DRIVE SHAFT, PROPELLER SHAFT, AXLE

3001U–02

PROBLEM SYMPTOMS TABLE

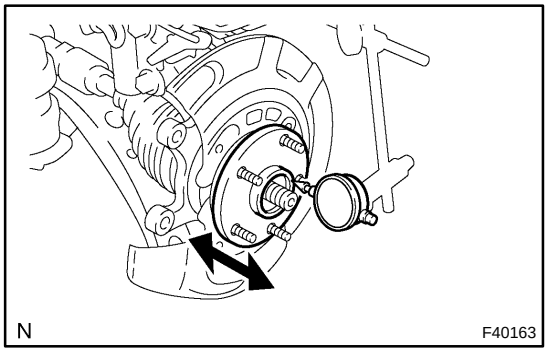
Use the table below to help you find the cause of the problem. The numbers indicate the priority of the likely cause of the problem. Check each part in order. If necessary, replace these parts.

Symptom	Suspect Area	See page
Wander	5. Wheel alignment	26–5 27–3
	6. Steering linkage (Loosen or worn)	–
	7. Hub bearing (Worn)	30–2
	8. Stabilizer bar	26–19 27–17
Front wheel shimmy	1. Wheel balance	28–1
	2. Shock absorber	26–9 27–4
	3. Ball joint (Worn)	26–17
	4. Hub bearing (Worn)	30–2
Noise	1. Inbord joint (Worn)	30–8
	2. Outbord joint (Worn)	30–8

3001V–02

ON–VEHICLE INSPECTION

1. REMOVE FRONT WHEEL
2. DISCONNECT FRONT DISC BRAKE CALIPER ASSY LH(See page 30–21)
3. REMOVE FRONT DISC

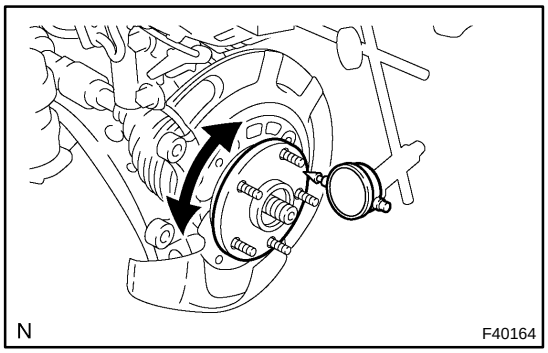


4. INSPECT FRONT AXLE HUB BEARING BACKLASH

(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.



5. INSPECT FRONT AXLE HUB DEVIATION

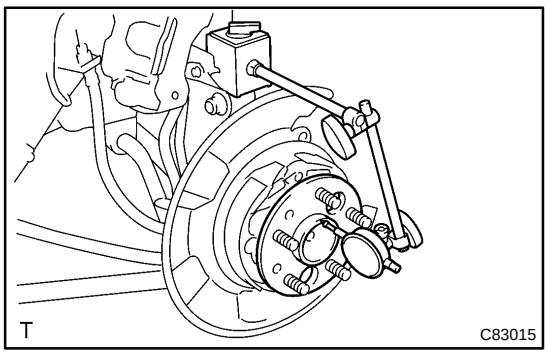
(a) Using a dial indicator, check the deviation at the surface of the axle hub outside the hub bolt.

Maximum: 0.05 mm (0.0020 in.)

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

6. INSTALL FRONT DISC
7. INSTALL FRONT DISC BRAKE CALIPER ASSY LH(See page 30–21)
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(DISC REAR BRAKE TYPE) (See page 30–28)
11. REMOVE REAR DISC(DISC REAR BRAKE TYPE)
12. REMOVE REAR BRAKE DRUM SUB–ASSY(DRUM REAR BRAKE TYPE)

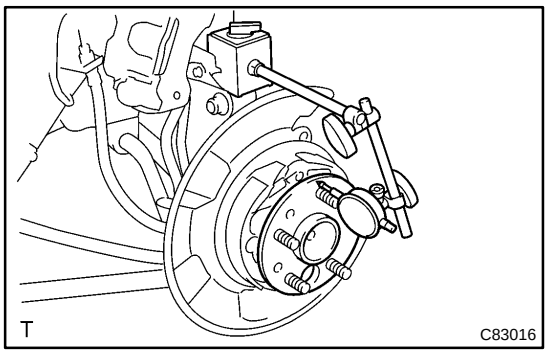


13. INSPECT REAR AXLE HUB BEARING BACKLASH

(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.



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

15. INSTALL REAR DISC(DISC REAR BRAKE TYPE)

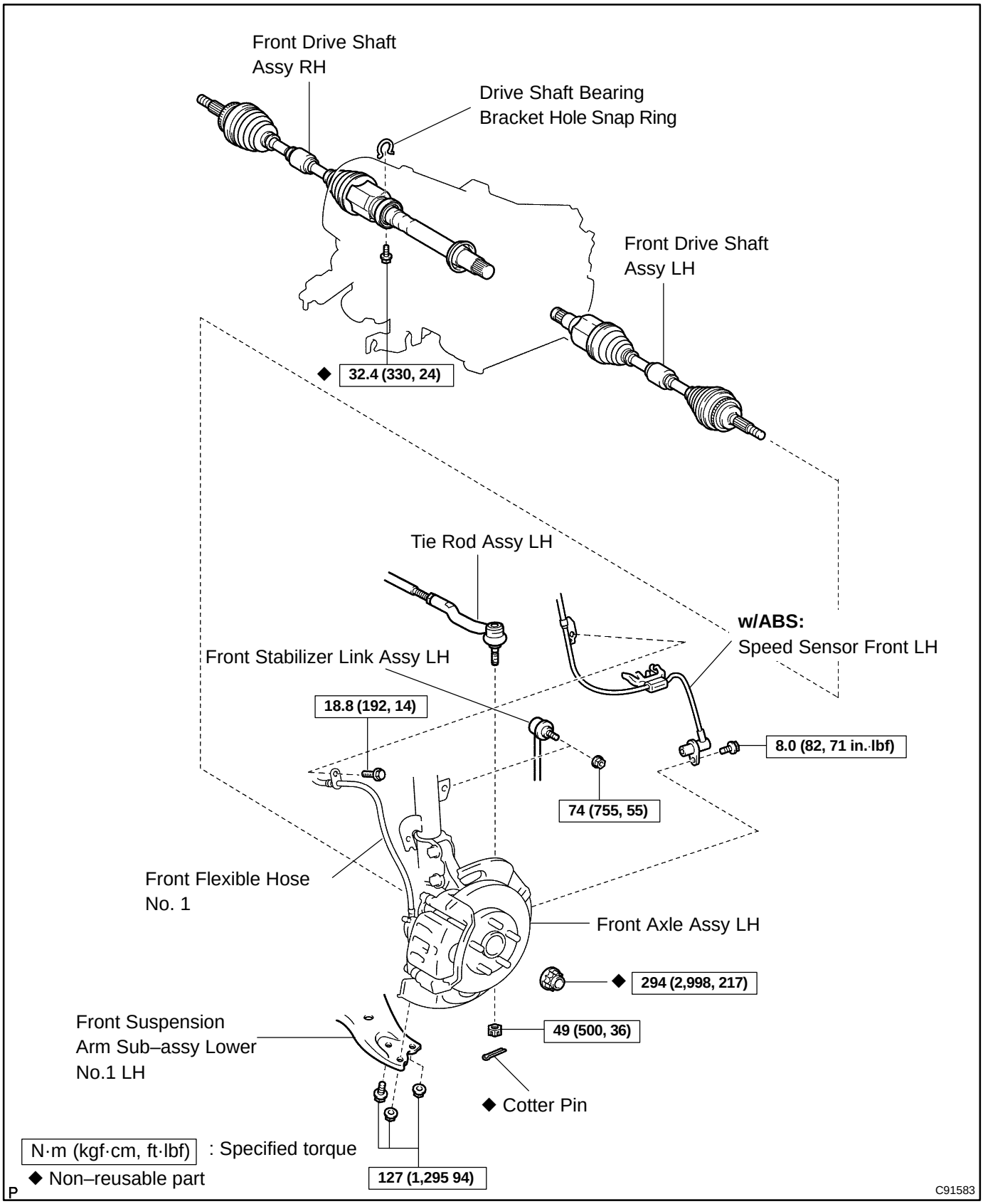
16. INSTALL REAR DISC BRAKE CALIPER ASSY LH(DISC REAR BRAKE TYPE)
(See page 30–28)

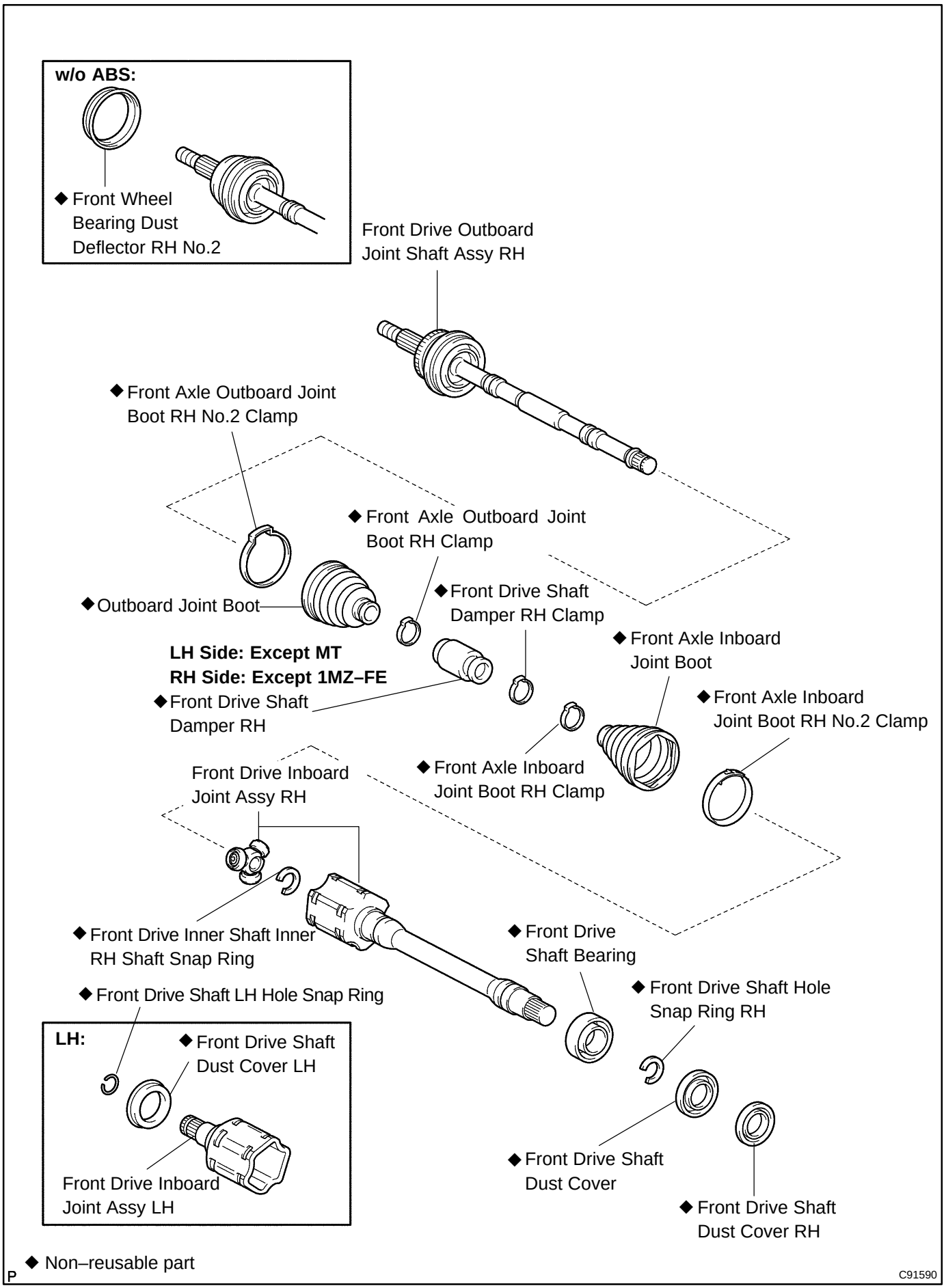
17. INSTALL REAR BRAKE DRUM SUB–ASSY(DRUM REAR BRAKE TYPE)

