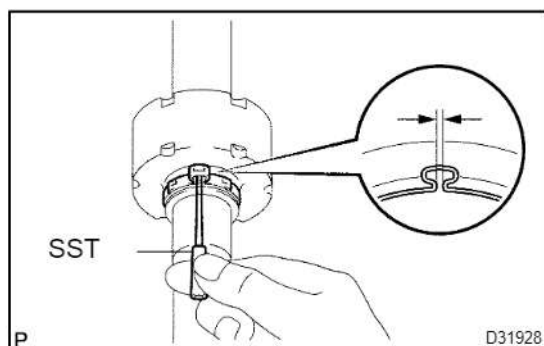
NOTICE:

Be sure to install the clamp in the correct position.

- (c) Place SST onto the drive shaft damper clamp.
SST 09521-24010
- (d) Tighten the SST so that the clamp is pinched.

NOTICE:

Do not overtighten the SST.



- (e) Using SST, measure the clearance of the drive shaft damper clamp.

SST 09240-00020

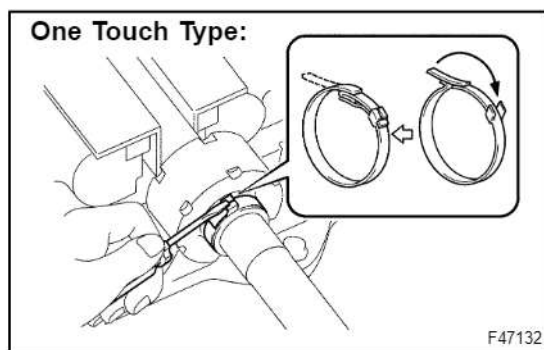
Clearance: 0.8 mm (0.031 in.) or less

NOTICE:

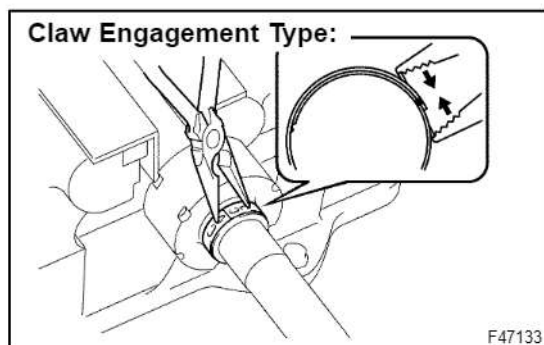
When the measured value is greater than the specified value, retighten the clamp.

HINT:

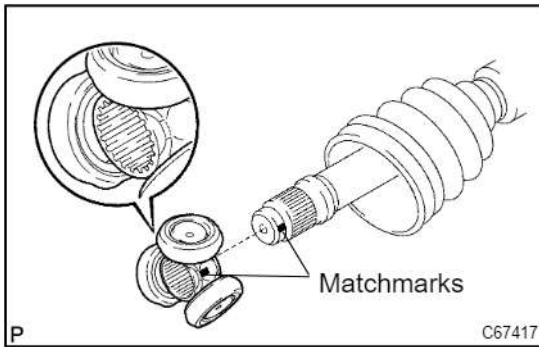
This procedure is unnecessary for a 3MZ-FE 4WD drive type vehicle (Front drive shaft RH) because it does not have a drive shaft damper.



- (f) One Touch Type:
Set a new damper clamp to the drive shaft damper RH and install the damper clamp with a screwdriver.



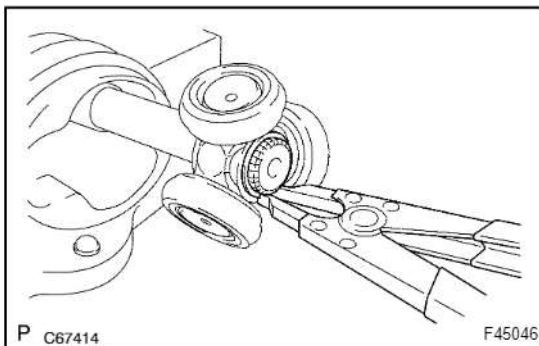
- (g) Claw Engagement Type:
Set a new damper clamp to the drive shaft damper RH and install the damper clamp with needle-nose pliers.

**49. INSTALL FRONT DRIVE INBOARD JOINT ASSY LH**

- (a) Temporarily install a new inboard joint boot with 2 clamps to the drive shaft.
- (b) Place the beveled side of the tripod joint axial spline toward the outboard joint shaft.
- (c) Align the matchmarks.
- (d) Using a brass bar and hammer, tap in the tripod joint to the outboard joint shaft.

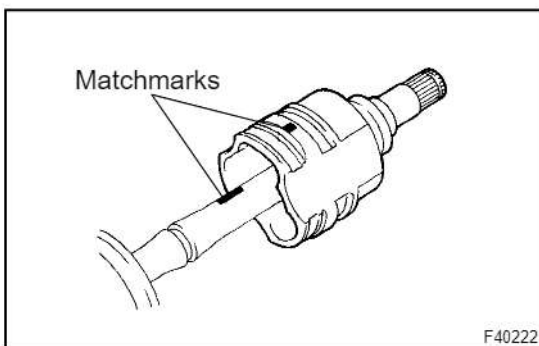
NOTICE:

- **Do not tap the roller.**
- **Be sure to install the tripod joint assy in the correct direction.**



- (e) Using a snap ring expander, install a new shaft snap ring.
- (f) Pack the outboard joint shaft and boot with grease.

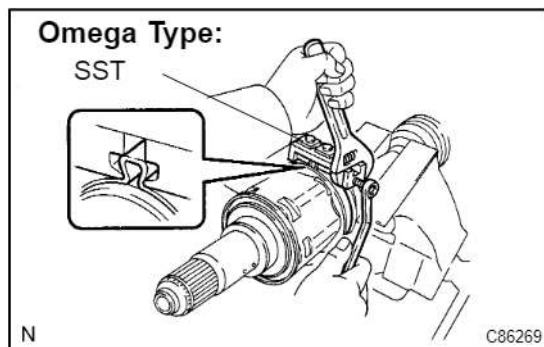
Type	Grease capacity g (oz.)
3MZ-FE (FF)	155 to 175 g (5.6 to 6.2 oz.)
EXCEPT 3MZ-FE (FF)	175 to 185 g (6.2 to 6.5 oz.)



- (g) Align the matchmarks, install the inboard joint assy to the outboard joint shaft assy.

50. INSTALL FR AXLE INBOARD JOINT BOOT

- (a) Install the inboard joint boot to the inboard joint assy.

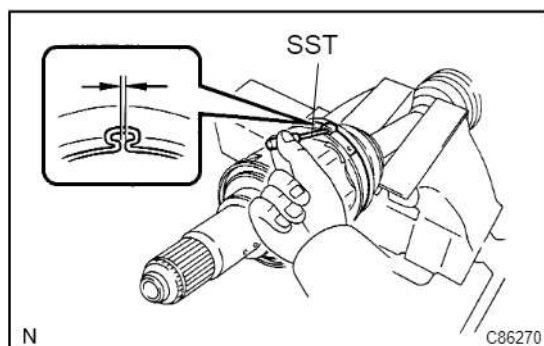


51. INSTALL FRONT AXLE INBOARD JOINT BOOT LH CLAMP

- (a) Omega Type:
Install new inboard joint boot clamps.
- (1) Hold the drive shaft lightly in a soft vise.
 - (2) Install 2 new inboard joint boot clamps to the boot.
 - (3) Place SST onto the inboard joint boot LH No.2 clamp.
- SST 09521-24010
- (4) Tighten the SST so that the inboard joint boot LH No.2 clamp is pinched.

NOTICE:

Do not overtighten the SST.



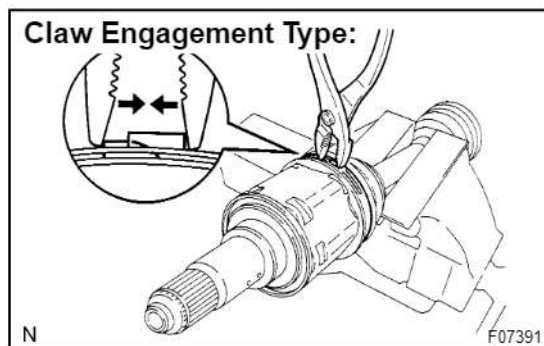
- (5) Using SST, measure the clearance of the inboard joint boot LH No.2 clamp.

SST 09240-00020

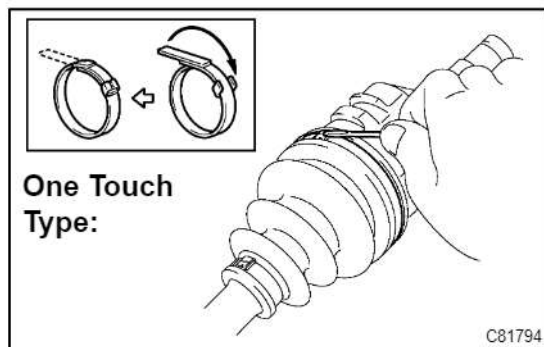
Clearance: 0.8 mm (0.031 in.) or less

NOTICE:

When the measured value is greater than the specified value, retighten the clamp.



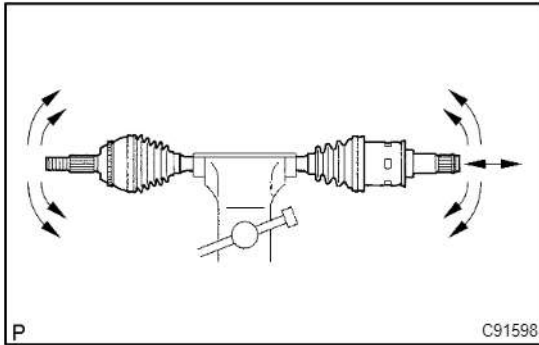
- (b) Claw Engagement Type:
Using pliers, install the inboard joint boot LH No.2 clamp, as shown in the illustration.



- (c) One Touch Type:
Using a screwdriver, install the inboard joint boot LH No.2 clamp, as shown in the illustration.

