

FRONT DRIVE SHAFT

OVERHAUL

3005F-01

HINT:

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

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

- (a) Remove the drain plug and gasket, drain the ATF.
- (b) Install a new gasket and drain plug.

Torque: 47 N·m (479 kgf·cm, 35 ft·lbf)

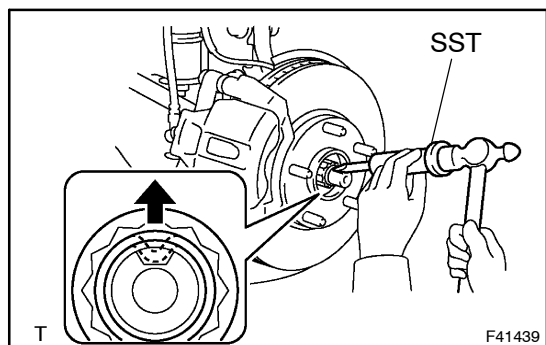
2. DRAIN MANUAL TRANSAXLE OIL(M/T TRANSAXLE)

- (a) Remove the filler plug and gasket.
- (b) Remove the drain plug and gasket, drain the manual transaxle oil.
- (c) Install 2 new gaskets, drain plug and filler plug.

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

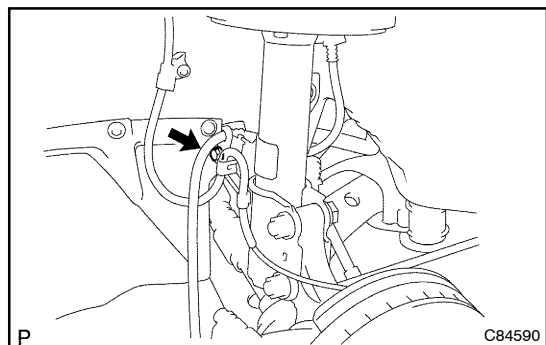
3. REMOVE FRONT WHEEL

4. REMOVE ENGINE UNDER COVER LH



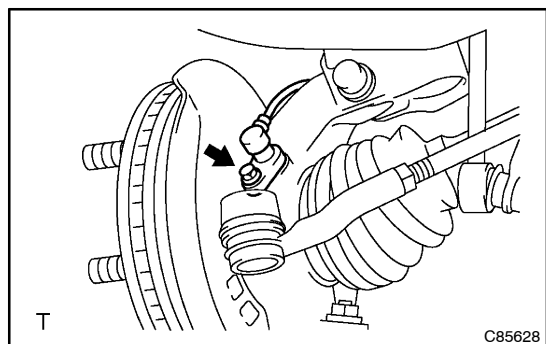
5. REMOVE FRONT AXLE HUB LH NUT

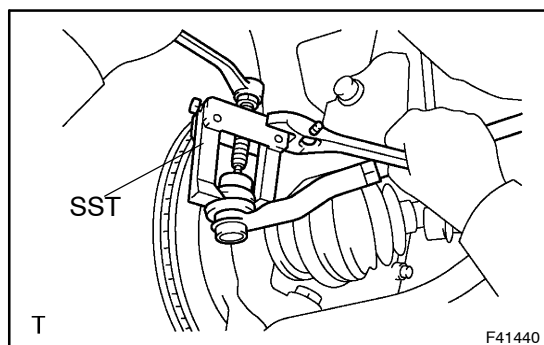
- (a) Using SST and a hammer, unstake the staked part of the hub LH nut.
SST 09930-00010
- (b) While applying the brakes, remove the hub LH nut.



6. SEPARATE SPEED SENSOR FRONT LH

- (a) Remove the bolt, separate the speed sensor wire harness LH and flexible hose from the shock absorber assy.
- (b) Remove the bolt, separate the speed sensor LH from the steering knuckle.



