

DRIVE SHAFT, PROPELLER SHAFT, AXLE

300EW-02

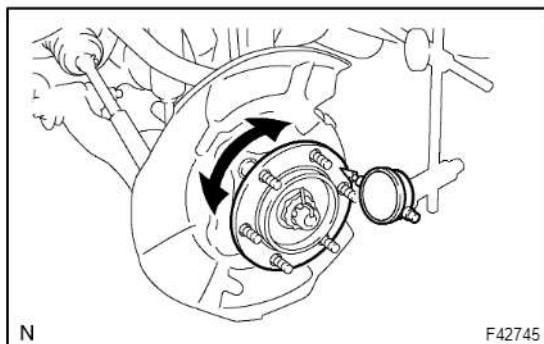
PROBLEM SYMPTOMS TABLE

Use the table below to help you find the cause of the problem. The numbers indicate the priority of the likely cause of the problem. Check each part in order. If necessary, replace these parts.

Symptom	Suspect Area	See page
Wander/pulls	4. Tires (Worn or improperly inflated)	28-1
	5. Wheel alignment (Incorrect)	26-7
	6. Steering linkage (Loosen or worn)	-
	7. Hub bearings (Loosen or worn)	30-2
	8. Steering gear (Out of adjustment or broken)	-
	9. Suspension parts (Worn out)	-
Front wheel shimmy	1. Tires (Worn or improperly inflated)	28-1
	2. Wheels (Out of balance)	28-1
	3. Shock absorber (Worn out)	26-12
	4. Wheel alignment (Incorrect)	26-7
	5. Ball joints (Worn)	26-19
		26-22
	6. Hub bearings (Loosen or worn)	30-2
	7. Steering linkage (Loosen or worn)	-
Rear wheel shimmy	8. Steering gear (Out of adjustment or broken)	-
	1. Tires (Worn or improperly inflated)	28-1
	2. Wheels (Out of balance)	28-1
	3. Shock absorber (Worn out)	27-3
		27-7
Noise	4. Hub bearings (Loosen or worn)	27-15
		30-2
Vibration	1. Spider bearing (Worn or stuck)	30-4
		30-11
	1. Propeller shaft (Runout)	30-4
		30-11
	2. Propeller shaft (Imbalance)	-

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ON-VEHICLE INSPECTION

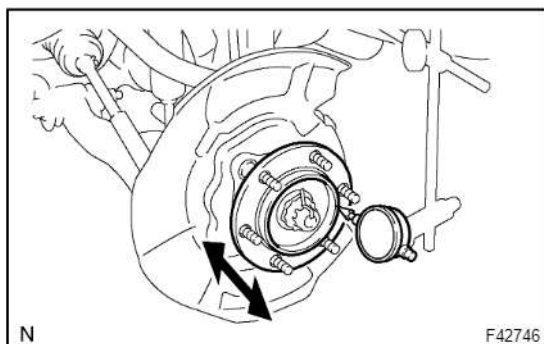


1. INSPECT FRONT AXLE HUB BEARING

- (a) Remove the front wheel.
- (b) Remove the front disc brake caliper (See page 32-17).
- (c) Remove the front disc.
- (d) Inspect the axle hub backlash.
 - (1) Using a dial indicator, check the backlash near the center of the axle hub.

Maximum: 0.05 mm (0.0020 in.)

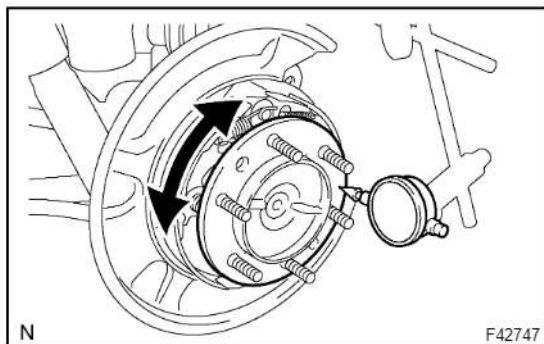
If the backlash exceeds the maximum, replace the bearing.



- (e) Inspect the axle hub deviation.
 - (1) Using a dial indicator, check the deviation at the surface of the axle hub.

Maximum: 0.05 mm (0.0020 in.)

If the deviation exceeds the maximum, replace the bearing.

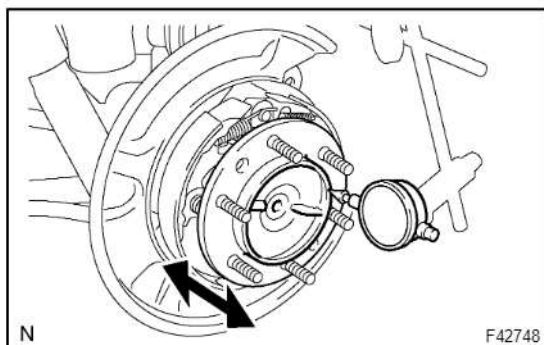


2. INSPECT REAR AXLE SHAFT BEARING

- (a) Remove the rear wheel.
- (b) Remove the rear disc brake caliper (See page 32-23).
- (c) Remove the rear disc.
- (d) Inspect the axle shaft backlash.
 - (1) Using a dial indicator, check the backlash near the center of the axle shaft.

Maximum: 0.05 mm (0.0020 in.)

If the backlash exceeds the maximum, replace the bearing.



- (e) Inspect the axle shaft deviation.
 - (1) Using a dial indicator, check the deviation at the surface of the axle shaft.

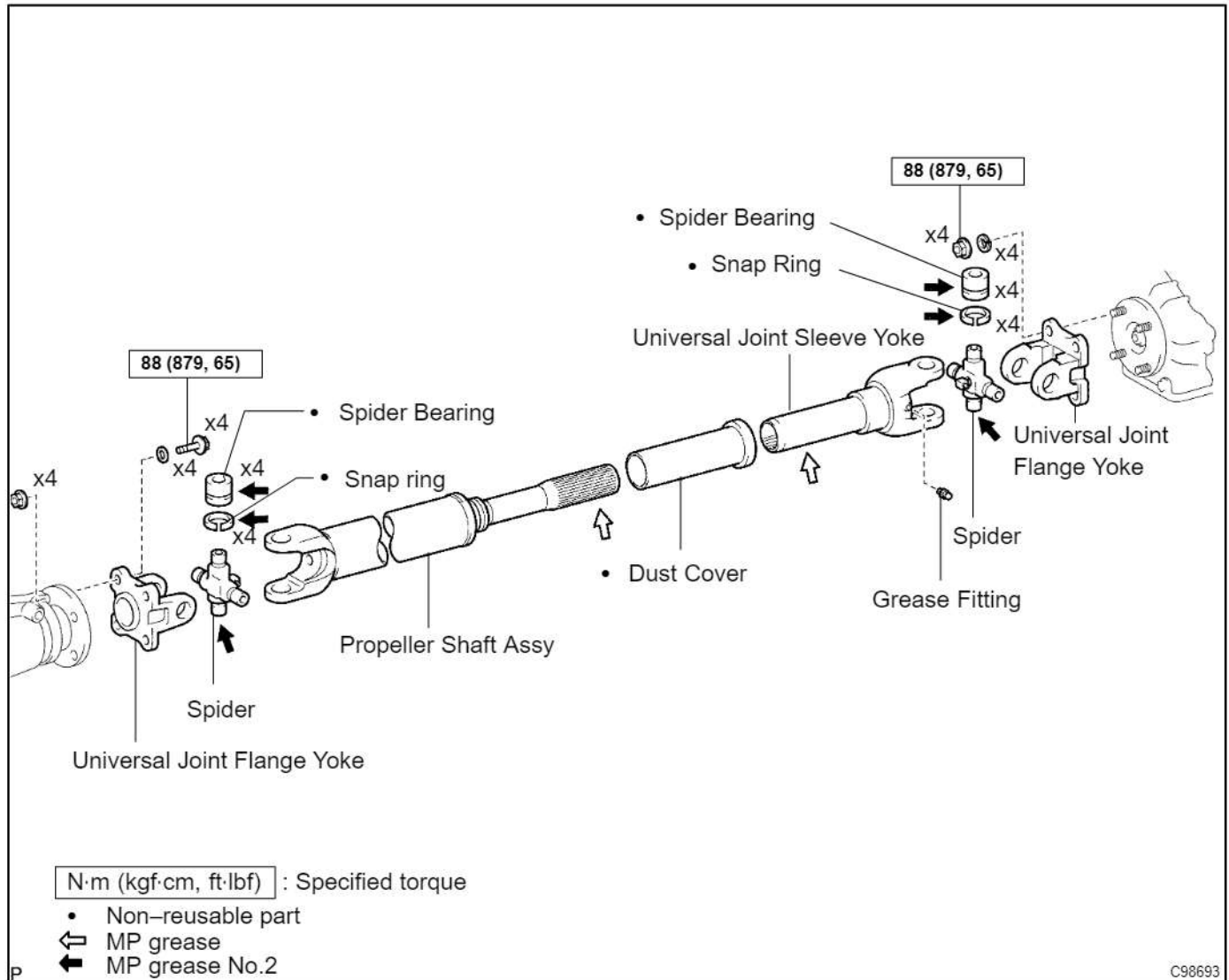
Maximum: 0.05 mm (0.0020 in.)

If the deviation exceeds the maximum, replace the bearing.

PROPELLER SHAFT ASSY FRONT (4WD)

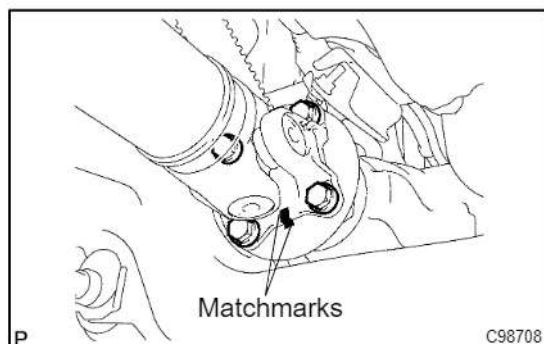
COMPONENTS

300EY-01



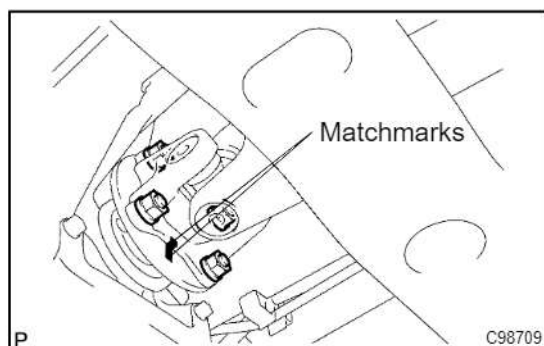
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OVERHAUL

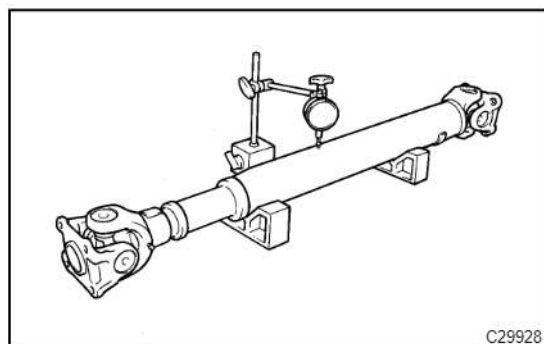


1. REMOVE PROPELLER SHAFT ASSY FRONT

- Place matchmarks on the propeller shaft flange and differential.
- Remove the 4 nuts, 4 bolts, 4 washers and front propeller shaft assy.



- Place matchmarks on the propeller shaft flange and transfer flange.
- Remove the 4 nuts, 4 washers and front propeller shaft assy.



2. INSPECT PROPELLER SHAFT ASSY FRONT

- Using a dial indicator, check the propeller shaft runout.

Maximum runout: 0.3 mm (0.012 in.)

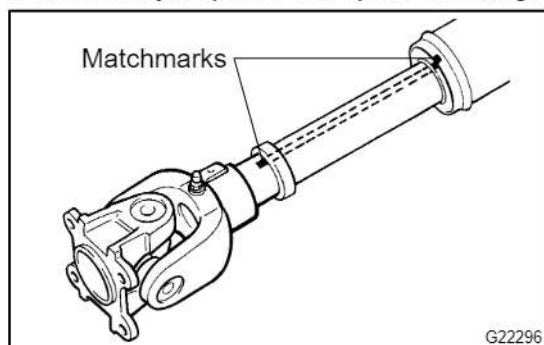
If the shaft runout is greater than maximum, replace the propeller shaft.

3. INSPECT FRONT PROPELLER SHAFT UNIVERSAL JOINT SPIDER BEARING

- Check the spider bearings for wear or damage.
- Check the spider bearing axial play by turning the yoke with holding the shaft tightly.

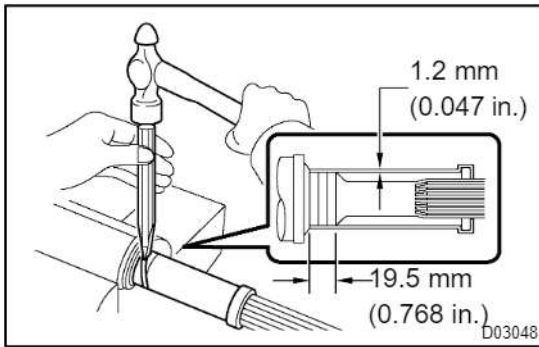
Maximum bearing axial play: 0 mm (0 in.)

If necessary, replace the spider bearing.



4. REMOVE FR PROPELLER SHAFT UNIVERSAL JOINT SLEEVE YOKE SUB-ASSY

- Place matchmarks on the propeller shaft and sleeve yoke.
- Remove the sleeve yoke from the propeller shaft.
- Remove the grease fitting from the universal joint sleeve yoke.

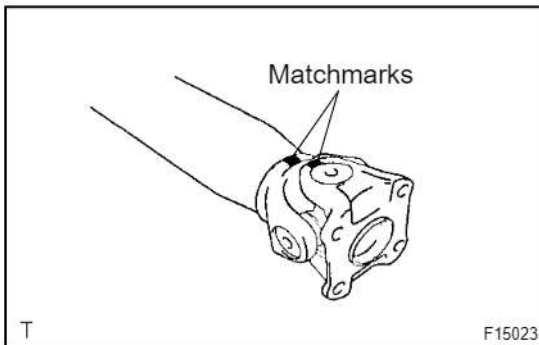


5. REMOVE REAR PROPELLER SHAFT SLIDING SHAFT DUST COVER SUB-ASSY

- (a) Cut the dust cover spirally at the pressing-in part with a saw and pry it off with a chisel and a hammer.

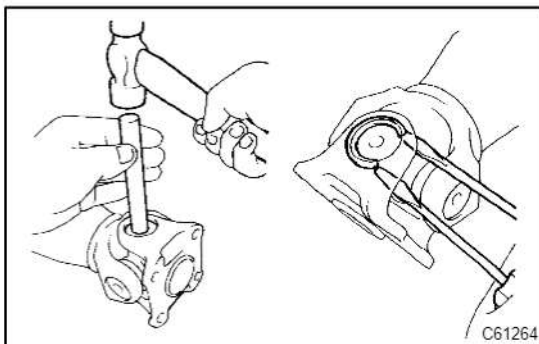
NOTICE:

Do not damage the propeller shaft. If damage, replace the shaft with a new one.

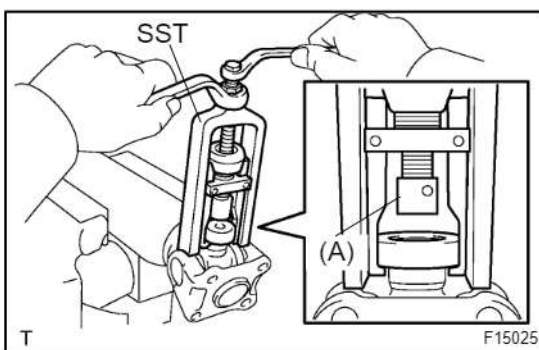


6. REMOVE FRONT PROPELLER SHAFT UNIVERSAL JOINT SPIDER BEARING

- (a) Place matchmarks on the flange yoke and sleeve yoke.



- (b) Using a brass bar and a hammer, slightly tap in the spider bearing outer races.
- (c) Using 2 screwdrivers, remove the 4 snap rings from the grooves.

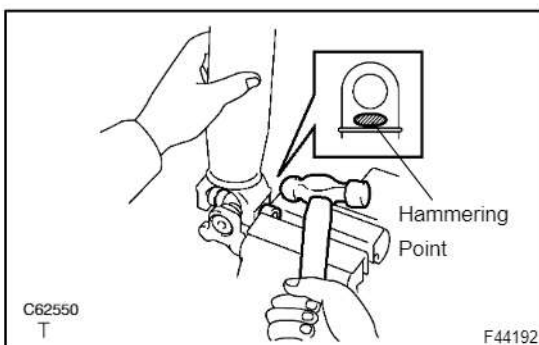


- (d) Using SST, push out the spider bearing from the propeller shaft.

SST 09332-25010

HINT:

Sufficiently raise the part indicated by (A) so that it does not come into contact with the spider bearing.



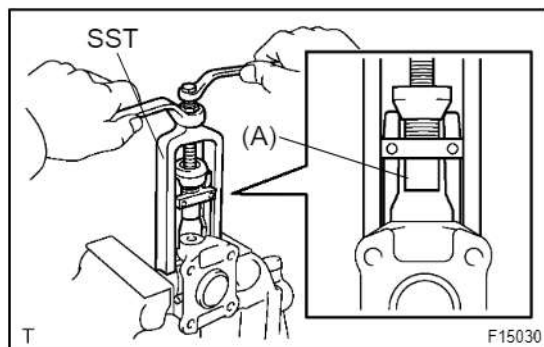
- (e) Clamp the spider bearing outer race in a vise and tap off the propeller shaft with a hammer.

HINT:

Remove the bearing on opposite side in the same procedure.

NOTICE:

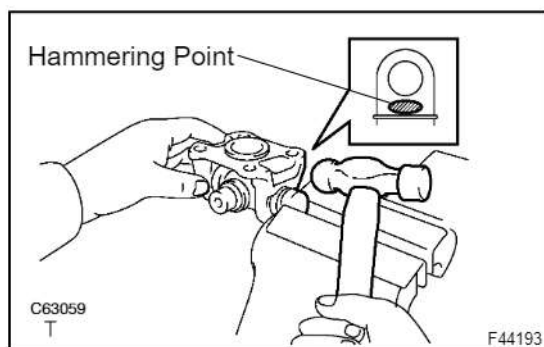
Do not tap the shaft.