52. INSTALL FRONT AXLE INBOARD JOINT BOOT LH CLAMP

- (a) Install the inboard joint boot LH clamp using the same procedures as for the inboard joint boot LH No.2 clamp.
SST 09521-24010, 09240-00020

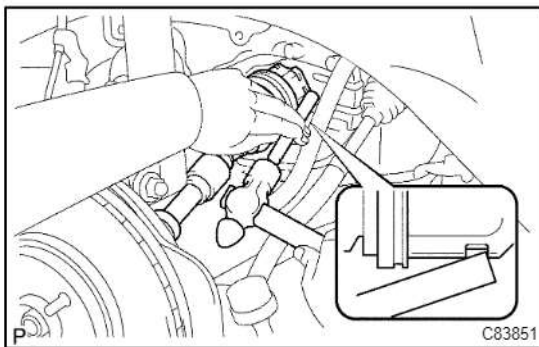
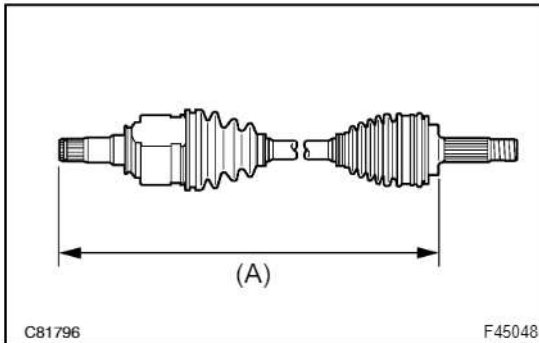
**53. INSPECT FRONT DRIVE SHAFT**

- Check that there is no remarkable play in the radial direction of 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.

HINT:

For dimension (A), refer to the following table.

DRIVE TYPE	LH mm (in.)	RH mm (in.)
2WD	2AZ-FE: 591.2 (23.27) ± 2.0 (0.08)	2AZ-FE: 890.0 (35.03) ± 2.0 (0.08)
	3MZ-FE: 579.4 (22.81) ± 2.0 (0.08)	3MZ-FE: 898.0 (35.35) ± 2.0 (0.08)
4WD	556.5 (21.90) ± 2.0 (0.08)	932.5 (36.71) ± 2.0 (0.08)

**54. INSTALL FRONT DRIVE SHAFT ASSY LH**

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

NOTICE:

- Set the snap ring with the opening side facing downward.
- Be careful not to damage the oil seal boot and dust cover.
- Move the drive shaft assy while keeping it level.

55. INSTALL FRONT DRIVE SHAFT ASSY RH (3MZ-FE for 2WD DRIVE TYPE)

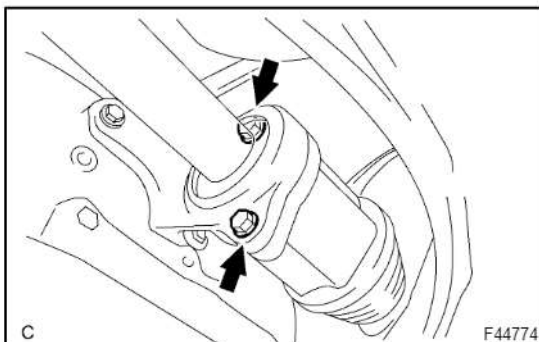
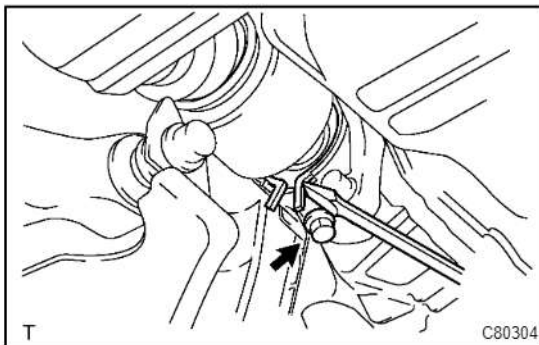
- Using a screwdriver, install a new bearing bracket hole snap ring.

NOTICE:

Do not damage the oil seal and boot.

- Install the bolt.

Torque: 32 N·m (330 kgf·cm, 24 ft·lbf)

**56. INSTALL FRONT DRIVE SHAFT ASSY RH (2AZ-FE for 2WD DRIVE TYPE)**

- Coat the spline of the inboard joint shaft assy RH with gear oil.
- Align the shaft splines and install the drive shaft assy RH with the 2 bolts.

NOTICE:

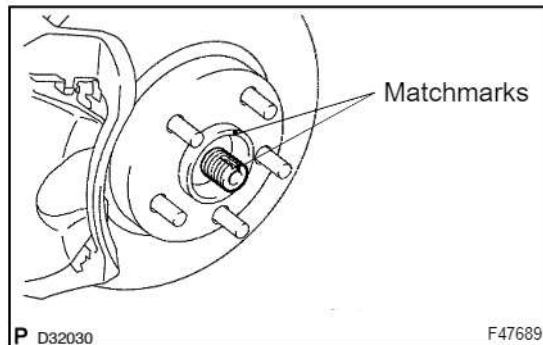
Do not damage the oil seal, boot and dust cover.

57. INSTALL FRONT DRIVE SHAFT ASSY RH (RH for 4WD DRIVE TYPE)**HINT:**

Install the RH side using the same procedures as for the LH side.

NOTICE:

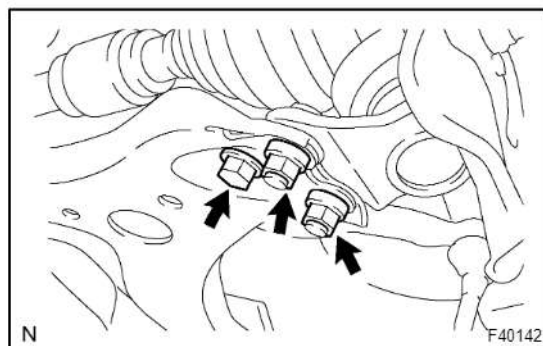
- Set the snap ring with the opening side facing downward.
- Be careful not to damage the transaxle case oil seal, inboard joint boot and drive shaft dust cover.

**58. INSTALL FRONT AXLE ASSY LH**

- (a) Align the matchmarks and install the drive shaft assy LH to the front axle assy LH.

NOTICE:

Be careful not to damage the outboard joint boot.
Be careful not to damage the speed sensor rotor.

**59. INSTALL FRONT SUSPENSION ARM SUB-ASSY LOWER NO.1 LH**

- (a) Install the lower ball joint to the front suspension arm sub-assy lower with the bolt and nuts.

Torque: 127 N·m (1,300 kgf·cm, 94 ft·lbf)

60. INSTALL TIE ROD END SUB-ASSY LH

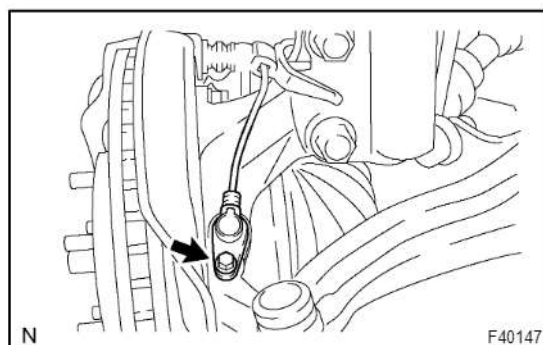
- (a) Install the tie rod end to the steering knuckle with the nut.

Torque: 49 N·m (500 kgf·cm, 36 ft·lbf)

- (b) Install a new cotter pin.

NOTICE:

If the holes for the cotter pin are not aligned, tighten the nut up to 60° further.

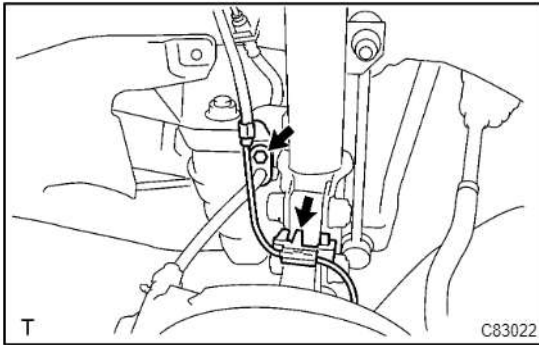
**61. INSTALL SPEED SENSOR FRONT LH**

- (a) Install the speed sensor to the steering knuckle with the bolt.

Torque: 8.0 N·m (82 kgf·cm, 71 in·lbf)

NOTICE:

Prevent foreign matter from adhering to the speed sensor.



- (b) Install the flexible hose and the speed sensor to the shock absorber with the bolt and set the clip of the sensor on the knuckle.

Torque: 19 N·m (192 kgf·cm, 14 ft·lbf)

NOTICE:

- Be careful not to damage the speed sensor.
- Prevent foreign matter from adhering to the speed sensor.
- Do not twist the sensor wire when installing the speed sensor.

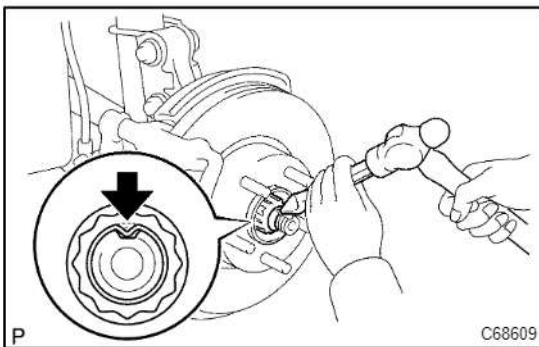
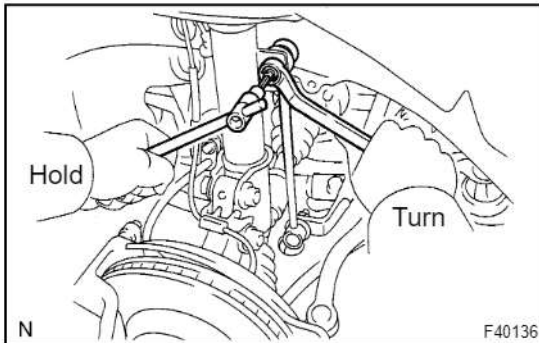
62. INSTALL FRONT STABILIZER LINK ASSY LH

- (a) Install the stabilizer link assy LH with the nut.

Torque: 74 N·m (755 kgf·cm, 55 ft·lbf)

HINT:

If the ball joint turns together with the nut, use a hexagon (6 mm) wrench to hold the stud.



63. INSTALL FRONT AXLE HUB LH NUT

- (a) Using a socket wrench (30 mm), install a new axle hub LH nut.

Torque: 294 N·m (3,000 kgf·cm, 217 ft·lbf)

- (b) Using a chisel and a hammer, stake the axle hub LH nut.

64. INSTALL FRONT WHEEL

Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)

65. ADD AUTOMATIC TRANSAXLE FLUID

66. INSPECT AUTOMATIC TRANSAXLE FLUID (SEE PAGE 40-2)

67. ADD TRANSFER OIL (4WD DRIVE TYPE)

HINT:

Perform the procedure only when installing the RH side.

68. INSPECT TRANSFER OIL (4WD DRIVE TYPE) (SEE PAGE 31-4)

HINT:

Perform the procedure only when installing the RH side.