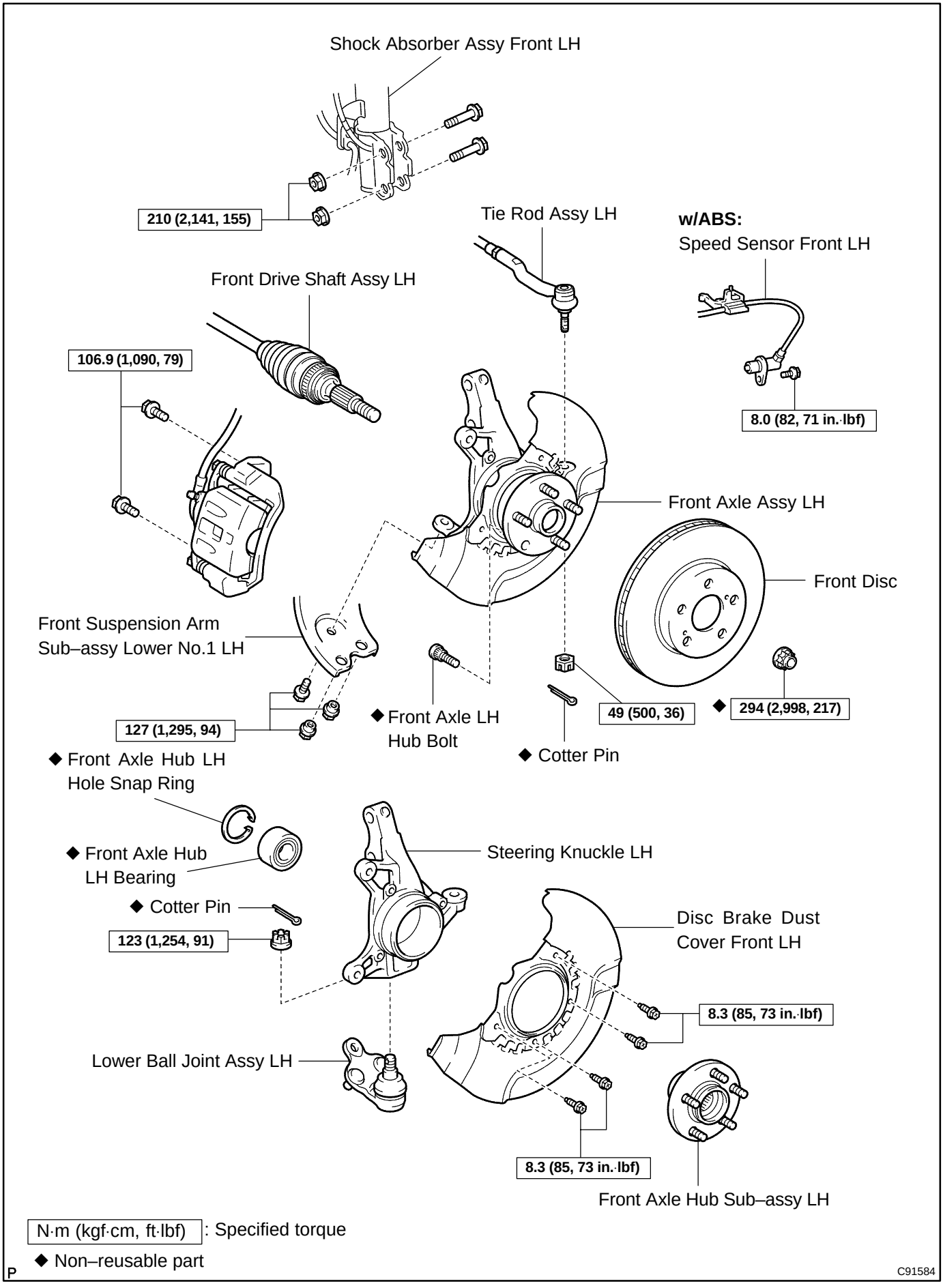
18. INSTALL REAR WHEEL
Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)

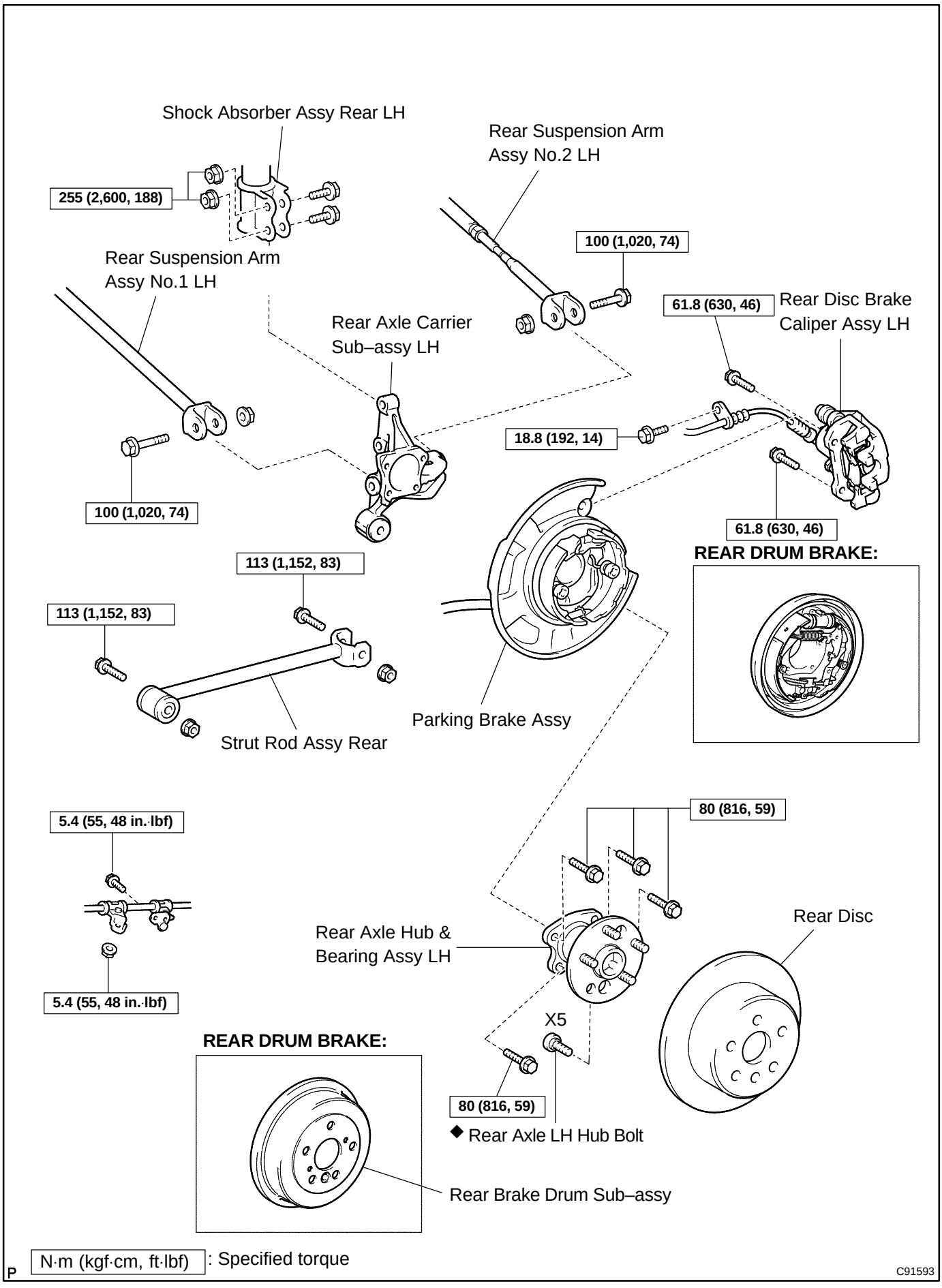
300AW–01

COMPONENTS




w/o ABS:
◆ Front Wheel Bearing Dust Deflector RH No.2
Front Drive Outboard Joint Shaft Assy RH
◆ Front Axle Outboard Joint Boot RH No.2 Clamp
◆ Front Axle Outboard Joint Boot RH Clamp
◆ Outboard Joint Boot
◆ Front Drive Shaft Damper RH Clamp
LH Side: Except MT
RH Side: Except 1MZ–FE
◆ Front Drive Shaft Damper RH
◆ Front Axle Inboard Joint Boot
◆ Front Axle Inboard Joint Boot RH No.2 Clamp
◆ Front Axle Inboard Joint Boot RH Clamp
Front Drive Inboard Joint Assy RH
◆ Front Drive Inner Shaft Inner RH Shaft Snap Ring
◆ Front Drive Shaft Bearing
◆ Front Drive Shaft LH Hole Snap Ring
◆ Front Drive Shaft Hole Snap Ring RH
LH:
◆ Front Drive Shaft Dust Cover LH
Front Drive Inboard Joint Assy LH
◆ Front Drive Shaft Dust Cover
◆ Front Drive Shaft Dust Cover RH
◆ Non–reusable part
C91590


Shock Absorber Assy Front LH
210 (2,141, 155)
Tie Rod Assy LH
w/ABS:
Speed Sensor Front LH
Front Drive Shaft Assy LH
106.9 (1,090, 79)
8.0 (82, 71 in.·lbf)
Front Axle Assy LH
Front Disc
Front Suspension Arm
Sub–assy Lower No.1 LH
127 (1,295, 94)
◆ Front Axle LH
Hub Bolt
49 (500, 36)
◆ 294 (2,998, 217)
◆ Cotter Pin
◆ Front Axle Hub LH
Hole Snap Ring
◆ Front Axle Hub
LH Bearing
Steering Knuckle LH
◆ Cotter Pin
123 (1,254, 91)
Disc Brake Dust
Cover Front LH
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
C91584


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
61.8 (630, 46)
Rear Disc Brake
Caliper Assy LH
18.8 (192, 14)
100 (1,020, 74)
61.8 (630, 46)
REAR DRUM BRAKE:
113 (1,152, 83)
113 (1,152, 83)
Parking Brake Assy
Strut Rod Assy Rear
5.4 (55, 48 in.·lbf)
80 (816, 59)
Rear Axle Hub &
Bearing Assy LH
Rear Disc
5.4 (55, 48 in.·lbf)
X5
REAR DRUM BRAKE:
80 (816, 59)
◆ Rear Axle LH Hub Bolt
Rear Brake Drum Sub–assy
N·m (kgf·cm, ft·lbf) : Specified torque
P
C91593

FRONT DRIVE SHAFT

3006G–01

OVERHAUL

NOTICE:

Do not disassemble the outboard joint.

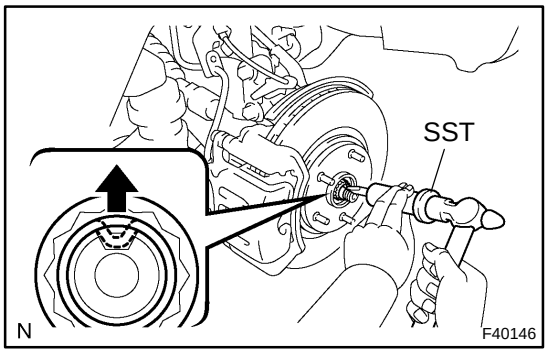
HINT:

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

1. DRAIN AUTOMATIC TRANSAXLE FLUID(A/T TRANSAXLE)

2. DRAIN MANUAL TRANSAXLE OIL(M/T TRANSAXLE)

3. REMOVE FRONT WHEEL



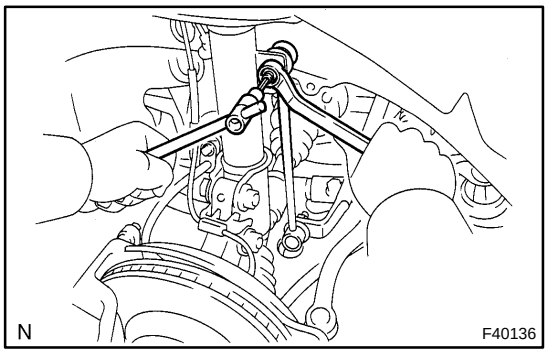
4. REMOVE FRONT AXLE HUB LH NUT

(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 brakes, remove the front axle hub LH nut.

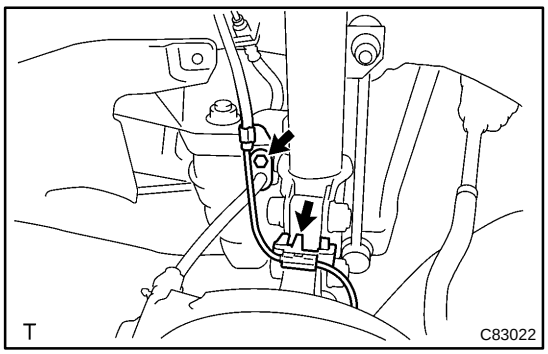


5. DISCONNECT FRONT STABILIZER LINK ASSY LH

(a) Remove the nut, disconnect the front stabilizer link assy LH from the shock absorber assy front LH.

