DRIVE SHAFT, PROPELLER SHAFT, AXLE (From July, 2003)

3001U-13

PROBLEM SYMPTOMS TABLE

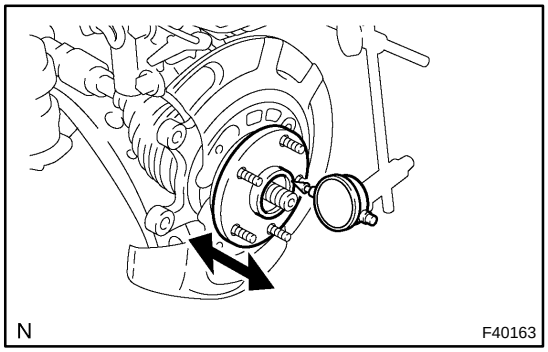
Use the table below to help determine the cause of the problem. The numbers indicate the priority of the possible cause of the problem. Check each part in order. If necessary, replace these parts.

Symptom	Suspected Area	See page
Wander	1. Wheel alignment	26-5 27-3
	2. Steering linkage (Loosen or worn)	-
	3. Hub bearing (Worn)	30-2
	4. Stabilizer bar	26-17 27-18
Front wheel shimmy	1. Wheel balance	28-1
	2. Shock absorber	26-8 27-4
	3. Ball joint (Worn)	26-16
	4. Hub bearing (Worn)	30-2
Noise	1. Inboard joint or outboard joint (Worn)	30-8

3001V-08

ON-VEHICLE INSPECTION

1. REMOVE FRONT WHEEL
2. DISCONNECT FRONT DISC BRAKE CALIPER ASSY LH (SEE PAGE 30-8)
3. REMOVE FRONT DISC



4. INSPECT FRONT AXLE HUB BEARING BACKLASH

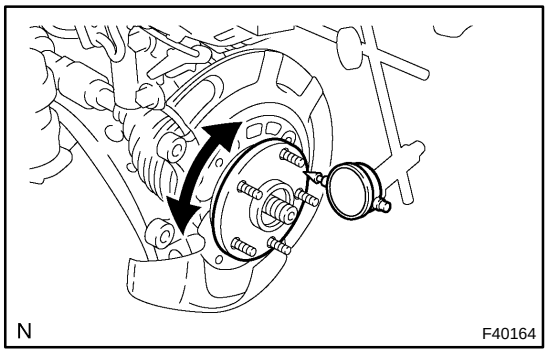
(a) Using a dial indicator, check the backlash near the center of the axle hub.

Maximum: 0.05 mm (0.0020 in.)

If the backlash exceeds the maximum, replace the bearing.

NOTICE:

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



5. INSPECT FRONT AXLE HUB DEVIATION

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

Maximum: 0.05 mm (0.0020 in.)

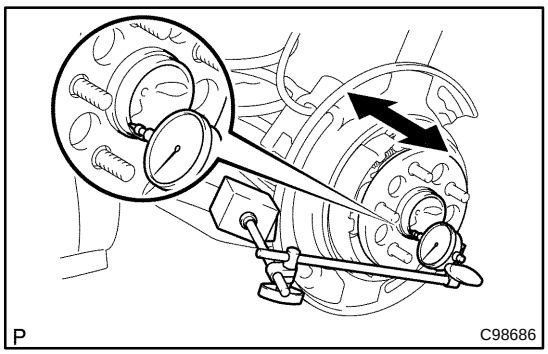
If the deviation exceeds the maximum, replace the axle hub.

NOTICE:

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

6. INSTALL FRONT DISC
7. INSTALL FRONT DISC BRAKE CALIPER ASSY LH (SEE PAGE 30-8)
8. INSTALL FRONT WHEEL

   Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)
9. REMOVE REAR WHEEL
10. DISCONNECT REAR DISC BRAKE CALIPER ASSY LH (SEE PAGE 30-26)
11. REMOVE REAR DISC



12. INSPECT REAR AXLE HUB BEARING BACKLASH

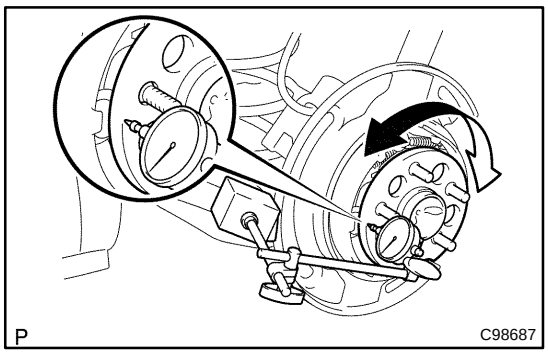
(a) Set a dial indicator near the center of the axle hub and check the backlash in the bearing shaft direction.

Maximum: 0.05 mm (0.0020 in.)

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

NOTICE:

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



13. INSPECT REAR 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 deviation exceeds the maximum, replace the axle hub assembly.

NOTICE:

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

14. INSTALL REAR DISC

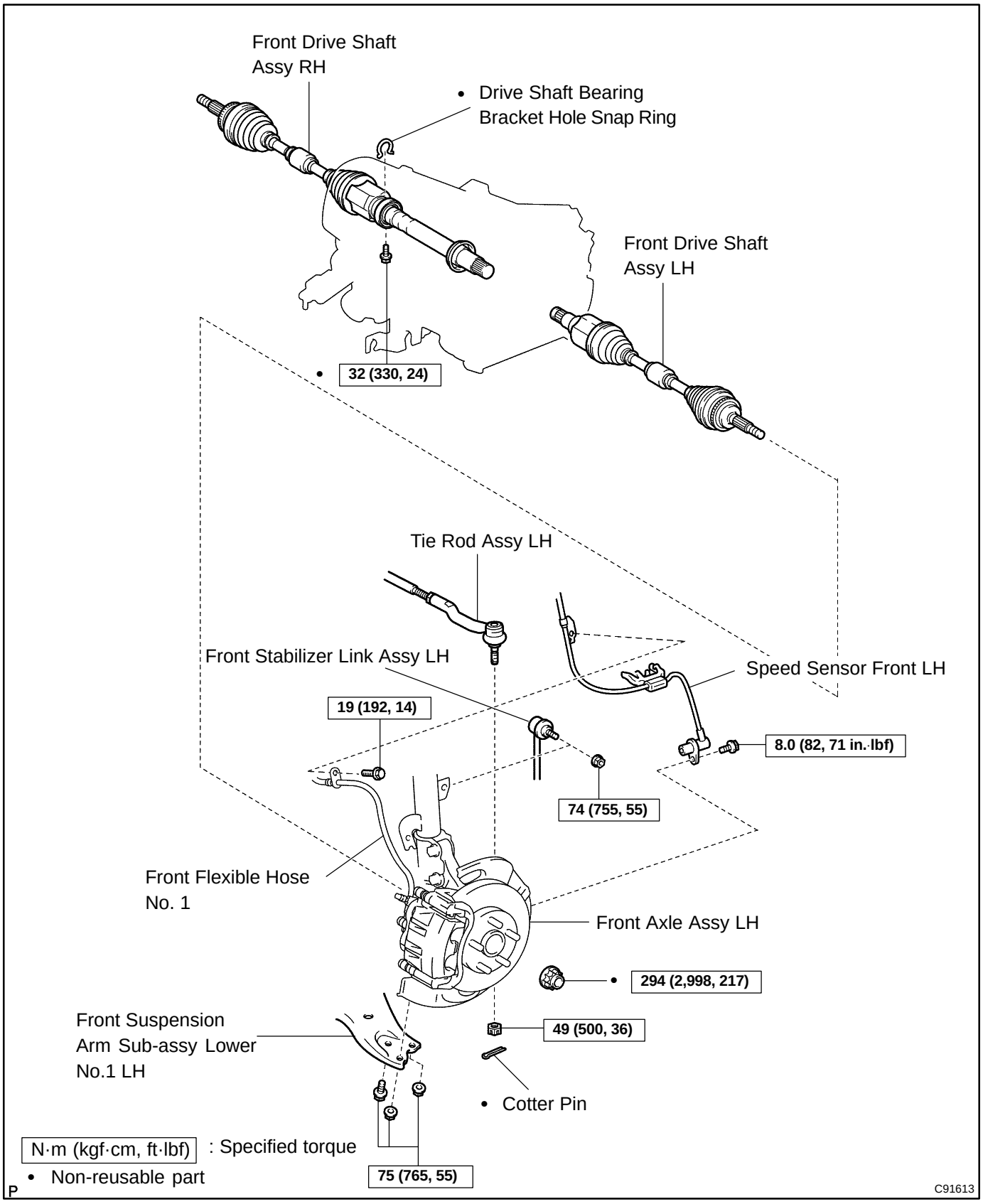
15. INSTALL REAR DISC BRAKE CALIPER ASSY LH (SEE PAGE 30-26)