69. INSPECT AND ADJUST FRONT WHEEL ALIGNMENT (SEE PAGE 26-7)

70. CHECK ABS SPEED SENSOR SIGNAL (SEE PAGE 05-765)

FRONT AXLE HUB SUB-ASSY LH

REPLACEMENT

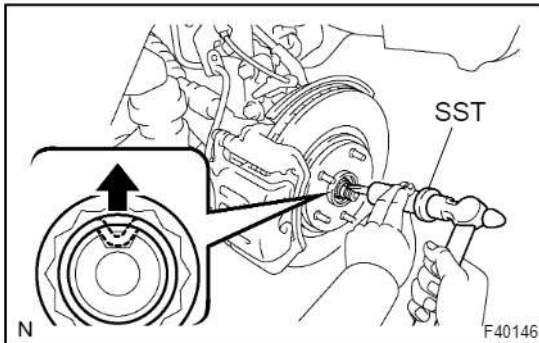
30001-02

HINT:

COMPONENTS: SEE PAGE 30-4

Replace the RH side by the same procedures with LH side.

1. REMOVE FRONT WHEEL

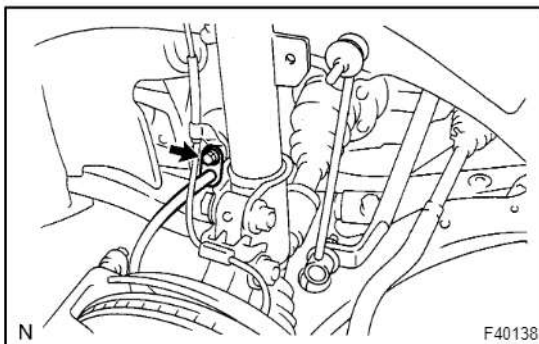


2. REMOVE FRONT AXLE HUB LH NUT

- (a) Using SST and a hammer, unstack the staked part of the lock nut.

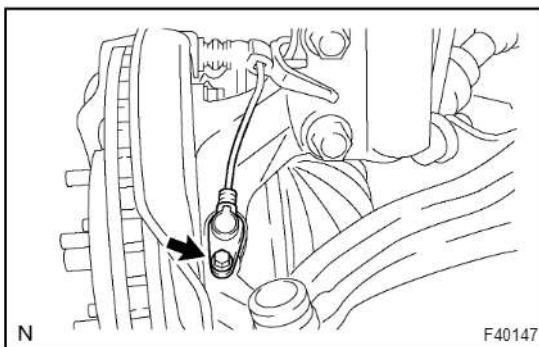
SST 09930-00010

- (b) While applying the brakes, remove the lock nut.

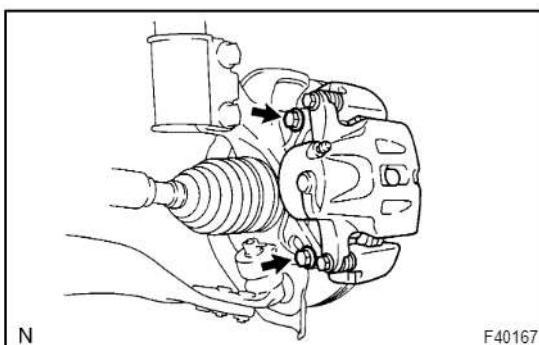


3. SEPARATE SPEED SENSOR FRONT LH

- (a) Remove the bolt, separate the sensor wire and flexible hose from the shock absorber.



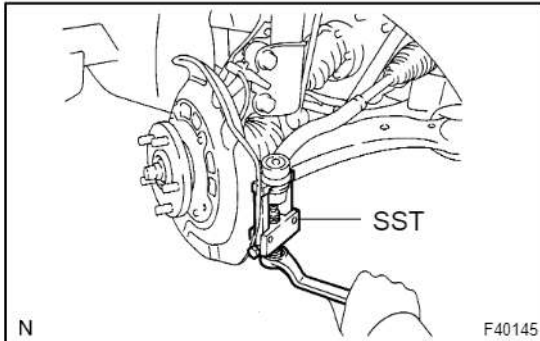
- (b) Remove the bolt and separate the speed sensor from the steering knuckle.



4. SEPARATE FRONT DISC BRAKE CALIPER ASSY LH

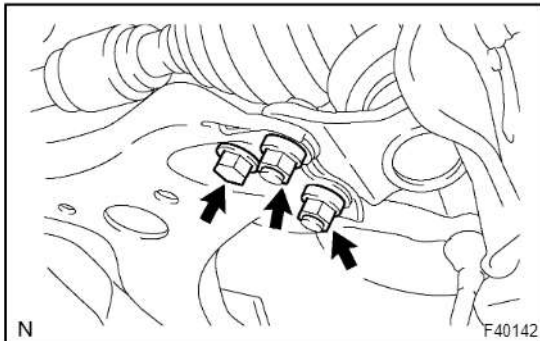
- (a) Remove the 2 bolts, separate the brake caliper.

5. REMOVE FRONT DISC



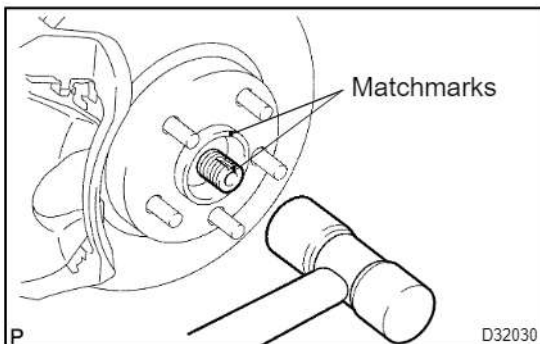
6. SEPARATE TIE ROD END SUB-ASSY LH

- (a) Remove the cotter pin and nut.
- (b) Using SST, separate the tie rod end from the steering knuckle.
SST 09628-6201 1



7. SEPARATE FRONT SUSPENSION ARM SUB-ASSY LOWER NO.1 LH

- (a) Remove the bolt and 2 nuts, and separate the lower suspension arm from the lower ball joint.

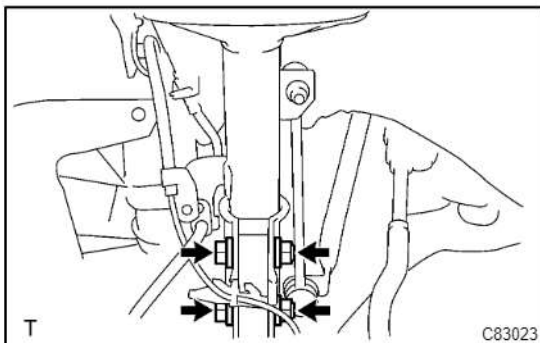


8. REMOVE FRONT AXLE ASSY LH

- (a) Put matchmarks on the drive shaft and the axle hub.
- (b) Using a plastic hammer, separate the drive shaft from the axle hub.

NOTICE:

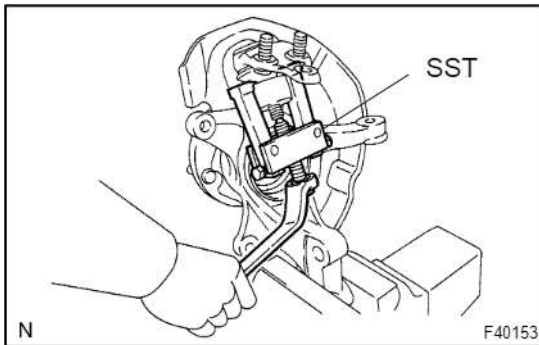
Be careful not to damage the boot and speed sensor rotor.



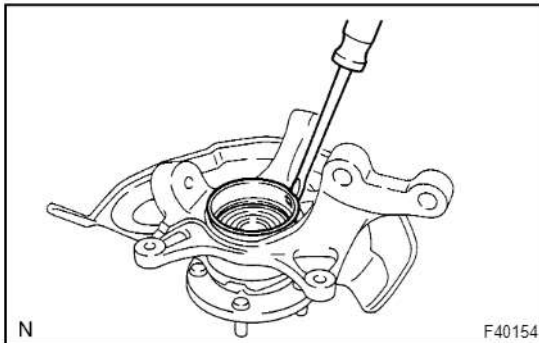
- (c) Remove the 2 bolts, nuts and steering knuckle with the axle hub.

9. REMOVE LOWER BALL JOINT ASSY FRONT LH

- (a) Remove the cotter pin and nut.

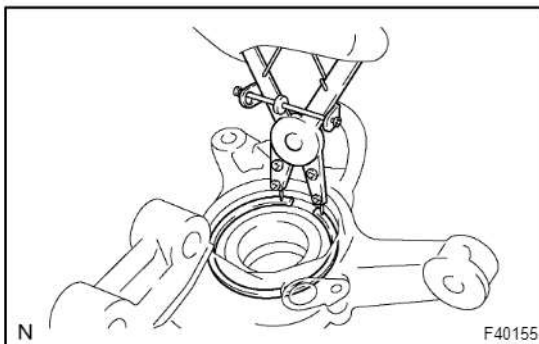


- (b) Using SST, remove the ball joint.
SST 09628-6201 1



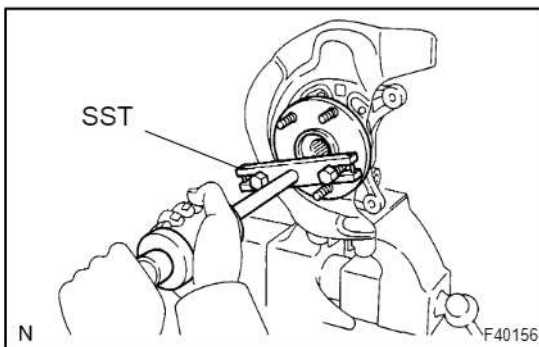
10. REMOVE FRONT WHEEL BEARING DUST DEFLECTOR NO.1 LH

- (a) Using a screwdriver, remove the dust deflector.



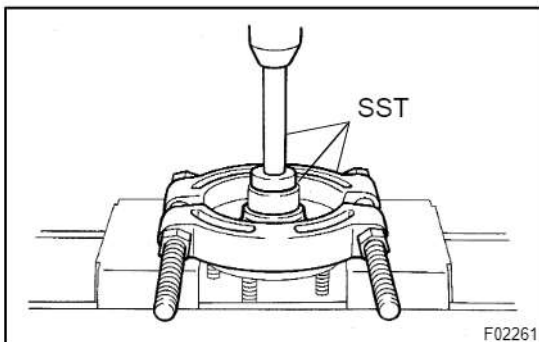
11. REMOVE FRONT AXLE HUB LH HOLE SNAP RING

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



12. REMOVE FRONT AXLE HUB SUB-ASSY LH

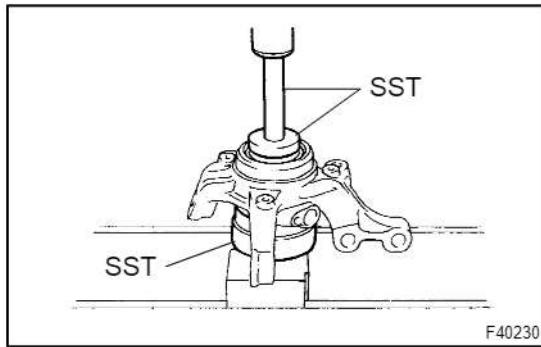
- (a) Using SST, remove the axle hub.