HINT:

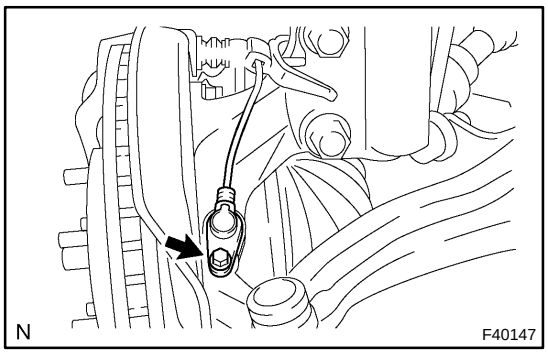
If the ball joint turns together with the nut, use a hexagon wrench (6 mm) to hold the stud.



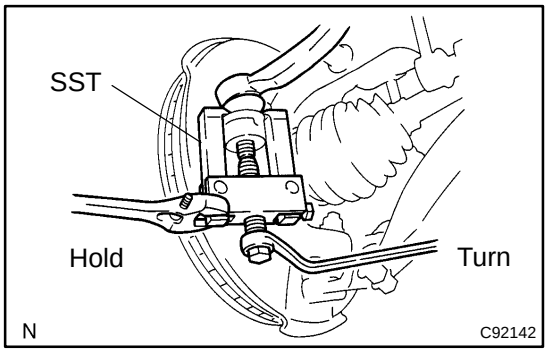
6. DISCONNECT SPEED SENSOR FRONT LH(W/ ABS)

(a) Remove the sensor wire clamp.

(b) Remove the bolt, disconnect the sensor wire and front flexible hose No.1 from the shock absorber assy front LH.

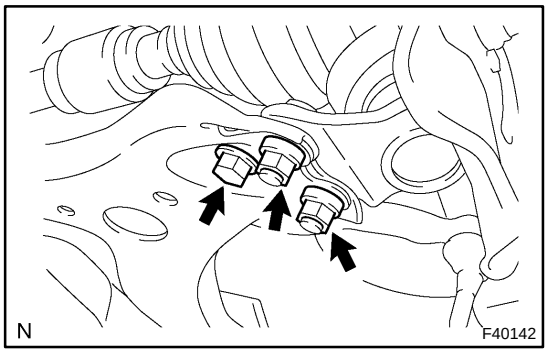


(c) Remove the bolt, disconnect the speed sensor front LH from the steering knuckle LH.



7. DISCONNECT TIE ROD ASSY LH

(a) Remove the cotter pin and nut.
(b) Using SST, disconnect the tie rod assy LH from the steering knuckle LH.
SST 09628–62011



8. 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 assy front LH.

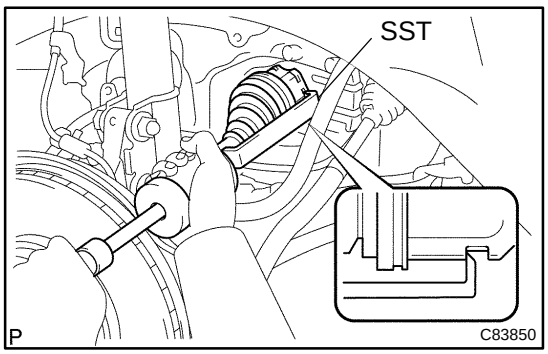
9. DISCONNECT FRONT AXLE ASSY LH

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

NOTICE:

w/ ABS:

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

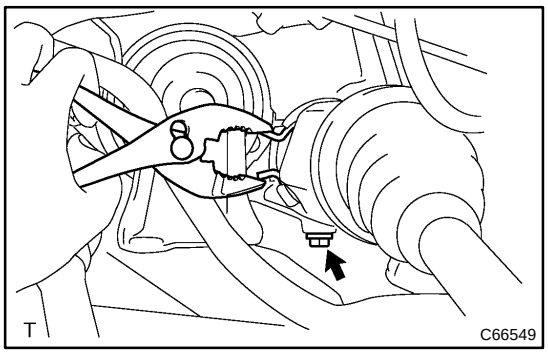


10. REMOVE FRONT DRIVE SHAFT ASSY LH

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

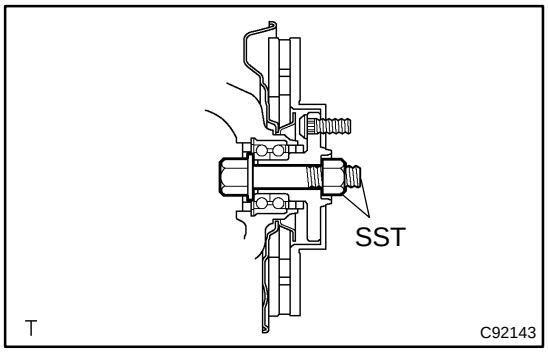
NOTICE:

Be careful not to damage the oil seal.



11. REMOVE FRONT DRIVE SHAFT ASSY RH

(a) Using a 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.



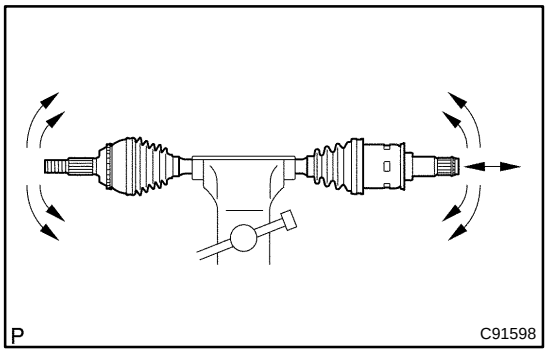
12. FIX FRONT AXLE ASSY LH

NOTICE:

The hub bearing could be damaged if it is subjected to the vehicle 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.

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

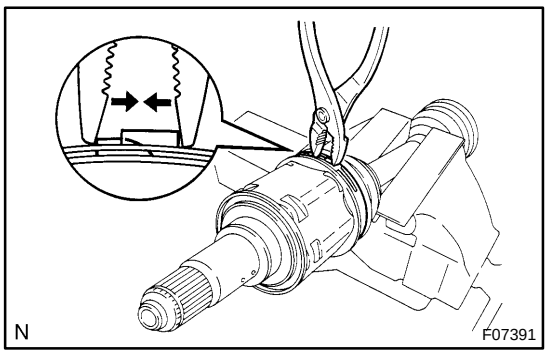


13. INSPECT FRONT DRIVE SHAFT ASSY LH

(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:

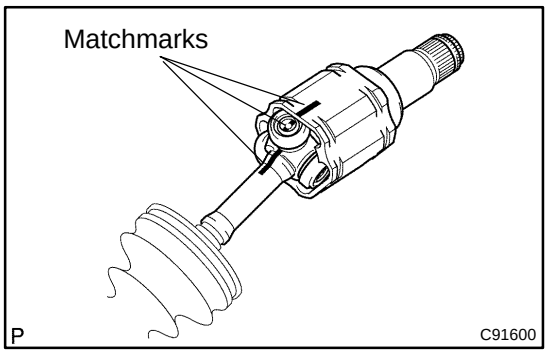
Move the drive shaft assy keeping it level.



14. REMOVE FRONT AXLE INBOARD JOINT BOOT CLAMP

(a) Using pliers, pinch the claws to compress the front axle inboard joint boot LH No.2 clamp and remove it.
(b) Using a side cutter, cut the front axle inboard joint boot LH clamp and remove it.

15. DISCONNECT FR AXLE INBOARD JOINT BOOT



16. 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 front drive inboard joint assy LH from the front drive outboard joint shaft assy LH.

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

(d) Place matchmarks on the front drive outboard joint shaft assy LH and tripod.

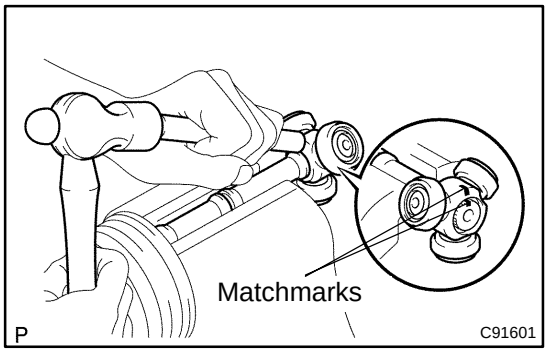
NOTICE:

Do not punch the marks.

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

NOTICE:

Do not tap the roller.



17. REMOVE FRONT DRIVE SHAFT DAMPER LH(M/T TRANSAXLE)

(a) Using a side cutter, cut the front drive shaft damper LH clamp and remove it.

(b) Remove the front drive shaft damper LH.

18. REMOVE FRONT DRIVE SHAFT DAMPER RH(EXCEPT 1MZ–FE ENGINE TYPE)

(a) Using a side cutter, cut the front drive shaft damper RH clamp and remove it.

(b) Remove the front drive shaft damper RH.

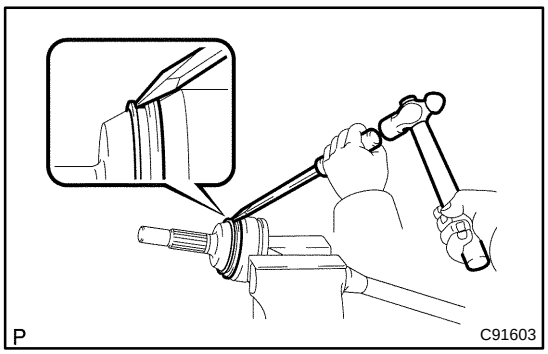
19. REMOVE FRONT AXLE OUTBOARD JOINT BOOT CLAMP

(a) Using a side cutter, cut the front axle outboard joint boot LH clamp and front axle outboard joint boot LH No. 2 clamp and remove them.

HINT:

If the outboard joint boot clamps that have been replaced are installed to the drive shaft, use a side cutter or pliers to remove then.

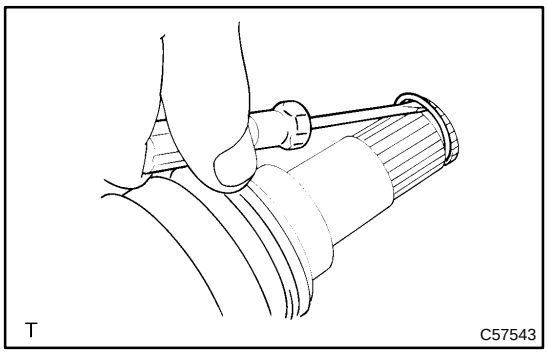
20. REMOVE OUTBOARD JOINT BOOT



21. REMOVE FRONT WHEEL BEARING DUST DEFLECTOR LH NO.2(W/O ABS)

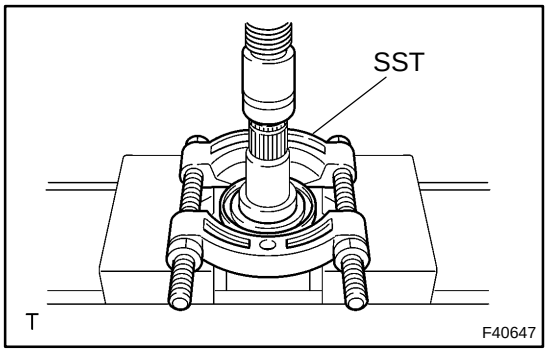
(a) Mount the front drive outboard joint shaft assy LH in a soft jaw vise.

(b) Using a screwdriver and a hammer, remove the front wheel bearing dust deflector LH No.2.



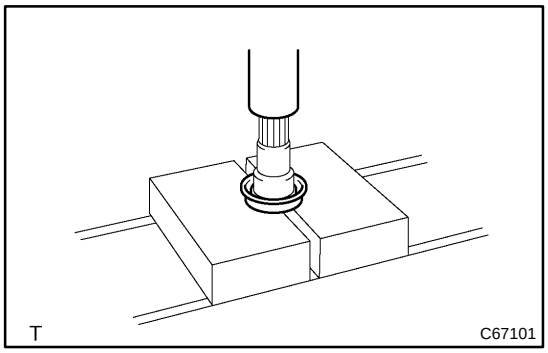
22. REMOVE FRONT DRIVE SHAFT LH HOLE SNAP RING

(a) Using a screwdriver, remove the front drive shaft LH hole snap ring.