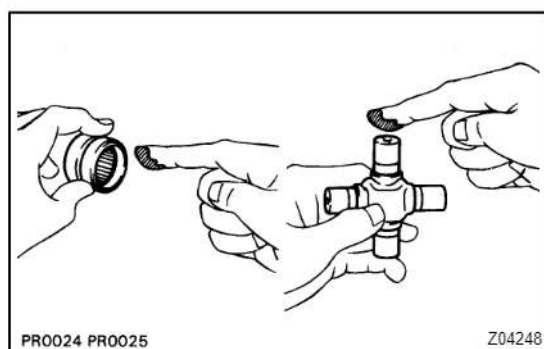
- (f) Install the 2 removed spider bearing outer race to the spider.
- (g) Using SST, push out the bearing from the yoke.
SST 09332-25010

HINT:

Sufficiently raise the part indicated by (A) so that it does not come into contact with the bearing.

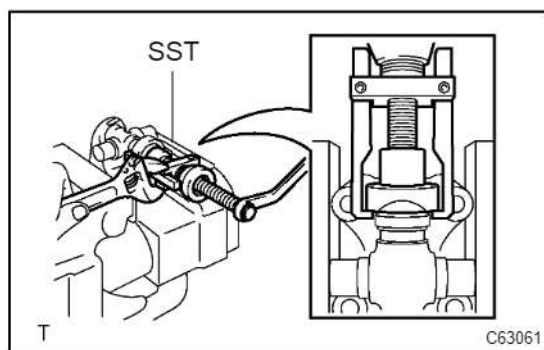


- (h) Clamp the outer bearing race in a vise and tap off the flange yoke with a hammer.
- (i) Remove the spider.

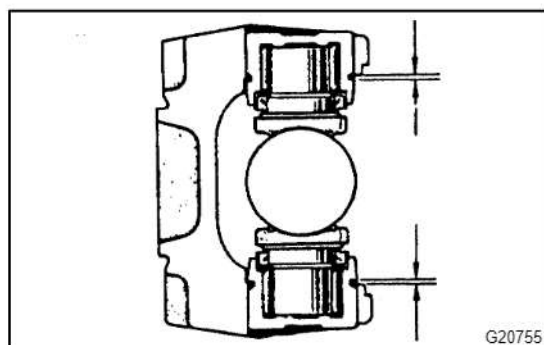


7. INSTALL FRONT PROPELLER SHAFT UNIVERSAL JOINT SPIDER BEARING

- (a) Apply MP grease No.2 to a new spider and spider bearing.
- (b) Fit the spider into the flange yoke.



- (c) Using SST, install the spider bearings on the spider.
SST 09332-25010
- (d) Using SST, adjust both bearings so that the snap ring grooves are at maximum and equal in width.
SST 09332-25010



- (e) Install the 4 new snap rings of equal thickness which will allow no axial play.

HINT:

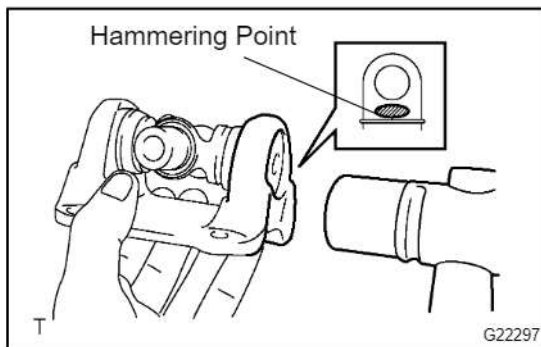
Do not reuse the snap rings.

Thickness of snap ring

Parts No.	Thickness mm (in.)	Mark
90520-25039	2.28 – 2.30	1
90520-25040	2.30 – 2.32	2
90520-25041	2.32 – 2.34	–
90520-25042	2.34 – 2.36	Brown
90520-25043	2.36 – 2.38	Blue
90520-25044	2.38 – 2.40	6
90520-25045	2.40 – 2.42	7
90520-25046	2.42 – 2.44	8
90520-25047	2.44 – 2.46	9
90520-25048	2.46 – 2.48	10
90520-25049	2.48 – 2.50	A
90520-25050	2.50 – 2.52	B
90520-25051	2.52 – 2.54	C
90520-25052	2.54 – 2.56	D
90520-25053	2.56 – 2.58	E
90520-25054	2.18 – 2.20	J
90520-25055	2.20 – 2.22	K
90520-25056	2.22 – 2.24	F
90520-25057	2.24 – 2.26	G
90520-25058	2.26 – 2.28	H

NOTICE:

- **Must use a new retainer ring.**
- **Must use retainer rings of the same thickness as possible on both ends.**

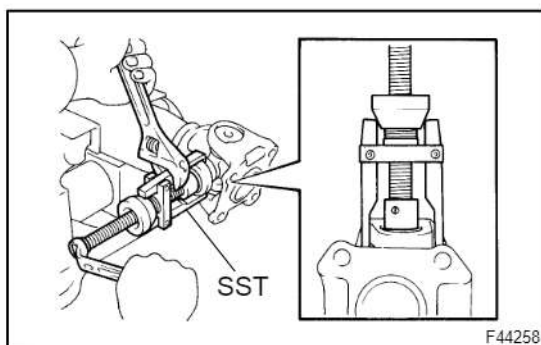


- (f) Using a hammer, tap the yoke until there is no clearance between the spider bearing outer race and snap ring.

HINT:

Install a new spider bearing on the sleeve side in the procedure described above.

- (g) Align the matchmarks on the flange yoke with the one the sleeve yoke.



- (h) Using SST, install the spider bearings on the spider.
SST 09332-25010
- (i) Using SST, adjust both bearings so that the snap ring grooves are at maximum and equal in width.
SST 09332-25010

- (j) Install the new 4 snap rings of equal thickness which will allow no axial play.

HINT:

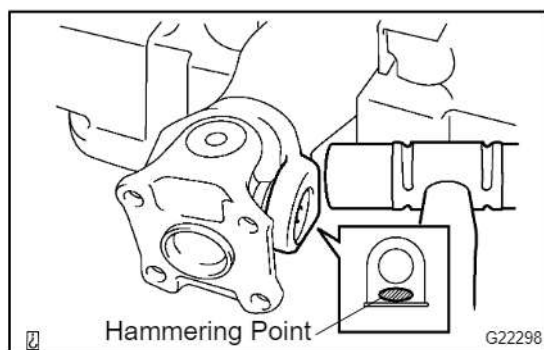
Do not reuse the snap rings.

Thickness of snap ring

Parts No.	Thickness mm (in.)	Mark
90520-25039	2.28 – 2.30	1
90520-25040	2.30 – 2.32	2
90520-25041	2.32 – 2.34	–
90520-25042	2.34 – 2.36	Brown
90520-25043	2.36 – 2.38	Blue
90520-25044	2.38 – 2.40	6
90520-25045	2.40 – 2.42	7
90520-25046	2.42 – 2.44	8
90520-25047	2.44 – 2.46	9
90520-25048	2.46 – 2.48	10
90520-25049	2.48 – 2.50	A
90520-25050	2.50 – 2.52	B
90520-25051	2.52 – 2.54	C
90520-25052	2.54 – 2.56	D
90520-25053	2.56 – 2.58	E
90520-25054	2.18 – 2.20	J
90520-25055	2.20 – 2.22	K
90520-25056	2.22 – 2.24	F
90520-25057	2.24 – 2.26	G
90520-25058	2.26 – 2.28	H

NOTICE:

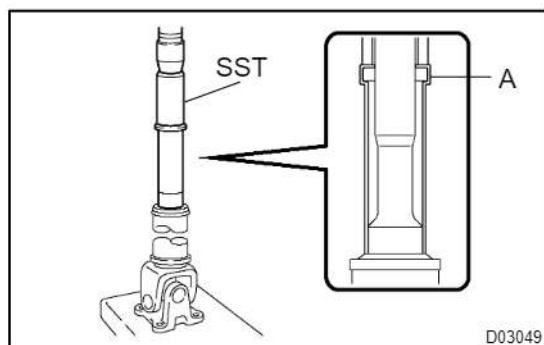
- **Must use a new retainer ring.**
- **Must use retainer rings of the same thickness as possible on both ends.**



- (k) Using a plastic hammer, tap the yoke until there is no clearance between the spider bearing outer race and snap ring.

HINT:

Install a new spider bearing on the sleeve side in the procedure described above.

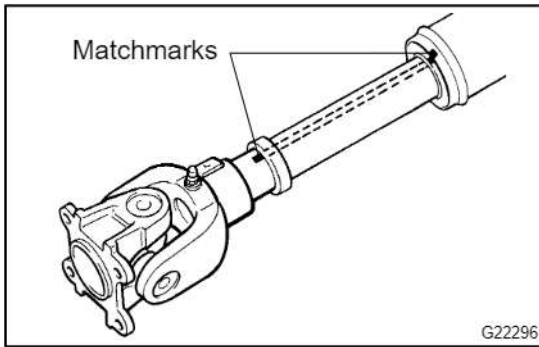


8. INSTALL REAR PROPELLER SHAFT SLIDING SHAFT DUST COVER SUB-ASSY

- (a) Using SST and press, press in a new dust cover.
SST 09636-20010

NOTICE:

Place the universal joint straight when pressing in the dust cover. Apply MP grease to the "A" part.



9. INSTALL FR PROPELLER SHAFT UNIVERSAL JOINT SLEEVE YOKE SUB-ASSY

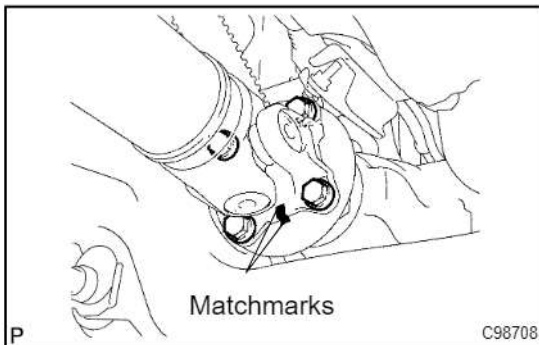
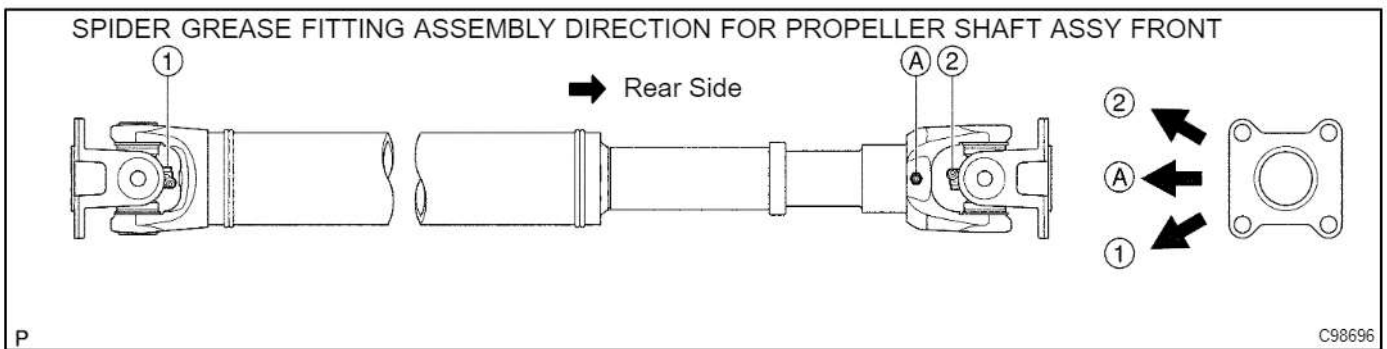
- Install the grease fitting to the universal joint sleeve yoke.
- Apply MP grease to the propeller shaft spline and sleeve yoke sliding surface.
- Align the matchmarks on the sleeve yoke propeller shaft.
- Install the propeller shaft into the sleeve yoke.

10. INSPECT FRONT PROPELLER SHAFT UNIVERSAL JOINT SPIDER BEARING

11. INSPECT PROPELLER SHAFT ASSY FRONT

HINT:

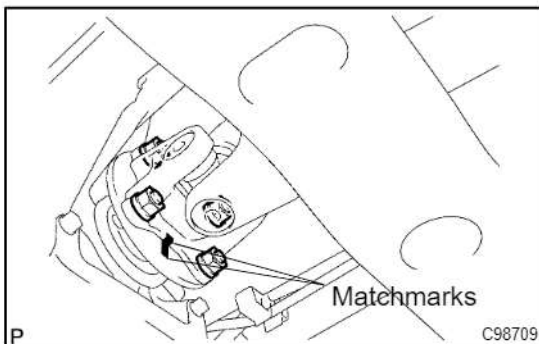
When replacing the spider bearing, be sure that the grease fitting assembly hole is facing to the direction shown in the illustration.



12. INSTALL PROPELLER SHAFT ASSY FRONT

- Align the matchmarks on the yoke and differential flange.
- Install the propeller shaft assy with the 4 bolts, 4 nuts and 4 washers.

Torque: 88 N·m (897 kgf·cm, 65 ft·lbf)



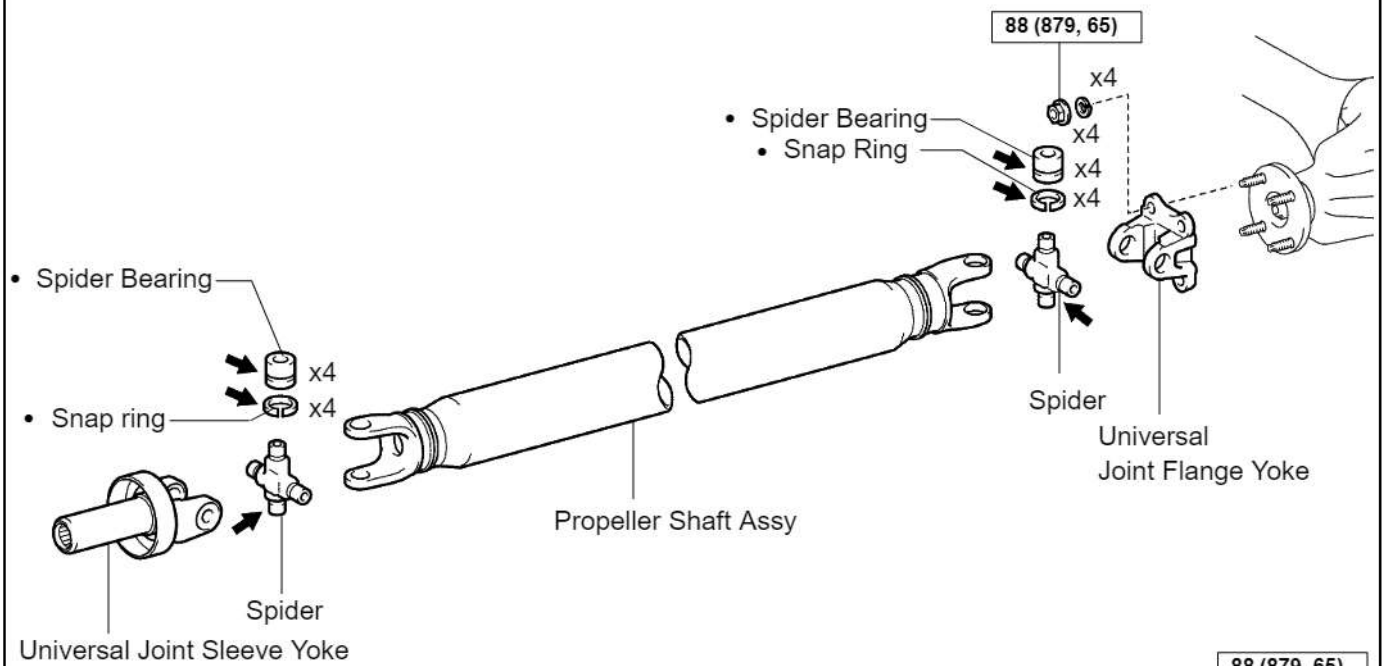
- Align the matchmarks on the yoke and transfer flange.
- Install the propeller shaft assy with the 4 nuts and 4 washers.