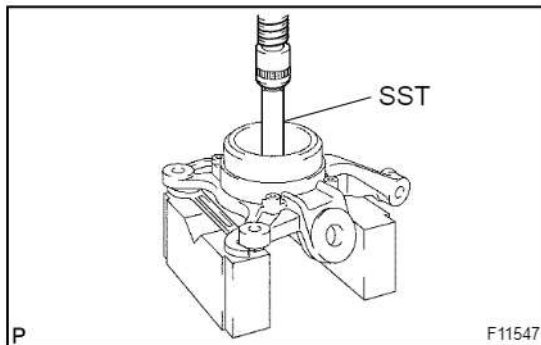
- (b) Using SST and a press, remove the inner race (outside) from the axle hub.
SST 09520-00031, 09950-00020, 09950-60010
(09951-00430), 09950-70010 (09951-07100)

13. REMOVE DISC BRAKE DUST COVER FRONT LH

- (a) Using a torx→ wrench (T30), remove the 4 bolts and dust cover.

**14. REMOVE FRONT AXLE HUB LH BEARING**

- (a) Place the inner race (outside) on the bearing.
- (b) Using SST and a press, press the bearing until it contacts with the SST.

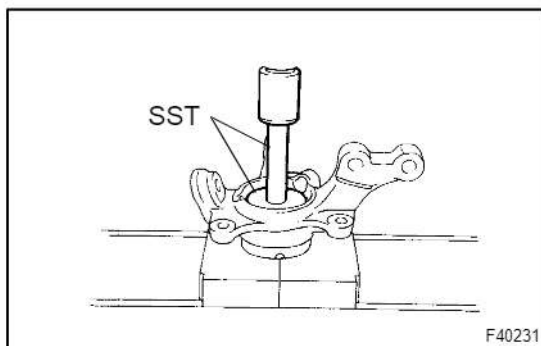


- (c) Using a spanner to make the steering knuckle horizontal, fix it to the V block as shown in the illustration.

NOTICE:

Be sure the steering knuckle is horizontally positioned.

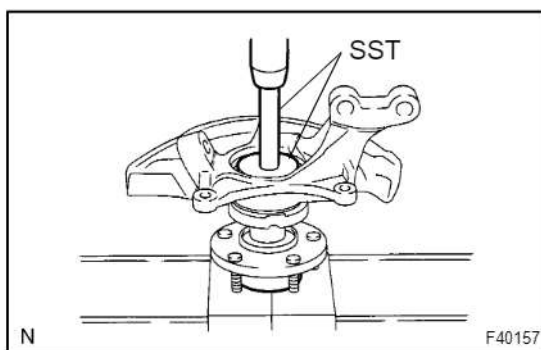
- (d) Using SST and a press, remove the bearing.
SST 09527-17011, 09950-60020 (09951-00750),
09950-70010 (09951-07100)

**15. INSTALL FRONT AXLE HUB LH BEARING**

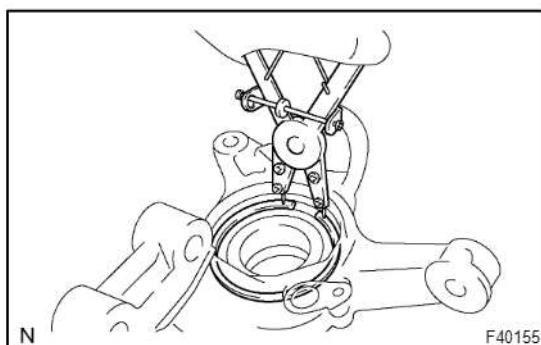
- (a) Using SST and a press, install a new bearing to the steering knuckle.
SST 09608-32010, 09950-60020 (09951-00810),
09950-70010 (09951-07100)

16. INSTALL DISC BRAKE DUST COVER FRONT LH

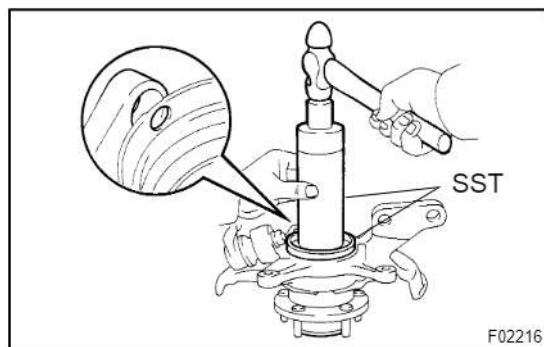
- (a) Place the dust cover and using a torx→ wrench (T30), torque the 4 bolts.

**17. INSTALL FRONT AXLE HUB SUB-ASSY LH**

- (a) Using SST and a press, install the axle hub.
SST 09608-32010, 09950-60020 (09951-00810),
09950-70010 (09951-07100)

**18. INSTALL FRONT AXLE HUB LH HOLE SNAP RING**

- (a) Using snap ring pliers, install a new snap ring.



19. INSTALL FRONT WHEEL BEARING DUST DEFLECTOR NO.1 LH

- (a) Using SST and a hammer, install a new dust deflector.
SST 09316-60011 (09316-00011, 09316-00031), 09608-32010

HINT:

Align the holes for the ABS speed sensor in the dust deflector with steering knuckle.

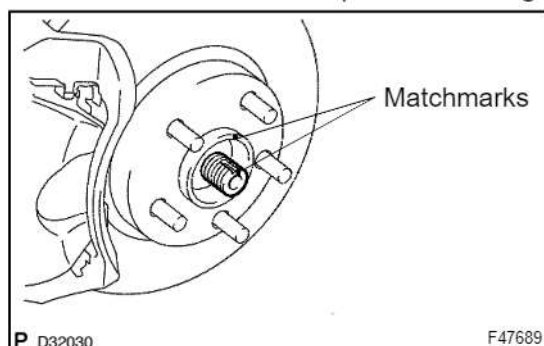
20. INSTALL LOWER BALL JOINT ASSY FRONT LH

- (a) Install the lower ball joint and tighten the nut.

Torque: 123 N·m (1,250 kgf·cm, 90 ft·lbf)

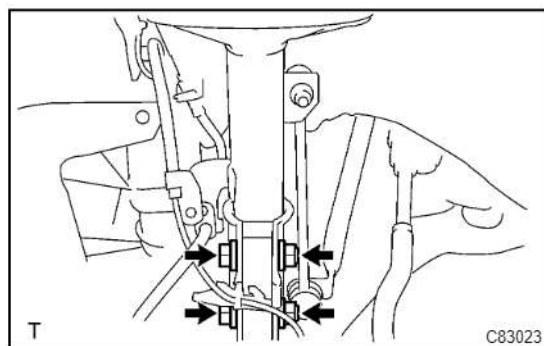
- (b) Install a new cotter pin.

If the holes for the cotter pin are not aligned, tighten the nut further up to 60°.



21. INSTALL FRONT AXLE ASSY LH

- (a) Align the matchmarks and install the drive shaft assy LH to the front axle assy LH.



- (b) Install the 2 bolts, nuts and axle assembly to the shock absorber.

Torque: 230 N·m (2,345 kgf·cm, 170 ft·lbf)

HINT:

Insert the bolt from the front side of the vehicle and tighten the nut.

- (c) Push the front axle assy toward the outside of the vehicle, fit the spline part of the drive shaft assy to that of the front axle assy and insert the drive shaft assy into the front axle assy.

NOTICE:

- Do not push out the front axle assy excessively.
- Be careful not to damage the drive shaft outboard joint boot.
- Be careful not to damage the speed sensor rotor.

22. INSTALL FRONT SUSPENSION ARM SUB-ASSY LOWER NO.1 LH

- (a) Connect the lower arm and ball joint with the 2 nuts and bolt.

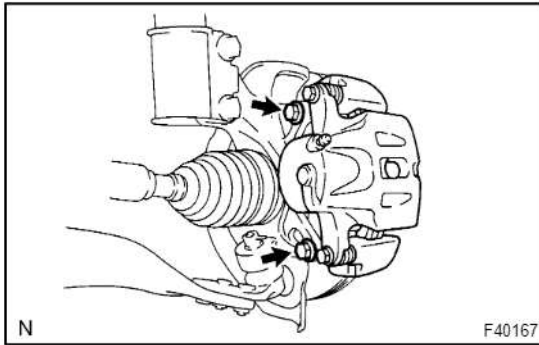
23. INSTALL TIE ROD END SUB-ASSY LH

- (a) Connect the tie rod end to the steering knuckle.

- (b) Install the nut and a new cotter pin.

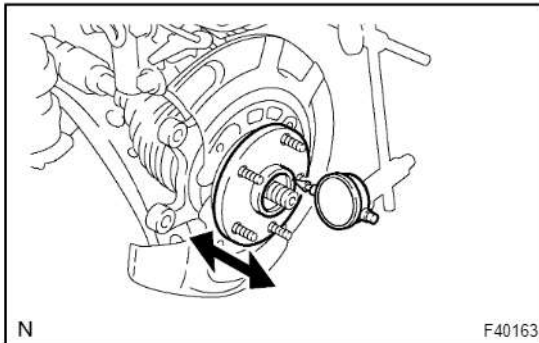
Torque: 49 N·m (500 kgf·cm, 36 ft·lbf)

24. INSTALL FRONT DISC

**25. INSTALL FRONT DISC BRAKE CALIPER ASSY LH**

- (a) Install the brake caliper assembly with the 2 bolts to the steering knuckle.

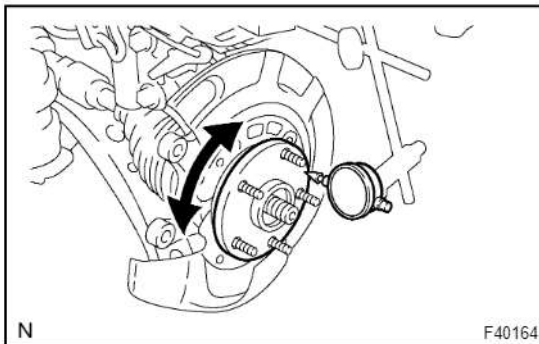
Torque: 107 N·m (1,090 kgf·cm, 79 ft·lbf)

26. INSTALL FRONT AXLE HUB LH NUT**27. SEPARATE FRONT DISC BRAKE CALIPER ASSY LH****28. REMOVE FRONT DISC****29. INSPECT BEARING BACKLASH**

- (a) Using a dial indicator, check the backlash near the center of the axle hub.

Maximum: 0 mm (0 in.)