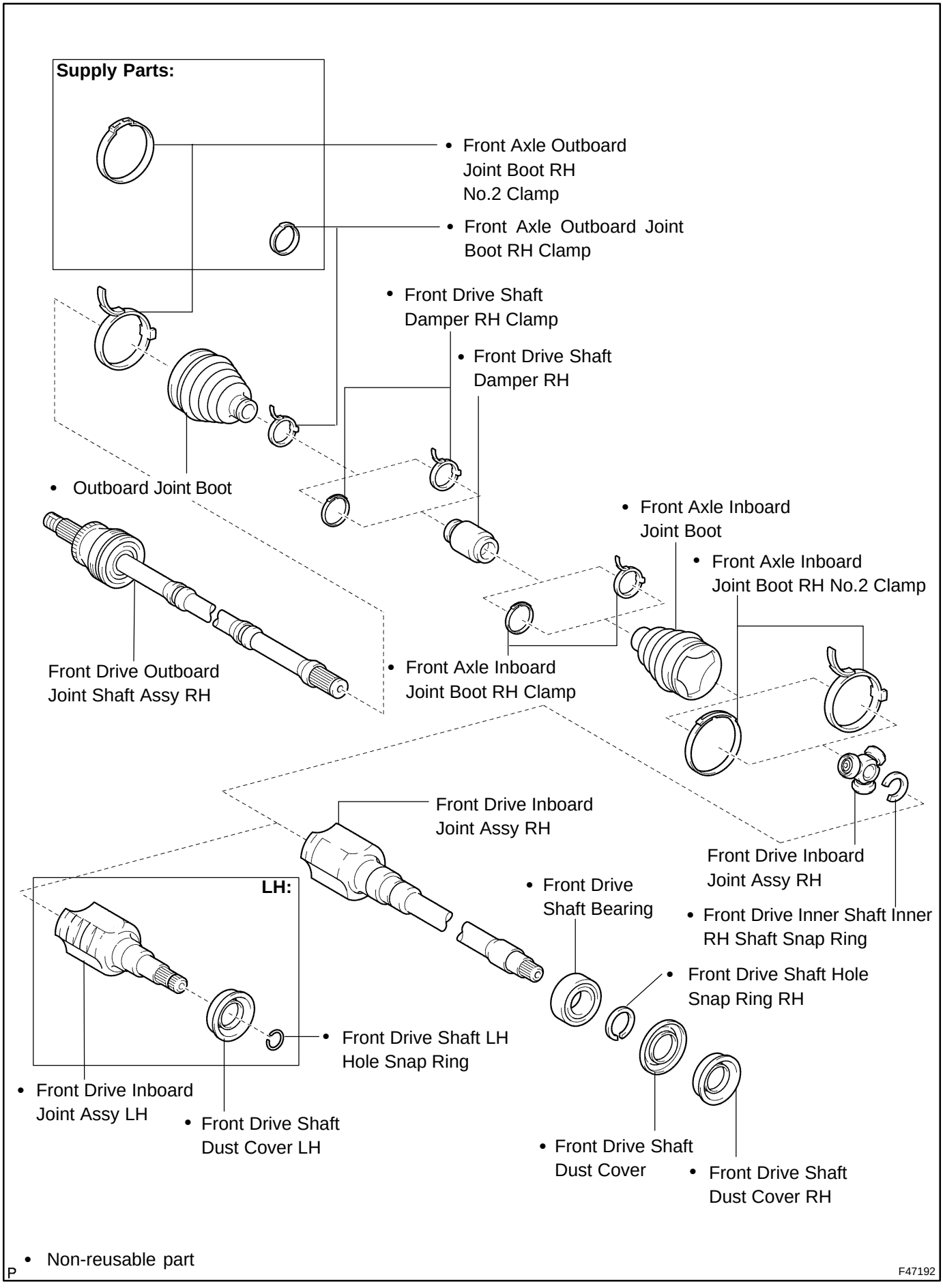
16. INSTALL REAR WHEEL

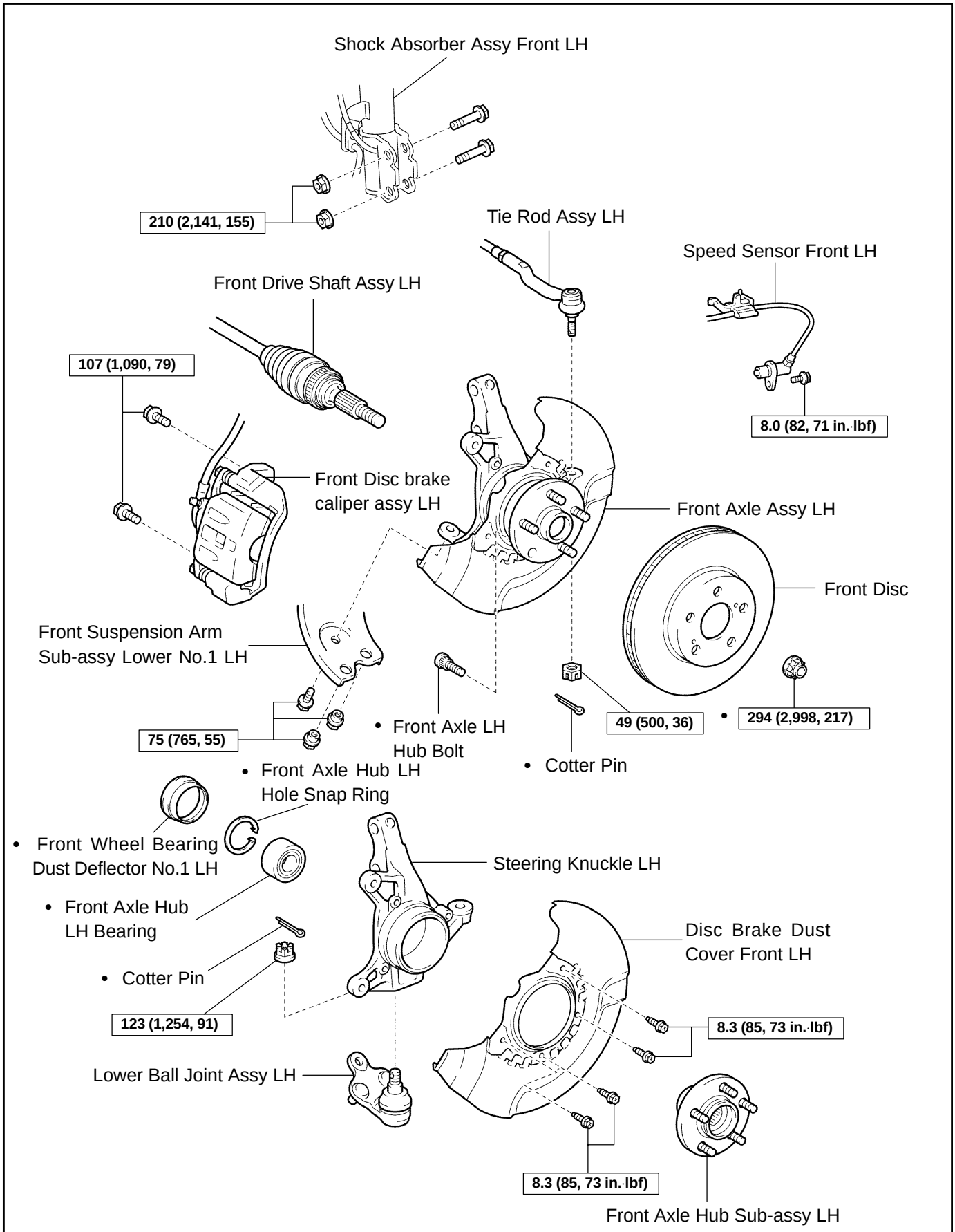
Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)

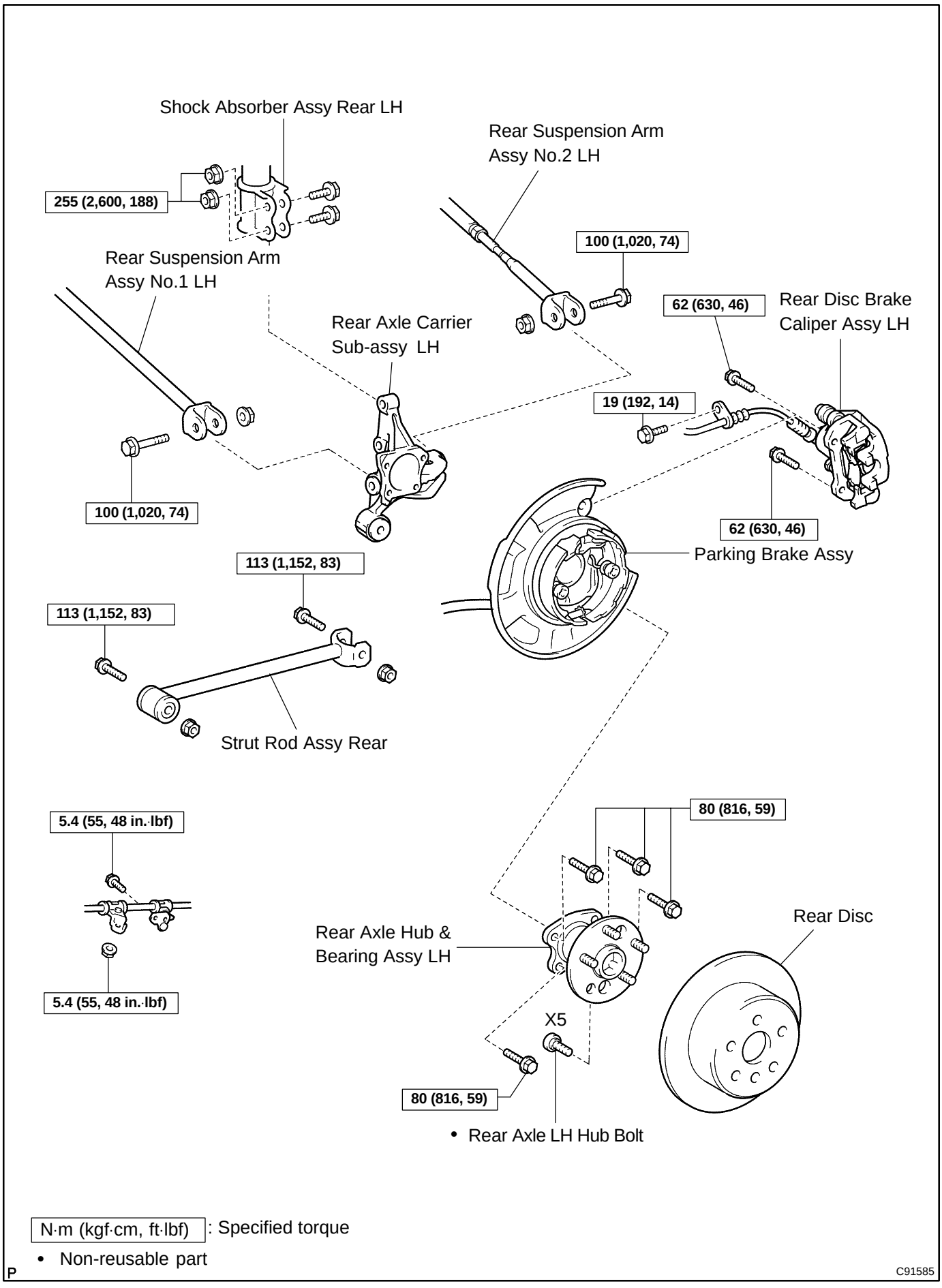
300AX-02

COMPONENTS




Supply Parts:
• Front Axle Outboard Joint Boot RH No.2 Clamp
• Front Axle Outboard Joint Boot RH Clamp
• Front Drive Shaft Damper RH Clamp
• Front Drive Shaft Damper RH
• Outboard Joint Boot
• Front Axle Inboard Joint Boot
• Front Axle Inboard Joint Boot RH No.2 Clamp
Front Drive Outboard Joint Shaft Assy RH
• Front Axle Inboard Joint Boot RH Clamp
Front Drive Inboard Joint Assy RH
Front Drive Inboard Joint Assy RH
LH:
• Front Drive Shaft Bearing
• Front Drive Inner Shaft Inner RH Shaft Snap Ring
• Front Drive Shaft Hole Snap Ring RH
• Front Drive Shaft LH Hole Snap Ring
• Front Drive Inboard Joint Assy LH
• Front Drive Shaft Dust Cover LH
• Front Drive Shaft Dust Cover
• Front Drive Shaft Dust Cover RH
• Non-reusable part
P
F47192


Shock Absorber Assy Front LH
210 (2,141, 155)
Tie Rod Assy LH
Speed Sensor Front LH
Front Drive Shaft Assy LH
107 (1,090, 79)
8.0 (82, 71 in.·lbf)
Front Disc brake caliper assy LH
Front Axle Assy LH
Front Disc
Front Suspension Arm Sub-assy Lower No.1 LH
75 (765, 55)
• Front Axle LH Hub Bolt
49 (500, 36)
• 294 (2,998, 217)
• Cotter Pin
• Front Axle Hub LH Hole Snap Ring
• Front Wheel Bearing Dust Deflector No.1 LH
Steering Knuckle LH
• Front Axle Hub LH Bearing
Disc Brake Dust Cover Front LH
• Cotter Pin
123 (1,254, 91)
8.3 (85, 73 in.·lbf)
Lower Ball Joint Assy LH
8.3 (85, 73 in.·lbf)
Front Axle Hub Sub-assy LH
N·m (kgf·cm, ft·lbf) : Specified torque
• Non-reusable part
P
G29148


Shock Absorber Assy Rear LH
255 (2,600, 188)
Rear Suspension Arm Assy No.2 LH
100 (1,020, 74)
Rear Suspension Arm Assy No.1 LH
Rear Axle Carrier Sub-assy LH
62 (630, 46)
Rear Disc Brake Caliper Assy LH
19 (192, 14)
100 (1,020, 74)
62 (630, 46)
Parking Brake Assy
113 (1,152, 83)
113 (1,152, 83)
Strut Rod Assy Rear
5.4 (55, 48 in.·lbf)
5.4 (55, 48 in.·lbf)
80 (816, 59)
Rear Axle Hub & Bearing Assy LH
Rear Disc
X5
80 (816, 59)
• Rear Axle LH Hub Bolt
N·m (kgf·cm, ft·lbf) : Specified torque
• Non-reusable part
P
C91585

FRONT DRIVE SHAFT (From July, 2003)

300M5-01

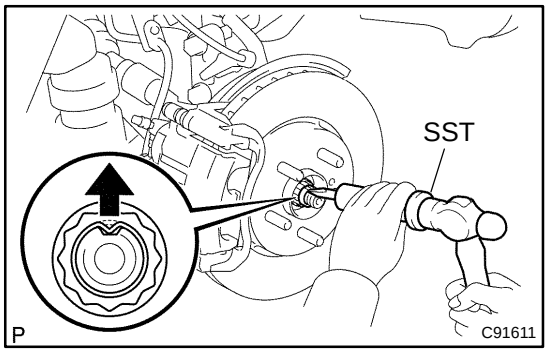
OVERHAUL

HINT:

- COMPONENTS: See page 30-4
- Overhaul the RH side following the same procedures as for the LH side.

1. DRAIN AUTOMATIC TRANSAXLE FLUID

2. REMOVE FRONT WHEEL



3. REMOVE FRONT AXLE HUB LH NUT

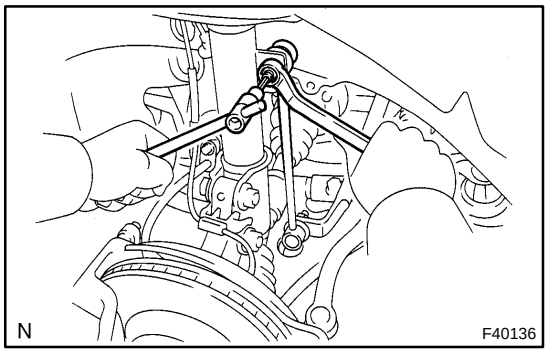
(a) Using SST and a hammer, unstake the staked part of the front axle hub LH nut.