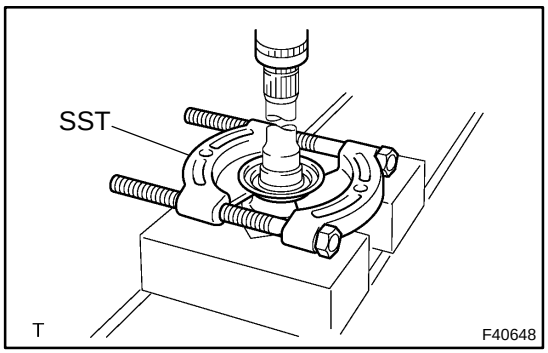
23. REMOVE FRONT DRIVE SHAFT DUST COVER LH

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



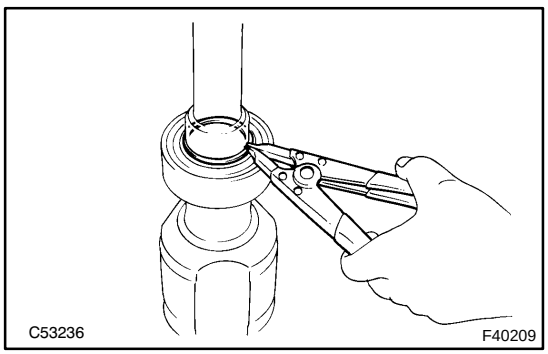
24. REMOVE FRONT DRIVE SHAFT DUST COVER RH

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



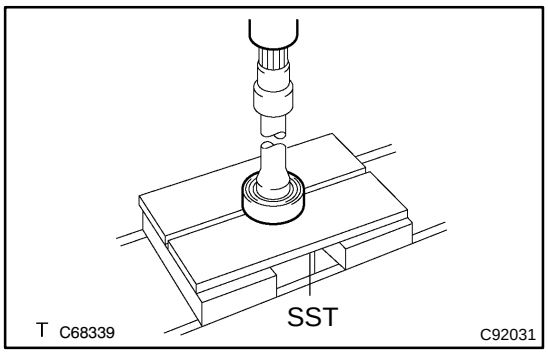
25. REMOVE FRONT DRIVE SHAFT DUST COVER

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

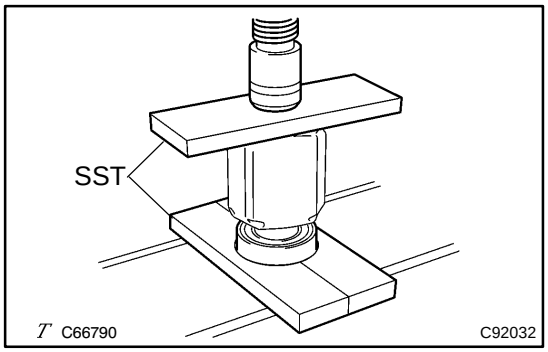


26. REMOVE FRONT DRIVE SHAFT BEARING

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

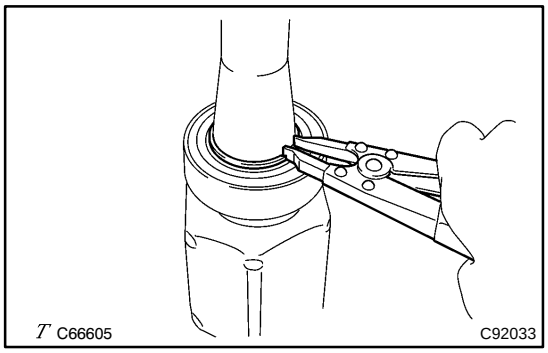


(b) Using SST and a press, remove the front drive shaft bearing.
SST 09527–10011

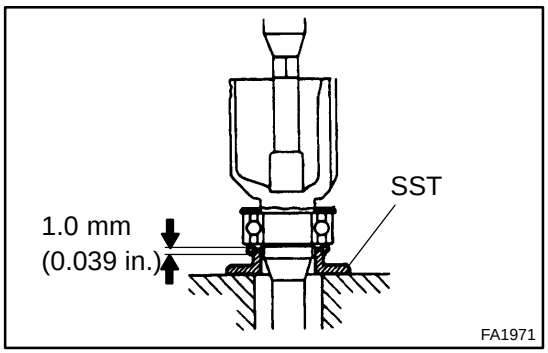


27. INSTALL FRONT DRIVE SHAFT BEARING

(a) Using SST and a press, install a new front drive shaft bearing.
SST 09527–30010, 09527–10011



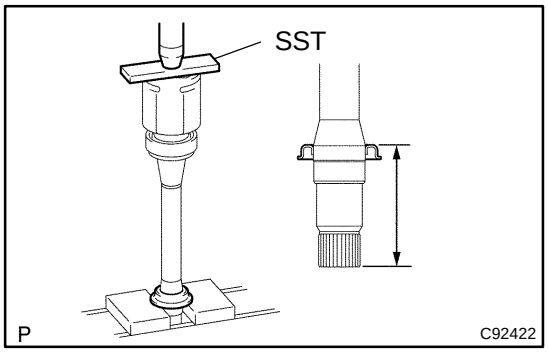
(b) Using a snap ring expander, install a new front drive shaft hole snap ring RH.



28. INSTALL FRONT DRIVE SHAFT DUST COVER

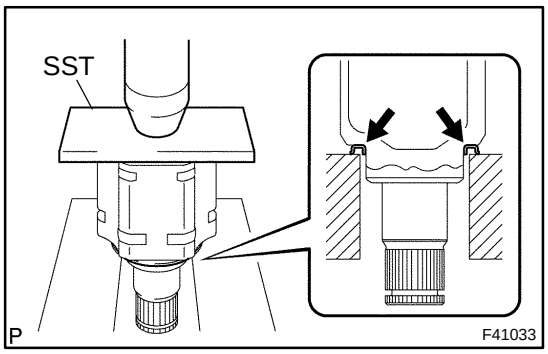
(a) Using SST, an extension bar and a press, install a new front drive shaft dust cover.
SST 09726–40010

HINT:
The clearance between the front drive shaft dust cover and the front drive shaft bearing should be kept in the range shown in the illustration.



29. INSTALL FRONT DRIVE SHAFT DUST COVER RH

(a) Using SST and a press, install a new front drive shaft dust cover RH until the distance from the tip of center drive shaft to the front drive shaft dust cover RH reaches the specification, as shown in the illustration.
SST 09527–10011
Distance:
1MZ–FE: 110.5 ± 0.5 mm (4.3 ± 0.02 in.)
2AZ–FE: 91.5 ± 0.5 mm (3.6 ± 0.02 in.)

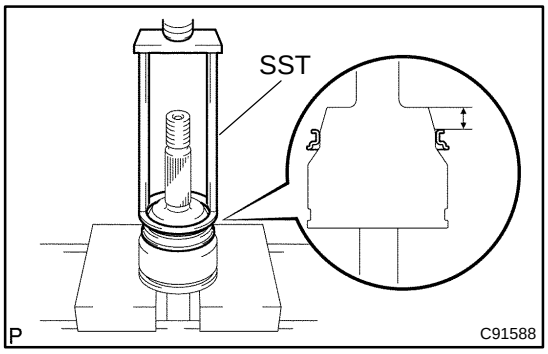


30. INSTALL FRONT DRIVE SHAFT DUST COVER LH

(a) Using SST and a press, install a new front drive shaft dust cover LH.
SST 09527–10011

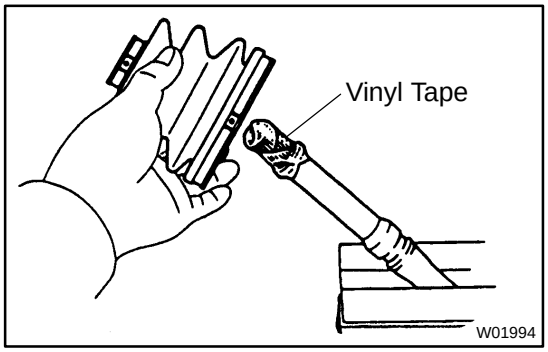
31. INSTALL FRONT DRIVE SHAFT LH HOLE SNAP RING

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



32. INSTALL FRONT WHEEL BEARING DUST DEFLECTOR LH NO.2(W/O ABS)

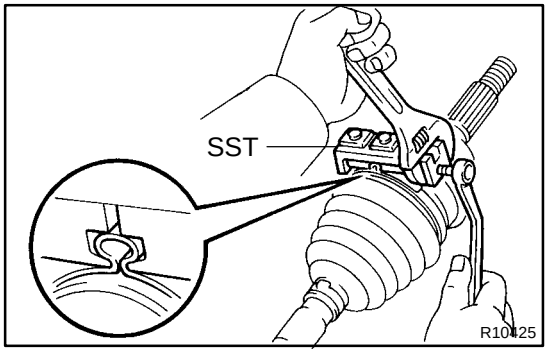
(a) Using SST and a press, install a new front wheel bearing dust deflector LH No.2 until the distance from the tip of front drive outboard joint shaft assy LH to the front wheel bearing dust deflector LH No.2 reaches the specification, as shown in the illustration.
SST 09387–00020
Distance: 13.5 – 13.8 mm (0.531 – 0.543 in.)



33. 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.

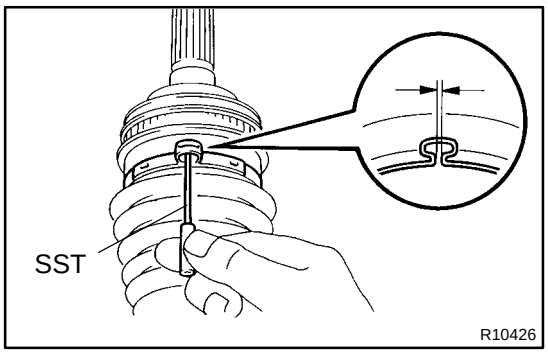
(a) Temporarily install a new outboard joint boot with 2 clamps to the drive shaft.
(b) Pack the inboard joint shaft and boot with grease in the boot kit.
Grease capacity:
1MZ–FE, 2AZ–FE(MT): 105 – 125 g (3.7 – 4.4 oz.)
2AZ–FE(AT): 100 – 120 g (3.5 – 4.2 oz.)



34. INSTALL FRONT AXLE OUTBOARD JOINT BOOT CLAMP

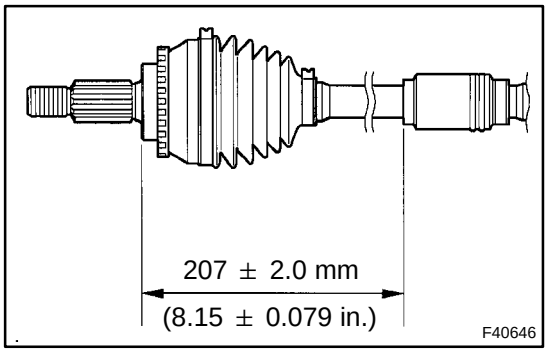
(a) Mount drive shaft in a soft vise.
(b) Secure the 2 outboard joint boot clamps onto the boot.
(c) Place SST onto the outboard joint large boot clamp.
SST 09521–24010
(d) Tighten the SST so that the large clamp is pinched.

NOTICE:
Do not overtighten the SST.



(e) Using SST, adjust the clearance of the large clamp.
SST 09240–00020
Crearance: 3.0 – 4.0 mm (0.118 – 0.157 in.)

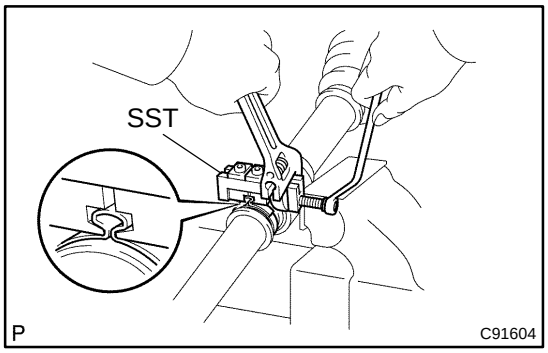
(f) Employ the same manner to the outboard joint small boot clamp.
Crearance: 1.5 – 2.5 mm (0.059 – 0.098 in.)



35. INSTALL FRONT DRIVE SHAFT DAMPER LH(M/T TRANSAXLE)

(a) Set the distance, as described below.
Distance: 207 ± 2.0 mm (8.15 ± 0.079 in.)