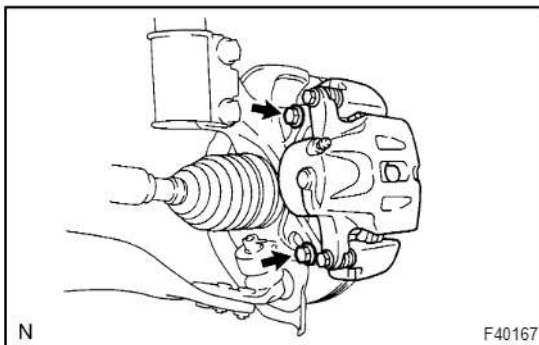
If the backlash exceeds the maximum, replace the bearing.

**30. INSPECT AXLE HUB DEVIATION**

- (a) Using a dial indicator, check the deviation at the surface of the axle hub outside the hub bolt.

Maximum: 0.07 mm (0.0027 in.)

If the backlash exceeds the maximum, replace the axle hub.

31. INSTALL FRONT DISC**32. INSTALL FRONT DISC BRAKE CALIPER ASSY LH**

- (a) Install the brake caliper assy with the 2 bolts to the steering knuckle.

Torque: 107 N·m (1,090 kgf·cm, 79 ft·lbf)

33. INSTALL SPEED SENSOR FRONT LH**34. INSTALL FRONT WHEEL**

Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)

35. INSPECT AND ADJUST FRONT WHEEL ALIGNMENT (SEE PAGE 26-7)**36. CHECK ABS SPEED SENSOR SIGNAL (SEE PAGE 05-765)**

FRONT AXLE LH HUB BOLT REPLACEMENT

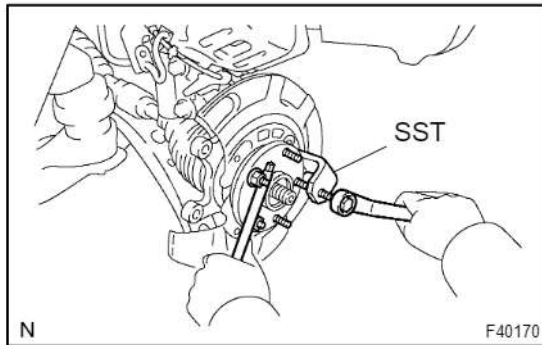
3000J-01

HINT:

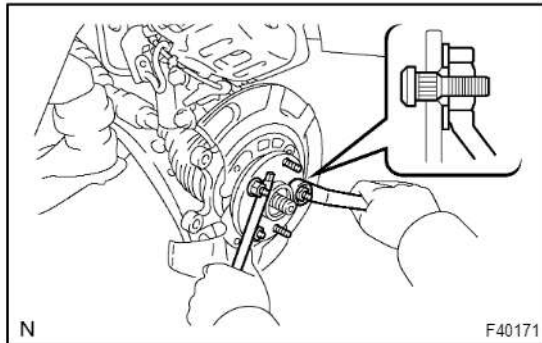
COMPONENTS:SEE PAGE 30-4

Replace the RH side by the same procedures with LH side.

1. REMOVE FRONT WHEEL
2. SEPARATE FRONT DISC BRAKE CALIPER ASSY LH(SEE PAGE 30-38)
3. REMOVE FRONT DISC



4. REMOVE FRONT AXLE LH HUB BOLT
 - (a) Using SST and a screwdriver or an equivalent to hold, remove the hub bolt.
SST 09628-1001 1



5. INSTALL FRONT AXLE LH HUB BOLT
 - (a) Install a washer and nut to a new hub bolt as shown in the illustration.
 - (b) Using a screwdriver to hold, install the hub bolt by torquing the nut.
6. INSTALL FRONT DISC
7. INSTALL FRONT DISC BRAKE CALIPER ASSY LH (SEE PAGE 30-38)
8. INSTALL FRONT WHEEL
Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)

REAR AXLE CARRIER SUB-ASSY LH (FF)

REPLACEMENT

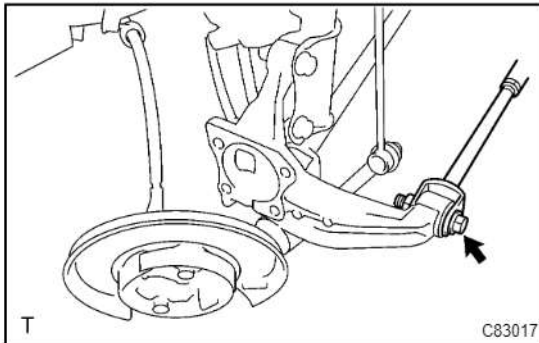
3000M-02

HINT:

COMPONENTS: SEE PAGE 30-4

Replace the RH side by the same procedures with the LH side.

1. **REMOVE REAR WHEEL**
2. **SEPARATE REAR DISC BRAKE CALIPER ASSY LH**
3. **REMOVE REAR DISC (SEE PAGE 32-29)**
4. **DISCONNECT SKID CONTROL SENSOR**
 - (a) Disconnect the connector.
5. **REMOVE REAR AXLE HUB & BEARING ASSY LH**
6. **SEPARATE STRUT ROD ASSY REAR**

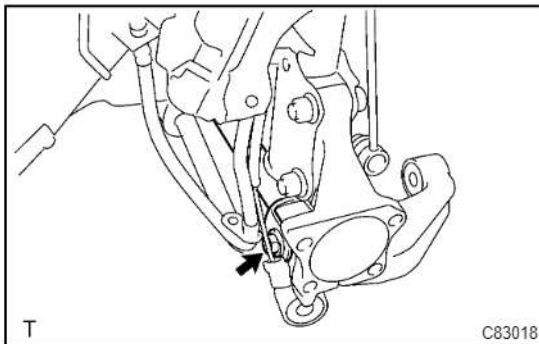


7. **SEPARATE REAR SUSPENSION ARM ASSY NO.2 LH**

- (a) Remove the bolt, nut and rear suspension arm No. 2 from the rear axle carrier.

HINT:

While fixing the nut, turn and remove the bolt.

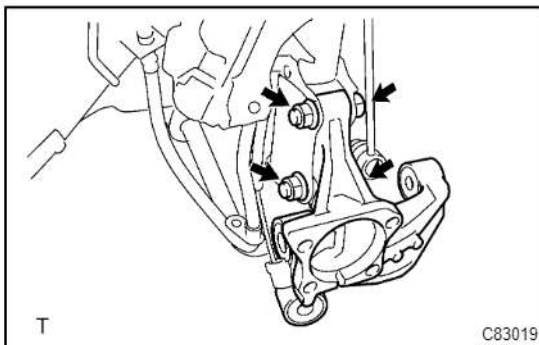


8. **SEPARATE REAR SUSPENSION ARM ASSY NO.1 LH**

- (a) Remove the bolt, nut and rear suspension arm No. 1 from the rear axle carrier.

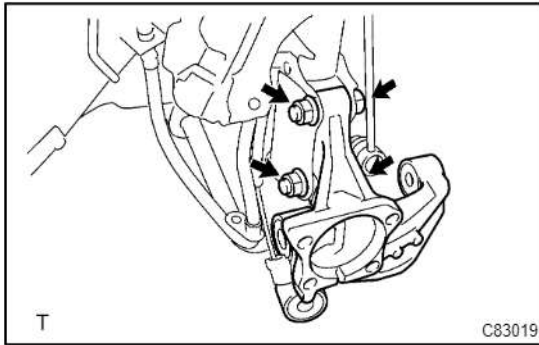
HINT:

While fixing the nut, turn and remove the bolt.



9. **REMOVE REAR AXLE CARRIER SUB-ASSY LH**

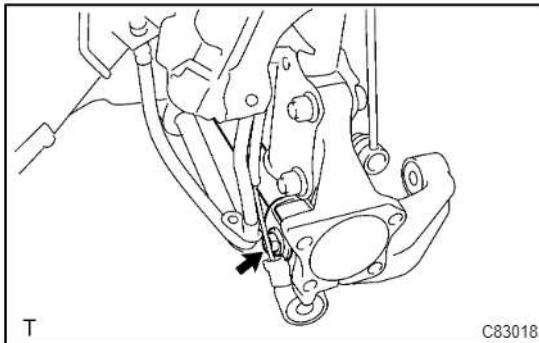
- (a) Remove the 2 bolts, nuts and rear axle carrier from the shock absorber.

**10. INSTALL REAR AXLE CARRIER SUB-ASSY LH**

- (a) Install the rear axle carrier with the 2 bolts and nuts.
Torque: 180 N·m (1,840 kgf·cm, 133 ft·lbf)

HINT:

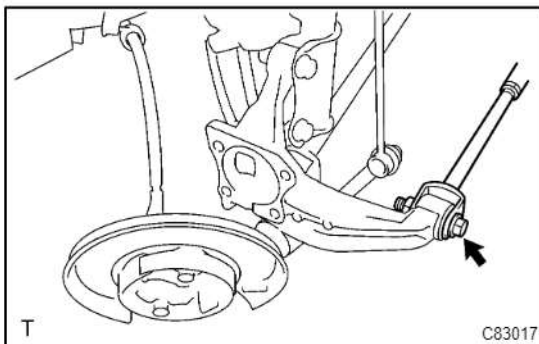
Insert the bolt from the rear side of the vehicle and install the nut.

**11. TEMPORARILY TIGHTEN REAR SUSPENSION ARM ASSY NO.1 LH**

- (a) Install the rear suspension arm No. 1 to the rear axle carrier with the bolt and nut, temporarily tighten the bolt.

HINT:

Insert the bolt from the front side of the vehicle and while fixing the nut, turn and install the bolt.

**12. TEMPORARILY TIGHTEN REAR SUSPENSION ARM ASSY NO.2 LH**

- (a) Install the rear suspension arm No. 2 to the rear axle carrier with the bolt and nut, temporarily tighten the bolt.

HINT:

Insert the bolt from the rear side of the vehicle and while fixing the nut, turn and install the bolt.

13. TEMPORARILY TIGHTEN STRUT ROD ASSY REAR (SEE PAGE 27-13)**14. INSTALL REAR AXLE HUB & BEARING ASSY LH (SEE PAGE 30-53)****15. INSPECT BEARING BACKLASH (SEE PAGE 30-3)****16. INSPECT AXLE HUB DEVIATION (SEE PAGE 30-3)****17. CONNECT SKID CONTROL SENSOR**

- (a) Connect the connector.

NOTICE:

Do not twist the sensor wire when connecting it.