SST 09930-00010

NOTICE:

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

(b) While applying the brake, remove the front axle hub LH nut.

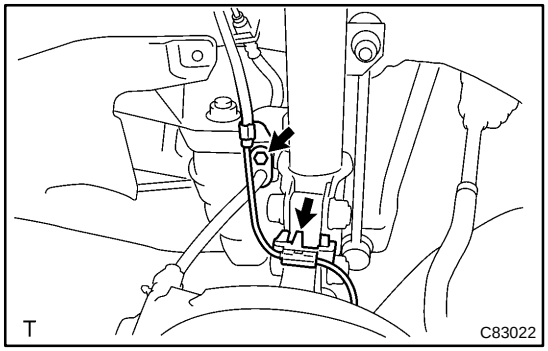


4. DISCONNECT FRONT STABILIZER LINK ASSY LH

(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.

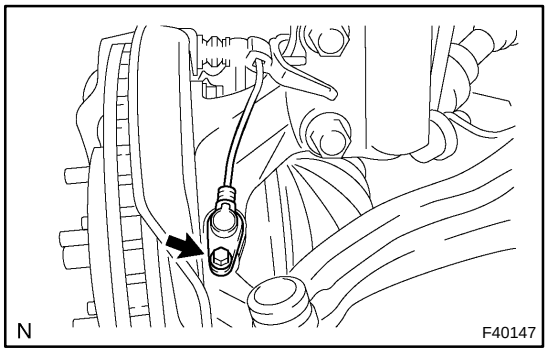


5. DISCONNECT SPEED SENSOR FRONT LH

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

NOTICE:

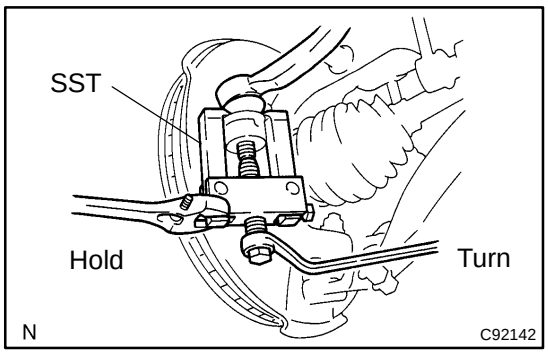
Be careful not to damage the speed sensor.



(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.

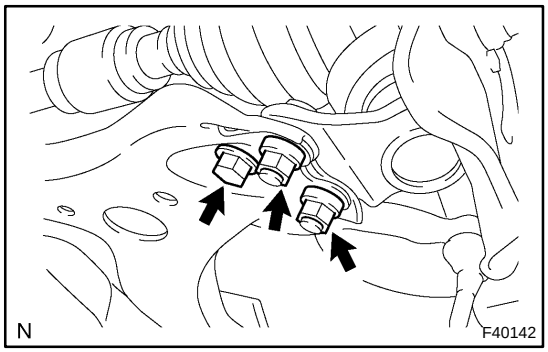


6. DISCONNECT TIE ROD ASSY LH

(a) Remove the cotter pin and nut.

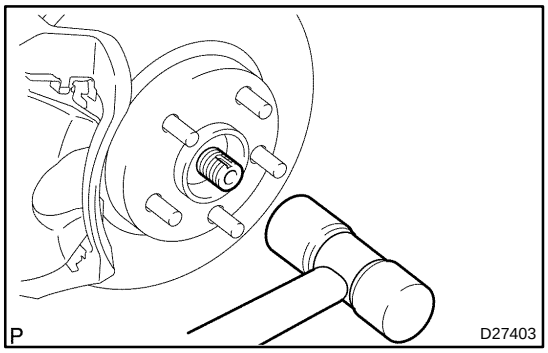
(b) Using SST, separate the tie rod end from the steering knuckle.

SST 09628-6201 1



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

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

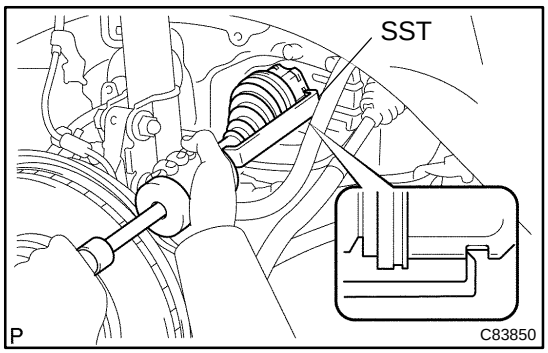


8. DISCONNECT FRONT AXLE ASSY LH

(a) Using a plastic hammer, separate the drive shaft from the axle hub.

NOTICE:

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



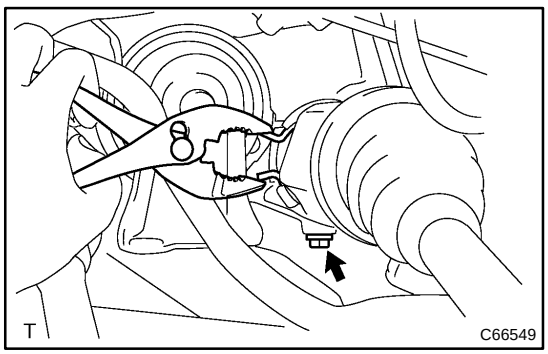
9. REMOVE FRONT DRIVE SHAFT ASSY LH

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

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

NOTICE:

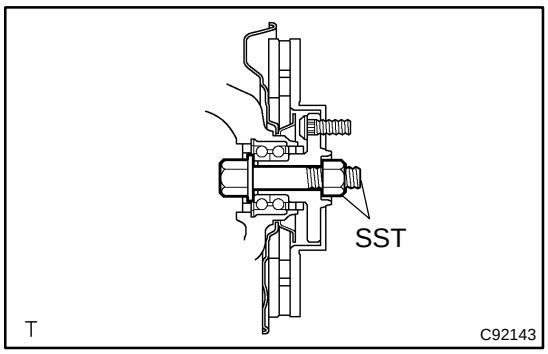
- **Be careful not to damage the transaxle case oil seal, inboard joint boot and drive shaft dust cover.**
- **Be careful not to drop the drive shaft assy.**



10. REMOVE FRONT DRIVE SHAFT ASSY RH

(a) Using pliers, remove the drive shaft bearing bracket hole snap ring.

(b) Remove the bolt and front drive shaft assy RH from the drive shaft bearing bracket.



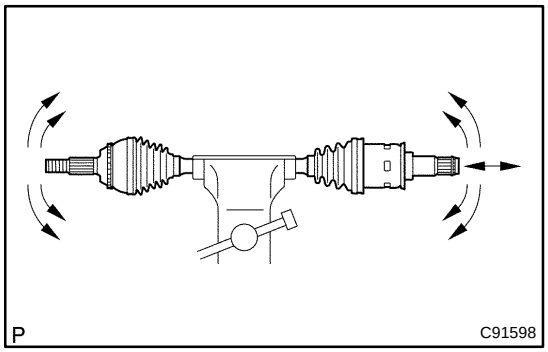
11. FIX FRONT AXLE ASSY LH

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.



12. INSPECT FRONT DRIVE SHAFT ASSY LH

NOTICE:

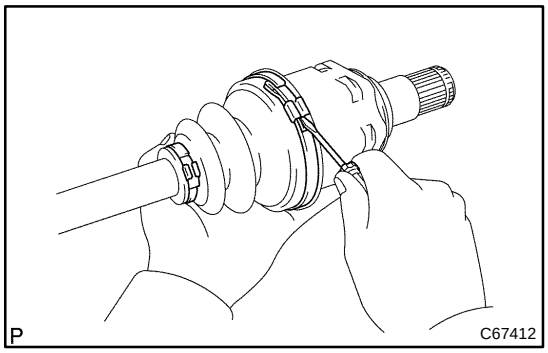
Move the drive shaft assy keeping it level.

(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.

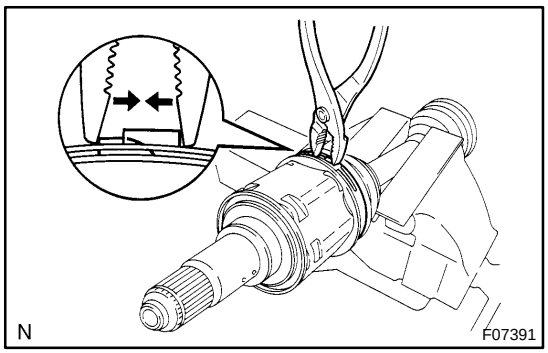
(d) Check the boots for damage.



13. REMOVE FRONT AXLE INBOARD JOINT BOOT CLAMP

(a) One touch type

(1) Using a screwdriver, remove the front axle inboard joint boot LH clamp and front axle inboard joint boot LH No.2 clamp, as shown in the illustration.

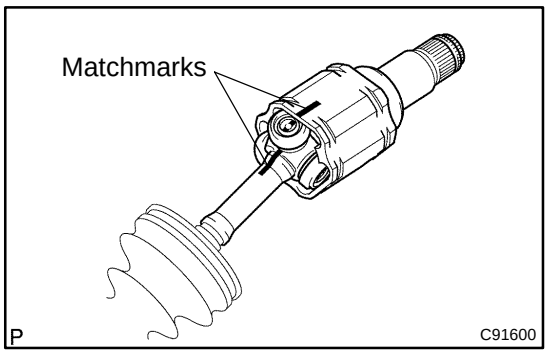


(b) Claw Engagement type

(1) Using pliers, remove the front axle inboard joint boot LH clamp and front axle inboard joint boot LH No.2 clamp, as shown in the illustration.

14. DISCONNECT FR AXLE INBOARD JOINT BOOT

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



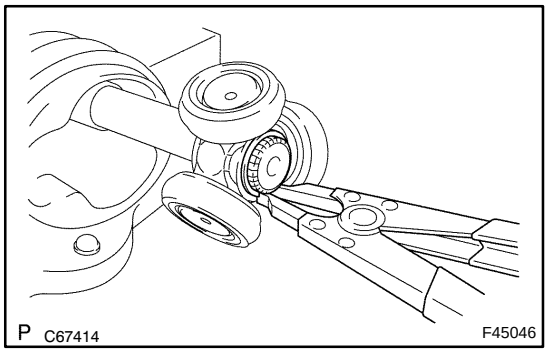
15. REMOVE FRONT DRIVE INBOARD JOINT ASSY LH

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

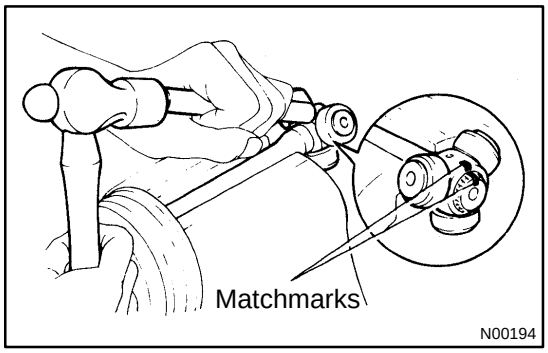
NOTICE:

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 front drive inner shaft inner RH 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.

16. REMOVE FRONT DRIVE SHAFT DAMPER LH

(a) Using a screwdriver, remove the front drive shaft damper LH clamp.

(b) Remove the front drive shaft damper LH.

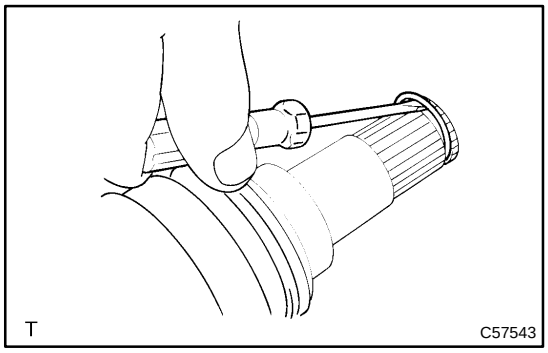
17. REMOVE FRONT AXLE OUTBOARD JOINT BOOT CLAMP

(a) Using a screwdriver, remove the front axle outboard joint boot LH clamp and front axle outboard joint boot LH No.2 clamp.