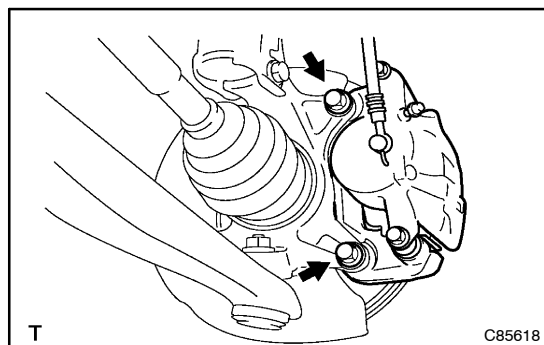


7. SEPARATE TIE ROD END SUB-ASSY LH

- Remove the cotter pin and nut.
- Using SST, separate the tie rod end LH from the steering knuckle.
SST 09628-62011

NOTICE:

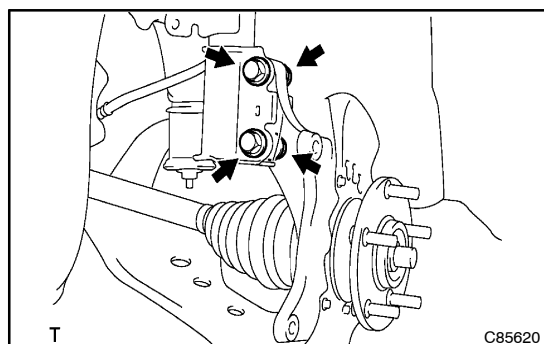
Be careful not to damage the dust boot.



8. SEPARATE FRONT DISC BRAKE CALIPER ASSY LH

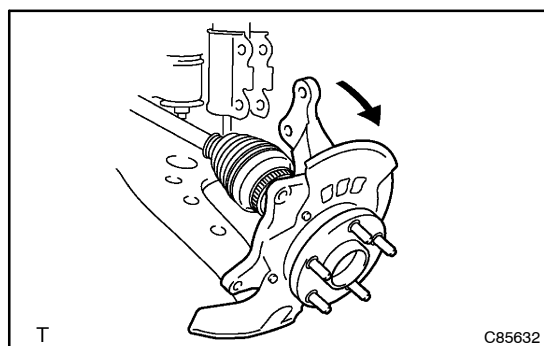
- Remove the 2 bolts, separate the brake caliper.
- Support the brake caliper securely.

9. REMOVE FRONT DISC



10. SEPARATE FRONT AXLE ASSY LH

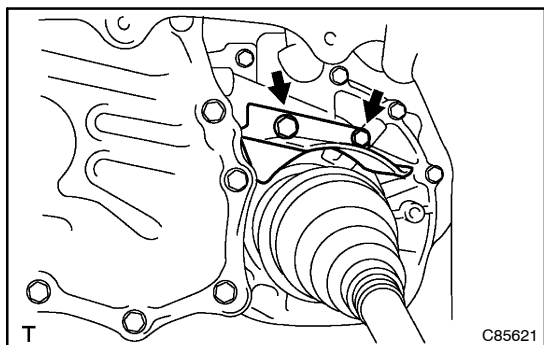
- Remove the 2 bolts, nuts and separate the front axle assy LH from the shock absorber assy LH.



- Push the front axle assy LH toward the outside of the vehicle, using a plastic hammer, separate the drive shaft assy LH from the front axle assy LH.

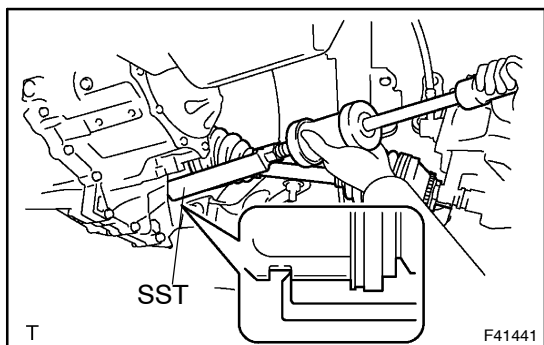
NOTICE:

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



11. REMOVE MANUAL TRANSMISSION CASE PROTECTOR(M/T TRANSAXLE)

- (a) Remove the 2 bolts and transmission case protector.