Torque: 88 N·m (897 kgf·cm, 65 ft·lbf)

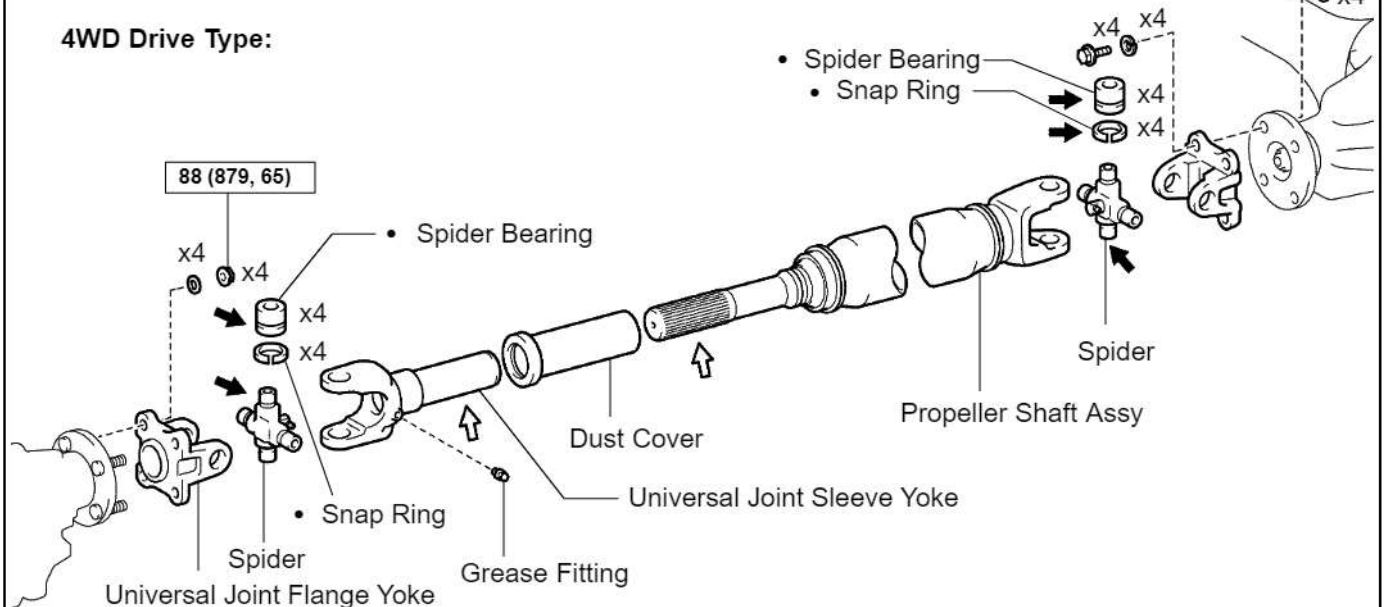
PROPELLER SHAFT ASSY COMPONENTS

300F0-01

2WD Drive Type:



4WD Drive Type:



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

• Non-reusable part

↩ MP grease

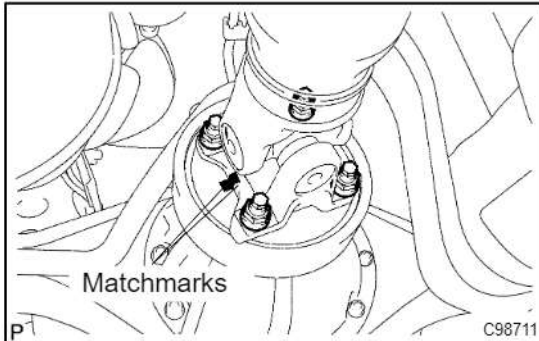
↩ MP grease No.2

P

C98707

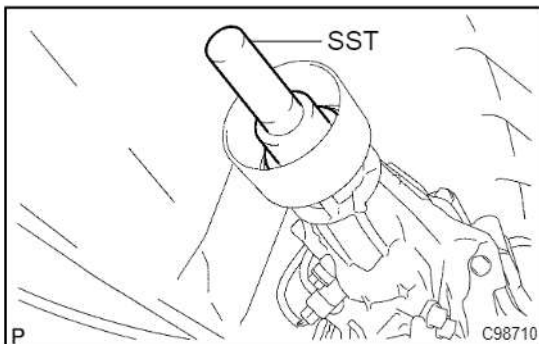
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OVERHAUL

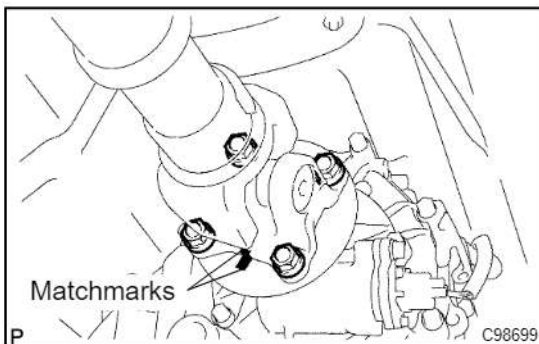


1. REMOVE PROPELLER SHAFT ASSY (2WD DRIVE TYPE)

- (a) Place matchmarks on the propeller shaft flange and differential flange.
- (b) Remove the 4 nuts and 4 washers.

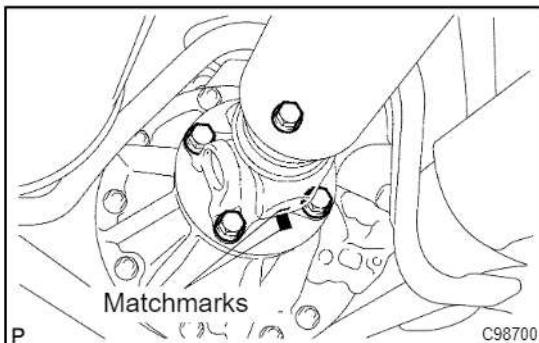


- (c) Remove the propeller shaft.
- (d) Insert SST in the transmission to prevent oil leakage.
SST 09325-40010

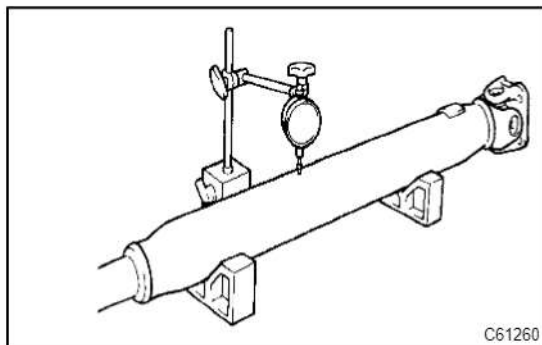


2. REMOVE PROPELLER SHAFT ASSY (4WD DRIVE TYPE)

- (a) Place matchmarks on the propeller shaft flange and transfer flange.
- (b) Remove the 4 nuts, 4 washers and propeller shaft assy.



- (c) Place matchmarks on the propeller shaft flange and differential flange.
- (d) Remove the 4 nuts, 4 bolts and 4 washers.



3. INSPECT PROPELLER SHAFT ASSY

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

Maximum runout: 0.3 mm (0.012 in.)

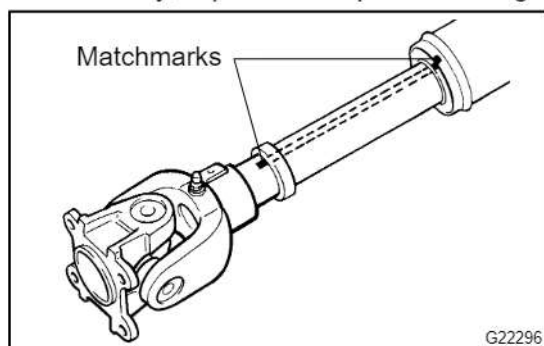
If the shaft runout is greater than maximum, replace the shaft.

4. INSPECT REAR PROPELLER SHAFT UNIVERSAL JOINT SPIDER BEARING

- (a) Check the spider bearings for wear or damage.
 (b) Check the spider bearing axial play by turning the yoke with holding the shaft tightly.

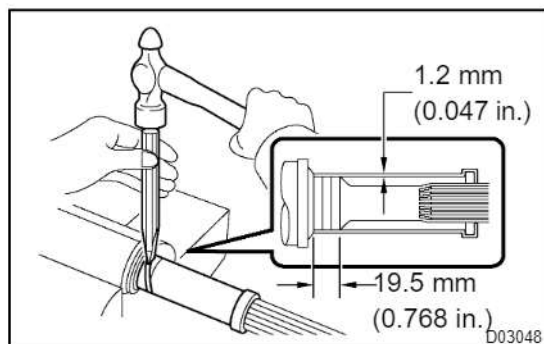
Maximum bearing axial play: 0 mm (0 in.)

If necessary, replace the spider bearing.



5. REMOVE RR PROPELLER SHAFT UNIVERSAL JOINT SLEEVE YOKE SUB-ASSY (4WD DRIVE TYPE)

- (a) Place matchmarks on the propeller shaft and sleeve yoke.
 (b) Remove the sleeve yoke from the propeller shaft.
 (c) Remove the grease fitting from the universal joint sleeve yoke.

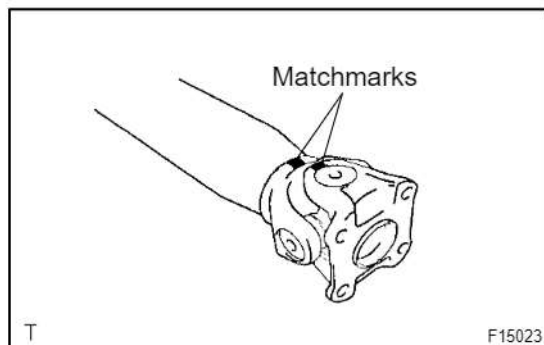


6. REMOVE REAR PROPELLER SHAFT SLIDING SHAFT DUST COVER SUB-ASSY (4WD DRIVE TYPE)

- (a) Cut the dust cover spirally at the pressing-in part with a saw and pry it off with a chisel.

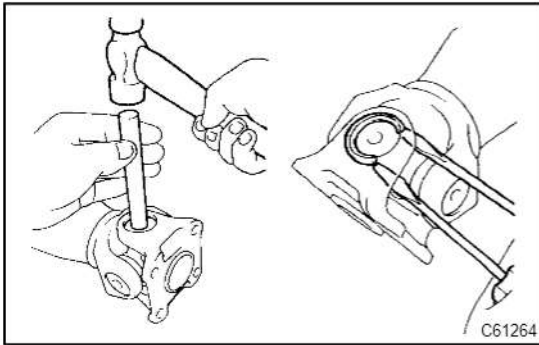
NOTICE:

Do not damage the propeller shaft. If damage, replace the shaft with a new one.

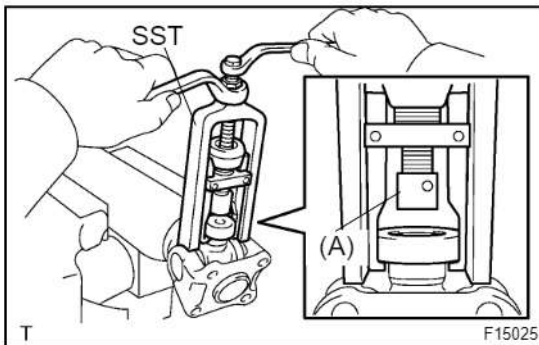


7. REMOVE REAR PROPELLER SHAFT UNIVERSAL JOINT SPIDER BEARING

- (a) Place matchmarks on the flange yoke and sleeve yoke.



- (b) Using a brass bar and a hammer, slightly tap in the spider bearing outer races.
- (c) Using 2 screwdrivers, remove the 4 snap rings from the grooves.

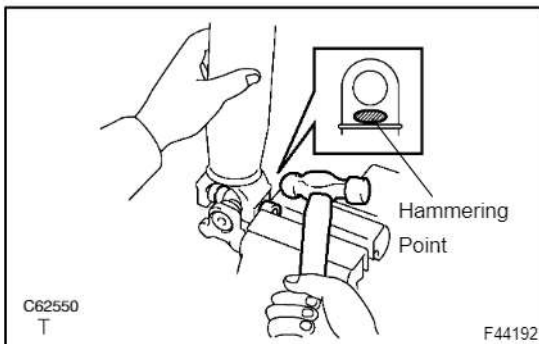


- (d) Using SST, push out the spider bearing from the propeller shaft.

SST 09332-25010

HINT:

Sufficiently raise the part indicated by (A) so that it does not come into contact with the spider bearing.



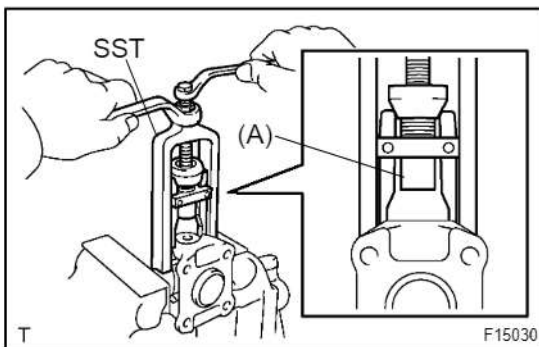
- (e) Clamp the spider bearing outer race in a vise and tap off the propeller shaft with a hammer.

HINT:

Remove the spider bearing on opposite side in the same procedure.

NOTICE:

Do not tap the shaft.



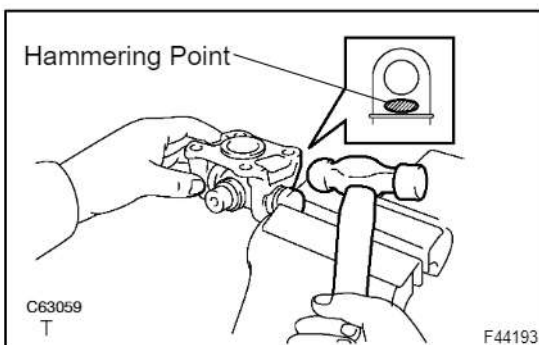
- (f) Install the 2 removed spider bearing outer race to the spider.

- (g) Using SST, push out the bearing from the yoke.

SST 09332-25010

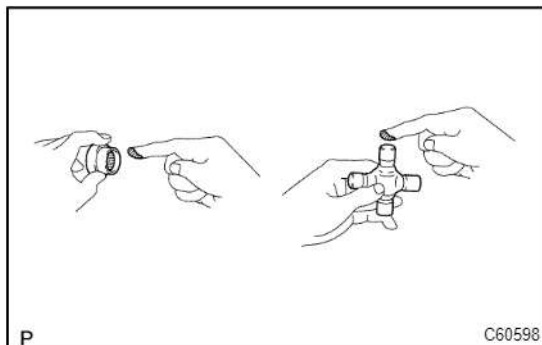
HINT:

Sufficiently raise the part indicated by (A) so that it does not come into contact with the bearing.



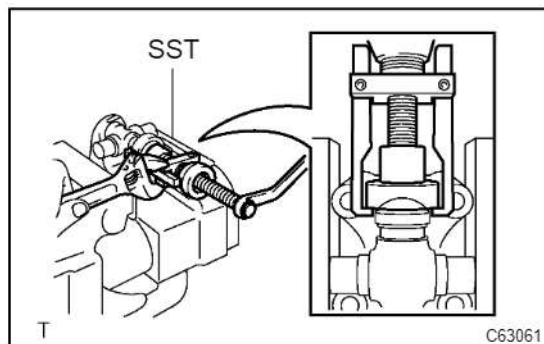
- (h) Clamp the outer bearing race in a vise and tap off the yoke with a hammer.

- (i) Remove the spider.

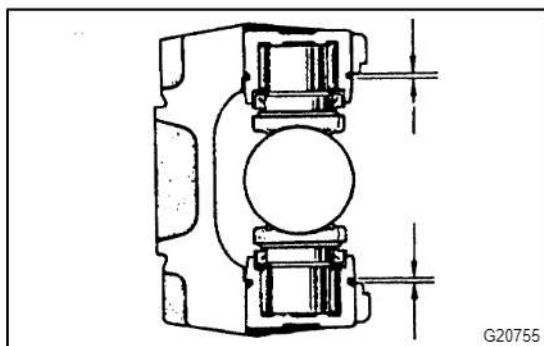


8. INSTALL REAR PROPELLER SHAFT UNIVERSAL JOINT SPIDER BEARING

- (a) Apply MP grease No.2 to a new spider and bearings.
- (b) Fit the spider into the flange yoke.



- (c) Using SST, install the bearings on the spider.
SST 09332-25010
- (d) Using SST, adjust both bearings so that the snap ring grooves are at maximum and equal in width.
SST 09332-25010



- (e) Install the new 4 snap rings of equal thickness which will allow no axial play.

HINT:

Do not reuse the snap rings.

Thickness of snap ring (Both ends thin type)

Parts No.	Thickness mm (in.)	Mark
90520-25039	2.28 – 2.30	1
90520-25040	2.30 – 2.32	2
90520-25041	2.32 – 2.34	–
90520-25042	2.34 – 2.36	Brown
90520-25043	2.36 – 2.38	Blue
90520-25044	2.38 – 2.40	6
90520-25045	2.40 – 2.42	7
90520-25046	2.42 – 2.44	8
90520-25047	2.44 – 2.46	9
90520-25048	2.46 – 2.48	10
90520-25049	2.48 – 2.50	A
90520-25050	2.50 – 2.52	B
90520-25051	2.52 – 2.54	C
90520-25052	2.54 – 2.56	D
90520-25053	2.56 – 2.58	E
90520-25054	2.18 – 2.20	J
90520-25055	2.20 – 2.22	K
90520-25056	2.22 – 2.24	F
90520-25057	2.24 – 2.26	G
90520-25058	2.26 – 2.28	H

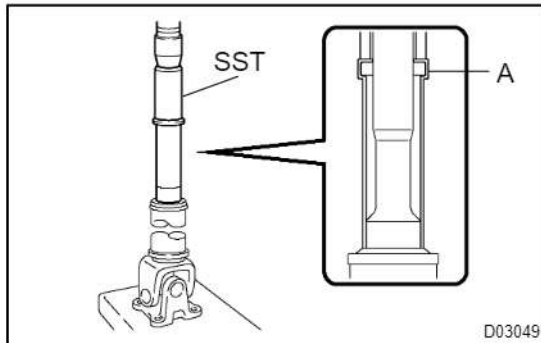
NOTICE:

- Must use a new retainer ring.
- Must use retainer rings of the same thickness as possible on both ends.

- (f) Using a hammer, tap the yoke until there is no clearance between the spider bearing outer race and snap ring.

HINT:

Install a new spider bearing on the sleeve side in the procedure described above.

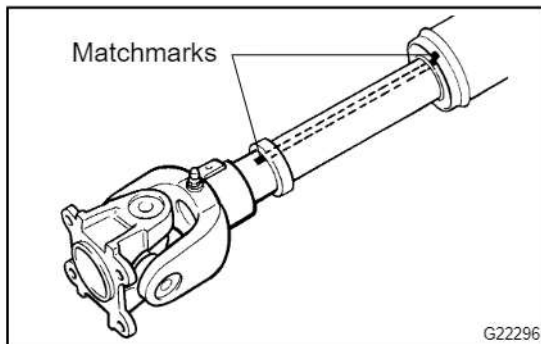


9. INSTALL REAR PROPELLER SHAFT SLIDING SHAFT DUST COVER SUB-ASSY (4WD DRIVE TYPE)

- (a) Using SST and press, press in a new dust cover.

NOTICE:

Place the universal joint straight when pressing in the dust cover. Apply MP grease to the "A" part.