18. REMOVE OUTBOARD JOINT BOOT

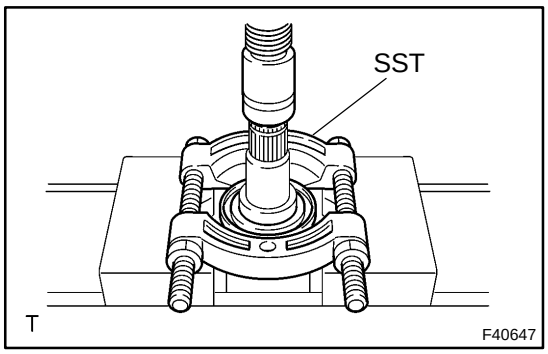
(a) Remove the outboard joint boot from the outboard joint shaft.

(b) Remove the old grease from the outboard joint.



19. REMOVE FRONT DRIVE SHAFT LH HOLE SNAP RING

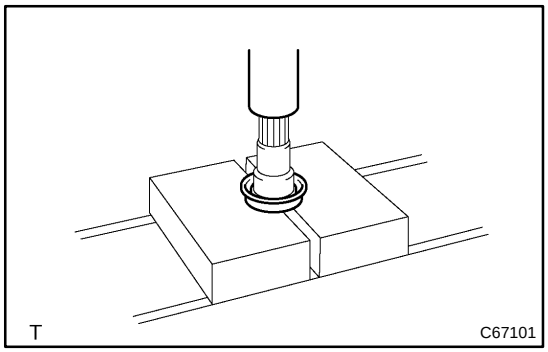
(a) Using a screwdriver, remove the hole snap ring.



20. REMOVE FRONT DRIVE SHAFT DUST COVER LH

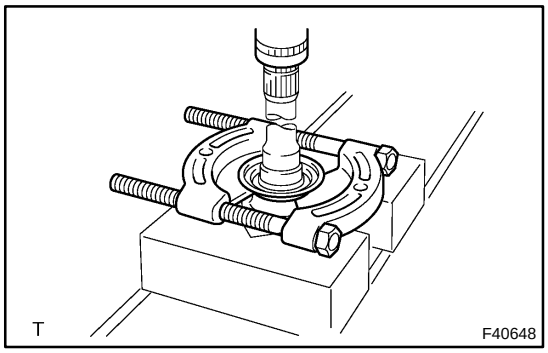
(a) Using SST and a press, remove the front drive shaft dust cover LH.
SST 09950-00020

NOTICE:
Be careful not to drop the inboard joint assy.



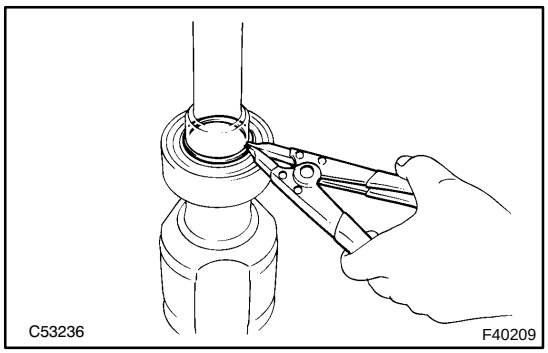
21. REMOVE FRONT DRIVE SHAFT DUST COVER RH

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



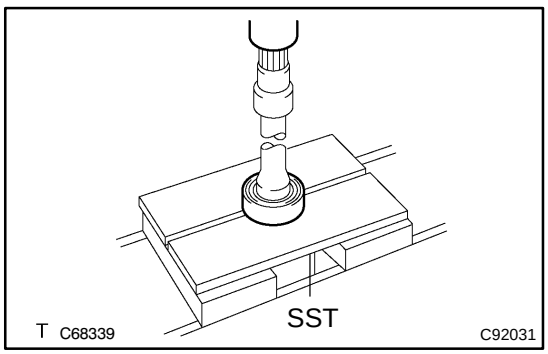
22. REMOVE FRONT DRIVE SHAFT DUST COVER

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



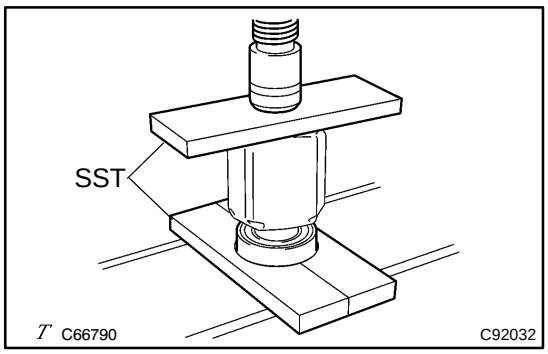
23. REMOVE FRONT DRIVE SHAFT BEARING

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



(b) Using SST and a press, remove the bearing.
SST 09527-1001 1

NOTICE:
Be careful not to drop the inboard joint assy.



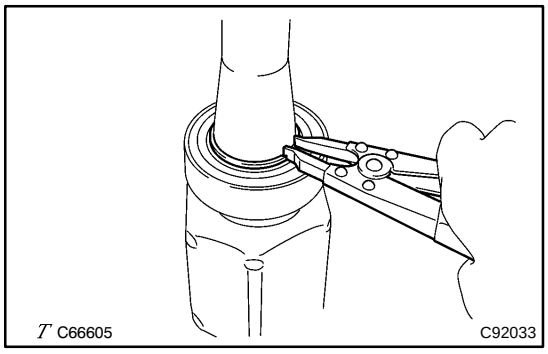
24. INSTALL FRONT DRIVE SHAFT BEARING

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

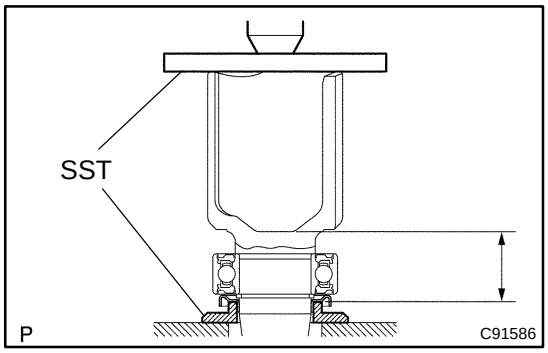
SST 09527-30010, 09527-10011

NOTICE:

Bearing should be completely installed.



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

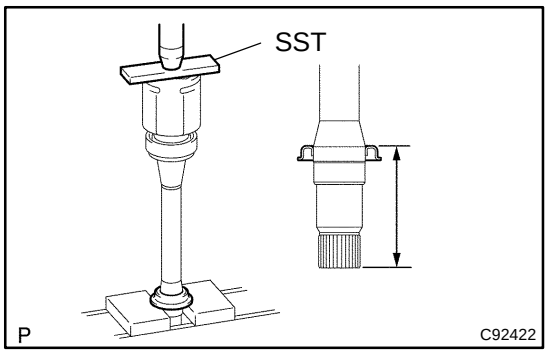


25. INSTALL FRONT DRIVE SHAFT DUST COVER

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

SST 09527-1001 1, 09726-40010

Distance: 42.1 ± 0.5 mm (1.7 ± 0.02 in.)



26. INSTALL FRONT DRIVE SHAFT DUST COVER RH

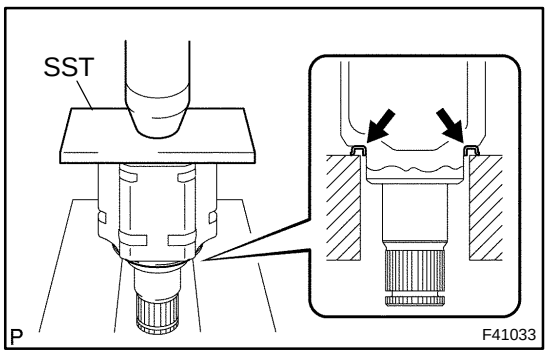
(a) Using SST and a press, install a new drive shaft dust cover RH until the distance from the tip of the center drive shaft to the drive shaft dust cover RH meets the specification, as shown in the illustration.

SST 09527-1001 1

Distance: 110.5 ± 0.5 mm (4.4 ± 0.02 in.)

NOTICE:

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



27. INSTALL FRONT DRIVE SHAFT DUST COVER LH

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

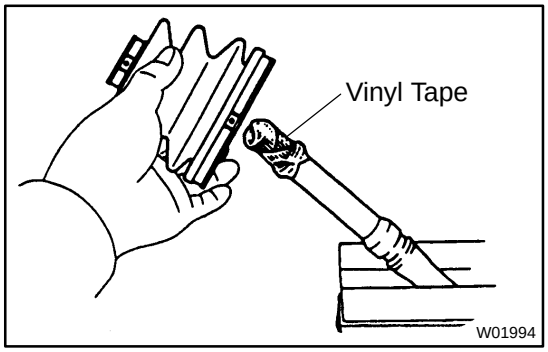
SST 09527-1001 1

NOTICE:

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

28. INSTALL FRONT DRIVE SHAFT LH HOLE SNAP RING

(a) Install a new front drive shaft LH hole snap ring.



29. 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.

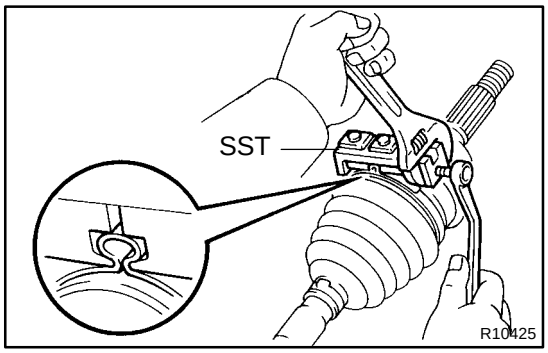
(a) Hold the drive shaft lightly in a soft vise.

(b) Temporarily install a new outboard joint boot with 2 new clamps to the drive shaft.

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

Grease capacity:

205 - 215 g (7.2 - 7.6 oz.)



30. INSTALL FRONT AXLE OUTBOARD JOINT BOOT CLAMP

(a) Hold the drive shaft lightly in a soft vise.

(b) Install the 2 outboard joint boot clamps onto the boot.

(c) Place SST onto the outboard joint large boot clamp.

SST 09521-24010

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

NOTICE:

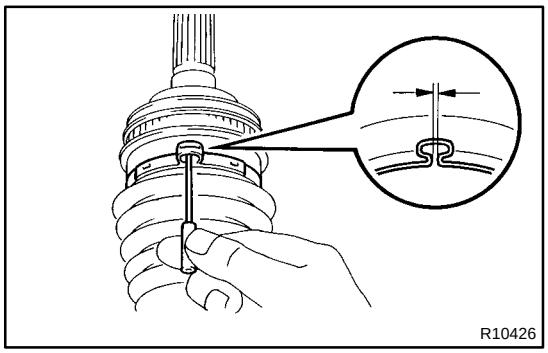
Do not overtighten the SST.

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

SST 09240-00020

Clearance: 0.8 mm (0.032 in.) or less

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



31. INSTALL FRONT DRIVE SHAFT DAMPER LH

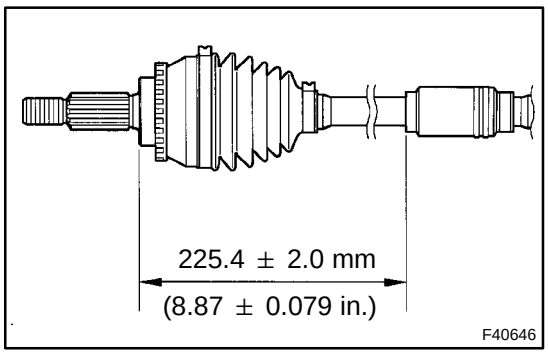
(a) Install the drive shaft damper LH to the drive shaft.

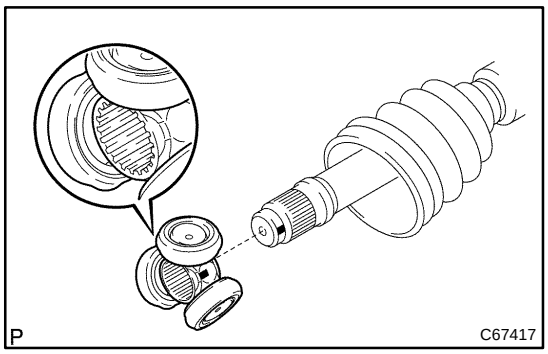
(b) Make sure that the damper is on the shaft groove.

(c) Set the distance, as described below.

Distance: 225.4 ± 2.0 mm (8.87 ± 0.079 in.)

(d) Install a new front drive shaft damper LH clamp to the front drive shaft damper LH.





32. INSTALL FRONT DRIVE INBOARD JOINT ASSY LH

(a) Temporarily install a new inboard joint boot with 2 new clamps to the drive shaft.