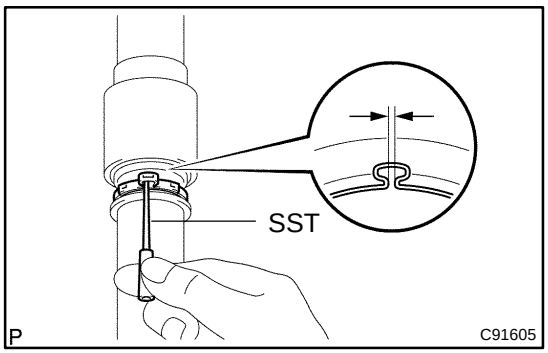
(b) Make sure that the front drive shaft damper LH is on the shaft groove.



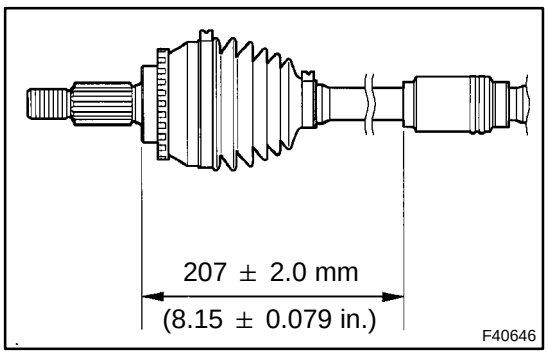
(c) Place SST onto the front drive shaft damper LH clamp.
SST 09521–24010

(d) Tighten the SST so that the front drive shaft damper LH clamp is pinched.

NOTICE:
Do not overtighten the SST.



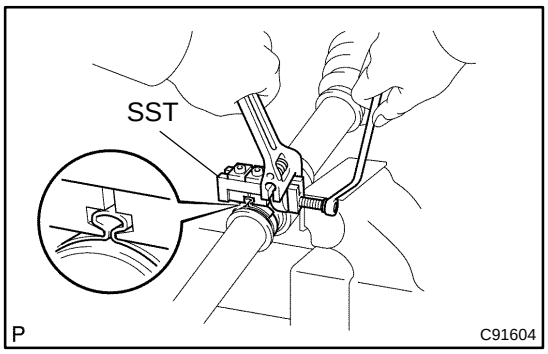
(e) Using SST, adjust the clearance of the front drive shaft damper LH clamp.
SST 09240–00020
Crearance: 0.5 – 1.2 mm (0.020 – 0.047 in.)



36. INSTALL FRONT DRIVE SHAFT DAMPER RH(EXCEPT 1MZ–FE ENGINE TYPE)

(a) Set the distance, as described below.
Distance: 207 ± 2.0 mm (8.15 ± 0.079 in.)

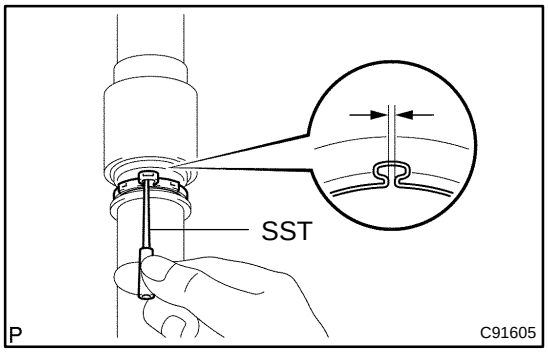
(b) Make sure that the front drive shaft damper RH is on the shaft groove.



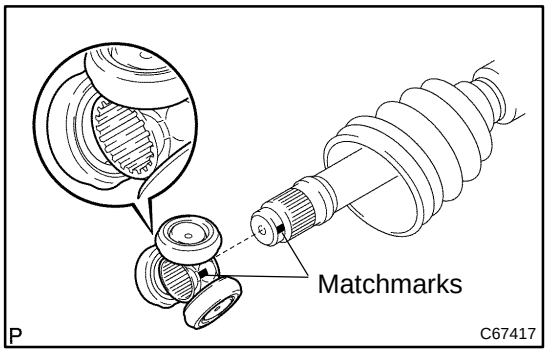
(c) Place SST onto the front drive shaft damper RH clamp.
SST 09521–24010

(d) Tighten the SST so that the front drive shaft damper RH clamp is pinched.

NOTICE:
Do not overtighten the SST.



(e) Using SST, adjust the clearance of the front drive shaft damper RH clamp.
SST 09240–00020
Crearance: 0.5 – 1.2 mm (0.020 – 0.047 in.)



37. INSTALL FRONT DRIVE INBOARD JOINT ASSY LH

(a) Place the beveled side of the tripod axial spline toward the front drive outboard joint shaft assy LH.

(b) Align the matchmarks placed before removal.

(c) Using a brass bar and hammer, tap in the tripod to the front drive outboard joint shaft assy LH.

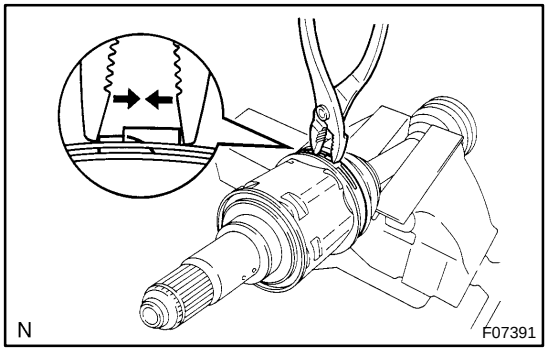
NOTICE:
Do not tap the roller.

(d) Using a snap ring expander, install a new front drive inner shaft inner RH shaft snap ring.

(e) Pack the front drive outboard joint shaft assy LH and front axle inboard joint boot with grease in the boot kit.
Grease capacity:
185 – 195 g (6.5 – 6.9 oz.)

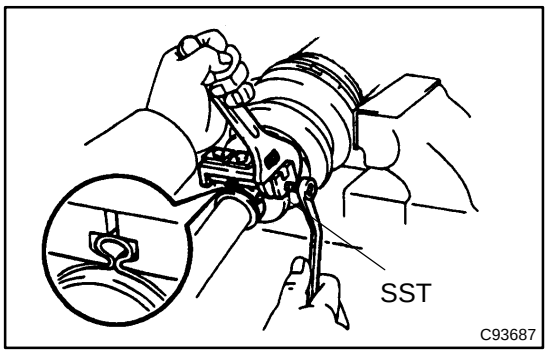
38. INSTALL FR AXLE INBOARD JOINT BOOT

(a) Install the front axle inboard joint boot to the front drive outboard joint shaft assy LH.



39. INSTALL FRONT AXLE INBOARD JOINT BOOT CLAMP

(a) Using pliers, pinch the claws to compress the front axle inboard joint boot LH No.2 clamp and engage the other claws.

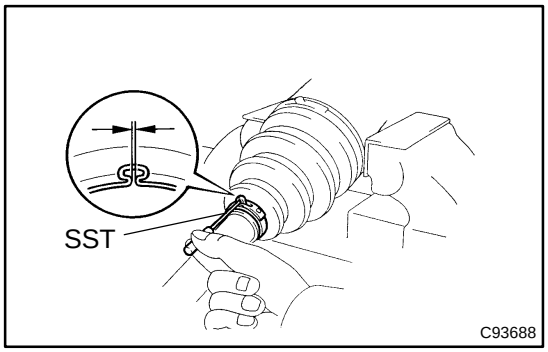


(b) Place SST onto the front axle inboard joint boot RH clamp.
SST 09521–24010

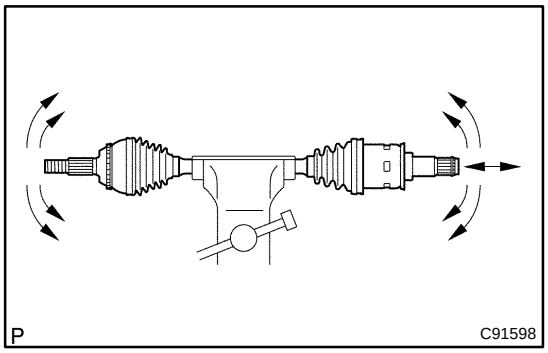
(c) Tighten the SST so that the front axle inboard joint boot RH clamp is pinched.

NOTICE:

Do not overtighten the SST.



(d) Using SST, adjust the clearance of the front axle inboard joint boot RH clamp.
SST 09240–00020
Clearance: 1.9 mm (0.075 in.) or less



40. INSPECT FRONT DRIVE SHAFT

(a) Check to see that there is no remarkable play in the outboard joint.

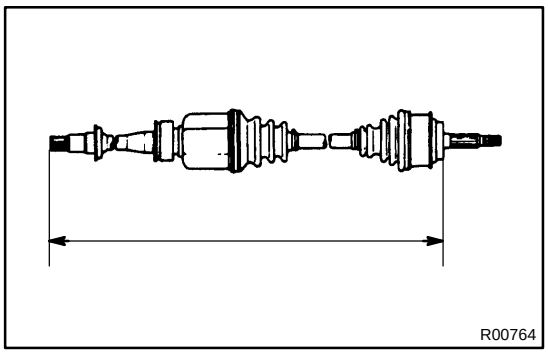
(b) Check to see that the inboard joint slides smoothly in the thrust direction.

(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.



(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.

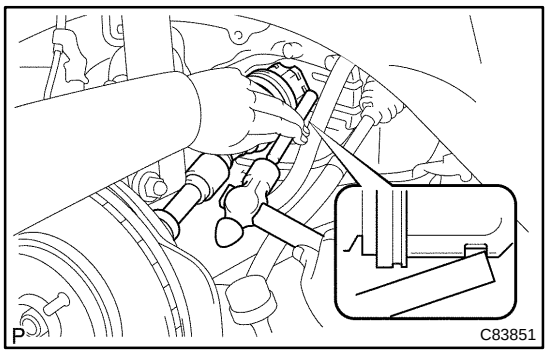
Drive shaft standard length: mm (in.)

1MZ–FE:

LH	576.9 ± 2.0 (22.713 ± 0.079)
RH	895.4 ± 2.0 (35.252 ± 0.079)

2AZ–FE:

LH	591.2 ± 2.0 (23.276 ± 0.079)
RH	890 ± 2.0 (35.039 ± 0.079)

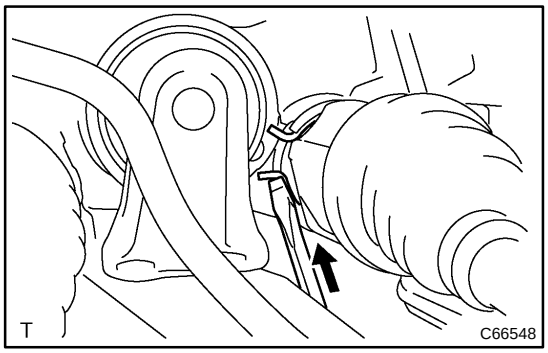


41. INSTALL FRONT DRIVE SHAFT ASSY LH

(a) Coat the spline of the front drive inboard joint assy LH with ATF.
(b) Aline the shaft splines and install the front drive shaft assy LH 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 front drive inboard joint assy LH is in contact with the pinion shaft or not can be known from the sound or feeling when driving it.



42. INSTALL FRONT DRIVE SHAFT ASSY RH

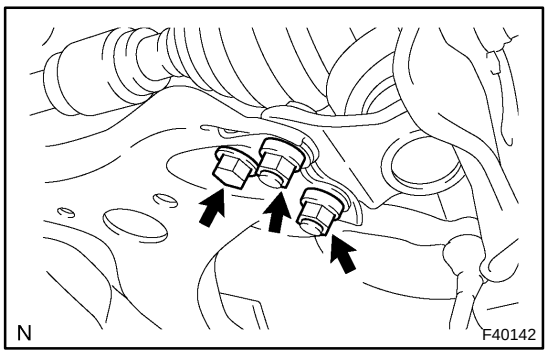
(a) Using a screwdriver, install the drive shaft bearing bracket hole snap ring.
(b) Install the bolt.
Torque: 32.4 N·m (330 kgf·cm, 24 ft·lbf)

NOTICE:
Do not damage the oil seal.

43. 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.**
- **w/ ABS:**
  Be careful not to damage the speed sensor rotor.