18. INSTALL REAR DISC (SEE PAGE 32-29)**19. INSTALL REAR DISC BRAKE CALIPER ASSY LH (SEE PAGE 30-53)****20. INSTALL REAR WHEEL**

Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)

21. STABILIZE SUSPENSION (SEE PAGE 27-27)**22. FULLY TIGHTEN REAR SUSPENSION ARM ASSY NO.1 LH (SEE PAGE 27-16)****23. FULLY TIGHTEN REAR SUSPENSION ARM ASSY NO.2 LH (SEE PAGE 27-23)****24. FULLY TIGHTEN STRUT ROD ASSY REAR (SEE PAGE 27-13)****25. INSPECT AND ADJUST REAR WHEEL ALIGNMENT (SEE PAGE 27-5)****26. CHECK ABS SPEED SENSOR SIGNAL (SEE PAGE 05-765)**

REAR AXLE LH HUB BOLT REPLACEMENT

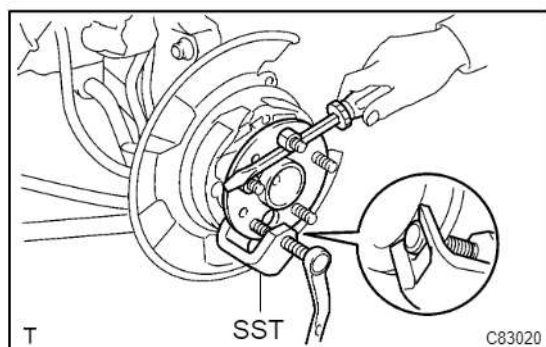
3000P-02

HINT:

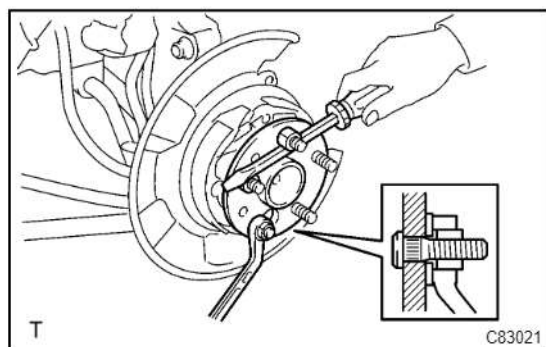
COMPONENTS:SEE PAGE 30-4

Replace the RH side by the same procedures with the LH side.

1. **REMOVE REAR WHEEL**
2. **SEPARATE REAR DISC BRAKE CALIPER ASSY LH (2WD DRIVE TYPE)**
 - (a) Remove the 2 bolts and brake caliper.
 - (b) Support the brake caliper securely.
3. **SEPARATE REAR DISC BRAKE CALIPER ASSY LH (4WD DRIVE TYPE)**
4. **REMOVE REAR DISC (SEE PAGE 32-29)**



5. **REMOVE REAR AXLE LH HUB BOLT**
 - (a) Using SST and a screwdriver or an equivalent to hold, remove the hub bolt.
SST 09628-1001 1



6. **INSTALL REAR AXLE LH HUB BOLT**
 - (a) Install a washer and nut to a new hub bolt as shown in the illustration.
 - (b) Using a screwdriver to hold, install the hub bolt by torquing the nut.
7. **INSTALL REAR DISC (SEE PAGE 32-29)**
8. **INSTALL REAR DISC BRAKE CALIPER ASSY LH (2WD DRIVE TYPE)**
 - (a) Install the brake caliper with the 2 bolts.
Torque:
2WD: 61.8 N·m (630 kgf·cm, 46 ft·lbf)
9. **INSTALL REAR DISC BRAKE CALIPER ASSY LH (4WD DRIVE TYPE)**
 - (a) Install the brake caliper with the 2 bolts.
Torque:
4WD: 58 N·m (592 kgf·cm, 43 ft·lbf)
10. **INSTALL REAR WHEEL**

REAR AXLE CARRIER SUB-ASSY LH (4WD)

REPLACEMENT

30000-02

HINT:

COMPONENTS: SEE PAGE 30-4

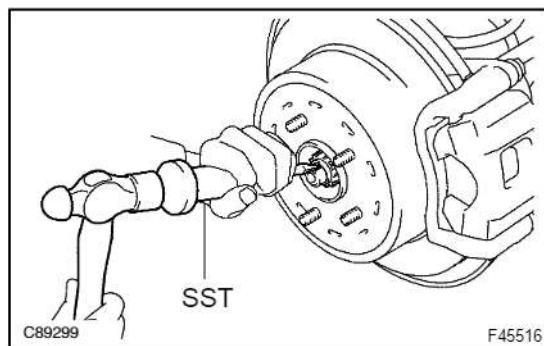
Replace the RH side using the same procedures as for the LH side.

1. REMOVE REAR WHEEL**2. SEPARATE SPEED SENSOR REAR LH**

- (a) Remove the bolt and separate the speed sensor from the axle carrier.

NOTICE:

- Be careful not to damage the speed sensor.
- Prevent foreign matter from adhering to the speed sensor.

**3. REMOVE REAR AXLE SHAFT LH NUT**

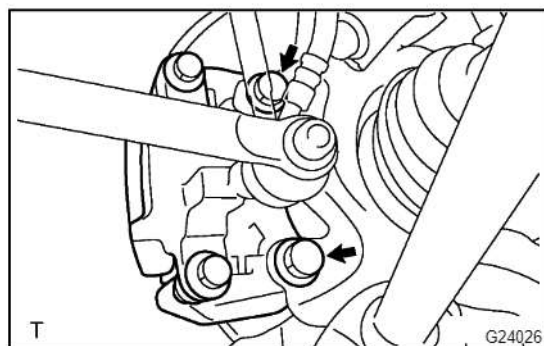
- (a) Using SST and a hammer, unstake the staked part of the axle hub LH nut.

SST 09930-00010

NOTICE:

Loosen the staked part of the nut completely, otherwise the screw of the drive shaft may be damaged.

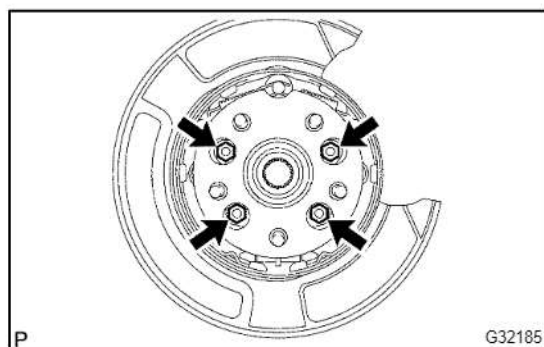
- (b) While applying the brakes, remove the lock axle hub LH nut.

**4. SEPARATE REAR DISC BRAKE CALIPER ASSY LH**

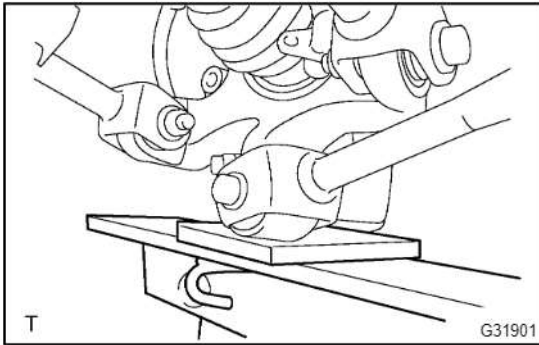
- (a) Remove the bolt, and separate the flexible hose from the shock absorber.
- (b) Remove the 2 bolts and separate rear disc brake caliper assy.

NOTICE:

Use a string or other device to keep the brake caliper from hanging down.

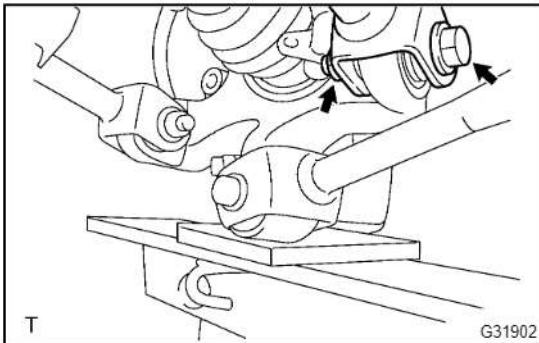
5. REMOVE REAR DISC (SEE PAGE 32-29)**6. REMOVE REAR AXLE HUB & BEARING ASSY LH**

- (a) Remove the 4 bolts and the rear axle hub & bearing assy LH.



7. SEPARATE REAR SUSPENSION ARM ASSY NO.1 LH

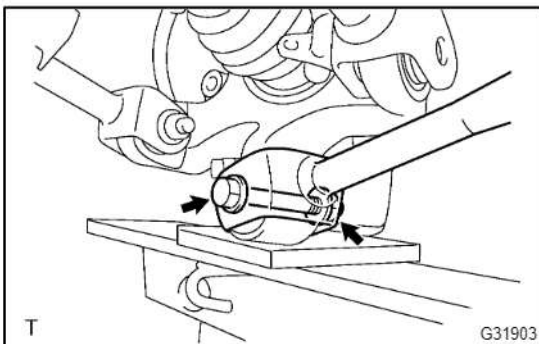
- (a) Using a jack, raise the rear axle carrier sub-assy LH, as shown in the illustration.



- (b) Remove the bolt and nut, and separate the rear suspension arm assy No.1 LH (rear axle carrier side) from the rear axle carrier.

HINT:

When removing the bolt, keep the nut from rotating.

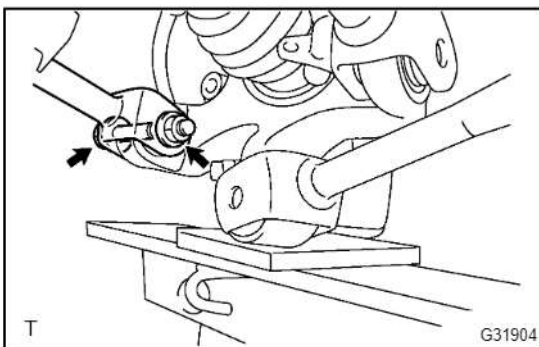


8. SEPARATE STRUT ROD ASSY REAR

- (a) Remove the bolt and nut, and separate the strut rod assy rear (rear axle carrier side) from the rear axle carrier.

HINT:

When removing the bolt, keep the nut from rotating.

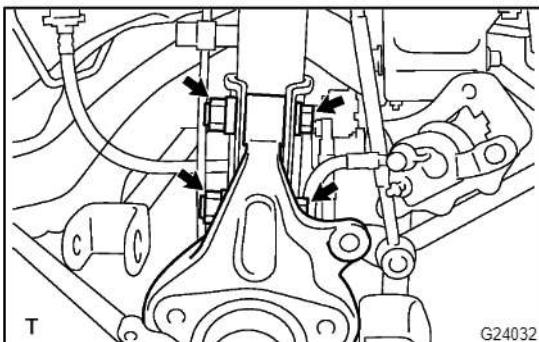


9. SEPARATE REAR SUSPENSION ARM ASSY NO.2 LH

- (a) Remove the bolt and nut, and separate the rear suspension arm assy No.2 LH (rear axle carrier side) from the rear axle carrier.

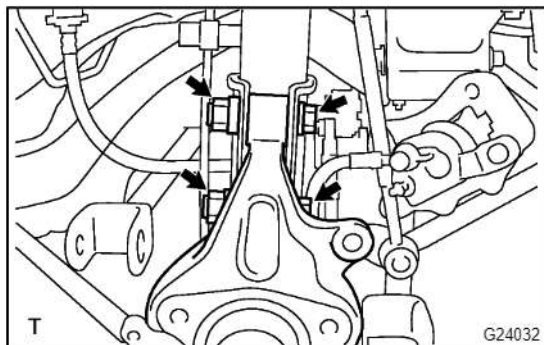
HINT:

When removing the bolt, keep the nut from rotating.