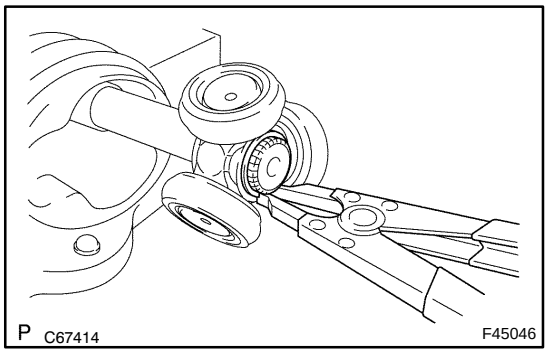
(b) Place the beveled side of the tripod joint axial spline toward the outboard joint shaft.

(c) Align the matchmarks.

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

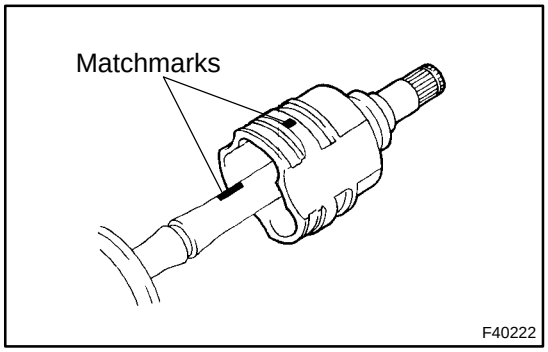
NOTICE:

- **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.

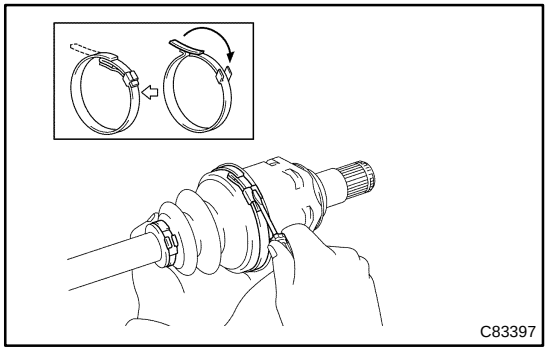
(f) Pack the outboard joint shaft and boot with grease.
Grease capacity: 175 to 185 g (6.25 to 6.61 oz.)



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

33. INSTALL FR AXLE INBOARD JOINT BOOT

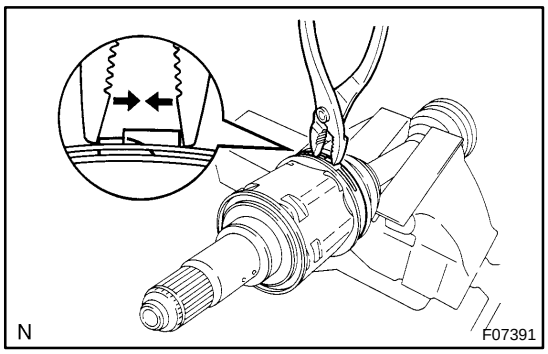
(a) Install the inboard joint boot to the inboard joint assy.



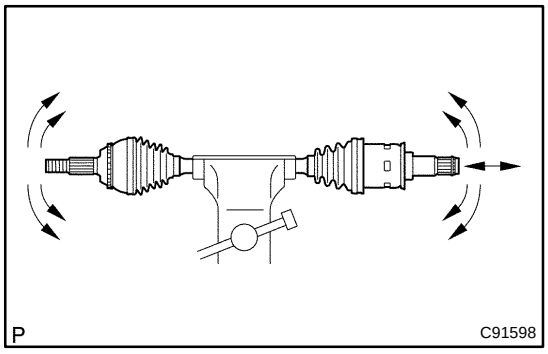
34. INSTALL FRONT AXLE INBOARD JOINT BOOT CLAMP

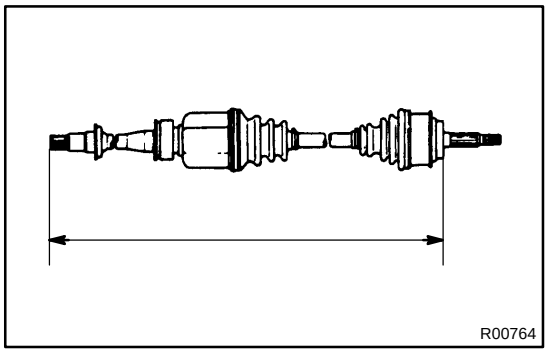
(a) One touch type

(1) Using a screwdriver, install the front axle inboard joint boot LH clamp and front axle inboard joint boot LH No.2 clamp, as shown in the illustration.



(b) Claw Engagement type
(1) Using pliers, install the front axle inboard joint boot LH clamp and front axle inboard joint boot LH No.2 clamp, as shown in the illustration.





35. INSPECT FRONT DRIVE SHAFT

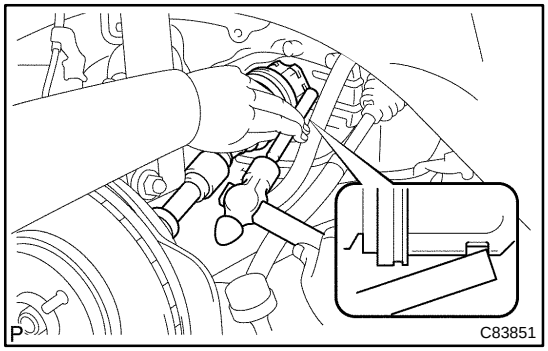
NOTICE:

Move the drive shaft assy keeping it level.

(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.
(e) Make sure that the 2 boots are on the shaft groove.
(f) Make sure that the 2 boots are not stretched or contracted when the drive shaft is at standard length.

Drive shaft standard length: mm (in.)

LH	576.9 ± 2.0 (22.713 ± 0.079)
RH	896.4 ± 2.0 (35.291 ± 0.079)

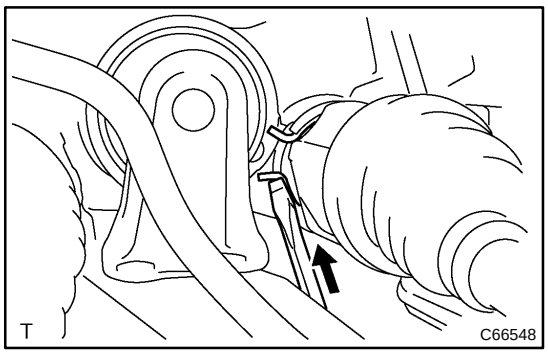


36. INSTALL FRONT DRIVE SHAFT ASSY LH

(a) Install a new front drive shaft LH hole snap ring.
(b) Coat the spline of the inboard joint shaft assy with ATF.
(c) Align the shaft splines and install the drive shaft assy with a brass bar and 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.**



37. INSTALL FRONT DRIVE SHAFT ASSY RH

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

NOTICE:

Do not damage the oil seal and boot.

(b) Install the bolt.

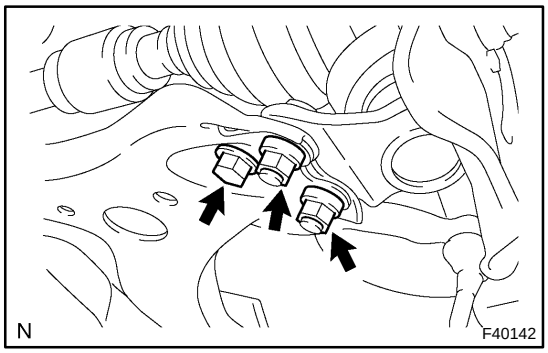
Torque: 32 N·m (330 kgf·cm, 24 ft·lbf)

38. INSTALL FRONT AXLE ASSY LH

(a) Install the front 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.**



39. 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: 75 N·m (765 kgf·cm, 55 ft·lbf)

40. INSTALL TIE ROD ASSY LH

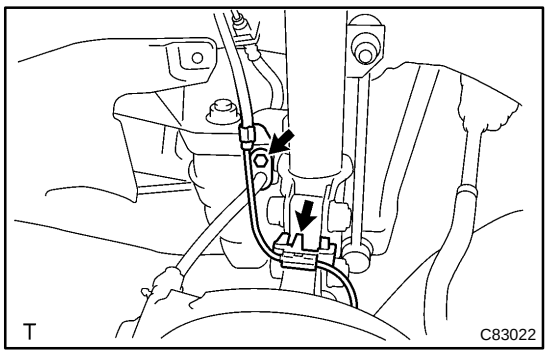
(a) Install the tie rod end to the steering knuckle with the nut.

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.



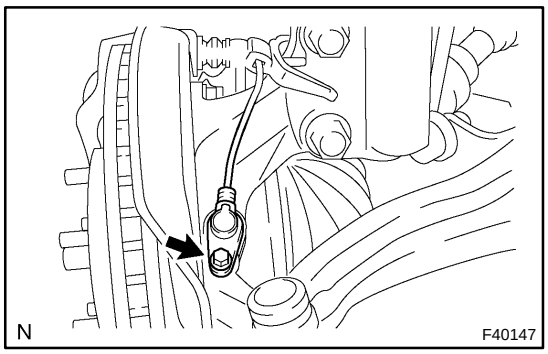
41. INSTALL SPEED SENSOR FRONT LH

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

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

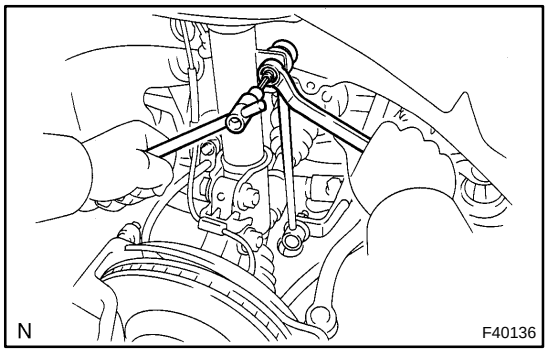
NOTICE:

- **Be careful not to damage the speed sensor.**
- **Do not twist the sensor wire when installing the speed sensor.**



(b) Install the speed sensor to the steering knuckle with the bolt.
Torque: 8.0 N·m (82 kgf·cm, 71 in.·lbf)

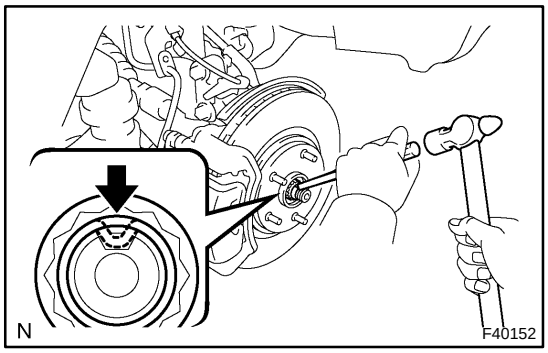
NOTICE:
Prevent foreign matter from adhering to the speed sensor.



42. INSTALL FRONT STABILIZER LINK ASSY LH

(a) Install the front 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.



43. INSTALL FRONT AXLE HUB LH NUT

(a) Using a socket wrench (30 mm), install a new axle hub LH nut.
Torque: 294 N·m (2,998 kgf·cm, 217 ft·lbf)

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

44. INSTALL FRONT WHEEL
Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)

45. ADD AUTOMATIC TRANSAXLE FLUID (SEE PAGE 40-1)

46. INSPECT AUTOMATIC TRANSAXLE FLUID

47. INSPECT AND ADJUST FRONT WHEEL ALIGNMENT (SEE PAGE 26-5)

48. CHECK ABS SPEED SENSOR SIGNAL
w/ VSC (SEE PAGE 05-471)
w/o VSC (SEE PAGE 05-420)

FRONT AXLE HUB SUB-ASSY LH (From July, 2003)

300M6-02

REPLACEMENT

HINT:

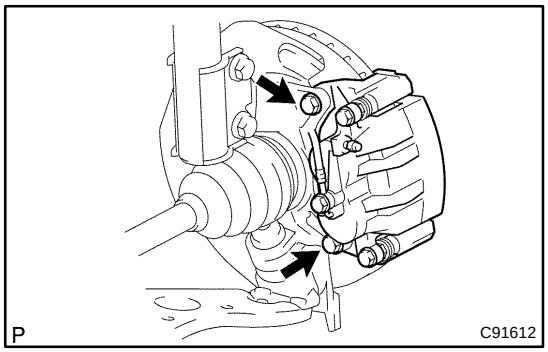
- Replace the RH side using the same procedures as for the LH side.