44. INSTALL FRONT SUSPENSION ARM SUB–ASSY LOWER NO.1 LH

(a) Install the lower ball joint assy front LH to the front suspension arm sub–assy lower No. 1 LH with the bolt and nut.
Torque: 127 N·m (1,295 kgf·cm, 94 ft·lbf)

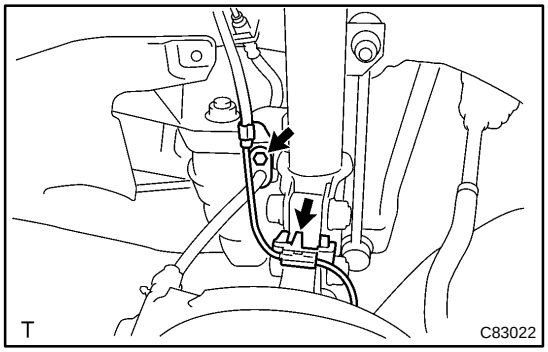
45. INSTALL TIE ROD ASSY LH

(a) Install the tie rod assy LH to the steering knuckle LH with the nut.
Torque: 49 N·m (500 kgf·cm, 36 ft·lbf)

(b) Install a new cotter pin.

NOTICE:

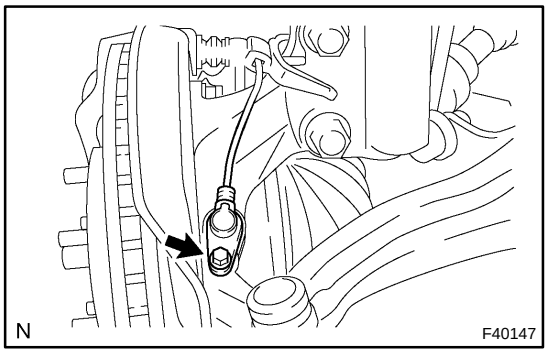
If the holes for the cotter pin are not aligned, tighten the nut further to 60°.



46. INSTALL SPEED SENSOR FRONT LH(W/ ABS)

(a) Install the sensor wire and front flexible hose No.1 to shock absorber with the bolt.
Torque: 18.8 N·m (192 kgf·cm, 14 ft·lbf)

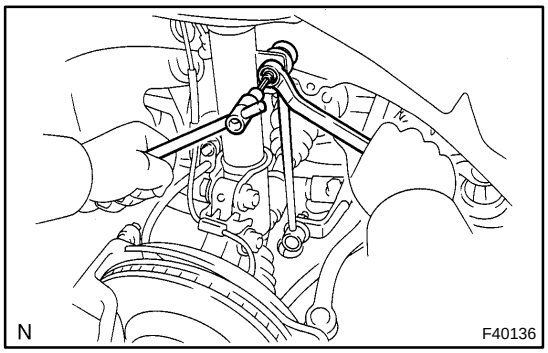
(b) Install the sensor wire clamp.



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

NOTICE:

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

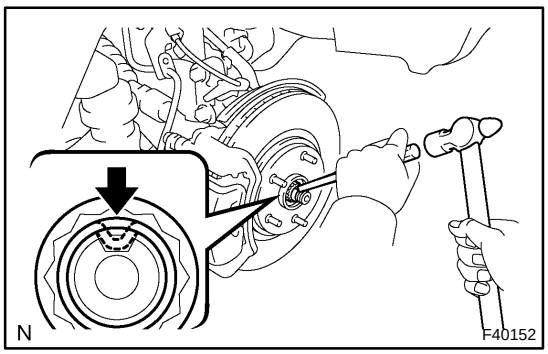


47. INSTALL FRONT STABILIZER LINK ASSY LH

(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.



48. INSTALL FRONT AXLE HUB LH NUT

(a) Install a new front axle hub LH nut.
Torque: 294 N·m (2,998 kgf·cm, 217 ft·lbf)

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

49. INSTALL FRONT WHEEL

50. ADD AUTOMATIC TRANSAXLE FLUID(A/T TRANSAXLE)(See page 40–1)

51. INSPECT AUTOMATIC TRANSAXLE FLUID(A/T TRANSAXLE)

52. ADD MANUAL TRANSAXLE OIL(M/T TRANSAXLE)

53. INSPECT MANUAL TRANSAXLE OIL(M/T TRANSAXLE)

54. INSPECT AND ADJUST FRONT WHEEL ALIGNMENT(See page 26–5)

55. CHECK ABS SPEED SENSOR SIGNAL(W/ ABS)

w/ VSC (See page 05–452)

w/o VSC (BOSCH MADE) (See page 05–363)

w/o VSC (DENSO MADE) (See page 05–404)

FRONT AXLE HUB SUB–ASSY LH

3006H–01

REPLACEMENT

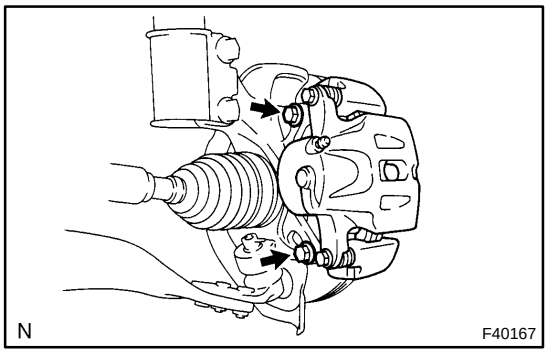
HINT:

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

1. REMOVE FRONT WHEEL

2. REMOVE FRONT AXLE HUB LH NUT
(See page 30–8)
SST 09930–00010

3. DISCONNECT SPEED SENSOR FRONT LH(W/ ABS)
(See page 30–8)



4. DISCONNECT FRONT DISC BRAKE CALIPER ASSY LH

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

5. REMOVE FRONT DISC

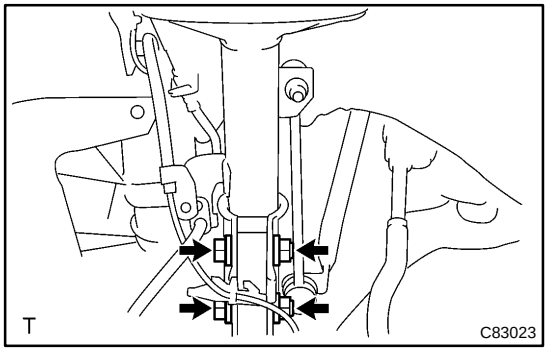
6. DISCONNECT TIE ROD ASSY LH
(See page 30–8)
SST 09628–62011

7. DISCONNECT 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.

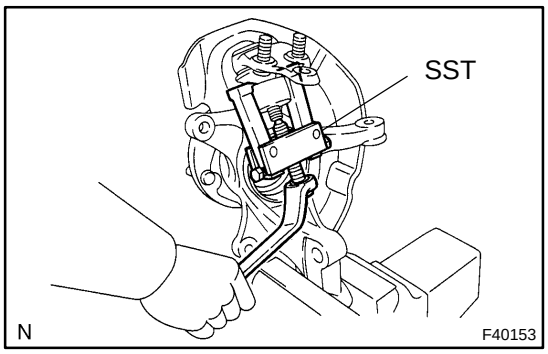
NOTICE:
w/ ABS:
Be careful not to damage the boot and ABS speed sensor rotor.



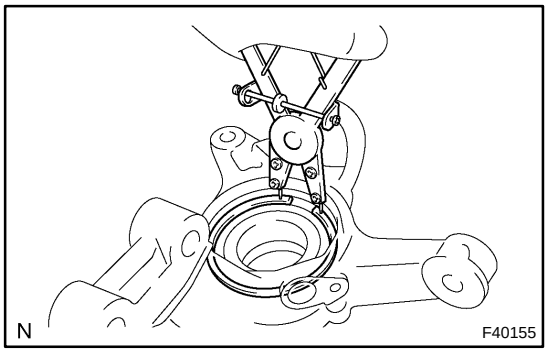
(b) Remove the 2 bolts, nuts and steering knuckle LH with the front axle hub sub–assy LH.

9. REMOVE LOWER BALL JOINT ASSY FRONT LH

(a) Remove the cotter pin and nut.

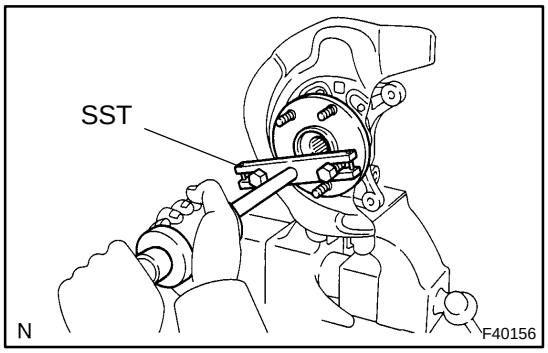


(b) Using SST, remove the lower ball joint assy front LH.
SST 09628–62011



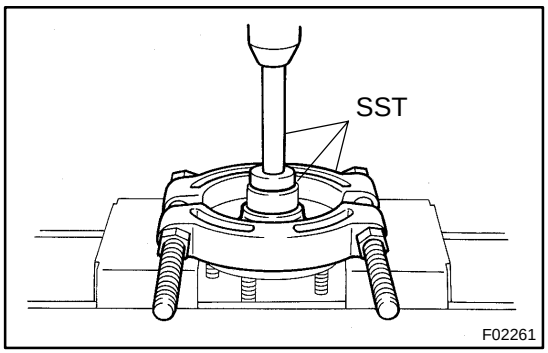
10. REMOVE FRONT AXLE HUB LH HOLE SNAP RING

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



11. REMOVE FRONT AXLE HUB SUB–ASSY LH

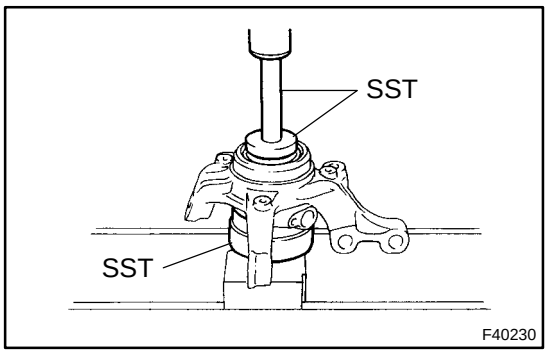
(a) Using SST, remove the front axle hub sub–assy LH.
SST 09520–00031



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

12. REMOVE DISC BRAKE DUST COVER FRONT LH

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

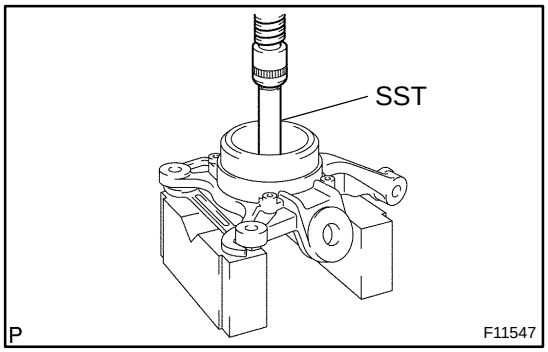


13. REMOVE FRONT AXLE HUB LH BEARING

(a) Place the 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 with the SST.

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



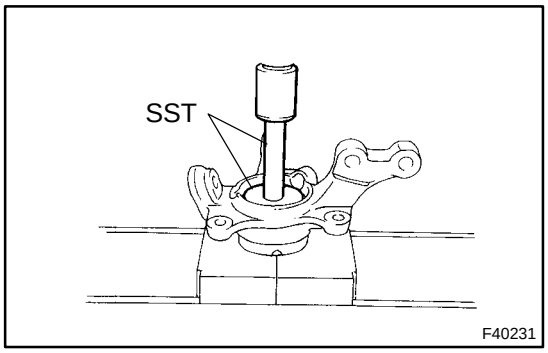
(c) Using a spanner to make the steering knuckle LH horizontal, fix it to the V block as shown in the illustration.

NOTICE:

Be sure 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)



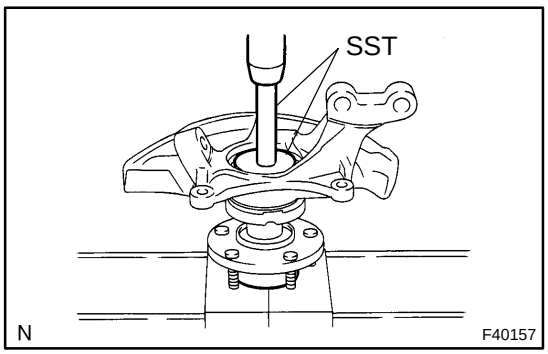
14. INSTALL FRONT AXLE HUB LH BEARING

(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)

15. INSTALL DISC BRAKE DUST COVER FRONT LH

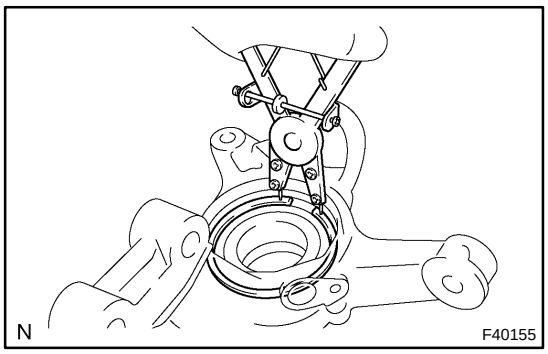
(a) Place the disc brake dust cover front LH and using a torx wrench (T30), torque the 4 bolts.