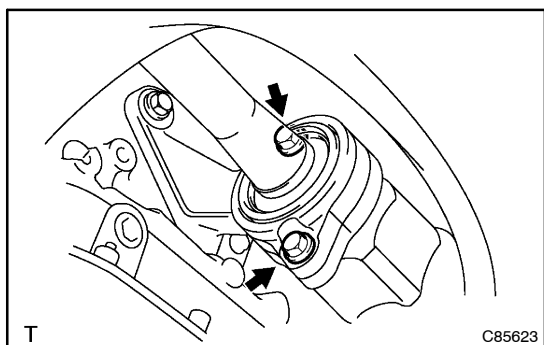


12. REMOVE FRONT DRIVE SHAFT ASSY LH

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

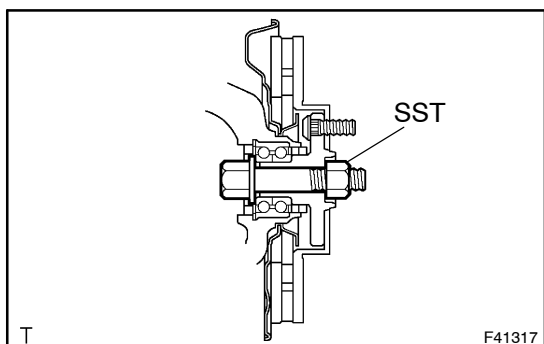
NOTICE:

Be careful not to damage the oil seal.



13. REMOVE FRONT DRIVE SHAFT ASSY RH

- (a) Remove the 2 bolts and pull out the drive shaft assy RH together with the bearing case.
- (b) Remove the drive shaft assy RH.



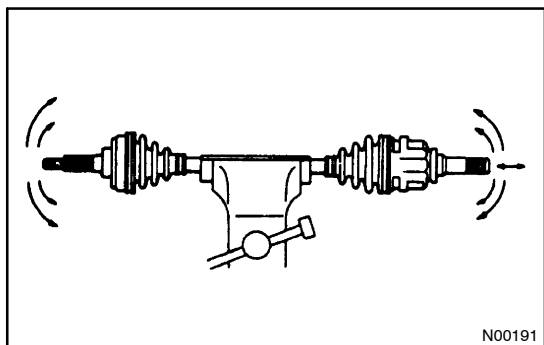
14. FIX FRONT AXLE ASSY LH

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.

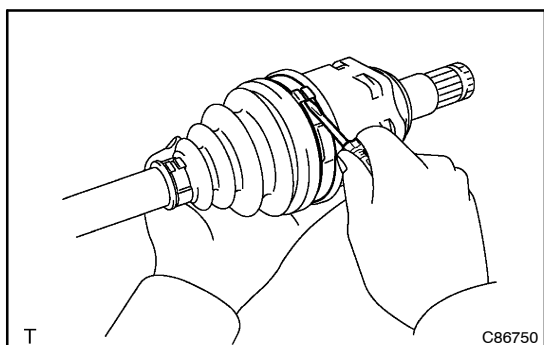
SST 09608-16042 (09608-02021, 09608-02041)

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

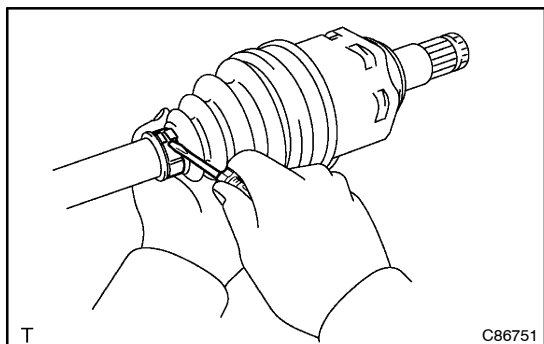
- (a) Check to see that there is no remarkable play in the outboard joint.
- (b) Check to see that the inboard joint slides smoothly in the thrust direction.
- (c) Check to see that there is no remarkable play in the radial direction of the inboard joint.
- (d) Check the boots for damage.