1. REMOVE FRONT WHEEL

2. REMOVE FRONT AXLE HUB LH NUT (SEE PAGE 30-8)

SST 09930-00010

3. DISCONNECT SPEED SENSOR FRONT LH (SEE PAGE 30-8)



4. SEPARATE FRONT DISC BRAKE CALIPER ASSY LH

(a) Remove the 2 bolts and separate the front disc brake caliper assy LH from the steering knuckle LH.

NOTICE:

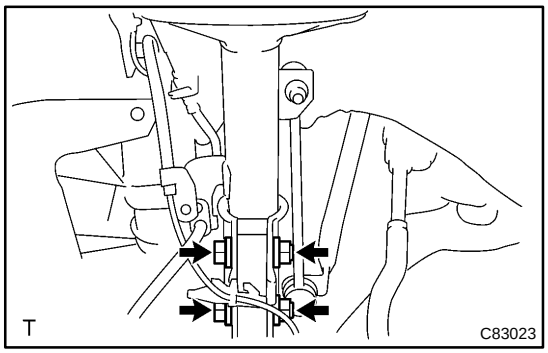
Use a string or other device to keep the brake caliper from hanging down by the flexible hose.

5. REMOVE FRONT DISC

6. SEPARATE TIE ROD ASSY LH (SEE PAGE 30-8)

SST 09628-6201 1

7. SEPARATE FRONT SUSPENSION ARM SUB-ASSY LOWER NO.1 LH (SEE PAGE 30-8)



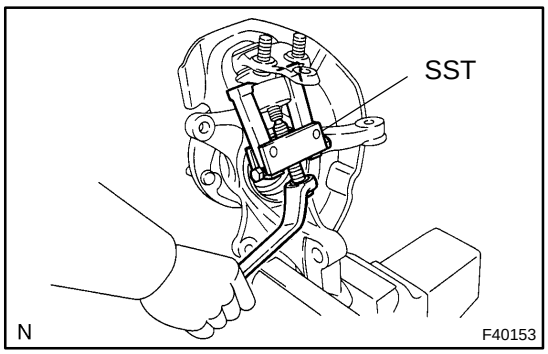
8. REMOVE FRONT AXLE ASSY LH

(a) Using a plastic hammer, separate the front drive shaft assy LH from the front axle hub sub-assy LH.

NOTICE:

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

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

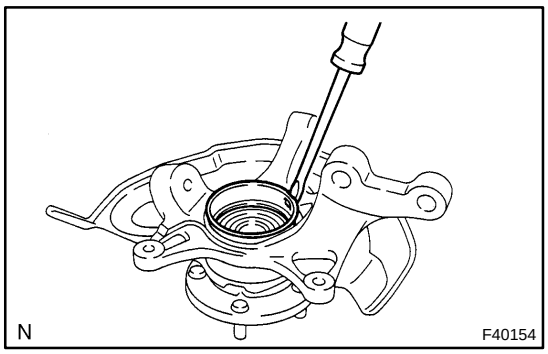


9. REMOVE LOWER BALL JOINT ASSY FRONT LH

(a) Remove the cotter pin and nut.

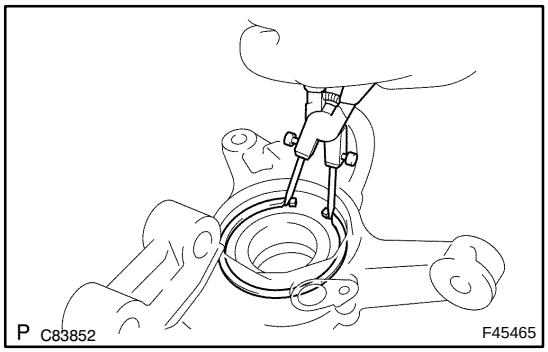
(b) Using SST, remove the lower ball joint assy front LH.

SST 09628-6201 1



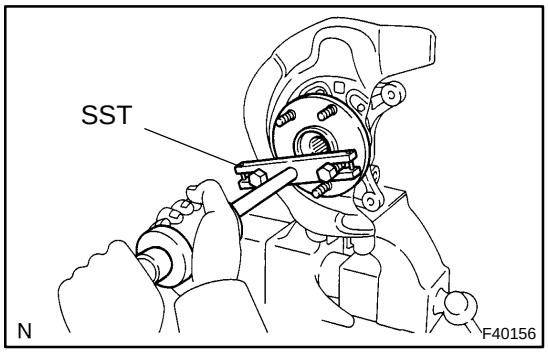
10. REMOVE FRONT WHEEL BEARING DUST DEFLECTOR NO.1 LH

(a) Using a screwdriver, remove the bearing dust deflector No.1 LH.



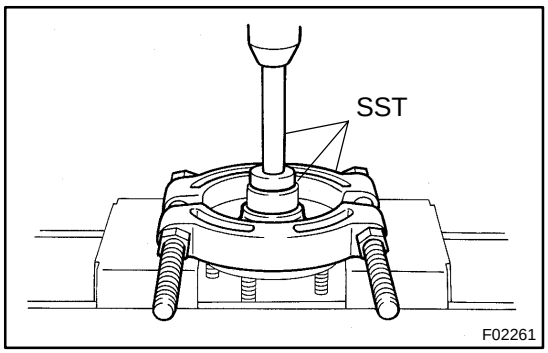
11. REMOVE FRONT AXLE HUB LH HOLE SNAP RING

(a) Using a snap ring expander, remove the front axle hub LH hole snap ring.



12. REMOVE FRONT AXLE HUB SUB-ASSY LH

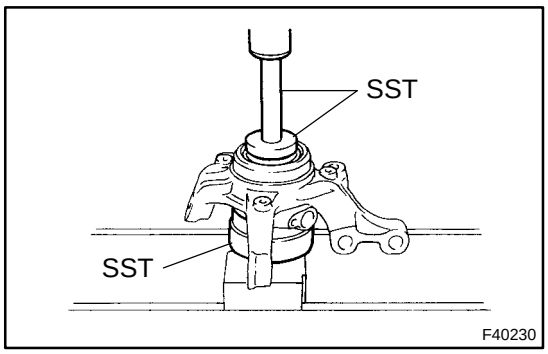
(a) Using SST, remove the front axle hub sub-assy LH.
SST 09520-00031



(b) Using SST and a press, remove the bearing inner race (outside) from the front axle hub sub-assy LH.
SST 09950- 00020, 09950- 60010 (09951- 00410), 09950-70010 (09951-07100)

13. REMOVE DISC BRAKE DUST COVER FRONT LH

(a) Using a torx® wrench (T30), remove the 4 bolts and disc brake dust cover front LH.

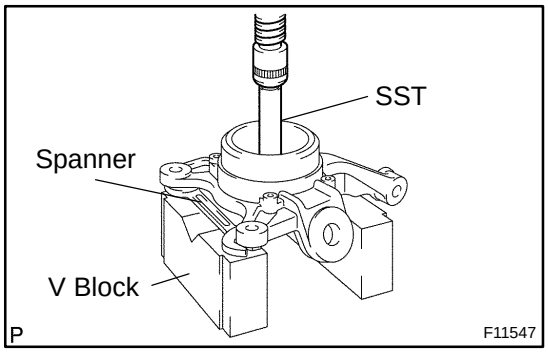


14. REMOVE FRONT AXLE HUB LH BEARING

(a) Place the bearing inner race (outside) on the front axle hub LH bearing.

(b) Using SST and a press, press the front axle hub LH bearing until it contacts the SST.

SST 09527- 17011, 09950- 60010 (09951- 00600), 09950-70010 (09951-07100)



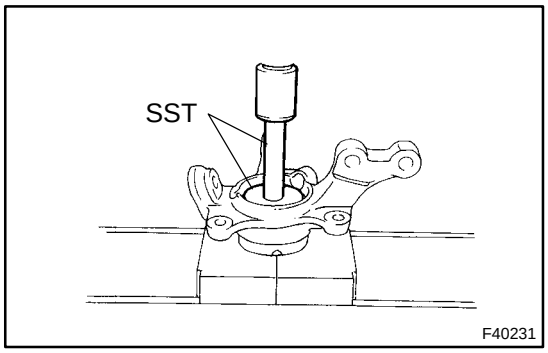
(c) Using a spanner to make the steering knuckle LH horizontal, fix it to the V block as shown in the illustration.

NOTICE:

Be sure that the steering knuckle is horizontally positioned.

(d) Using SST and a press, remove the front axle hub LH bearing.

SST 09950- 60010 (09951- 00600), 09950- 70010 (09951-07100)



15. INSTALL FRONT AXLE HUB LH BEARING

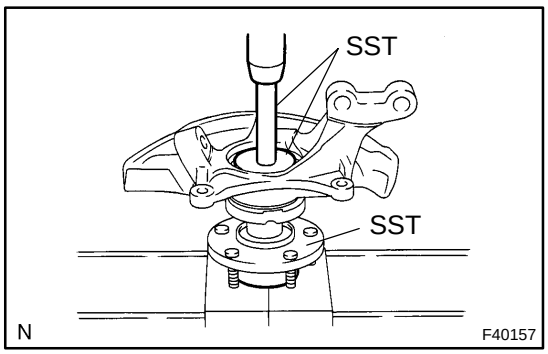
(a) Using SST and a press, install a new front axle hub LH bearing to the steering knuckle LH.

SST 09950- 60020 (09951- 00790), 09950- 70010 (09951-07100)

16. INSTALL DISC BRAKE DUST COVER FRONT LH

(a) Place the disc brake dust cover front LH and using a torx wrench (T30), torque the 4 bolts.

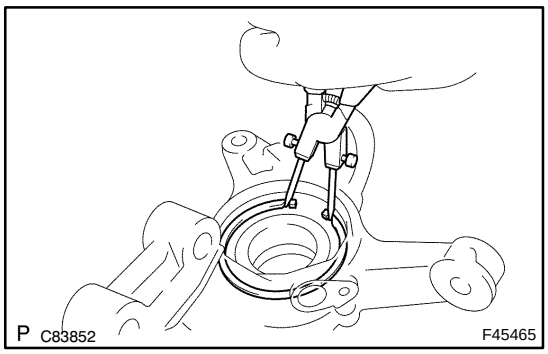
Torque: 8.3 N·m (85 kgf·cm, 73 in.·lbf)



17. INSTALL FRONT AXLE HUB SUB-ASSY LH

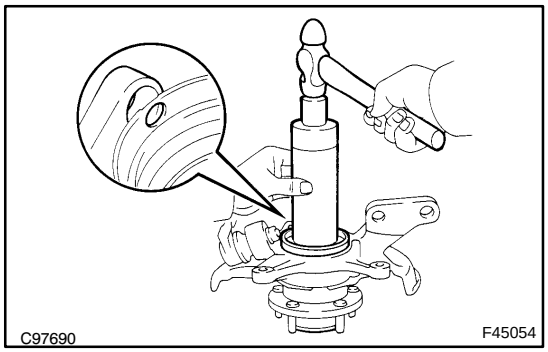
(a) Using SST and a press, install the front axle hub subassy LH.

SST 09608- 32010, 09950- 60020 (09951- 00790), 09950-70010 (09951-07100)



18. INSTALL FRONT AXLE HUB LH HOLE SNAP RING

(a) Using snap ring pliers, install a new front axle hub LH hole snap ring.



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

(a) Using SST and a hammer, install the bearing dust deflector No.1 LH.

SST 09316- 60011 (09316- 00011, 09316- 00031), 09608-32010

HINT:

Aligh the hole for the speed sensor in the bearing dust deflector No.1 LH with the steering knuckle.

20. INSTALL LOWER BALL JOINT ASSY FRONT LH

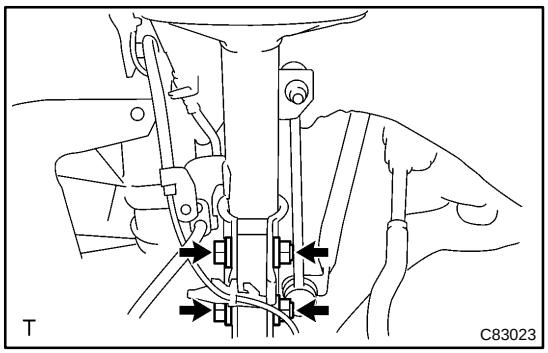
(a) Install the lower ball joint assy front LH and tighten the nut.