10. INSTALL RR PROPELLER SHAFT UNIVERSAL JOINT SLEEVE YOKE SUB-ASSY (4WD DRIVE TYPE)

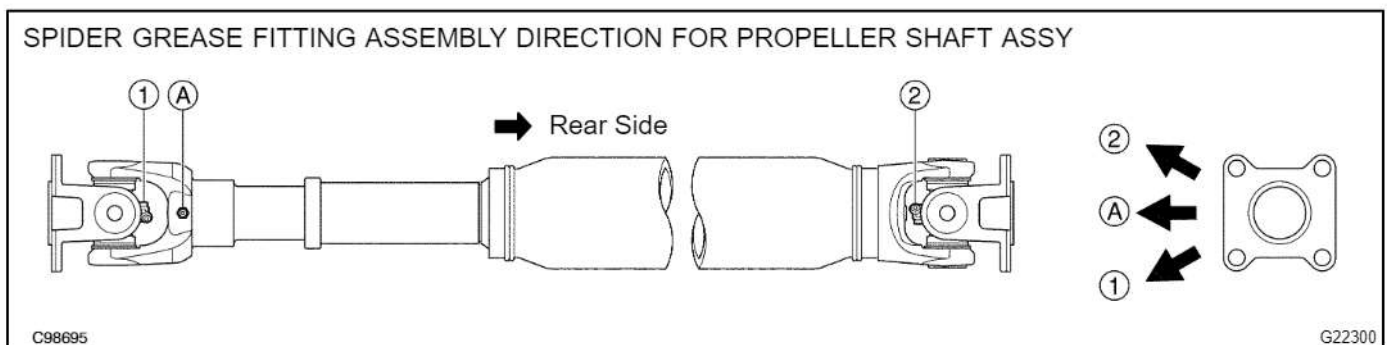
- (a) Install the grease fitting to the universal joint sleeve yoke.
 (b) Apply MP grease to the propeller shaft spline and sleeve yoke sliding surface.
 (c) Align the matchmarks on the sleeve yoke propeller shaft.
 (d) Install the propeller shaft into the sleeve yoke.

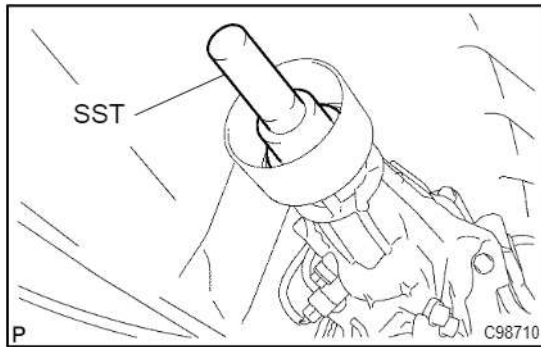
11. INSPECT REAR PROPELLER SHAFT UNIVERSAL JOINT SPIDER BEARING

12. INSPECT PROPELLER SHAFT ASSY (4WD DRIVE TYPE)

HINT:

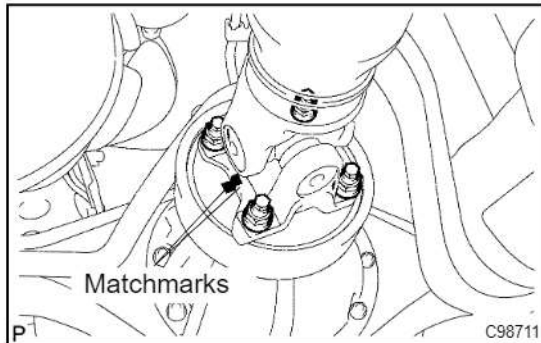
When replacing the spider bearing, be sure that the grease fitting assembly hole is facing to the direction shown in the illustration.





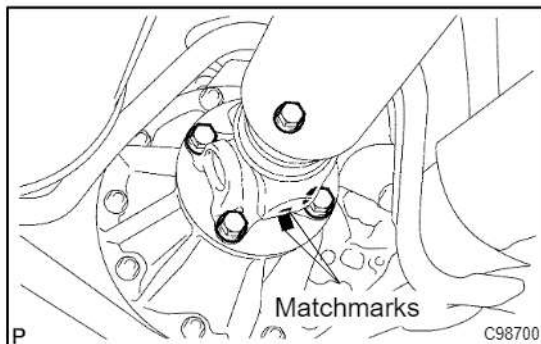
13. INSTALL PROPELLER SHAFT ASSY (2WD DRIVE TYPE, YOKE SLIDE TYPE PROPELLER SHAFT)

- (a) Remove the SST from the extension housing.
- (b) Install the propeller shaft assy in the extension housing.



- (c) Align the matchmarks on the propeller shaft flange and differential flange.
- (d) Install the propeller shaft assy with the 4 nuts and 4 washers.

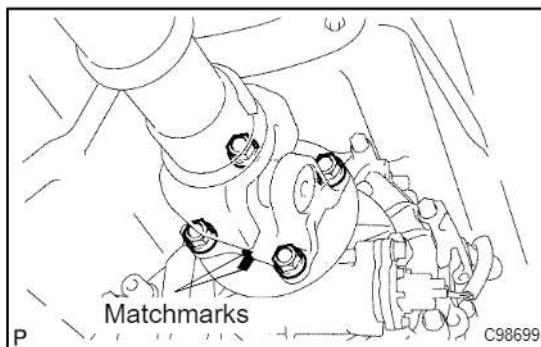
Torque: 88 N·m (897 kgf·cm, 65 ft·lbf)



14. INSTALL PROPELLER SHAFT ASSY (4WD DRIVE TYPE)

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

Torque: 88 N·m (897 kgf·cm, 65 ft·lbf)



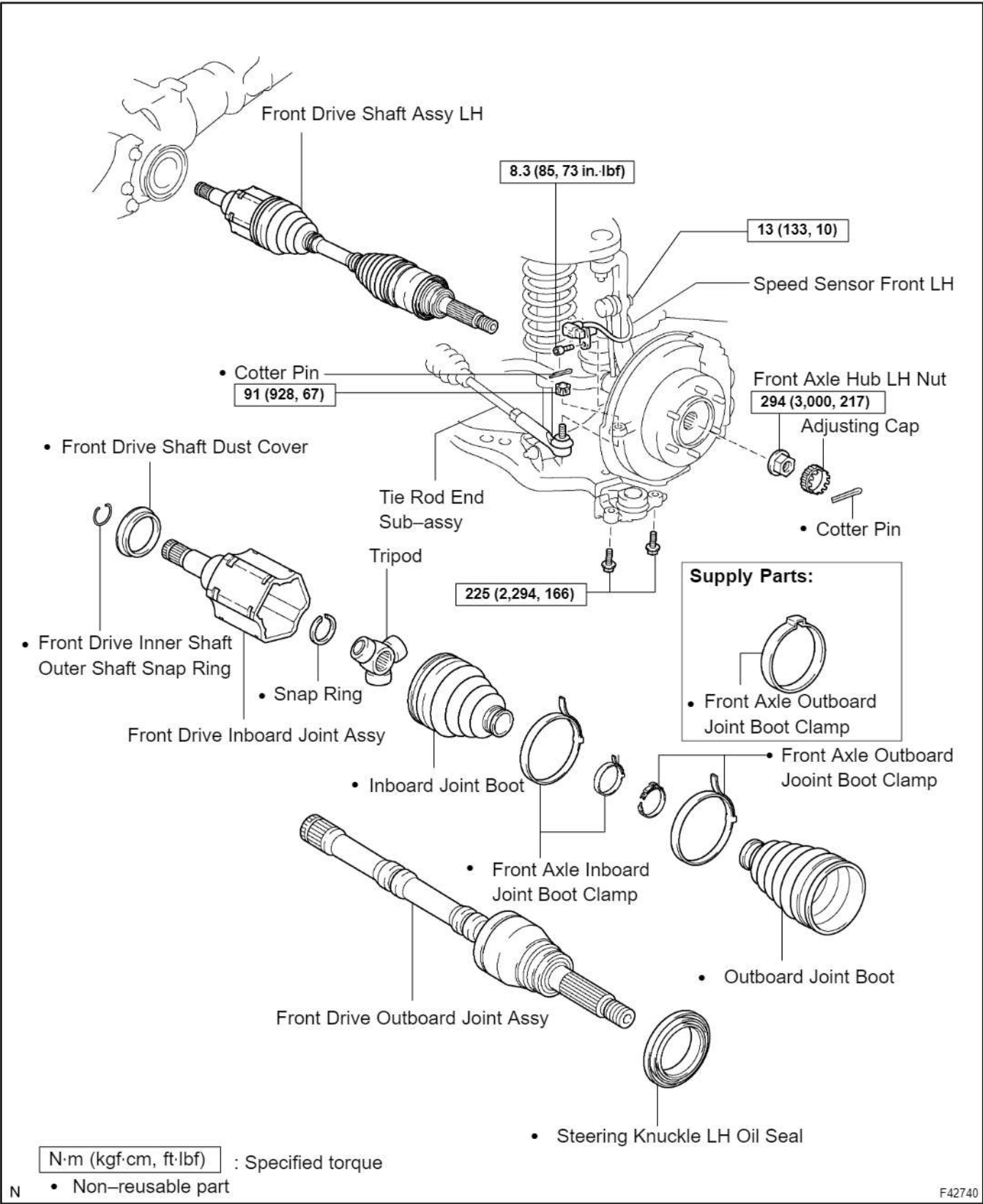
- (c) Align the matchmarks on the propeller shaft flange and transfer flange.
- (d) Install the propeller shaft assy with the 4 nuts and 4 washers.

Torque: 88 N·m (897 kgf·cm, 65 ft·lbf)

FRONT DRIVE SHAFT ASSY LH (4WD)

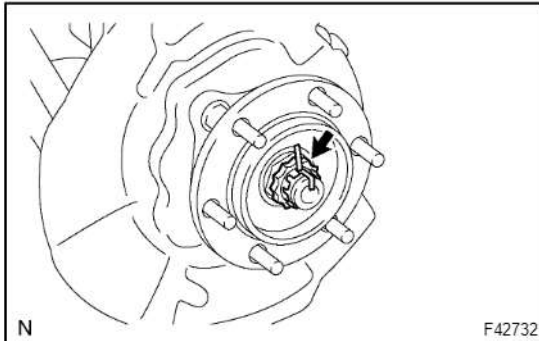
COMPONENTS

300F2-01

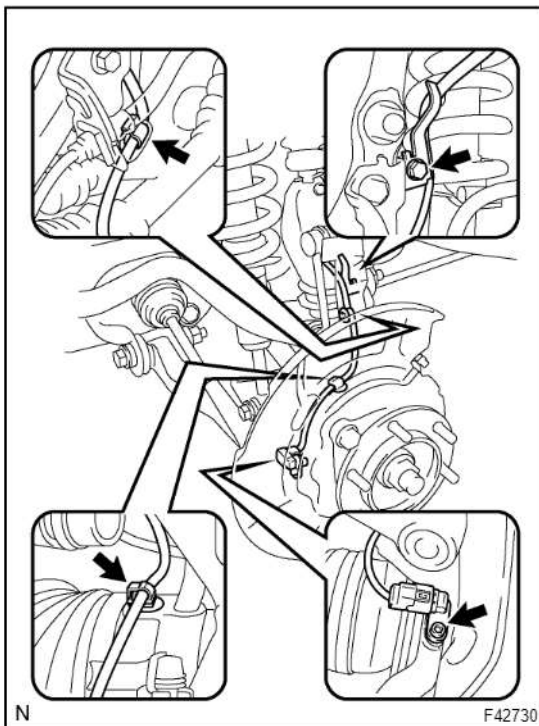


OVERHAUL

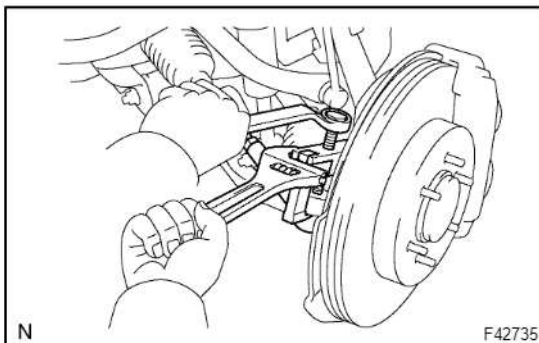
1. REMOVE FRONT WHEEL
2. DRAIN DIFFERENTIAL OIL (See page 29-3)



3. REMOVE FRONT AXLE HUB LH NUT
 - (a) Remove the cotter pin and a adjusting cap.
 - (b) Remove the front axle hub LH nut.

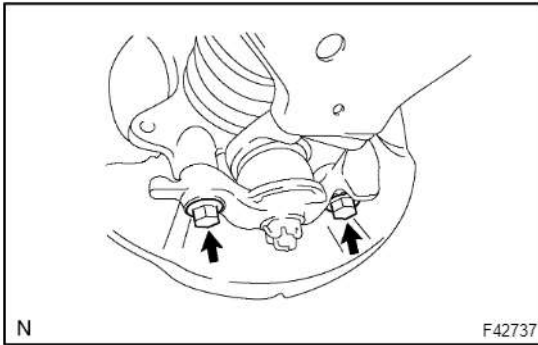


4. SEPARATE SPEED SENSOR FRONT LH
 - (a) Using a hexagon wrench, separate the speed sensor front LH.
 - (b) Disconnect the 2 clamp.
 - (c) Remove the bolt and separate the speed sensor wire harness from the steering knuckle.



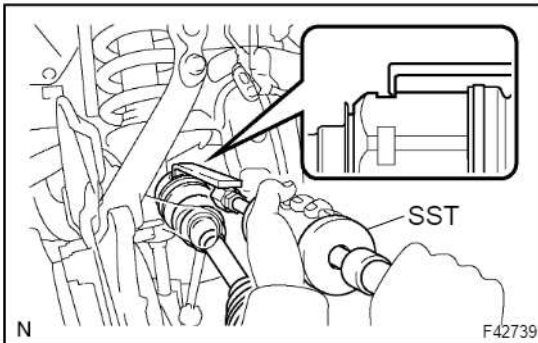
5. SEPARATE TIE ROD END SUB-ASSY LH
 - (a) Remove the cotter pin and nut.
 - (b) Using SST, separate the tie rod end from the steering knuckle.

SST 09628-62011



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

- (a) Remove the 2 bolts and separate the front suspension arm from the lower ball joint.



7. REMOVE FRONT DRIVE SHAFT ASSY LH

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

NOTICE:

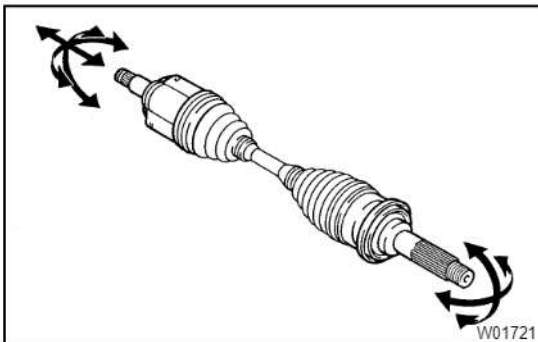
Be careful not to damage the oil seal.

8. REMOVE FRONT DRIVE SHAFT ASSY RH

HINT:

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

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



9. INSPECT SHAFT ASSY, FR DRIVE

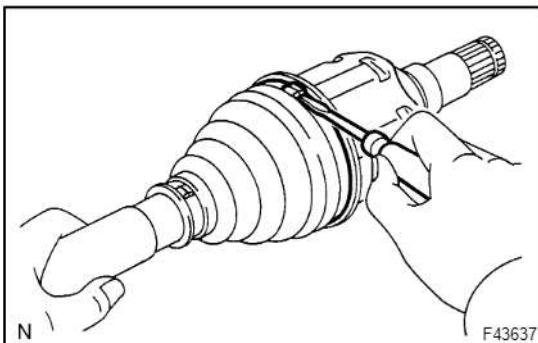
- (a) Check to see that there is no remarkable play in the outboard joint.
(b) Check to see that the inboard joint slides smoothly in the thrust direction.
(c) Check to see that there is no remarkable play in the radial direction of the inboard joint.
(d) Check the boots for damage.

NOTICE:

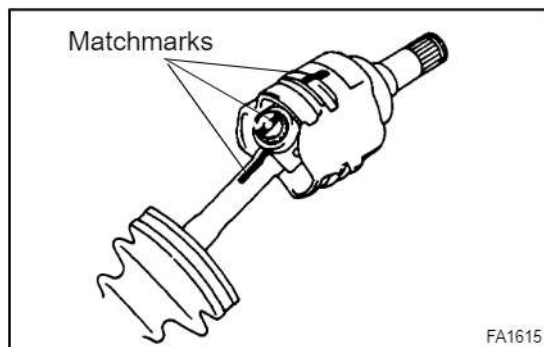
Move the drive shaft assy keeping it level.

10. SEPARATE FRONT AXLE INBOARD JOINT BOOT CLAMP

- (a) Using a screwdriver, disclamp the inboard joint boot clamp.
(b) Using the same manner to the inboard joint small boot clamp.



11. SEPARATE INBOARD JOINT BOOT



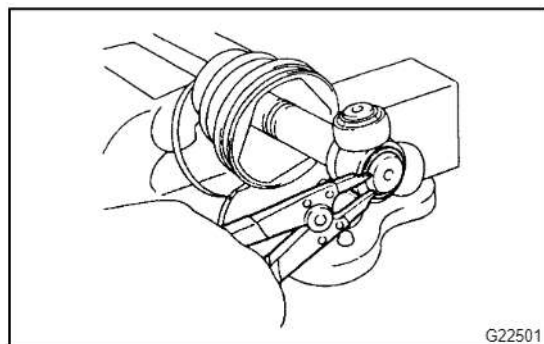
12. REMOVE FRONT DRIVE INBOARD JOINT ASSY LH

- (a) Place matchmarks on the tripod, inboard and outboard joint shafts.

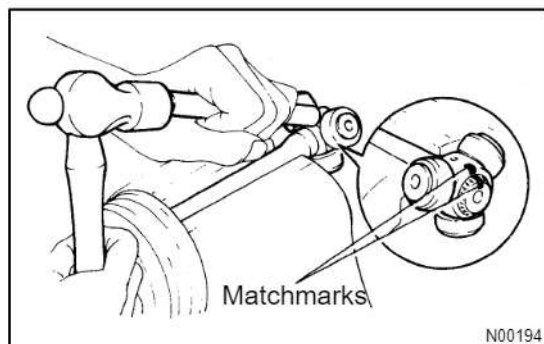
NOTICE:

Do not punch the marks.

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



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



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

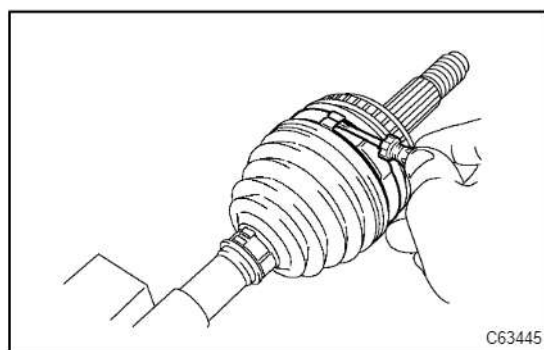
NOTICE:

Do not punch the marks.

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

NOTICE:

Do not tap the roller.