NOTICE:

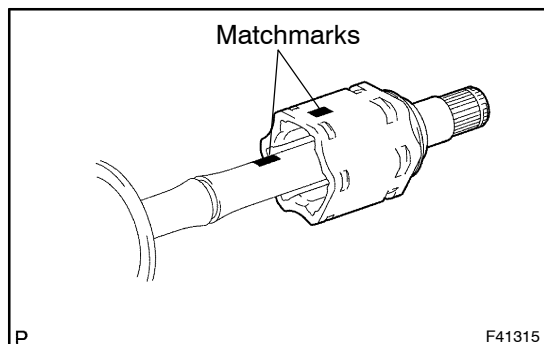
Move the drive shaft assy keeping it level.

**16. REMOVE FRONT AXLE INBOARD JOINT BOOT CLAMP**

- (a) Using a screwdriver, disengage the No. 2 clamp.



- (b) Using a screwdriver, disengage the clamp.

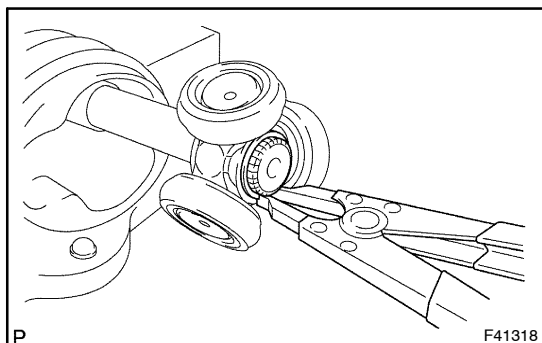
17. SEPARATE FR AXLE INBOARD JOINT BOOT**18. REMOVE FRONT DRIVE INBOARD JOINT ASSY LH**

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

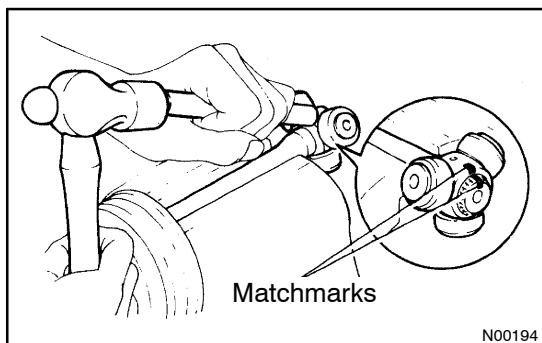
NOTICE:

Do not punch the marks.

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



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



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

NOTICE:

Do not punch the marks.

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

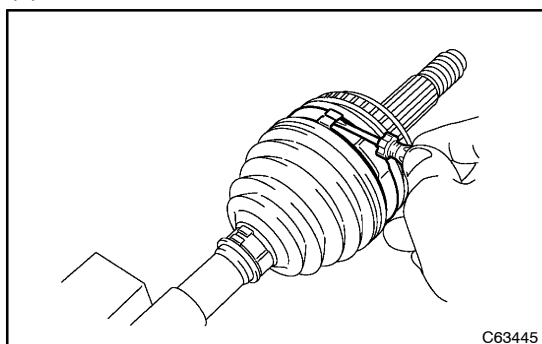
NOTICE:

Do not tap the roller.

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

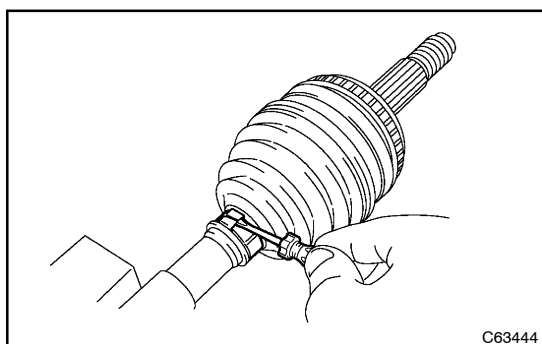
19. REMOVE DRIVE SHAFT DAMPER(W/ DRIVE SHAFT DAMPER)

- (a) Using a screwdriver, disclamp the damper clamp.
 (b) Remove the drive shaft damper.
 (c) Remove the damper clamp.