Torque: 123 N·m (1,254 kgf·cm, 90 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.



21. INSTALL FRONT AXLE ASSY LH

(a) Install the front axle assy LH with the 2 bolts and nuts to the shock absorber assy front LH.

Torque: 210 N·m (2,141 kgf·cm, 155 ft·lbf)

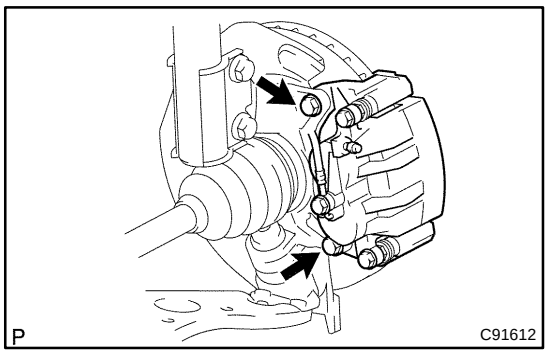
NOTICE:

- **Only when reusing the bolts and nuts, apply the small amount of engine oil to the screw part of the nuts.**
- **Do not excessively push out the front axle assy LH.**
- **Be careful not to damage the outboard joint boot.**
- **Be careful not to damage the speed sensor rotor.**

22. INSTALL FRONT SUSPENSION ARM SUB-ASSY LOWER NO.1 LH (SEE PAGE 30-8)

23. INSTALL TIE ROD ASSY LH (SEE PAGE 30-8)

24. INSTALL FRONT DISC

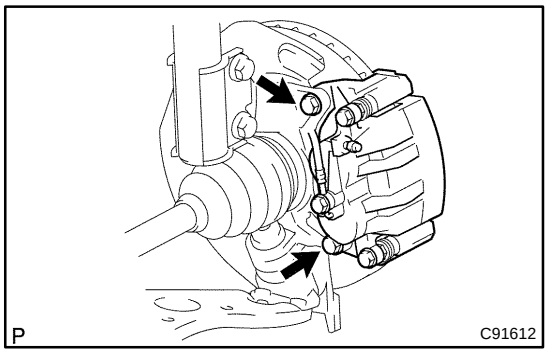


25. INSTALL FRONT DISC BRAKE CALIPER ASSY LH

(a) Install the front disc brake caliper assy LH with the 2 bolts to the steering knuckle LH.
Torque: 107 N·m (1,090 kgf·cm, 79 ft·lbf)

26. INSTALL FRONT AXLE HUB LH NUT (SEE PAGE30-8)

(a) Using a socket wrench (30 mm), install a new axle hub LH nut.
Torque: 294 N·m (2,998 kgf·cm, 217 ft·lbf)

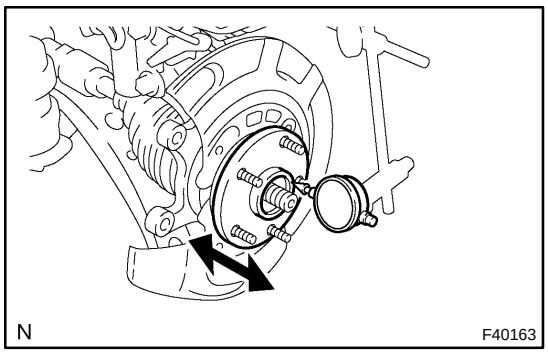


27. DISCONNECT FRONT DISC BRAKE CALIPER ASSY LH

(a) Remove the 2 bolts and separate the front disc brake caliper assy LH from the steering knuckle LH.

NOTICE:
Use a string or other device to keep the brake caliper from hanging down by the flexible hose.

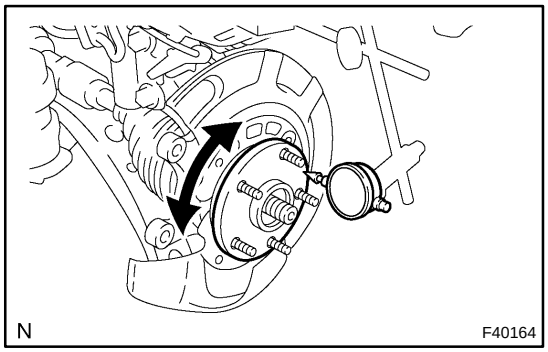
28. REMOVE FRONT DISC



29. INSPECT BEARING BACKLASH

(a) Using a dial indicator, check the backlash near the center of the axle hub.
Maximum: 0.05 mm (0.0020 in.)

If the backlash exceeds the maximum, replace the bearing.

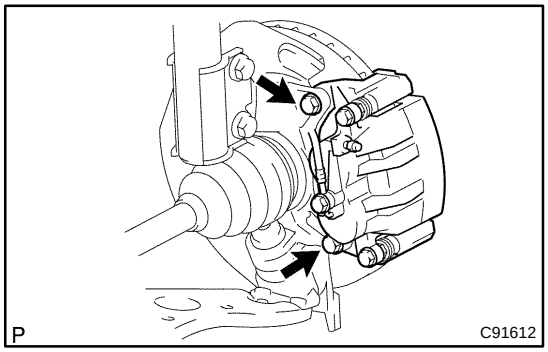


30. INSPECT AXLE HUB DEVIATION

(a) Using a dial indicator, check the deviation at the surface of the axle hub outside the hub bolt.
Maximum: 0.05 mm (0.0020 in.)

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

31. INSTALL FRONT DISC

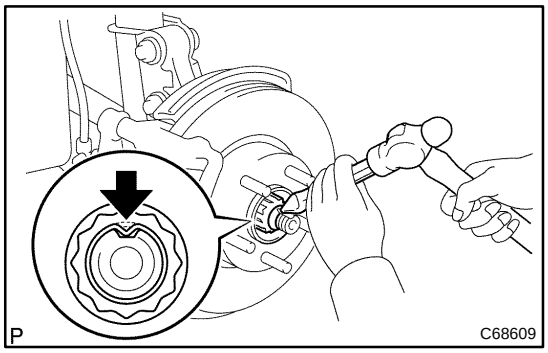


32. INSTALL FRONT DISC BRAKE CALIPER ASSY LH

(a) Install the front disc brake caliper assy LH with the 2 bolts to the steering knuckle LH.

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

33. INSTALL SPEED SENSOR FRONT LH (SEE PAGE 30-8)



34. INSTALL FRONT AXLE HUB LH NUT

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

Torque: 294 N·m (2,998 kgf·cm, 217 ft·lbf)

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

35. INSTALL FRONT WHEEL

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

36. INSPECT AND ADJUST FRONT WHEEL ALIGNMENT (SEE PAGE 26-5)

37. CHECK ABS SPEED SENSOR SIGNAL

w/ VSC (SEE PAGE 05-471)

w/o VSC (SEE PAGE 05-420)

FRONT AXLE LH HUB BOLT

30020-09

REPLACEMENT

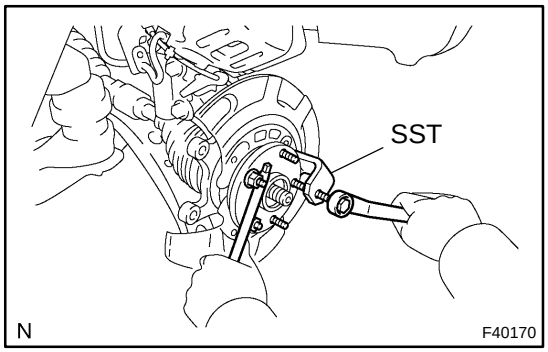
HINT:

- COMPONENTS: See page 30-4
- Replace the RH side by the same procedures with LH side.

1. REMOVE FRONT WHEEL

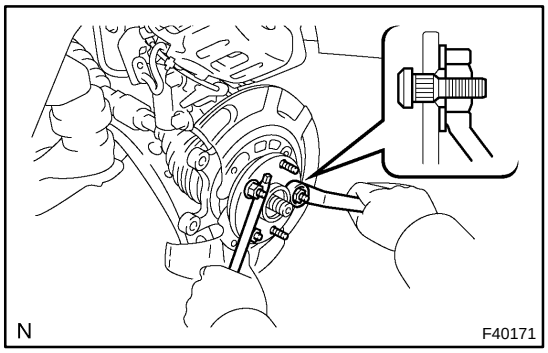
2. DISCONNECT FRONT DISC BRAKE CALIPER ASSY LH (SEE PAGE 30-19)

3. REMOVE FRONT DISC



4. REMOVE FRONT AXLE LH HUB BOLT

(a) Using SST and a screwdriver or an equivalent to hold, remove the front axle LH hub bolt.
SST 09628-1001 1



5. INSTALL FRONT AXLE LH HUB BOLT

(a) Install a washer and nut to a new front axle LH 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 30-19)

8. INSTALL FRONT WHEEL
Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)

REAR AXLE HUB & BEARING ASSY LH

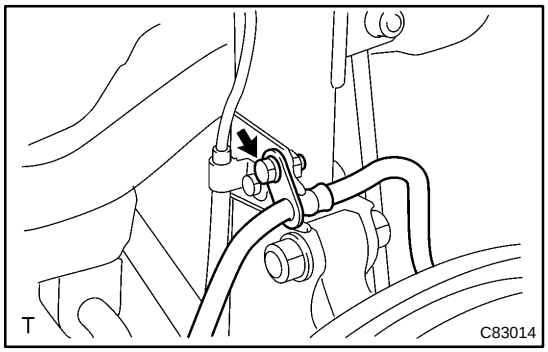
3006I-04

REPLACEMENT

HINT:

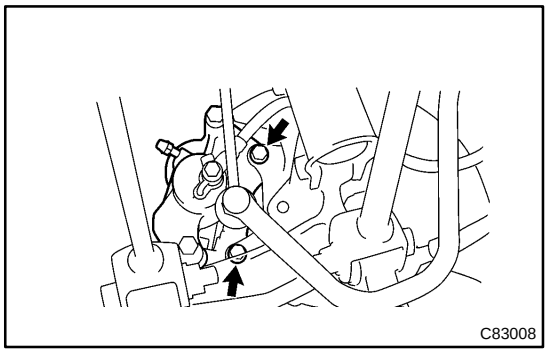
- COMPONENTS: See page 30-4
- Replace the RH side by the same procedures with the LH side.

1. REMOVE REAR WHEEL



2. DISCONNECT REAR DISC BRAKE CALIPER ASSY LH

(a) Remove the bolt and disconnect the rear flexible hose.

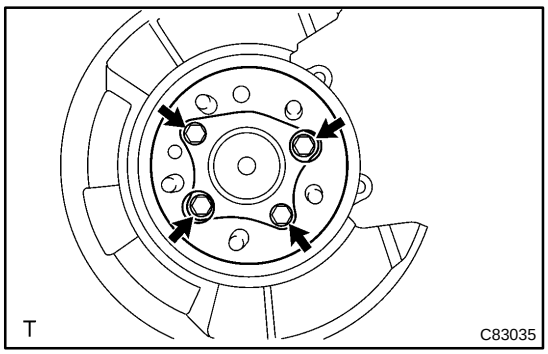


(b) Remove the 2 bolts and rear disc brake caliper assy LH.

(c) Support the rear disc brake caliper assy LH securely.