13. REMOVE FRONT AXLE OUTBOARD JOINT BOOT CLAMP

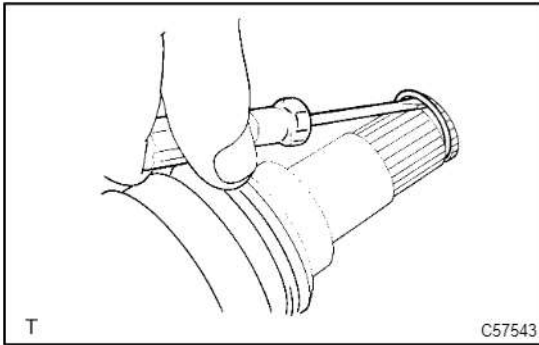
- (a) Using a screwdriver, disclamp the inboard joint boot clamps.

HINT:

If the outboard joint boot clamp that have been replaced are installed to the drive shaft, use a side cutter to remove them.

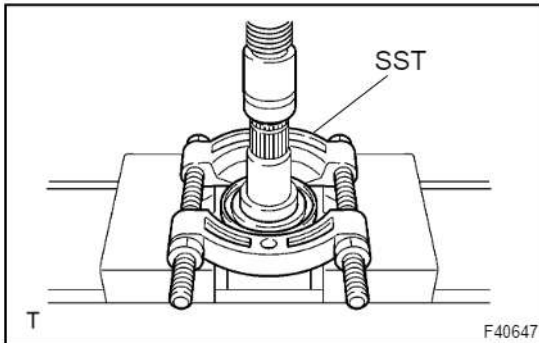
- (b) Using the same manner to the outboard joint small boot clamp.

14. REMOVE OUTBOARD JOINT BOOT



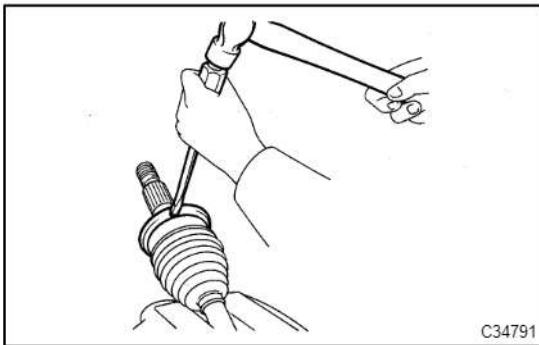
15. REMOVE FRONT DRIVE INNER SHAFT OUTER SHAFT SNAP RING

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



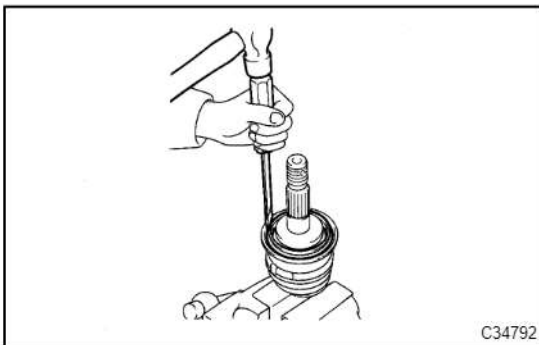
16. REMOVE FRONT DRIVE SHAFT DUST COVER

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



17. REMOVE STEERING KNUCKLE LH OIL SEAL

- (a) Using a screwdriver and a hammer, remove the oil seal.

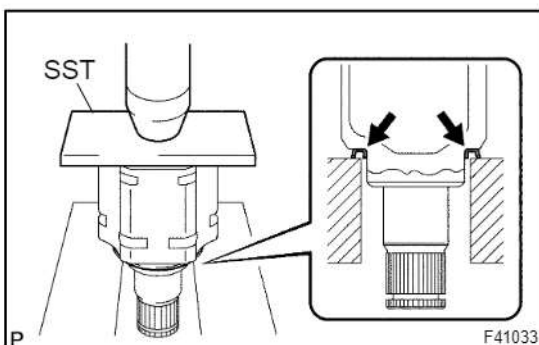


18. INSTALL STEERING KNUCKLE LH OIL SEAL

- (a) Using a screwdriver and a hammer, install a new oil seal.

NOTICE:

Do not damage the oil seal.

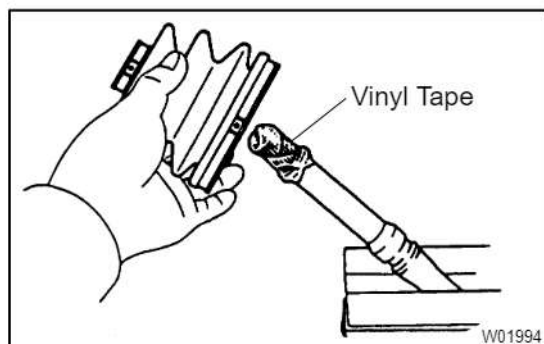


19. INSTALL FRONT DRIVE SHAFT DUST COVER

- (a) Using SST and a press, install a new dust cover.
SST 09527-10011

20. INSTALL FRONT DRIVE INNER SHAFT OUTER SHAFT SNAP RING

- (a) Install a new snap ring.

**21. 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.

- (a) Temporarily install a new outboard joint boot with 2 clamps to the drive shaft.
 (b) Pack the outboard joint assy and boot with grease in the boot kit.

Grease capacity:

260 – 270 g (9.2 – 9.5 oz.)

22. INSTALL FRONT AXLE OUTBOARD JOINT BOOT CLAMP

- (a) Mount drive shaft in a soft vise.
 (b) Secure the outboard joint boot clamps onto the boot.
 (c) Place SST onto the outboard joint large boot clamp.
 SST 09521-24010

Clearance: 0.8 mm (0.031 in.) or less

- (d) Tighten the SST so that the large clamp is pinched.

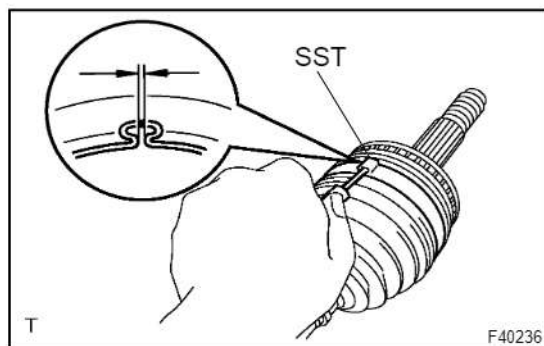
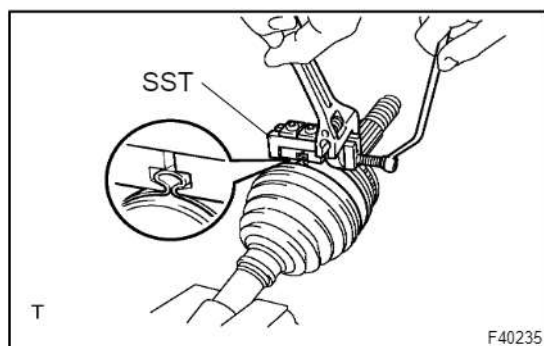
NOTICE:

Do not overtighten the SST.

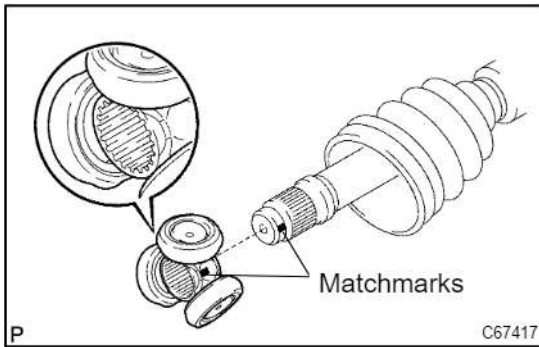
- (e) Using SST, adjust the clearance of the large clamp.
 SST 09240-00020

Clearance: 0.8 mm (0.031 in.) or less

- (f) Employ the same manner to the outboard joint small boot clamp.

**23. INSTALL INBOARD JOINT BOOT**

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

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

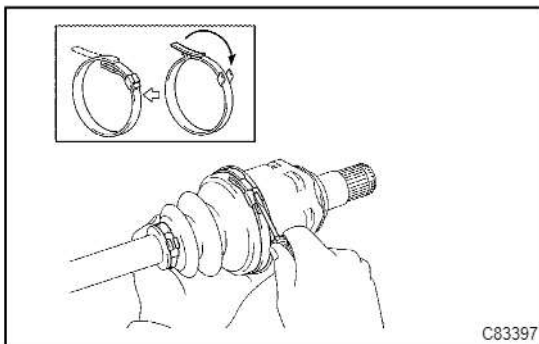
- Place the beveled side of the tripod axial spline toward the outboard joint.
- Align the matchmarks placed before removal.
- Using a brass bar and hammer, tap in the tripod to the drive shaft.

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

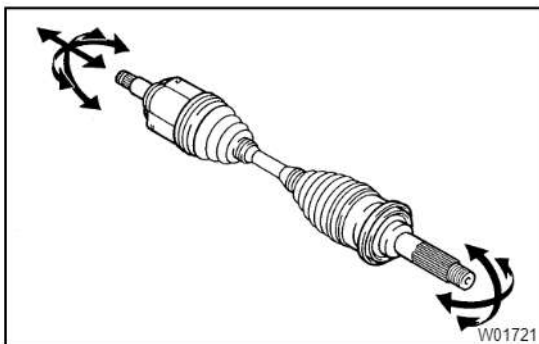
- Pack the inboard joint assy and boot with grease in the boot kit.

Grease capacity:**231 – 241 g (8.1 – 8.5 oz.)**

- Using a snap ring expander, install a new snap ring.

**25. INSTALL FRONT AXLE INBOARD JOINT BOOT CLAMP**

- Bend the band and lock a new inboard joint large boot clamp with a screwdriver.
- Using the same manner to the inboard joint small boot clamp.

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

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

NOTICE:**Move the drive shaft assy keeping it level.****27. INSTALL FRONT DRIVE SHAFT ASSY LH**

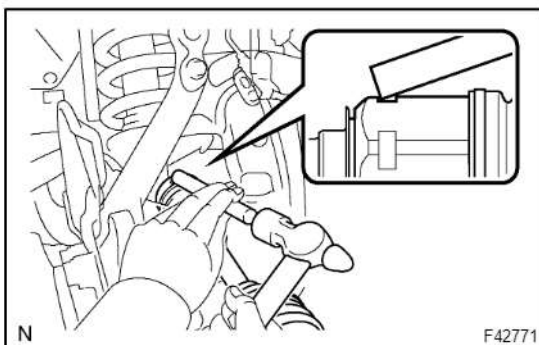
- Coat the spline of the inboard joint shaft assy with ATF.
- Align the shaft splines and install the drive shaft assy with brass bar and hammer.

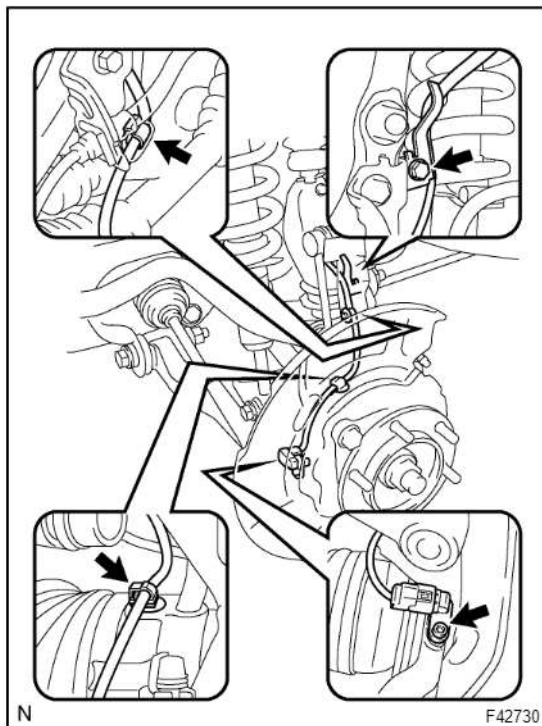
NOTICE:

- Set the snap ring with opening side facing downward.
- Be careful not to damage the oil seal.

HINT:

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



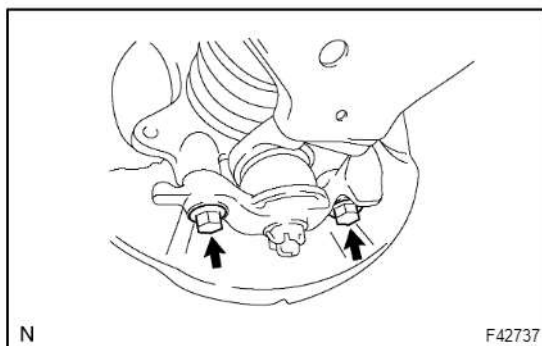
**28. INSTALL SPEED SENSOR FRONT LH**

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

Torque: 13 N·m (133 kgf·cm, 10 ft·lbf)

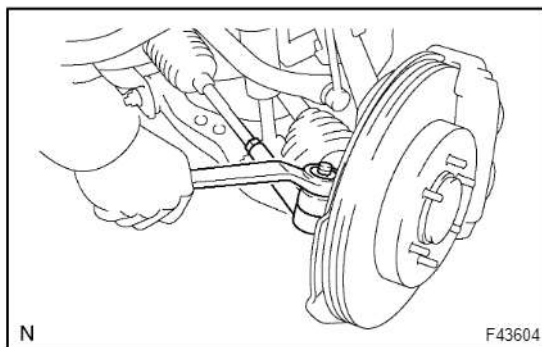
- (b) Connect the 2 clips.
(c) Using a hexagon wrench, install the speed sensor with the bolt.

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

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

- (a) Install the lower ball joint to the lower suspension arm with the bolt and nut.

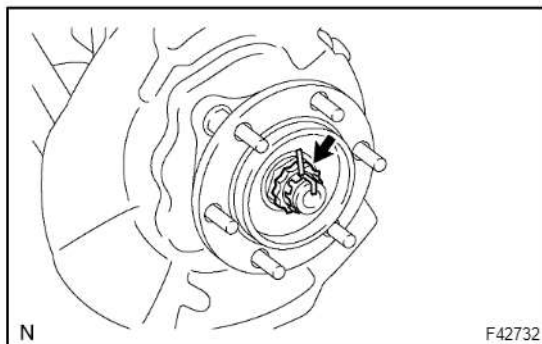
Torque: 225 N·m (2,294 kgf·cm, 166 ft·lbf)

**30. INSTALL TIE ROD END SUB-ASSY LH**

- (a) Install the tie rod end to the steering knuckle with the nut.
Torque: 91 N·m (928 kgf·cm, 67 ft·lbf)
(b) Install a new cotter pin.

NOTICE:

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

**31. INSTALL FRONT AXLE HUB LH NUT**

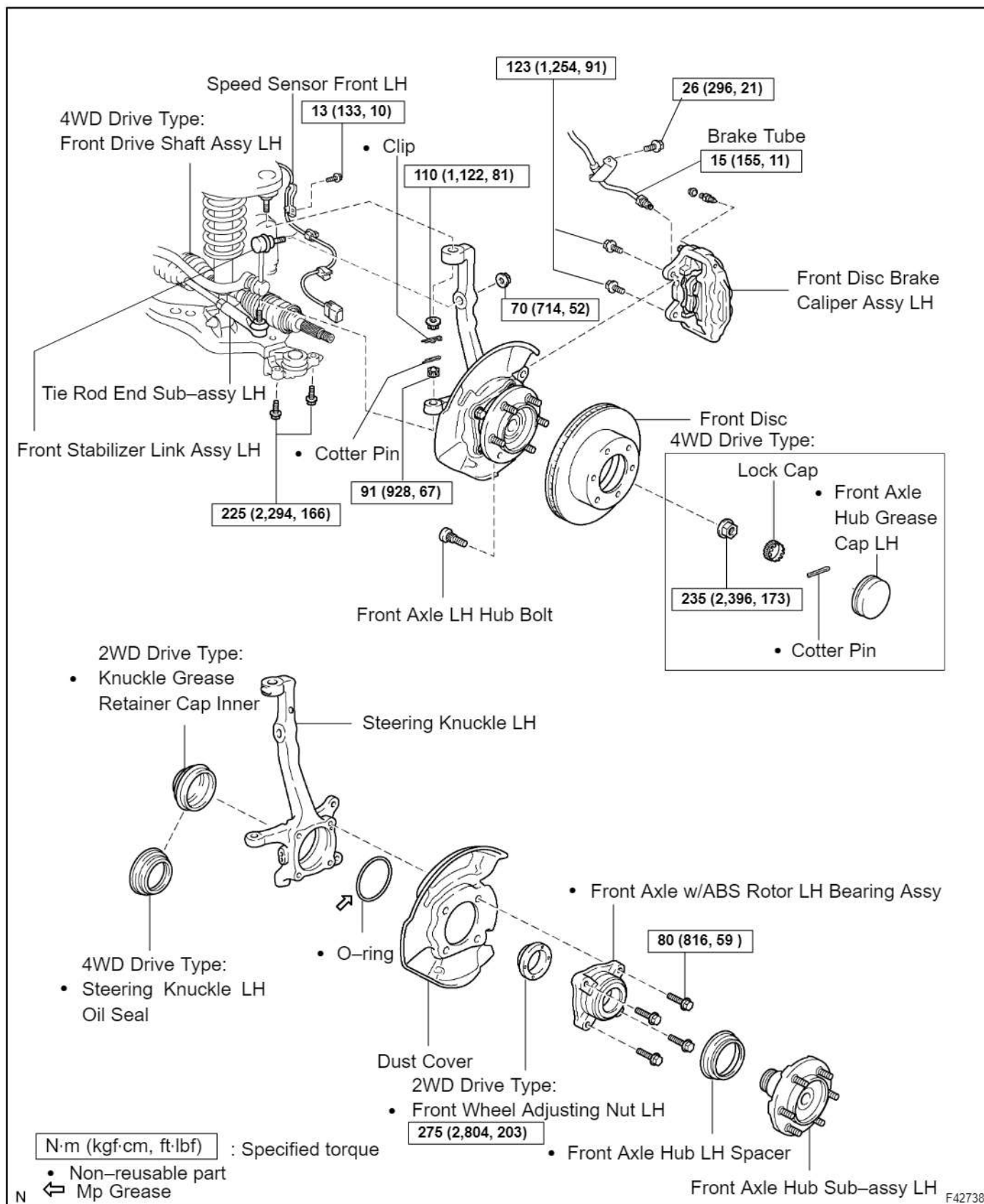
- (a) Install the hub nut.
Torque: 294 N·m (3,000 kgf·cm, 217 ft·lbf)
(b) Install a new cotter pin and adjusting cap.