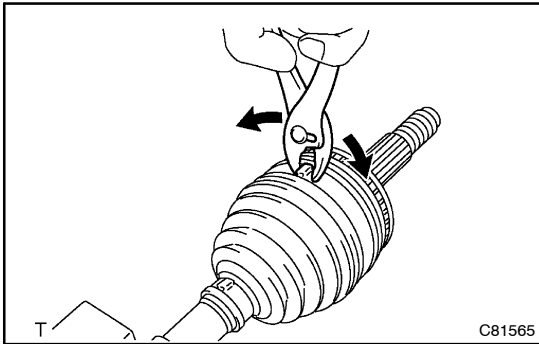


20. REMOVE FRONT AXLE OUTBOARD JOINT BOOT CLAMP

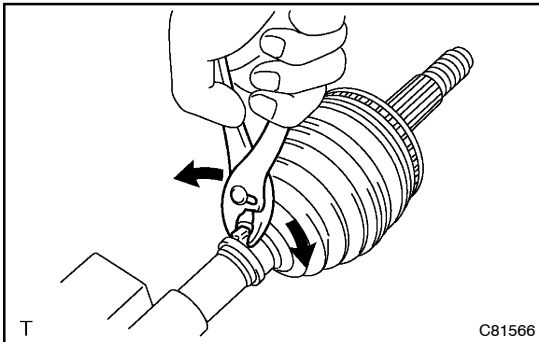
- (a) One touch clamp type:
 (1) Using a screwdriver, remove the No. 2 clamp.



- (2) Using a screwdriver, remove the clamp.



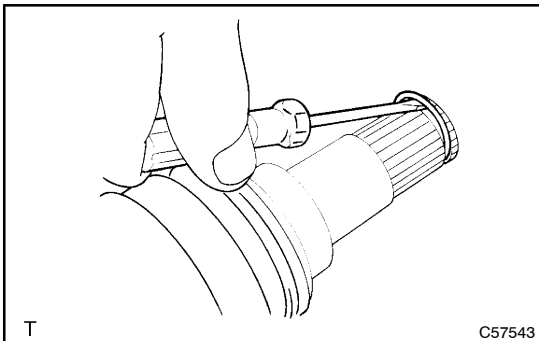
- (b) Omega clamp type:
Pinch the outboard joint large lamp.
- (1) Using pliers, remove the No. 2 clamp, as shown in the illustration.



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

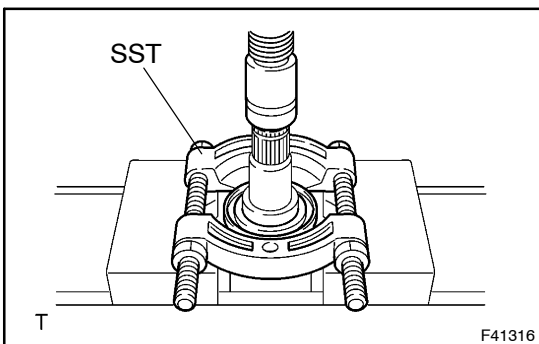
21. REMOVE OUTBOARD JOINT BOOT

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



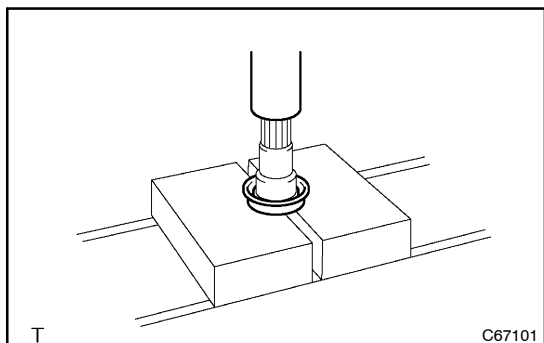
22. REMOVE FRONT DRIVE SHAFT LH HOLE SNAP RING