16. INSTALL FRONT AXLE HUB SUB–ASSY LH

(a) Using SST and a press, install the front axle hub sub–assy LH.

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



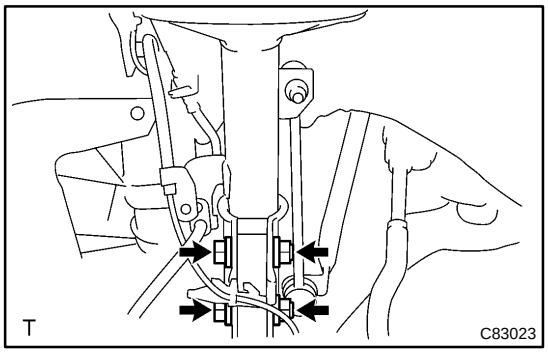
17. INSTALL FRONT AXLE HUB LH HOLE SNAP RING

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

18. 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, 91 ft·lbf)
(b) Install a new cotter pin.

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



19. INSTALL FRONT AXLE ASSY LH

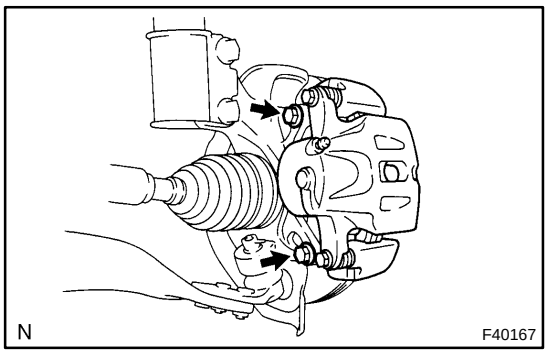
(a) Install the 2 bolts, nuts and front axle assy LH to the shock absorber assy front LH.
Torque: 210 N·m (2,141 kgf·cm, 155 ft·lbf)

HINT:
Insert the bolt from the rear side of the vehicle and tighten the nut.

(b) Push the front axle assy LH toward the outside of the vehicle, fit the splined part of the front drive shaft assy LH to that of the front axle assy LH and insert the front drive shaft assy LH into the front axle assy LH.

NOTICE:
- **Do not push out the front axle assy LH excessively.**
- **Be careful not to damage the outboard joint boot.**
- **w/ ABS:**
  Be careful not to damage the speed sensor rotor.

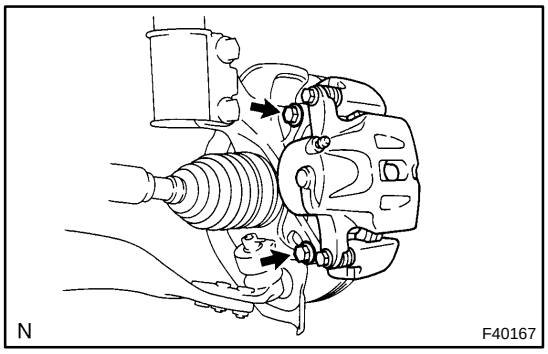
20. INSTALL FRONT SUSPENSION ARM SUB–ASSY LOWER NO.1 LH
(See page 30–8)
21. INSTALL TIE ROD ASSY LH
(See page 30–8)
22. INSTALL FRONT DISC



23. 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: 106.9 N·m (1,090 kgf·cm, 79 ft·lbf)

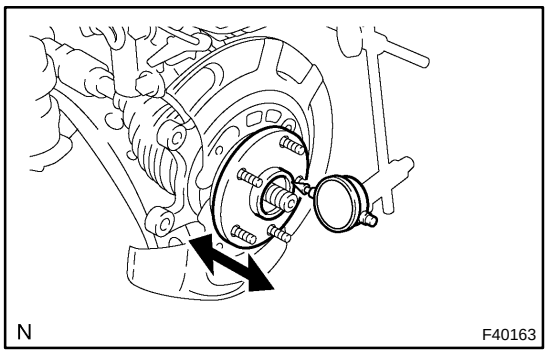
24. INSTALL FRONT AXLE HUB LH NUT
(See page 30–8)



25. DISCONNECT FRONT DISC BRAKE CALIPER ASSY LH

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

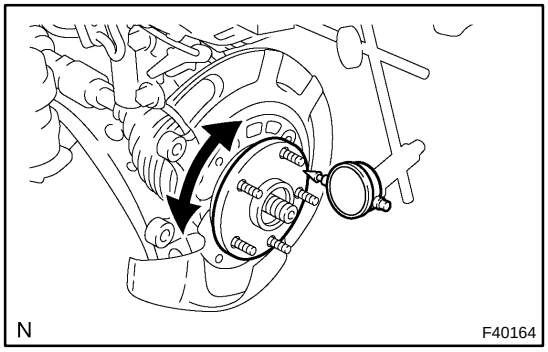
26. REMOVE FRONT DISC



27. 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.

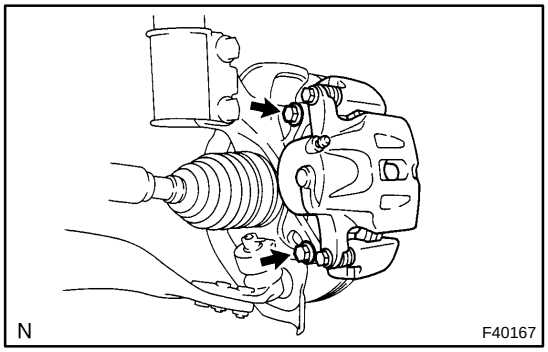


28. INSPECT AXLE HUB DEVIATION

(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 backlash exceeds the maximum, replace the axle hub.

29. INSTALL FRONT DISC



30. 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: 106.9 N·m (1,090 kgf·cm, 79 ft·lbf)

31. INSTALL SPEED SENSOR FRONT LH(W/ ABS)
(See page 30–8)

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

33. INSPECT AND ADJUST FRONT WHEEL ALIGNMENT(See page 26–5)

34. CHECK ABS SPEED SENSOR SIGNAL(W/ ABS)
w/ VSC (See page 05–452)
w/o VSC (BOSCH MADE) (See page 05–363)
w/o VSC (DENSO MADE) (See page 05–404)

FRONT AXLE LH HUB BOLT

30020–02

REPLACEMENT

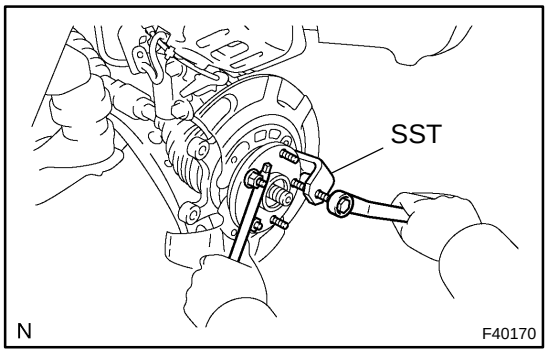
HINT:

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

1. REMOVE FRONT WHEEL

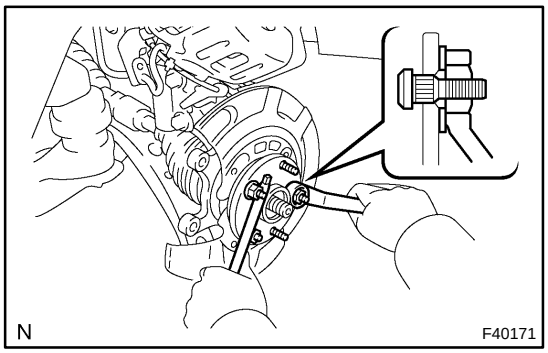
2. DISCONNECT FRONT DISC BRAKE CALIPER ASSY LH(See page 30–21)

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 09628–10011



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 30–21)

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

REAR AXLE HUB & BEARING ASSY LH

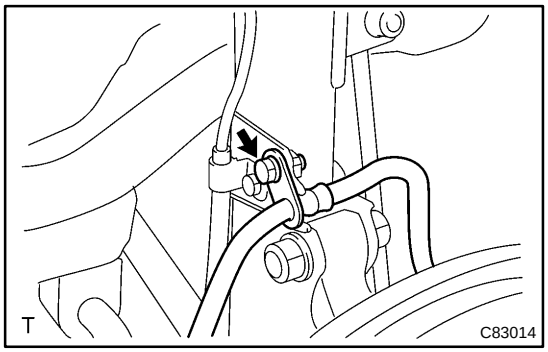
3006I–01

REPLACEMENT

HINT:

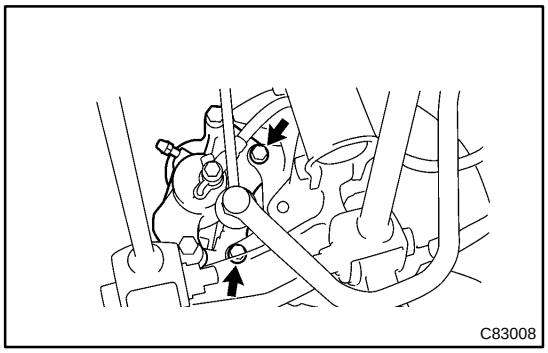
- COMPONENTS: See page 30–4
- Replace the RH side by the same procedures with the LH side.

1. REMOVE REAR WHEEL



2. DISCONNECT REAR DISC BRAKE CALIPER ASSY LH(DISC REAR BRAKE TYPE)

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



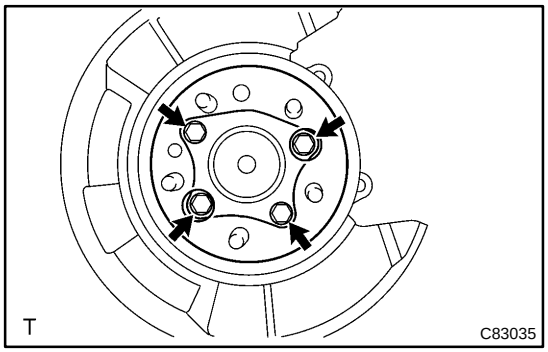
(b) Remove the 2 bolts and rear disc brake caliper assy LH.

(c) Support the brake caliper assy LH securely.

3. REMOVE REAR DISC(DISC REAR BRAKE TYPE)

4. REMOVE REAR BRAKE DRUM SUB–ASSY(DRUM REAR BRAKE TYPE)

5. DISCONNECT SKID CONTROL SENSOR WIRE(W/ ABS)



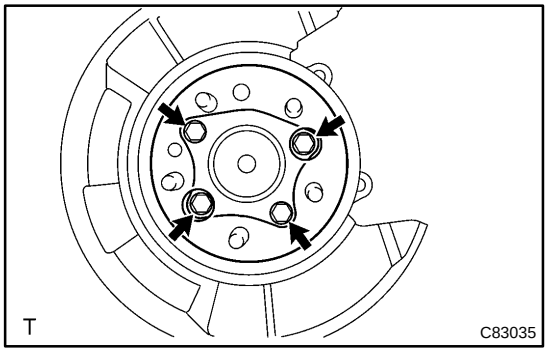
6. REMOVE REAR AXLE HUB & BEARING ASSY LH

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

Author : Date : 1982

7. REMOVE SKID CONTROL SENSOR(W/ ABS)
(See page 32–58)

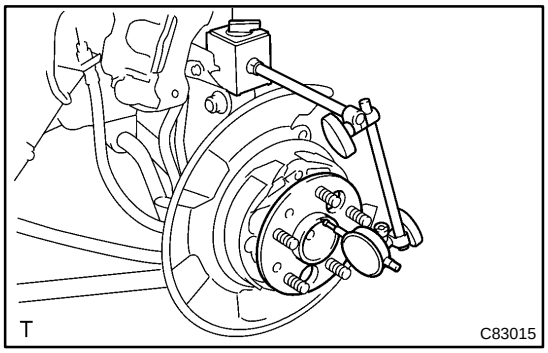
8. INSTALL SKID CONTROL SENSOR(W/ ABS)
(See page 32–58)



9. INSTALL REAR AXLE HUB & BEARING ASSY LH

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

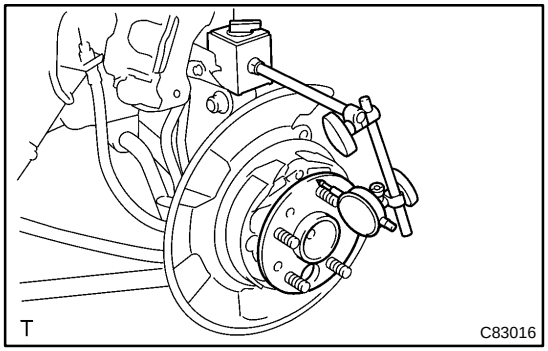
10. INSTALL SKID CONTROL SENSOR WIRE(W/ ABS)



11. 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.