32. FILL UP DIFFERENTIAL OIL (See page 29-3)
33. INSPECT DIFFERENTIAL OIL (See page 29-3)
34. INSTALL FRONT WHEEL
Torque: 112 N·m (1,142 kgf·cm, 83 ft·lbf)
35. CHECK ABS SPEED SENSOR SIGNAL (See page 05-803)

FRONT AXLE HUB SUB-ASSY LH

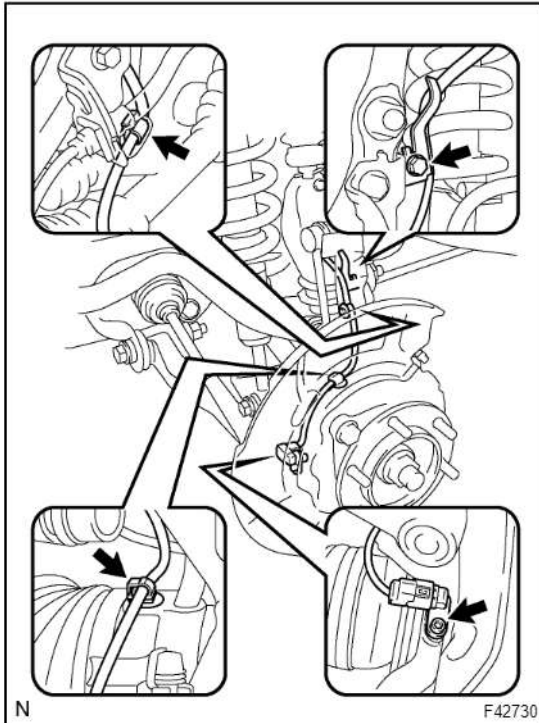
COMPONENTS

300F4-01



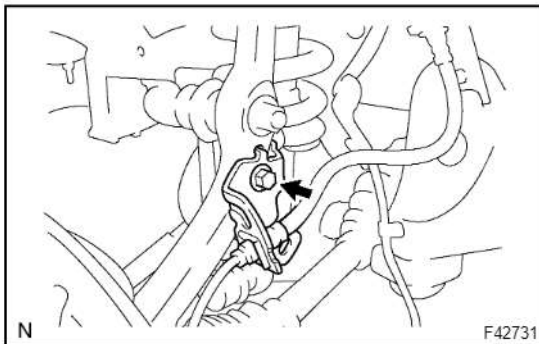
REPLACEMENT

1. REMOVE FRONT WHEEL



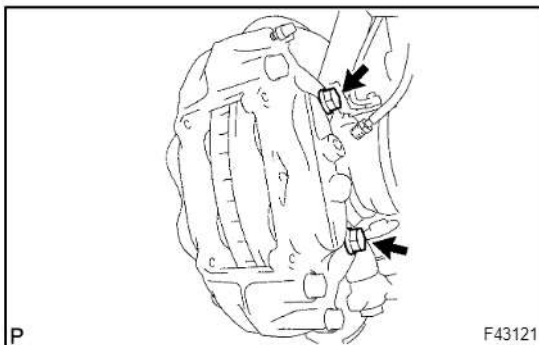
2. SEPARATE SPEED SENSOR FRONT LH

- Using a hexagon wrench, separate the speed sensor front LH.
- Disconnect the 2 clamp.
- Remove the bolt and separate the speed sensor wire harness from the steering knuckle.



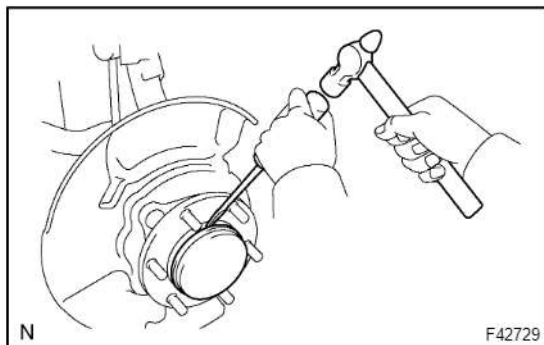
3. REMOVE FRONT DISC BRAKE CALIPER ASSY LH

- Remove the bolt and separate the brake tube bracket from the steering knuckle.
- Using SST, disconnect the brake tube from the front disc brake caliper assy LH.
SST 09023-00100



- Remove the 2 bolts and front disc brake caliper assy LH.

4. REMOVE FRONT DISC

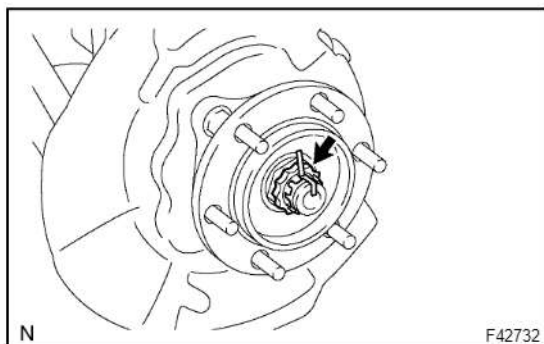


5. REMOVE FRONT AXLE HUB GREASE CAP LH (4WD DRIVE TYPE)

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

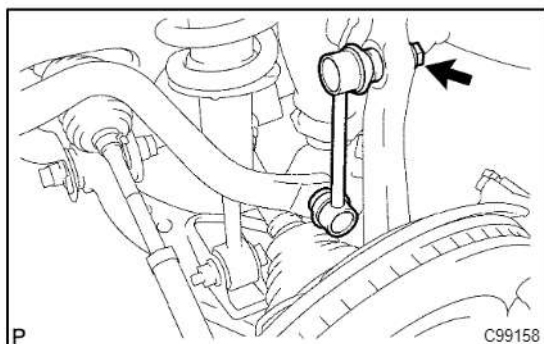
NOTICE:

Do not damage the axle hub.



6. REMOVE FRONT AXLE HUB LH NUT (4WD DRIVE TYPE)

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

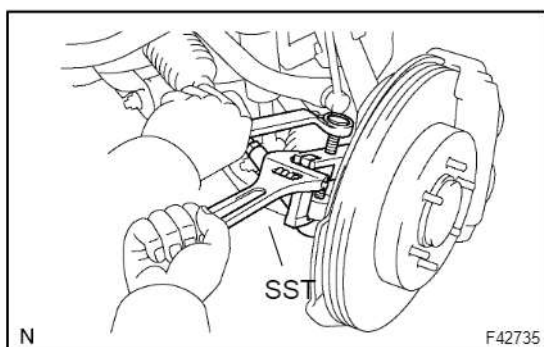


7. SEPARATE FRONT STABILIZER LINK ASSY LH

- (a) Remove the nut and separate the stabilizer link assy LH from the steering knuckle.

HINT:

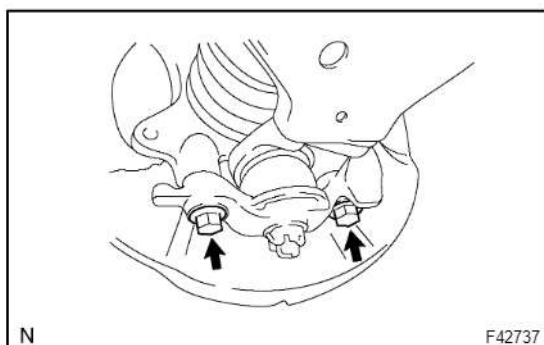
If the ball joint turns together with the nut, use a hexagon (6 mm) wrench to hold the stud.



8. SEPARATE TIE ROD END SUB-ASSY LH

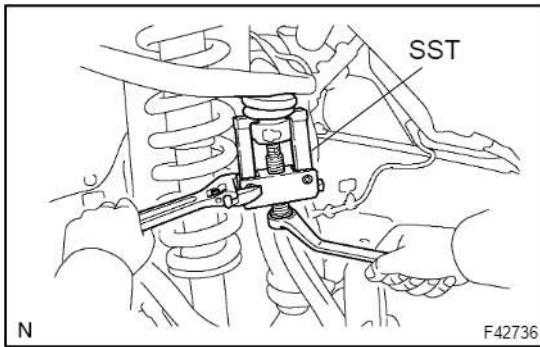
- (a) Remove the cotter pin and nut.
- (b) Using SST, separate the tie rod end sub-assy LH from the steering knuckle.

SST 09628-62011



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

- (a) Remove the 2 bolts and separate the front suspension arm sub-assy lower No.1 LH from the steering knuckle.

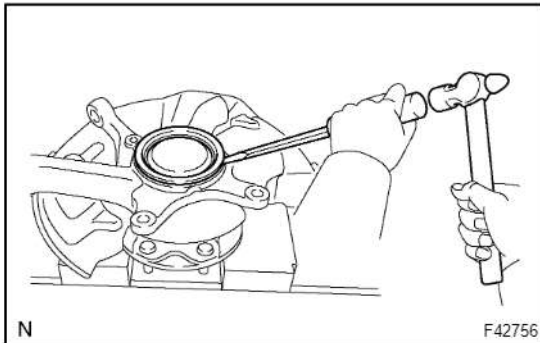


10. SEPARATE FRONT SUSPENSION UPPER ARM ASSY LH

- (a) Remove the cotter pin and nut.
 - (b) Using SST, separate the steering knuckle from the front suspension upper arm assy LH.
- SST 09628-62011

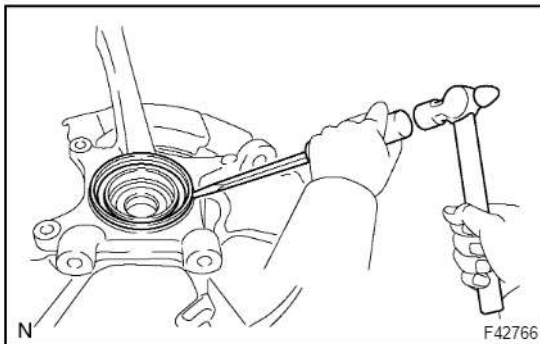
11. REMOVE FRONT AXLE HUB ASSEMBLY

- (a) 4WD Drive Type:
Using a plastic hammer, separate the front axle hub from the front drive shaft.
- (b) Remove the front axle hub sub-assy LH.



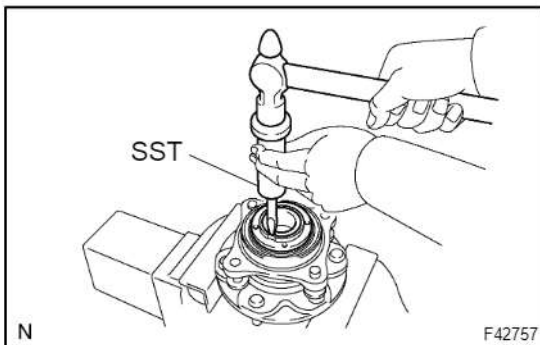
12. REMOVE KNUCKLE GREASE RETAINER CAP INNER (2WD DRIVE TYPE)

- (a) Using a screwdriver and hammer, remove the knuckle grease retainer cap inner.



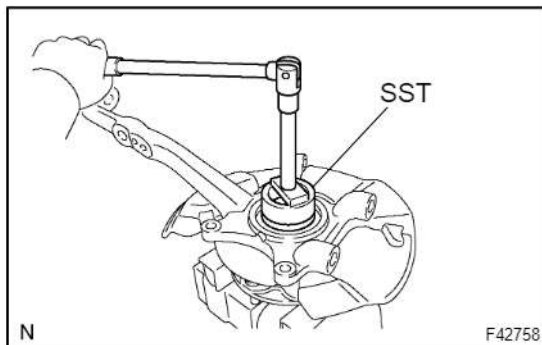
13. REMOVE STEERING KNUCKLE LH OIL SEAL (4WD DRIVE TYPE)

- (a) Using a screwdriver and hammer, remove the steering knuckle LH oil seal.

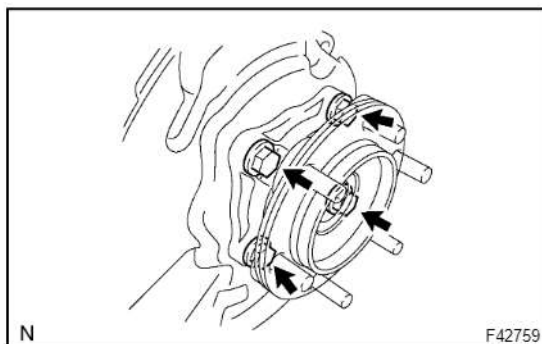


14. REMOVE FRONT WHEEL ADJUSTING NUT LH (2WD DRIVE TYPE)

- (a) Using SST and a hammer, unstick the adjusting nut.
- SST 09930-00010

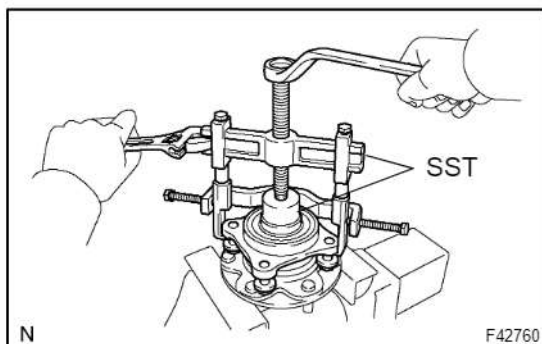


- (b) Using SST, remove the adjusting nut.
SST 09318-12010



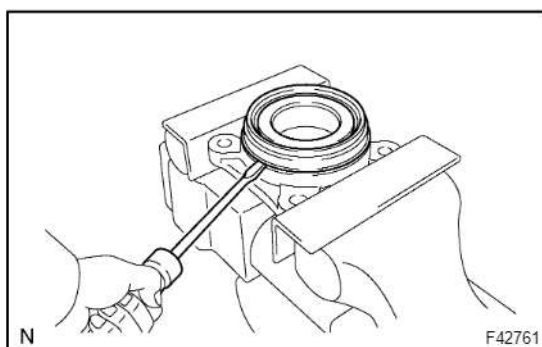
15. REMOVE FRONT AXLE HUB

- (a) Remove the 4 bolts and axle hub from the steering knuckle.
(b) Remove the O-ring from the axle hub.



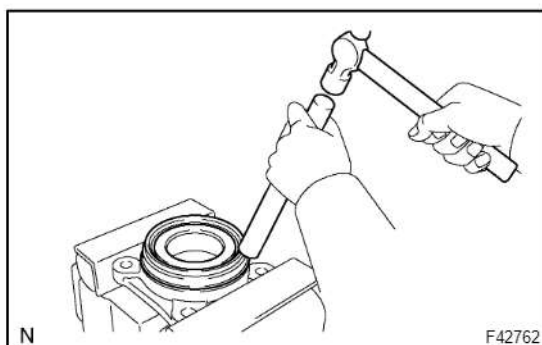
16. REMOVE FRONT AXLE W/ABS ROTOR LH BEARING ASSY

- (a) Fix the front axle hub soft in vise.
(b) Using SST, remove the bearing.
SST 09710-30021 (09710-03051), 09950-40011
(09951-04020, 09952-04010, 09953-04020,
09954-04010, 09955-04061, 09957-04010,
09958-04011)



17. REMOVE FRONT AXLE HUB LH SPACER

- (a) Using a screwdriver, remove the front axle hub LH spacer.

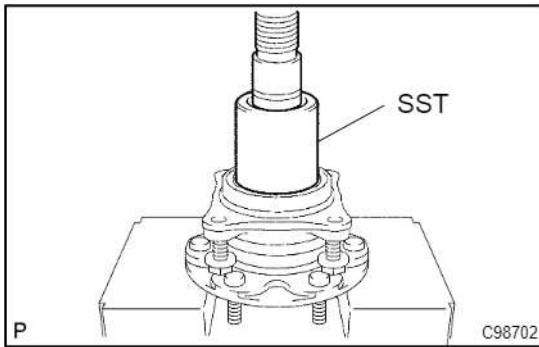


18. INSTALL FRONT AXLE HUB LH SPACER

- (a) Using a brass bar and a hammer, install the new front axle hub LH spacer.

NOTICE:

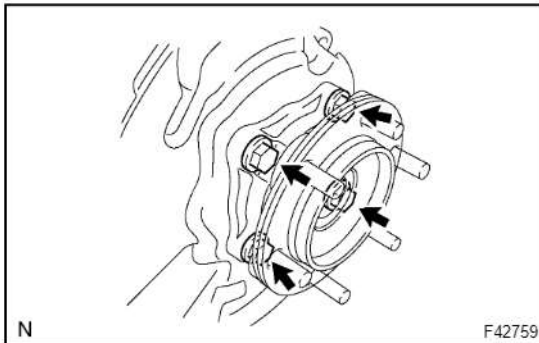
Do not damage the spacer.



19. INSTALL FRONT AXLE W/ABS ROTOR LH BEARING ASSY

- (a) Using SST and a press, install the new bearing to the front axle hub.

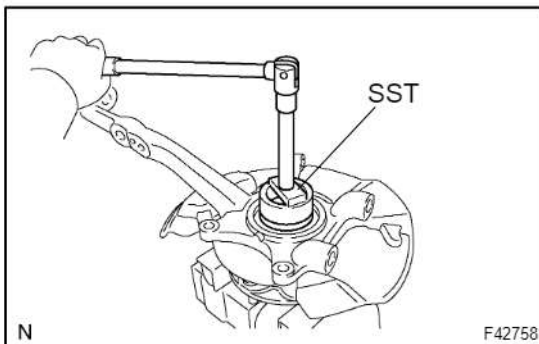
SST 09649-17010



20. INSTALL FRONT AXLE HUB

- (a) Apply the MP grease to a new O-ring.
 (b) Install the new O-ring to the axle hub.
 (c) Install the dust cover, axle hub to the steering knuckle with the 4 bolts.

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

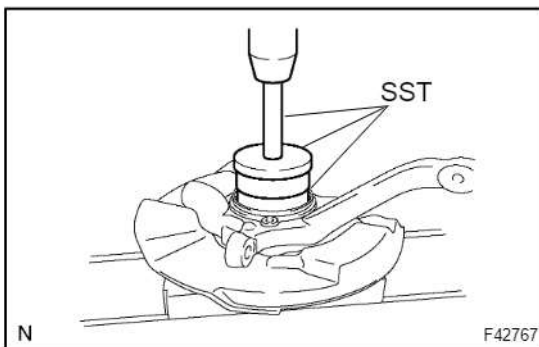


21. INSTALL FRONT WHEEL ADJUSTING NUT LH (2WD DRIVE TYPE)

- (a) Using SST, install a new adjusting nut.