3. REMOVE REAR DISC

4. DISCONNECT SKID CONTROL SENSOR WIRE

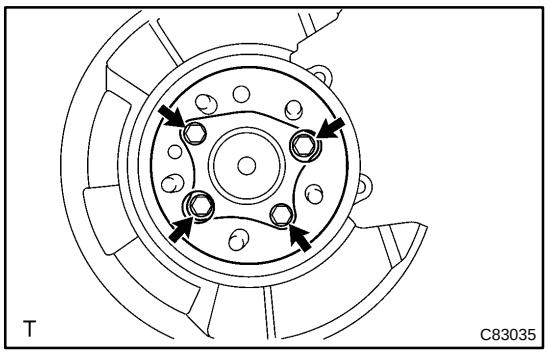


5. REMOVE REAR AXLE HUB & BEARING ASSY LH

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

6. REMOVE SKID CONTROL SENSOR (SEE PAGE 32-56)

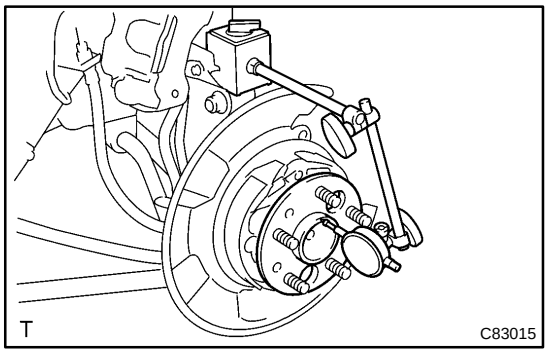
7. INSTALL SKID CONTROL SENSOR (SEE PAGE 32-56)



8. INSTALL REAR AXLE HUB & BEARING ASSY LH

(a) Install the rear axle hub & bearing assy LH with the 4 bolts.
Torque: 80 N·m (816 kgf·cm, 59 ft·lbf)

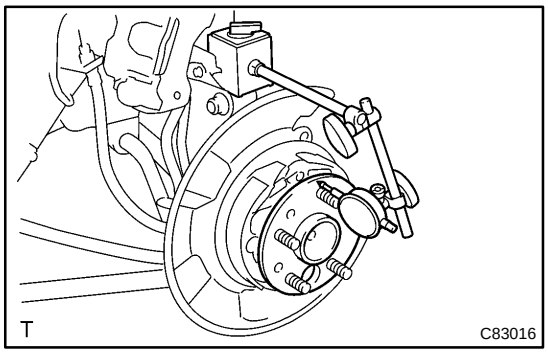
9. INSTALL SKID CONTROL SENSOR WIRE



10. 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: 0.05 mm (0.0020 in.)

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

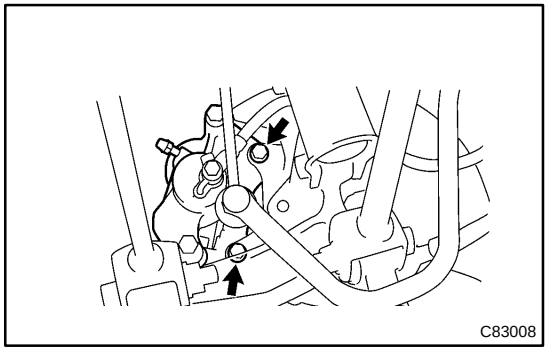


11. INSPECT AXLE HUB DEVIATION

(a) Using a dial indicator, check the deviation at the surface of the axle hub outside the hub bolt.
Maximum: 0.07 mm (0.0028 in.)

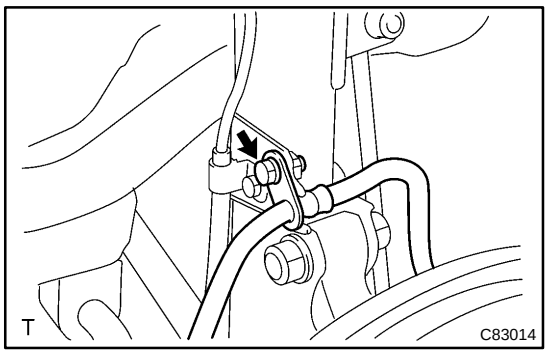
If the backlash exceeds the maximum, replace the axle hub assembly.

12. INSTALL REAR DISC



13. INSTALL REAR DISC BRAKE CALIPER ASSY LH

(a) Install the rear disc brake caliper assy LH with the 2 bolts.
Torque: 62 N·m (630 kgf·cm, 46 ft·lbf)



(b) Install the rear flexible hose with the bolt.
Torque: 19 N·m (192 kgf·cm, 14 ft·lbf)

14. INSTALL REAR WHEEL
Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)

15. INSPECT AND ADJUST REAR WHEEL ALIGNMENT (SEE PAGE 27-3)

16. CHECK ABS SPEED SENSOR SIGNAL
w/ VSC (SEE PAGE 05-471)
w/o VSC (SEE PAGE 05-420)

REAR AXLE CARRIER SUB-ASSY LH

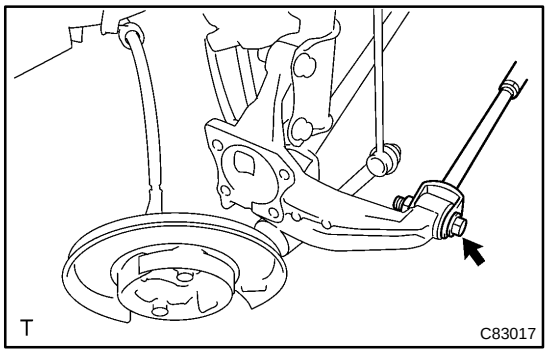
3006J-06

REPLACEMENT

HINT:

- COMPONENTS: See page 30-4
- Replace the RH side by the same procedures with the LH side.

1. **REMOVE REAR WHEEL**
2. **REMOVE STRUT ROD ASSY REAR (SEE PAGE 27-18)**
3. **DISCONNECT REAR DISC BRAKE CALIPER ASSY LH (SEE PAGE 30-26)**
4. **REMOVE REAR DISC**
5. **DISCONNECT SKID CONTROL SENSOR WIRE**
6. **REMOVE REAR AXLE HUB & BEARING ASSY LH (SEE PAGE 30-26)**

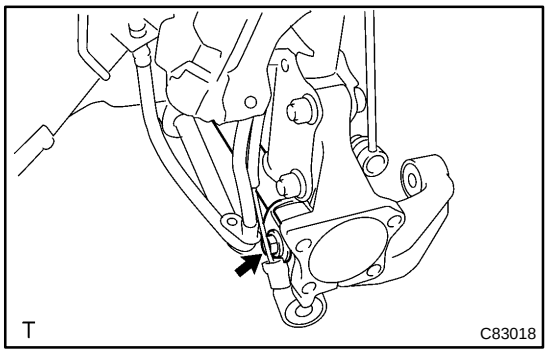


7. SEPARATE REAR SUSPENSION ARM ASSY NO.2 LH

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

HINT:

While fixing the nut, turn and remove the bolt.

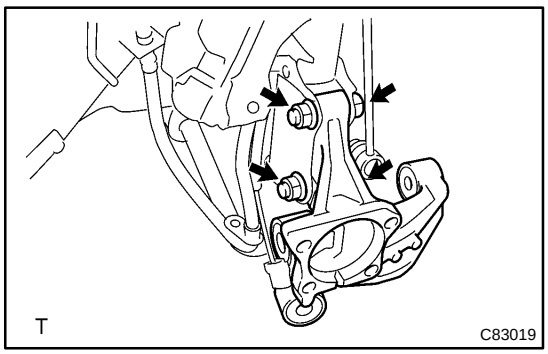


8. SEPARATE REAR SUSPENSION ARM ASSY NO.1 LH

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

HINT:

While fixing the nut, turn and remove the bolt.

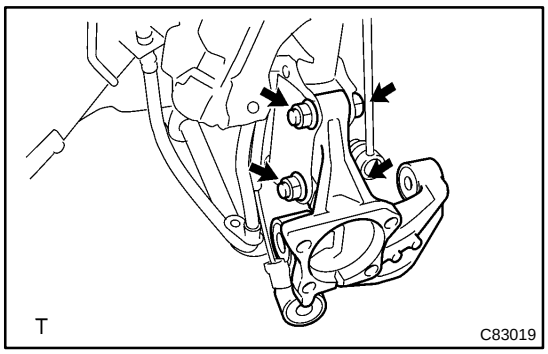


9. REMOVE REAR AXLE CARRIER SUB-ASSY LH

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

NOTICE:

When removing bolt, stop the bolt from rotating and loosen the nut.



10. INSTALL REAR AXLE CARRIER SUB-ASSY LH

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

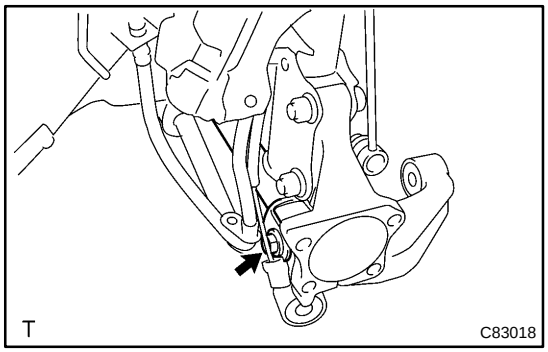
Torque: 255 N·m (2,600 kgf·cm, 188 ft·lbf)

NOTICE:

When installing bolt, stop the bolt from rotating and torque the nut.

HINT:

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

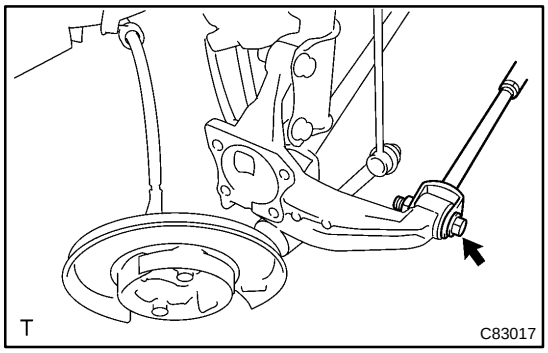


11. TEMPORARILY TIGHTEN REAR SUSPENSION ARM ASSY NO.1 LH

(a) Install the rear suspension arm assy No.1 LH to the rear axle carrier sub-assy LH 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 sub-assy LH 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. INSTALL REAR AXLE HUB & BEARING ASSY LH (SEE PAGE 30-26)
14. INSTALL SKID CONTROL SENSOR WIRE
15. INSTALL REAR DISC
16. INSTALL REAR DISC BRAKE CALIPER ASSY LH (SEE PAGE 30-26)
17. TEMPORARILY TIGHTEN STRUT ROD ASSY REAR (SEE PAGE 27-18)
18. STABILIZE SUSPENSION (SEE PAGE 27-18)
19. FULLY TIGHTEN REAR SUSPENSION ARM ASSY NO.1 LH (SEE PAGE 27-10)
20. FULLY TIGHTEN REAR SUSPENSION ARM ASSY NO.2 LH (SEE PAGE 27-14)
21. FULLY TIGHTEN STRUT ROD ASSY REAR (SEE PAGE 27-18)
22. INSTALL REAR WHEEL
Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)
23. INSPECT AND ADJUST REAR WHEEL ALIGNMENT (SEE PAGE 27-3)
24. CHECK ABS SPEED SENSOR SIGNAL
w/ VSC (SEE PAGE 05-471)
w/o VSC (SEE PAGE 05-420)

REAR AXLE LH HUB BOLT

30024-07

REPLACEMENT

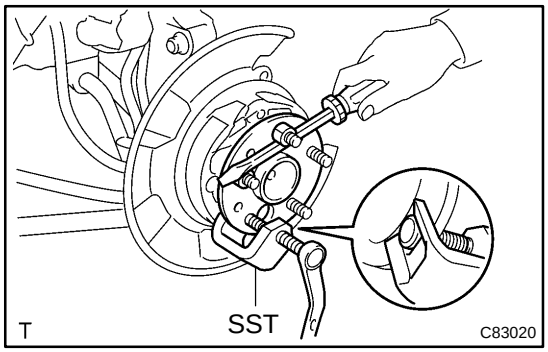
HINT:

- COMPONENTS: See page 30-4
- Replace the RH side by the same procedures with the LH side.

1. REMOVE REAR WHEEL

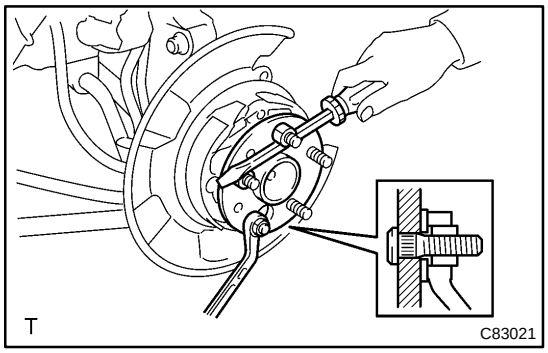
2. DISCONNECT REAR DISC BRAKE CALIPER ASSY LH (SEE PAGE 30-26)

3. REMOVE REAR DISC



4. REMOVE REAR AXLE LH HUB BOLT

(a) Using SST and a screwdriver or an equivalent to hold, remove the rear axle LH hub bolt.
SST 09628-1001 1



5. INSTALL REAR AXLE LH HUB BOLT

(a) Install a washer and nut to a new rear axle LH hub bolt as shown in the illustration.

(b) Using a screwdriver to hold, install the rear axle LH hub bolt by torquing the nut.

6. INSTALL REAR DISC

7. INSTALL REAR DISC BRAKE CALIPER ASSY LH (SEE PAGE 30-26)

8. INSTALL REAR WHEEL
Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)