10. REMOVE REAR AXLE CARRIER SUB-ASSY LH

- (a) Remove the 2 bolts and 2 nuts, and the rear axle carrier sub-assy LH from the shock absorber.



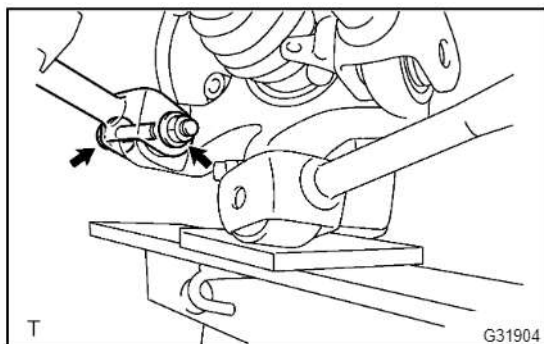
11. INSTALL REAR AXLE CARRIER SUB-ASSY LH

- (a) Install the rear axle carrier sub-assy LH with the 2 bolts and nuts.

Torque: 180 N·m (1,840 kgf·cm, 133 ft·lbf)

HINT:

Insert the bolt from the rear side of the vehicle and temporarily install the nut to the shock absorber.

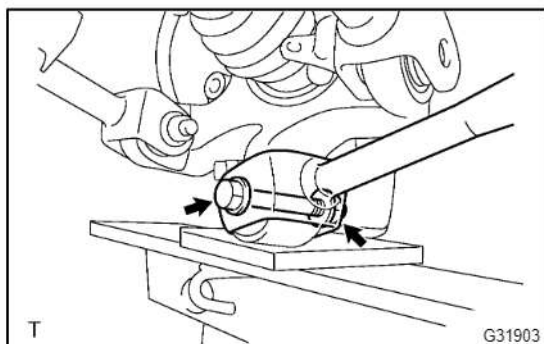


12. TEMPORARILY TIGHTEN REAR SUSPENSION ARM ASSY NO.2 LH

- (a) Temporarily tighten the rear suspension arm assy No.2 LH with the bolt and nut.

HINT:

Insert the bolt from the rear side of the vehicle and lightly tighten the bolt.

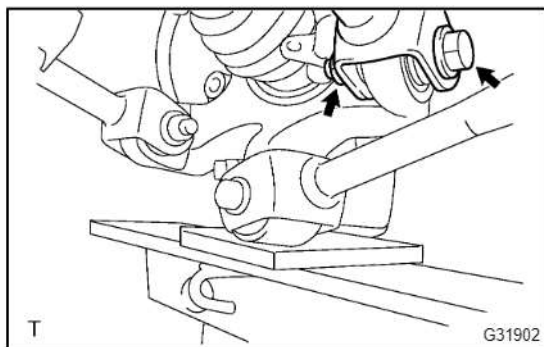


13. TEMPORARILY TIGHTEN STRUT ROD ASSY REAR

- (a) Temporarily tighten the strut rod assy rear with the bolt and nut.

HINT:

Insert the bolt from the inside of the vehicle and lightly tighten the bolt.

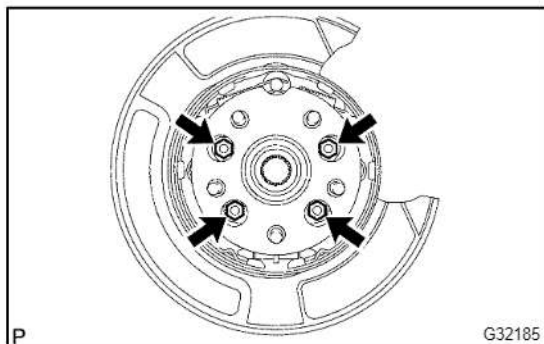


14. TEMPORARILY TIGHTEN REAR SUSPENSION ARM ASSY NO.1 LH

- (a) Temporarily tighten the rear suspension arm assy No.1 LH with the bolt and nut.

HINT:

Insert the bolt from the front side of the vehicle and lightly tighten the bolt.

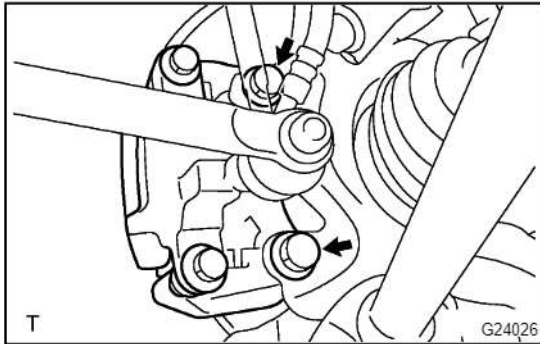


15. INSTALL REAR AXLE HUB & BEARING ASSY LH

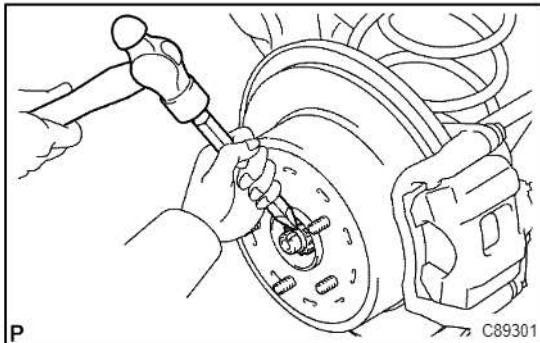
- (a) Install the rear axle hub & bearing assy LH with the 4 bolts.

Torque: 75 N·m (765 kgf·cm, 55 ft·lbf)

16. INSPECT BEARING BACKLASH (SEE PAGE 30-3)
17. INSPECT AXLE HUB DEVIATION (SEE PAGE 30-3)
18. INSTALL REAR DISC (SEE PAGE 32-29)



19. **INSTALL REAR DISC BRAKE CALIPER ASSY LH**
 - (a) Install the rear disc brake caliper assy LH with the 2 bolts.
Torque: 78 N·m (800 kgf·cm, 58 ft·lbf)
 - (b) Install the flexible hose with the bolt to the shock absorber.
Torque: 19 N·m (192 kgf·cm, 14 ft·lbf)



20. **INSTALL REAR AXLE SHAFT LH NUT**
 - (a) Install a new axle shaft LH nut.
Torque: 294 N·m, (3,000 kgf·cm, 217 ft·lbf)
 - (b) Using a chisel and a hammer, stake the axle shaft LH nut.

21. **INSTALL SPEED SENSOR REAR LH**
 - (a) Install the speed sensor with the bolt.
Torque: 8.0 N·m (82 kgf·cm, 71 in·lbf)

NOTICE:

- Be careful not to damage the speed sensor.
- Prevent foreign matter from adhering to the speed sensor.
- Do not twist the sensor wire when installing the sensor.

22. **INSTALL REAR WHEEL**
Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)
23. **STABILIZE SUSPENSION (SEE PAGE 27-29)**
24. **FULLY TIGHTEN REAR SUSPENSION ARM ASSY NO.2 LH (SEE PAGE 27-25)**
25. **FULLY TIGHTEN STRUT ROD ASSY REAR (SEE PAGE 27-13)**
26. **FULLY TIGHTEN REAR SUSPENSION ARM ASSY NO.1 LH (SEE PAGE 27-18)**
27. **INSPECT AND ADJUST REAR WHEEL ALIGNMENT (SEE PAGE 27-5)**
28. **CHECK ABS SPEED SENSOR SIGNAL (SEE PAGE 05-765)**

REAR AXLE HUB & BEARING ASSY LH (FF)

REPLACEMENT

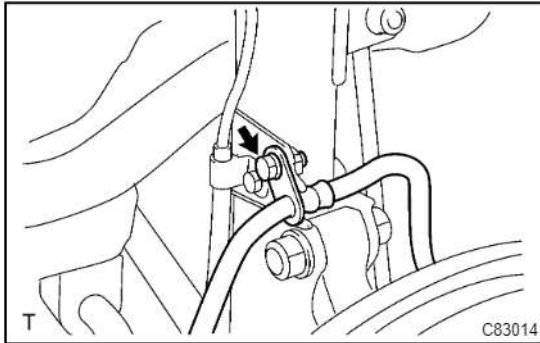
3000L-02

HINT:

COMPONENTS: SEE PAGE 30-4

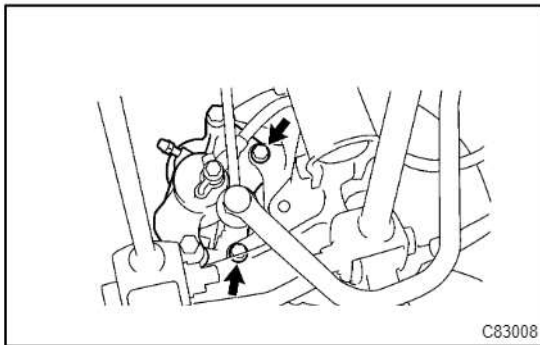
Replace the RH side by the same procedures with LH side.

1. REMOVE REAR WHEEL



2. SEPARATE RR DISC BRAKE CALIPER ASSY RH

- (a) Remove the bolt and separate the flexible hose.



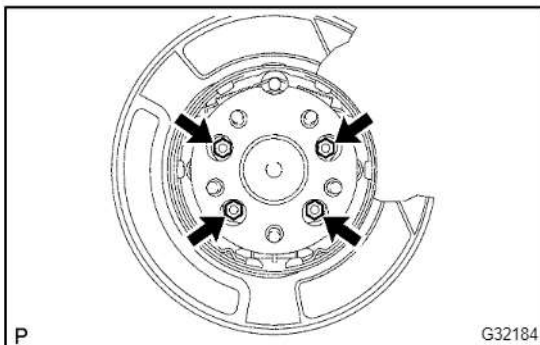
- (b) Remove the 2 bolts and brake caliper.

- (c) Support the brake caliper securely.

3. REMOVE REAR DISC (SEE PAGE 32-29)

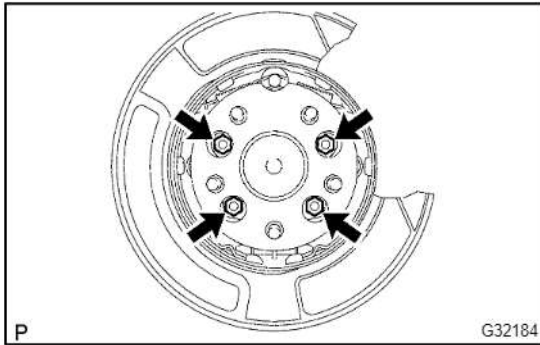
4. SEPARATE SKID CONTROL SENSOR WIRE

- (a) Disconnect the connector.