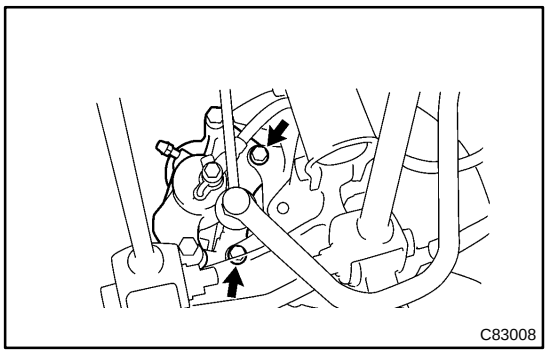


12. INSPECT AXLE HUB DEVIATION

(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.)

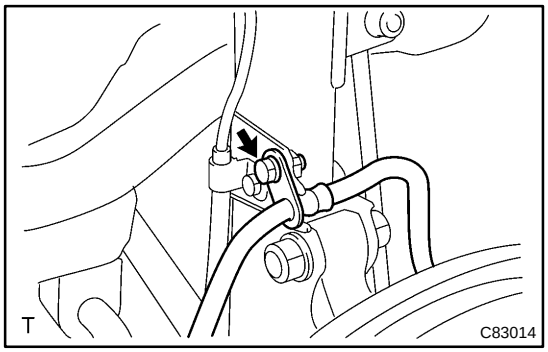
If the backlash exceeds the maximum, replace the axle hub assembly.

13. INSTALL REAR DISC(DISC REAR BRAKE TYPE)



14. INSTALL REAR DISC BRAKE CALIPER ASSY LH(DISC REAR BRAKE TYPE)

(a) Install the rear disc brake caliper assy LH with the 2 bolts.
Torque: 61.8 N·m (630 kgf·cm, 46 ft·lbf)



(b) Install the rear flexible hose with the bolt.
Torque: 18.8 N·m (192 kgf·cm, 14 ft·lbf)

15. INSTALL REAR BRAKE DRUM SUB–ASSY(DRUM REAR BRAKE TYPE)

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

17. INSPECT AND ADJUST REAR WHEEL ALIGNMENT(See page 27–3)

18. CHECK ABS SPEED SENSOR SIGNAL(W/ ABS)
w/ VSC (See page 05–452)
w/o VSC (BOSCH MADE) (See page 05–363)
w/o VSC (DENSO MADE) (See page 05–404)

REAR AXLE CARRIER SUB–ASSY LH

3006J–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. REMOVE STRUT ROD ASSY REAR
(See page 27–19)

3. DISCONNECT REAR DISC BRAKE CALIPER ASSY LH(DISC REAR BRAKE TYPE)
(See page 30–28)

4. REMOVE REAR DISC(DISC REAR BRAKE TYPE)

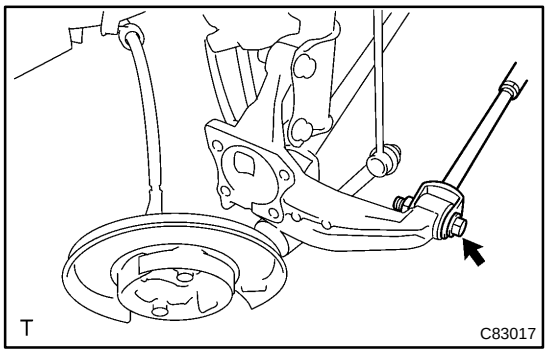
5. REMOVE REAR BRAKE DRUM SUB–ASSY(DRUM REAR BRAKE TYPE)

6. DISCONNECT SKID CONTROL SENSOR WIRE(W/ ABS)

7. DISCONNECT REAR BRAKE TUBE NO.4(DRUM REAR BRAKE TYPE)

(a) Using SST, disconnect the rear brake tube No.4 from the LH front or upper rear wheel brake cylinder assy.
SST 09023–00100

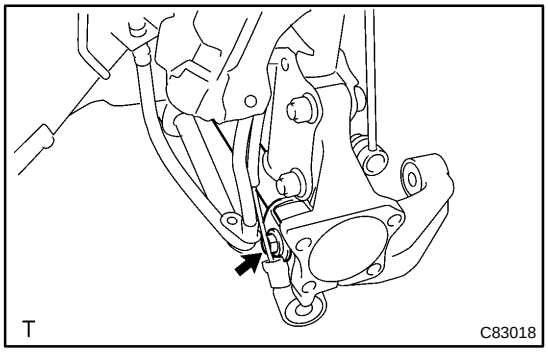
8. REMOVE REAR AXLE HUB & BEARING ASSY LH
(See page 30–28)



9. DISCONNECT 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.

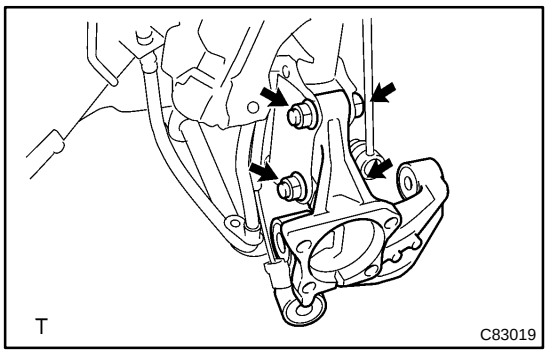
HINT:
While fixing the nut, turn and remove the bolt.



10. DISCONNECT 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.

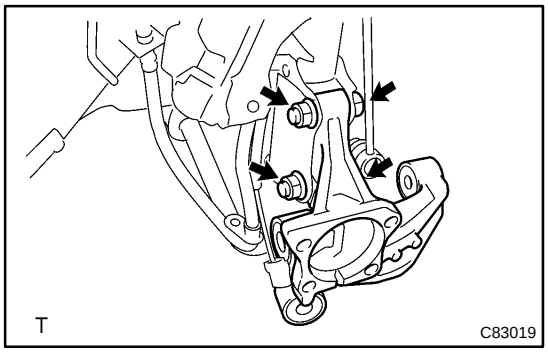
HINT:
While fixing the nut, turn and remove the bolt.



11. 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.



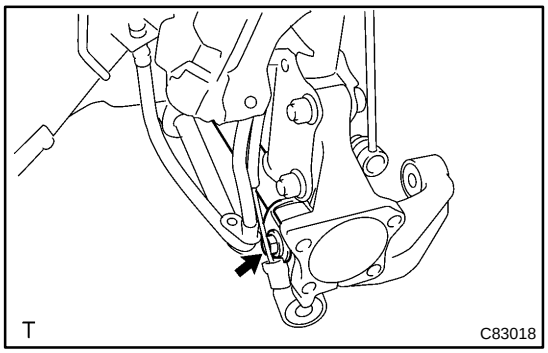
12. INSTALL REAR AXLE CARRIER SUB–ASSY LH

(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.

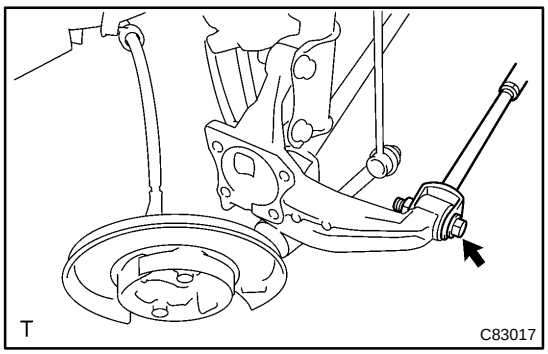
HINT:
Insert the bolt from the rear side of the vehicle and install the nut.



13. TEMPORARY TIGHTEN REAR SUSPENSION ARM ASSY NO.1 LH

(a) Install the rear suspension arm No.1 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.



14. TEMPORARY 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.

15. INSTALL REAR AXLE HUB & BEARING ASSY LH

(See page 30–28)

16. INSTALL REAR BRAKE TUBE NO.4(DRUM REAR BRAKE TYPE)

(a) Using SST, install the rear brake tube No.4 to the LH front or upper rear wheel brake cylinder assy.
SST 09023–00100
Torque: 15.2 N·m (155 kgf·cm,11 ft·lbf)

17. INSTALL SKID CONTROL SENSOR WIRE(W/ ABS)

18. INSTALL REAR DISC(DISC REAR BRAKE TYPE)

19. INSTALL REAR DISC BRAKE CALIPER ASSY LH(DISC REAR BRAKE TYPE)
(See page 30–28)

20. INSTALL REAR BRAKE DRUM SUB–ASSY(DRUM REAR BRAKE TYPE)

21. TEMPORARY TIGHTEN STRUT ROD ASSY REAR
(See page 27–19)

22. STABILIZE SUSPENSION(See page 27–19)

23. FULLY TIGHTEN REAR SUSPENSION ARM ASSY NO.1 LH
(See page 27–10)

24. FULLY TIGHTEN REAR SUSPENSION ARM ASSY NO.2 LH
(See page 27–14)

25. FULLY TIGHTEN STRUT ROD ASSY REAR
(See page 27–19)

26. FILL RESERVOIR WITH BRAKE FLUID(DRUM REAR BRAKE TYPE)

27. BLEED MASTER CYLINDER(DRUM REAR BRAKE TYPE)(See page 32–4)
SST 09023–00100

28. BLEED BRAKE LINE(DRUM REAR BRAKE TYPE)

29. CHECK FLUID LEVEL IN RESERVOIR(DRUM REAR BRAKE TYPE)

30. CHECK BRAKE FLUID LEAKAGE(DRUM REAR BRAKE TYPE)

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

32. INSPECT AND ADJUST REAR WHEEL ALIGNMENT(See page 27–3)

33. CHECK ABS SPEED SENSOR SIGNAL(W/ ABS)
w/ VSC (See page 05–452)
w/o VSC (BOSCH MADE) (See page 05–363)
w/o VSC (DENSO MADE) (See page 05–404)

REAR AXLE LH HUB BOLT

30024–02

REPLACEMENT

HINT:

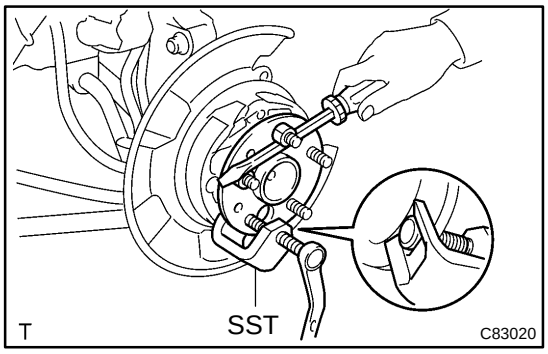
- COMPONENTS: See page 30–4
- Replace the RH side by the same procedures with the LH side.

1. REMOVE REAR WHEEL

2. REMOVE REAR DISC BRAKE CALIPER ASSY LH(DISC REAR BRAKE TYPE)(See page 30–28)

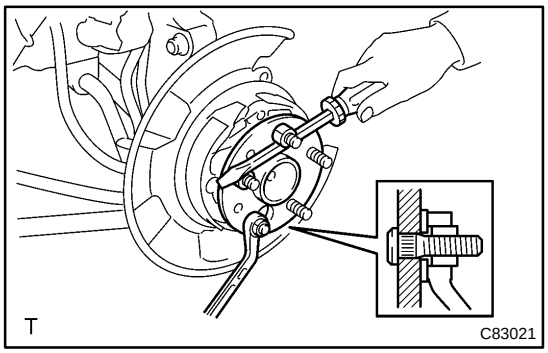
3. REMOVE REAR DISC(DISC REAR BRAKE TYPE)

4. REMOVE REAR BRAKE DRUM SUB–ASSY(DRUM REAR BRAKE TYPE)



5. 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 09628–10011



6. 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.

7. INSTALL REAR DISC(DISC REAR BRAKE TYPE)

8. INSTALL REAR DISC BRAKE CALIPER ASSY LH(DISC REAR BRAKE TYPE)(See page 30–28)

9. INSTALL REAR BRAKE DRUM SUB–ASSY(DRUM REAR BRAKE TYPE)

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