Torque: 275 N·m (2,804 kgf·cm, 203 ft·lbf)

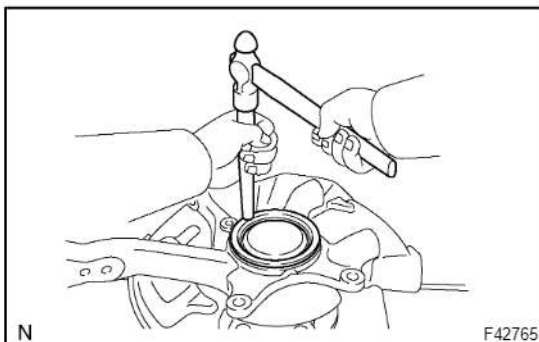
SST 09318-12010



22. INSTALL STEERING KNUCKLE LH OIL SEAL (4WD DRIVE TYPE)

- (a) Using SST and a press, install a new steering knuckle LH oil seal.

SST 09527-17011, 09950-70010 (09951-07100), 09951-01000



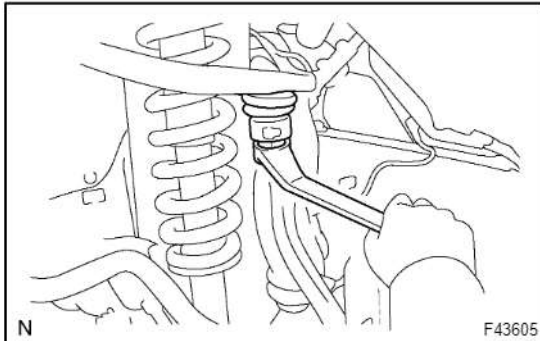
23. INSTALL KNUCKLE GREASE RETAINER CAP INNER (2WD DRIVE TYPE)

- (a) Using a brass bar and a hammer, install a new knuckle grease retainer cap inner.

NOTICE:

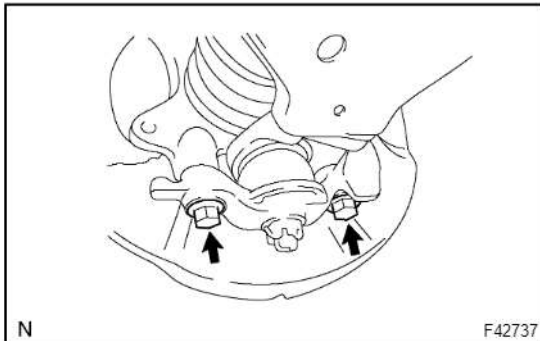
Do not damage the knuckle grease retainer cap inner.

24. INSTALL FRONT AXLE HUB ASSEMBLY



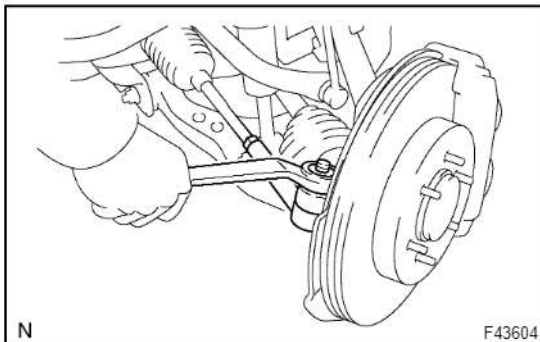
25. INSTALL FRONT SUSPENSION UPPER ARM ASSY LH

- (a) Install the front suspension upper arm assy LH with a nut.
Torque: 110 N·m (1,122 kgf·cm, 81 ft·lbf)
- (b) Install a new cotter pin.



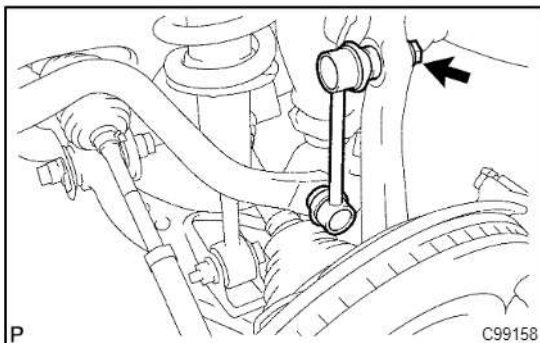
26. INSTALL FRONT SUSPENSION ARM SUB-ASSY LOWER NO.1 LH

- (a) Install the front suspension arm sub-assy lower No.1 LH with the 2 bolts.
Torque: 225 N·m (2,294 kgf·cm, 166 ft·lbf)



27. INSTALL TIE ROD END SUB-ASSY LH

- (a) Install the tie rod end sub-assy LH with a nut.
Torque: 91 N·m (928 kgf·cm, 67 ft·lbf)
- (b) Install a new cotter pin.

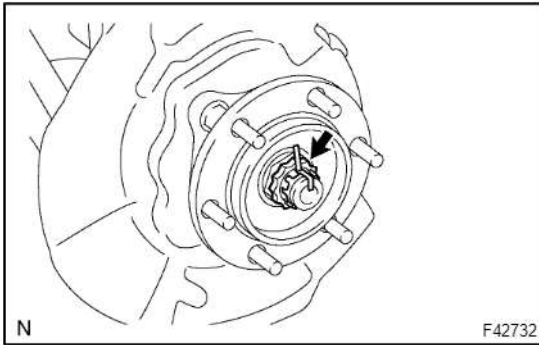


28. INSTALL FRONT STABILIZER LINK ASSY LH

- (a) Install the stabilizer link with a nut to the steering knuckle.
Torque: 70 N·m (714 kgf·cm, 52 ft·lbf)

HINT:

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

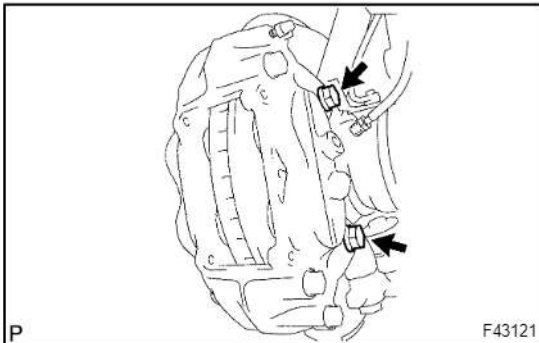


29. INSTALL FRONT AXLE HUB LH NUT (4WD DRIVE TYPE)

- (a) Install the hub nut.
Torque: 235 N·m (2,396 kgf·cm, 173 ft·lbf)
- (b) Install the adjusting cap and cotter pin.

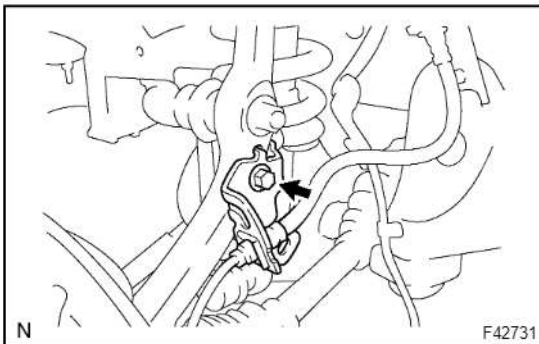
30. INSTALL FRONT AXLE HUB GREASE CAP LH (4WD DRIVE TYPE)

31. INSTALL FRONT DISC



32. INSTALL FRONT DISC BRAKE CALIPER ASSY LH

- (a) Install the front disc brake caliper assy LH with the 2 bolts.
Torque: 123 N·m (1,254 kgf·cm, 91 ft·lbf)



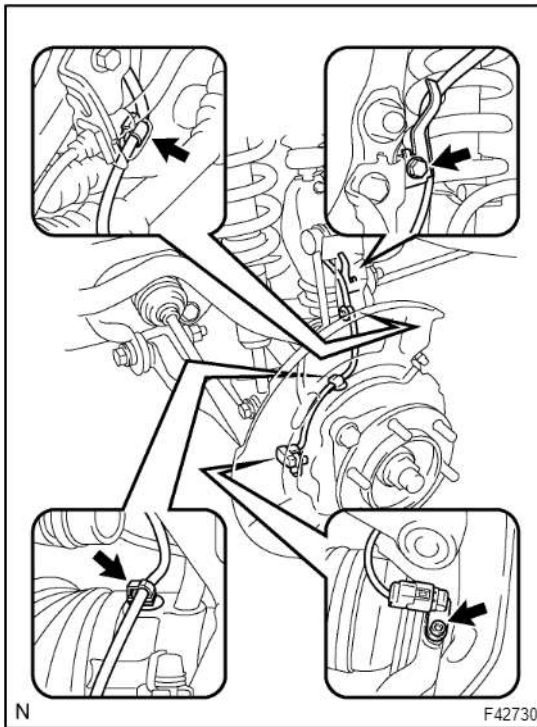
- (b) Install the brake tube bracket to the steering knuckle with a bolt.

Torque: 29 N·m (296 kgf·cm, 21 ft·lbf)

- (c) Using SST, connect the brake tube to the disc brake caliper assy.

SST 09023-00100

Torque: 15 N·m (155 kgf·cm, 11 ft·lbf)

**33. INSTALL SPEED SENSOR FRONT LH**

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

Torque: 13 N·m (133 kgf·cm, 10 ft·lbf)

- (b) Connect the 2 clips.

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

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

34. BLEED BRAKE LINE (See page 32-4)

35. CHECK FLUID LEVEL IN RESERVOIR (See page 32-4)

36. CHECK BRAKE FLUID LEAKAGE (See page 32-4)

37. INSTALL FRONT WHEEL

Torque: 112 N·m (1,142 kgf·cm, 83 ft·lbf)

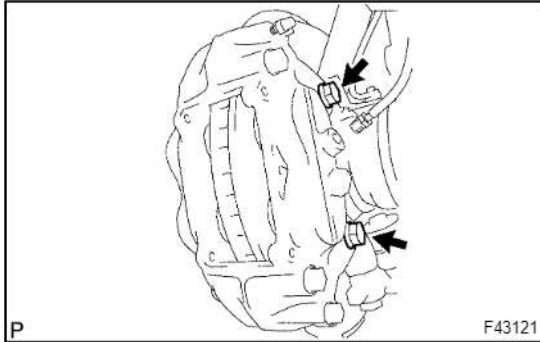
38. INSPECT AND ADJUST FRONT WHEEL ALIGNMENT (See page 26-7)

39. CHECK ABS SPEED SENSOR SIGNAL (See page 05-803)

FRONT AXLE LH HUB BOLT REPLACEMENT

300F6-01

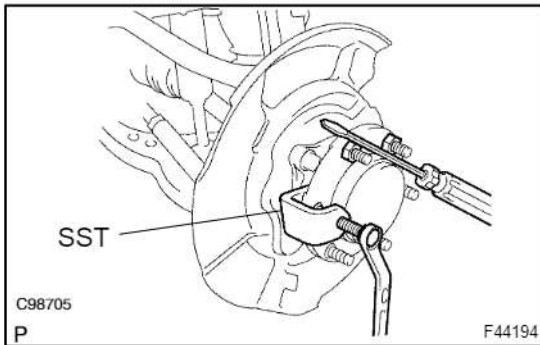
1. REMOVE FRONT WHEEL



2. REMOVE FRONT DISC BRAKE CALIPER ASSY LH

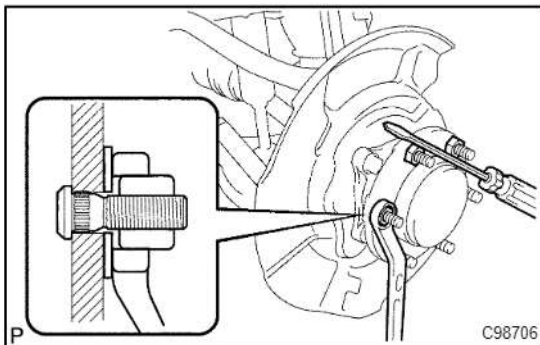
- (a) Using SST, disconnect the brake tube from the disc brake caliper assy.
SST 09023-00100
- (b) Remove the 2 bolts and disc brake caliper assy.

3. REMOVE FRONT DISC



4. REMOVE FRONT AXLE LH HUB BOLT

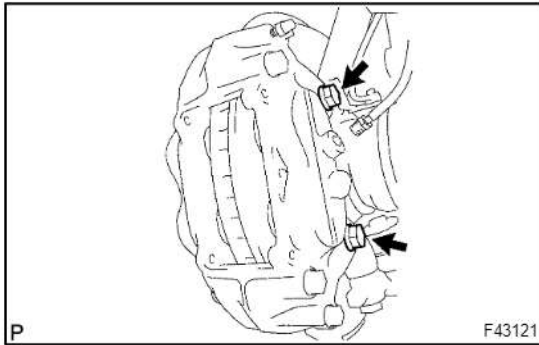
- (a) Using SST and a screwdriver, remove the hub bolt.
SST 09611-12010



5. INSTALL FRONT AXLE LH HUB BOLT

- (a) Pass a new hub bolt through the axle hub.
- (b) Pass a washer plate, as shown in the illustration, through the hub bolt, and install the hub bolt as tightening the hub nut.

6. INSTALL FRONT DISC

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

- (a) Install the disc brake caliper assy with the 2 bolts.
Torque: 123 N·m (1,254 kgf·cm, 91 ft·lbf)
- (b) Using SST, connect the brake tube to the disc brake caliper assy.

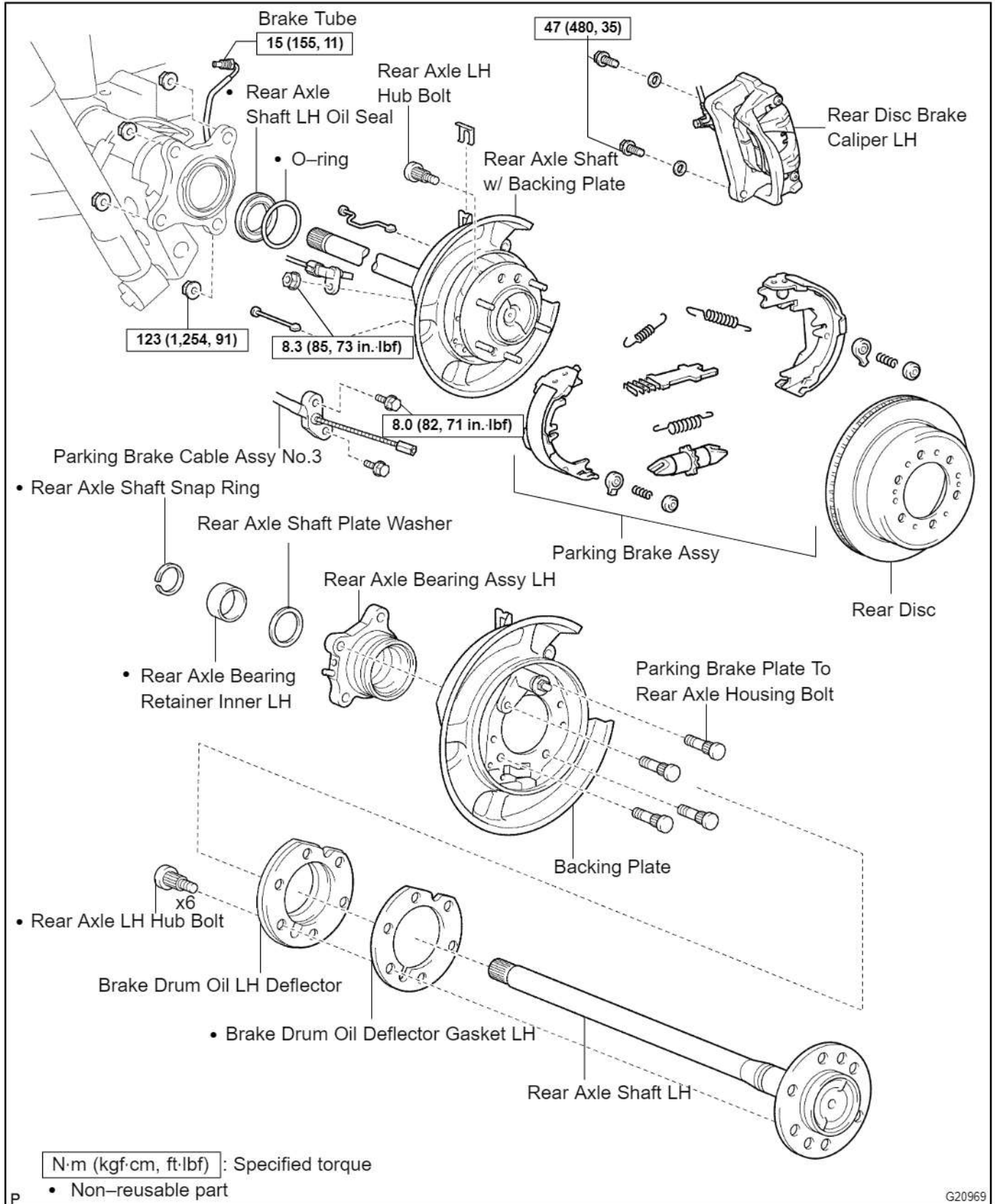
SST 09023-00100

Torque: 15 N·m (155 kgf·cm, 11 ft·lbf)

- 8. BLEED BRAKE LINE (See page 32-4)**
- 9. CHECK FLUID LEVEL IN RESERVOIR (See page 32-4)**
- 10. CHECK BRAKE FLUID LEAKAGE (See page 32-4)**
- 11. INSTALL FRONT WHEEL**
Torque: 112 N·m (1,142 kgf·cm, 83 ft·lbf)