5. REMOVE REAR AXLE HUB & BEARING ASSY LH

- (a) Remove the 4 bolts and axle hub.



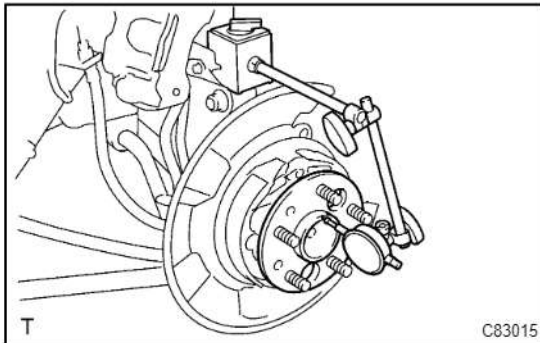
6. INSTALL REAR AXLE HUB & BEARING ASSY LH

- (a) Install the axle hub with the 4 bolts.

Torque: 80 N·m (816 kgf·cm, 59 ft·lbf)

7. INSTALL SKID CONTROL SENSOR WIRE

- (a) Connect the connector.

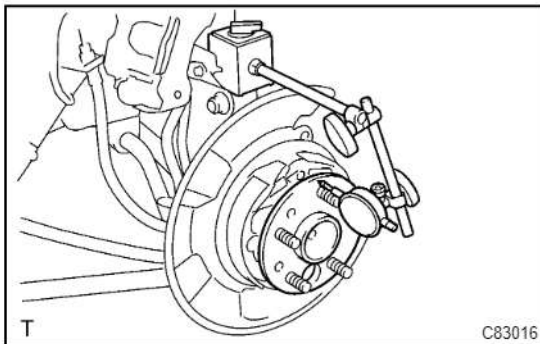


8. INSPECT BEARING BACKLASH

- (a) Set a dial indicator near the center of the axle hub and check the backlash in the bearing shaft direction.

Maximum: 0 mm (0 in.)

If the backlash exceeds the maximum, replace the axle hub assembly.



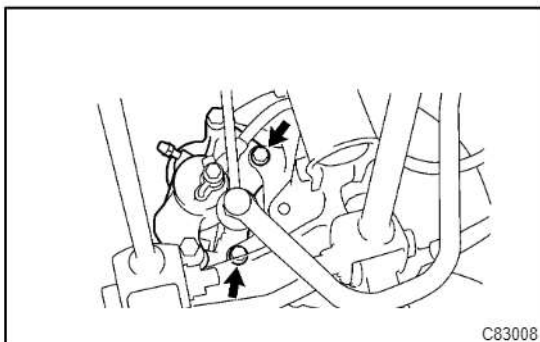
9. INSPECT AXLE HUB DEVIATION

- (a) Using a dial indicator, check the deviation at the surface of the axle hub outside the hub bolt.

Maximum: 0.08 mm (0.0031 in.)

If the backlash exceeds the maximum, replace the axle hub assembly.

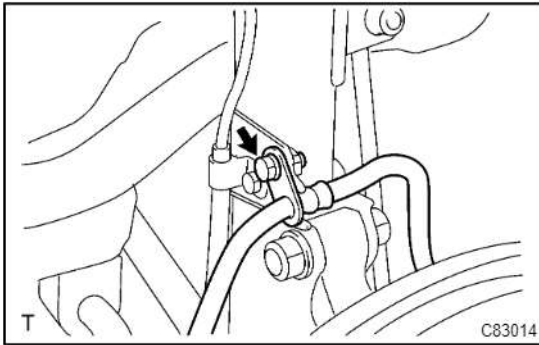
10. INSTALL REAR DISC (SEE PAGE 32-29)



11. INSTALL RR DISC BRAKE CALIPER ASSY RH

- (a) Install the brake caliper with the 2 bolts.

Torque: 78 N·m (800 kgf·cm, 58 ft·lbf)



- (b) Install the flexible hose with the bolt.
Torque: 19 N·m (194 kgf·cm, 14 ft·lbf)

12. INSTALL REAR WHEEL

Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)

13. INSPECT REAR WHEEL ALIGNMENT (SEE PAGE [27-5](#))

14. CHECK ABS SPEED SENSOR SIGNAL (SEE PAGE [05-765](#))

REAR AXLE HUB & BEARING ASSY LH (4WD)

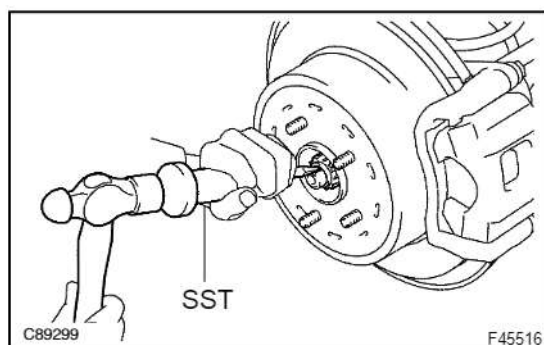
REPLACEMENT

3000N-02

HINT:

COMPONENTS: SEE PAGE 30-4

1. REMOVE REAR WHEEL
2. SEPARATE SPEED SENSOR REAR LH



3. REMOVE REAR AXLE SHAFT LH NUT

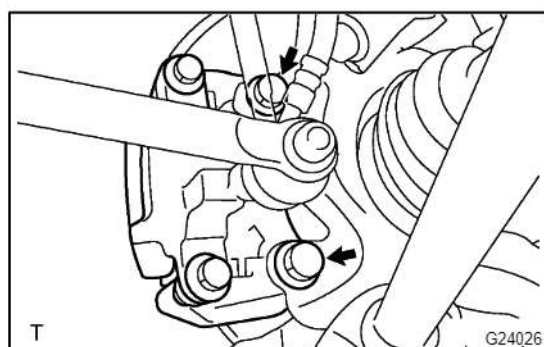
- (a) Using SST and a hammer, unstake the staked part of the axle hub LH nut.

SST 09930-00010

NOTICE:

Loosen the staked part of the nut completely, otherwise the screw of the drive shaft may be damaged.

- (b) While applying the brakes, remove the lock axle hub LH nut.



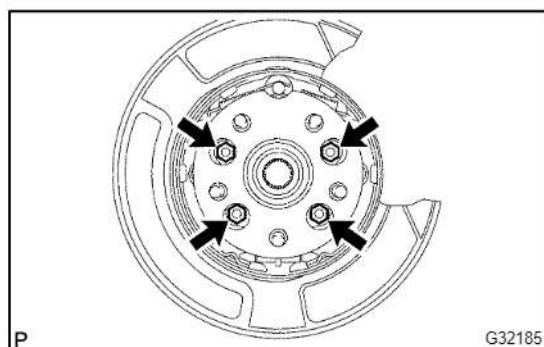
4. SEPARATE REAR DISC BRAKE CALIPER ASSY LH

- (a) Remove the bolt, and separate the flexible hose from the shock absorber.
- (b) Remove the 2 bolts and separate rear disc brake caliper assy.

NOTICE:

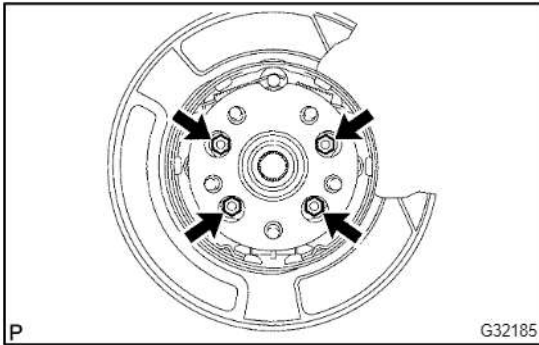
Use a string or other device to keep the brake caliper from hanging down.

5. REMOVE REAR DISC (SEE PAGE 32-29)



6. REMOVE REAR AXLE HUB & BEARING ASSY LH

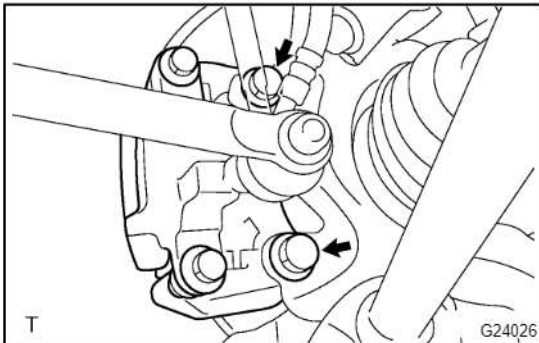
- (a) Remove the 4 bolts and the rear axle hub & bearing assy LH.



7. INSTALL REAR AXLE HUB & BEARING ASSY LH

- (a) Install the rear axle hub & bearing assy LH with the 4 bolts.
Torque: 75 N·m (765 kgf·cm, 55 ft·lbf)

8. INSTALL REAR DISC (SEE PAGE 32-29)



9. INSTALL REAR DISC BRAKE CALIPER ASSY LH

- (a) Install the rear disc brake caliper assy LH with the 2 bolts.
Torque: 78 N·m (800 kgf·cm, 58 ft·lbf)
(b) Install the flexible hose with the bolt to the shock absorber.
Torque: 19 N·m (192 kgf·cm, 14 ft·lbf)

10. INSTALL REAR AXLE SHAFT LH NUT

- (a) Install a new axle shaft LH nut.
Torque: 294 N·m, (3,000 kgf·cm, 217 ft·lbf)

11. REMOVE REAR DISC BRAKE CALIPER ASSY LH

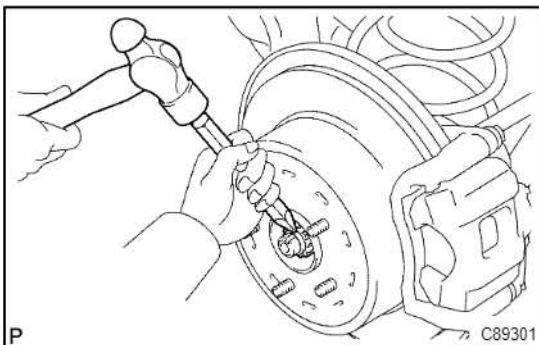
12. REMOVE REAR DISC

13. INSPECT BEARING BACKLASH (SEE PAGE 30-3)

14. INSPECT AXLE HUB DEVIATION (SEE PAGE 30-3)

15. INSTALL REAR DISC (SEE PAGE 32-29)

16. INSTALL REAR DISC BRAKE CALIPER ASSY LH



17. INSTALL REAR AXLE SHAFT LH NUT

- (a) Install a new axle shaft LH nut.
Torque: 294 N·m, (3,000 kgf·cm, 217 ft·lbf)
(b) Using a chisel and a hammer, stake the axle shaft LH nut.

18. INSTALL SPEED SENSOR REAR LH

19. INSTALL REAR WHEEL

20. CHECK ABS SPEED SENSOR SIGNAL (SEE PAGE 05-765)