REAR AXLE SHAFT LH COMPONENTS

300F7-01

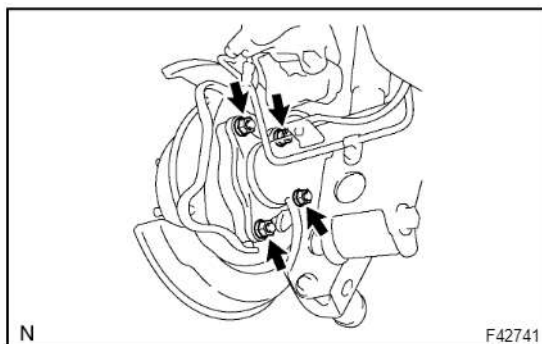


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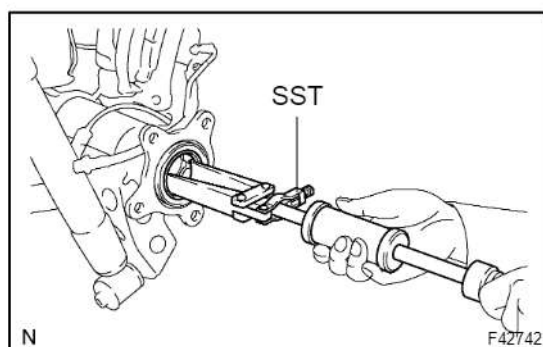
G20969

REPLACEMENT

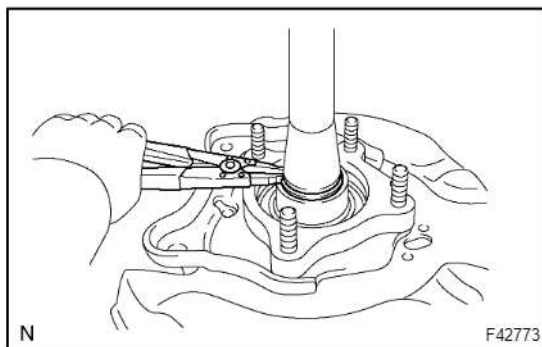
1. REMOVE REAR WHEEL
2. REMOVE SPEED SENSOR REAR LH (See page 32-52)
3. SEPARATE REAR DISC BRAKE CALIPER ASSY LH (See page 32-23)
4. REMOVE REAR DISC
5. REMOVE PARKING BRAKE SHOE RETURN TENSION SPRING (See page 33-15)
6. REMOVE PARKING BRAKE SHOE STRUT COMPRESSION SPRING (See page 33-15)
7. REMOVE PARKING BRAKE SHOE STRUT LH (See page 33-15)
8. REMOVE PARKING BRAKE SHOE (See page 33-15)



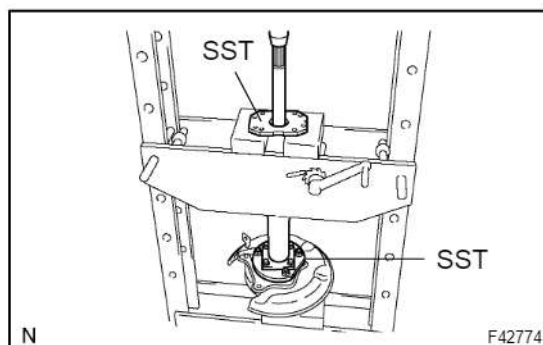
9. REMOVE REAR AXLE SHAFT W/BACKING PLATE
 - (a) Remove the 4 nuts and rear axle shaft w/backing plate.
 - (b) Remove a O-ring.



10. REMOVE REAR AXLE SHAFT LH OIL SEAL
 - (a) Using SST, remove the rear axle shaft oil seal.
SST 09308-00010



11. REMOVE REAR AXLE SHAFT LH SNAP RING
 - (a) Using a snap ring expander, remove the snap ring.



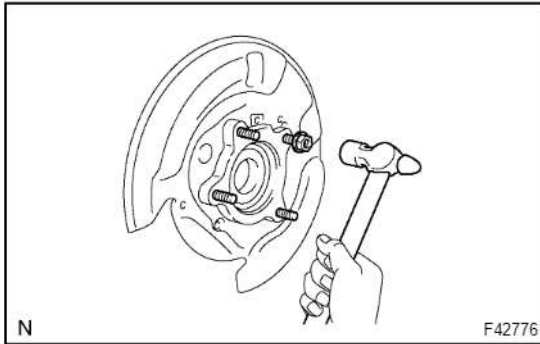
12. REMOVE REAR AXLE SHAFT LH
 - (a) Using SST and press, remove the rear axle shaft.
SST 09521-25011, 09521-25021

13. REMOVE REAR AXLE BEARING RETAINER INNER LH

- (a) Remove the rear axle bearing retainer inner LH from the rear axle bearing assy LH.

14. REMOVE REAR AXLE SHAFT LH WASHER

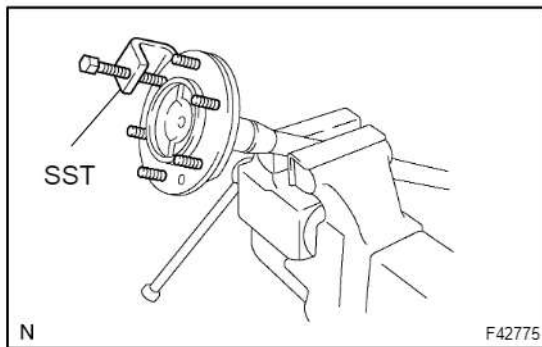
- (a) Remove the rear axle shaft plate washer from the rear axle bearing assy LH.

**15. REMOVE PARKING BRAKE PLATE TO REAR AXLE HOUSING BOLT**

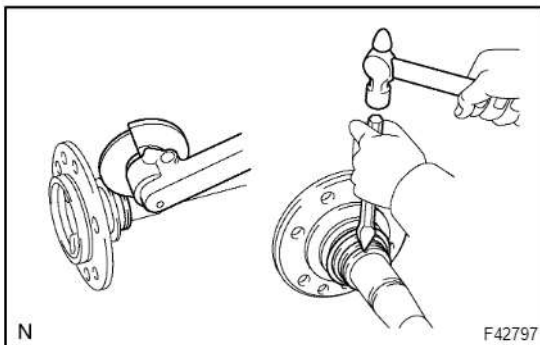
- (a) Attach 4 nuts to the parking brake plate to rear axle housing bolts.
 (b) Using a hammer, remove the 4 parking brake plate to rear axle housing bolts and rear axle bearing assy.

NOTICE:

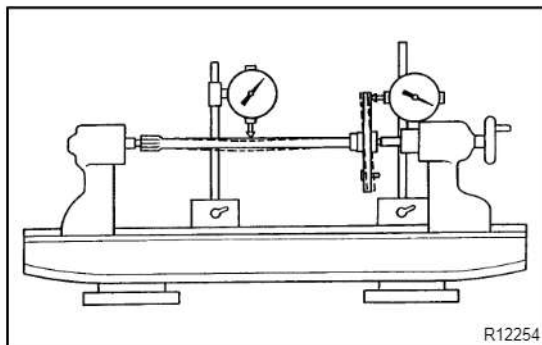
Do not reuse the nuts previously removed from the vehicle.

16. REMOVE REAR AXLE HUB & BEARING ASSY LH**17. REMOVE REAR AXLE LH HUB BOLT**

- (a) Using SST, remove the 6 hub bolts.
 SST 09650-17011

18. REMOVE BRAKE DRUM OIL LH DEFLECTOR**19. REMOVE BRAKE DRUM OIL DEFLECTOR GASKET LH****20. REMOVE REAR AXLE BEARING OIL SEAL**

- (a) Grind the rear axle bearing inner race surface using a grinder, then chisel them out with a chisel.
 (b) Remove the rear axle shaft oil seal from the rear axle shaft.

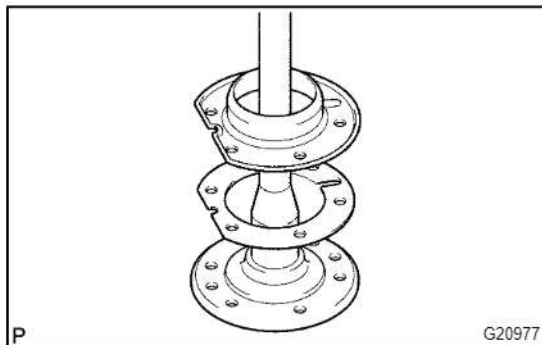
**21. INSPECT REAR AXLE SHAFT LH**

Maximum runout:

Shaft runout: 1.5 mm (0.0591 in.)

Flange runout: 0.05 mm (0.0020 in.)

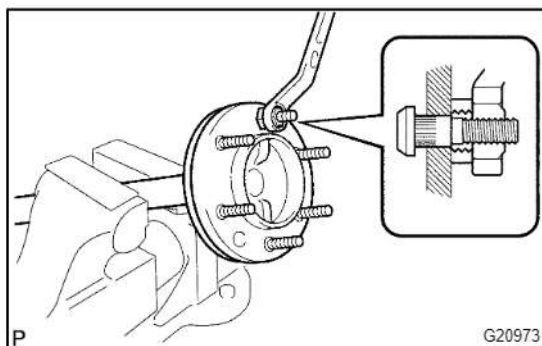
If the rear axle shaft or flange are damaged or worn, or of runout of greater than the maximum, replace the rear axle shaft.

**22. INSTALL REAR AXLE LH HUB BOLT**

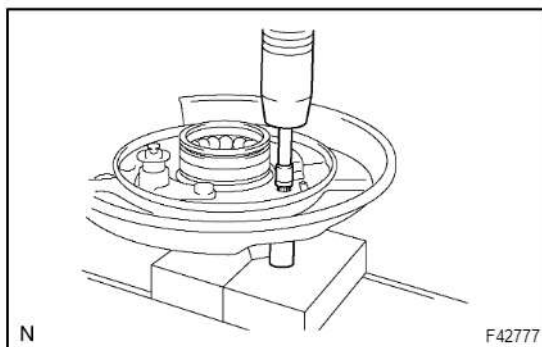
- (a) Install a new deflector gasket and deflector to the rear axle shaft.

HINT:

Align the 2 notches.



- (b) Pass the 6 bolts through the axle hub.
(c) Pass a washer plate, as shown in the illustration, through the hub bolt, and install the hub bolt as tightening the hub nut.

23. INSTALL REAR AXLE HUB & BEARING ASSY LH**24. INSTALL PARKING BRAKE PLATE TO REAR AXLE HOUSING BOLT**

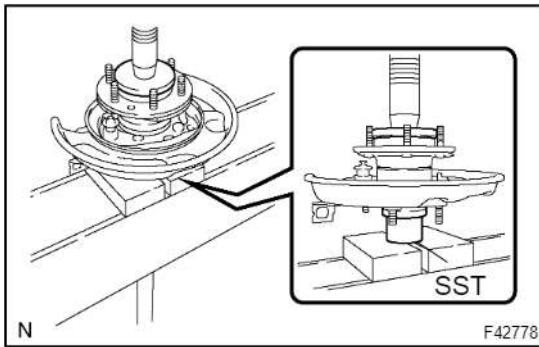
- (a) Position the backing plate on a rear axle bearing assy LH, and install the 4 parking brake plate to rear axle housing bolts using 2 socket wrenches and a press.

25. INSTALL REAR AXLE SHAFT LH WASHER

- (a) Install the rear axle shaft plate washer to the rear axle shaft LH.

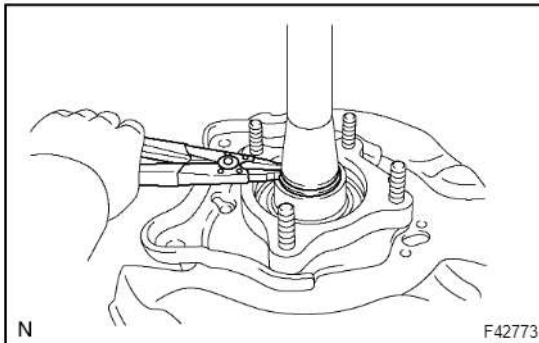
26. INSTALL REAR AXLE BEARING RETAINER INNER LH

- (a) Install a new rear axle bearing retainer inner LH to the rear axle shaft LH.

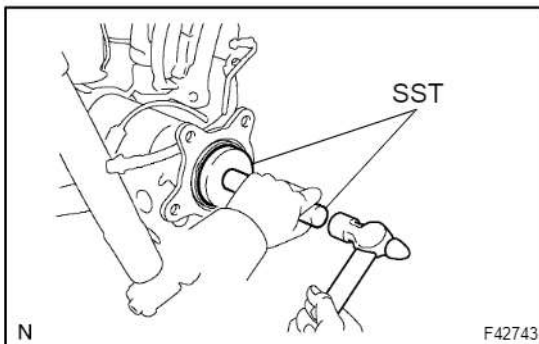
**27. INSTALL REAR AXLE SHAFT LH**

- (a) Using SST and a press, install the rear axle shaft LH to the rear axle bearing assy LH.

SST 09521-25011

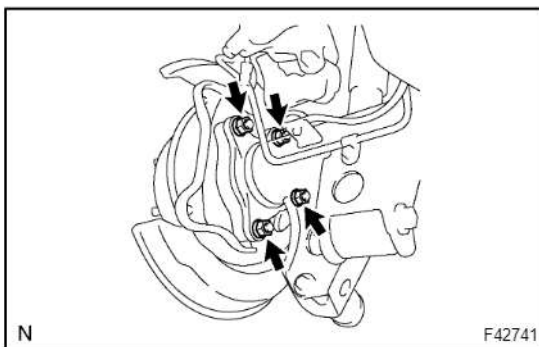
**28. INSTALL REAR AXLE SHAFT LH SNAP RING**

- (a) Using a snap ring expander, install a new rear axle shaft snap ring.

**29. INSTALL REAR AXLE SHAFT LH OIL SEAL**

- (a) Using SST and a hammer, install a new axle shaft oil seal.

SST 09950-60020 (09951-00770), 09950-70010 (09951-07150)

**30. INSTALL REAR AXLE SHAFT W/BACKING PLATE**

- (a) Install a new O-ring.
 (b) Install the rear axle shaft w/backing plate with the 4 nuts.
Torque: 123 N·m (1,254 kgf·cm, 91 ft·lbf)

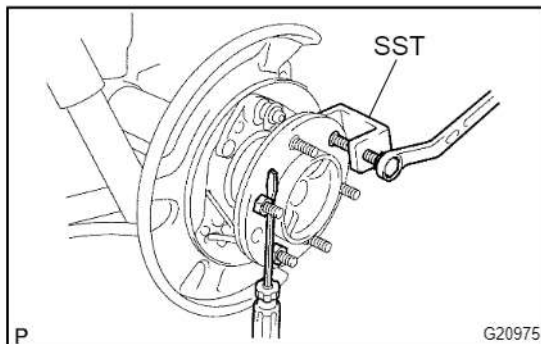
31. **INSTALL PARKING BRAKE SHOE** (See page 33-15)
32. **INSTALL PARKING BRAKE SHOE STRUT LH** (See page 33-15)
33. **INSTALL PARKING BRAKE SHOE STRUT COMPRESSION SPRING** (See page 33-15)
34. **INSTALL PARKING BRAKE SHOE RETURN TENSION SPRING** (See page 33-15)
35. **INSTALL REAR DISC**
36. **CONNECT REAR DISC BRAKE CALIPER ASSY LH** (See page 32-23)
37. **INSTALL SPEED SENSOR REAR LH** (See page 32-52)
38. **FILL RESERVOIR WITH BRAKE FLUID** (See page 32-4)
39. **BLEED MASTER CYLINDER** (See page 32-4)
40. **BLEED BRAKE LINE** (See page 32-4)

41. INSPECT BRAKE FLUID LEVEL IN RESERVOIR (See page [32-4](#))
42. CHECK BRAKE FLUID LEAKAGE (See page [32-4](#))
43. INSTALL REAR WHEEL
Torque: 112 N·m (1,142 kgf·cm, 83 ft·lbf)
44. INSPECT AND ADJUST PARKING BRAKE LEVER TRAVEL (See page [33-2](#))
45. CHECK ABS SPEED SENSOR SIGNAL (See page [05-803](#))

REAR AXLE LH HUB BOLT REPLACEMENT

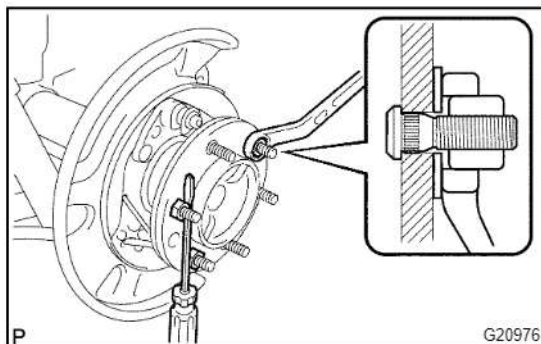
300F9-02

1. REMOVE REAR WHEEL
2. REMOVE SPEED SENSOR REAR LH (See page 32-52)
3. SEPARATE REAR DISC BRAKE CALIPER ASSY LH (See page 32-23)
4. REMOVE REAR DISC
5. REMOVE PARKING BRAKE SHOE RETURN TENSION SPRING (See page 33-15)
6. REMOVE PARKING BRAKE SHOE STRUT COMPRESSION SPRING (See page 33-15)
7. REMOVE PARKING BRAKE SHOE STRUT LH (See page 33-15)
8. REMOVE PARKING BRAKE SHOE (See page 33-15)



9. REMOVE REAR AXLE LH HUB BOLT

- (a) Using SST, remove the hub bolt.
SST 09650-17011



10. INSTALL REAR AXLE LH HUB BOLT

- (a) Pass a new hub bolt through the axle hub.
- (b) Pass a washer plate, as shown in the illustration, through the hub bolt, and install the hub bolt as tightening the hub nut.

11. INSTALL PARKING BRAKE SHOE (See page 33-15)
12. INSTALL PARKING BRAKE SHOE STRUT LH (See page 33-15)
13. INSTALL PARKING BRAKE SHOE STRUT COMPRESSION SPRING (See page 33-15)
14. INSTALL PARKING BRAKE SHOE RETURN TENSION SPRING (See page 33-15)
15. INSTALL REAR DISC
16. CONNECT REAR DISC BRAKE CALIPER ASSY LH (See page 32-23)
17. INSTALL SPEED SENSOR REAR LH (See page 32-52)
18. FILL RESERVOIR WITH BRAKE FLUID (See page 32-4)
19. BLEED BRAKE LINE (See page 32-4)
20. INSPECT BRAKE FLUID LEVEL IN RESERVOIR (See page 32-4)
21. CHECK BRAKE FLUID LEAKAGE (See page 32-4)
22. INSTALL REAR WHEEL
Torque: 112 N·m (1,142 kgf·cm, 83 ft·lbf)
23. INSPECT AND ADJUST PARKING BRAKE LEVER TRAVEL (See page 33-2)
24. CHECK ABS SPEED SENSOR SIGNAL (See page 05-803)