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

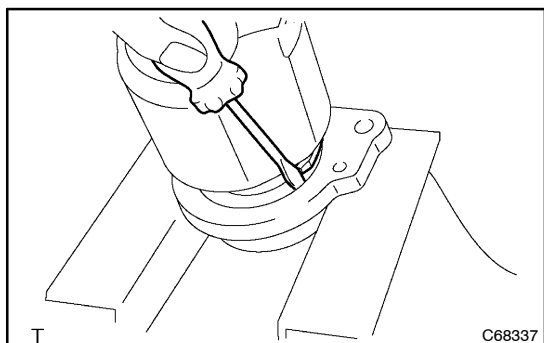


23. REMOVE FRONT DRIVE SHAFT DUST COVER LH

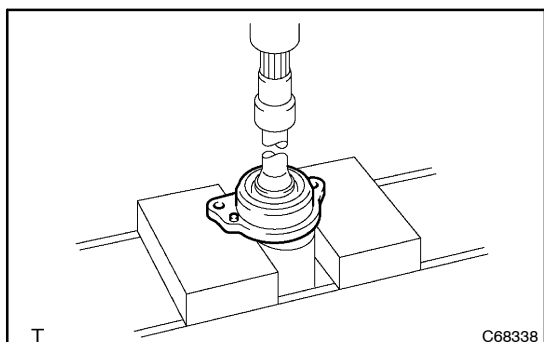
- (a) Using SST and a press, remove the dust cover LH.
SST 09950-00020

**24. REMOVE FRONT DRIVE SHAFT DUST COVER RH**

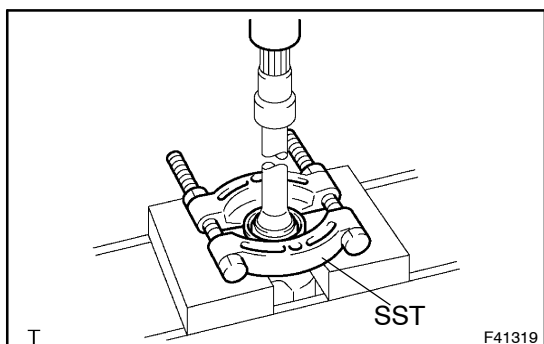
- (a) Using a press, remove the dust cover RH.

**25. REMOVE CASE SUB ASSY, DRIVE SHAFT BEARING SNAP RING**

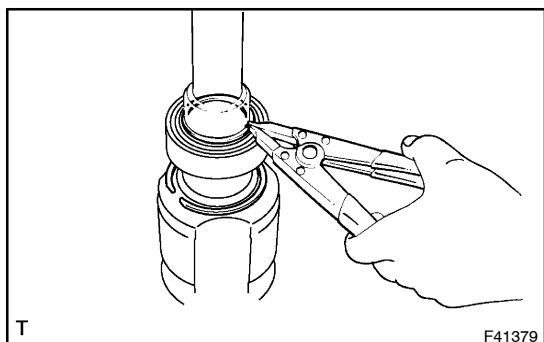
- (a) Using a screwdriver, remove the snap ring.

**26. REMOVE DRIVE SHAFT BEARING CASE SUB ASSY**

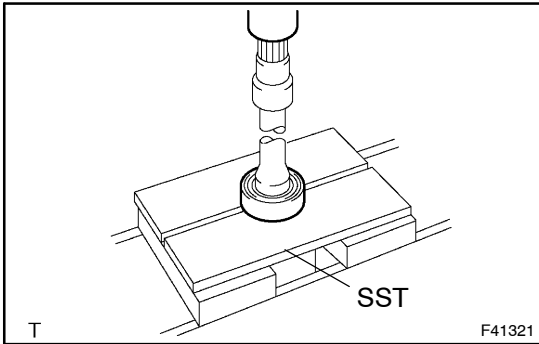
- (a) Using a press, remove the bearing case.

**27. REMOVE FRONT DRIVE SHAFT DUST COVER**

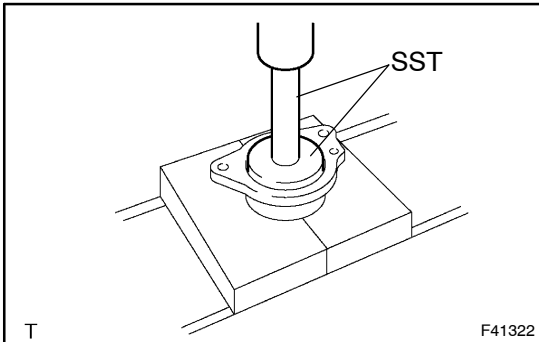
- (a) Using SST and a press, remove the dust cover.
SST 09950-00020

**28. REMOVE FRONT DRIVE SHAFT BEARING**

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

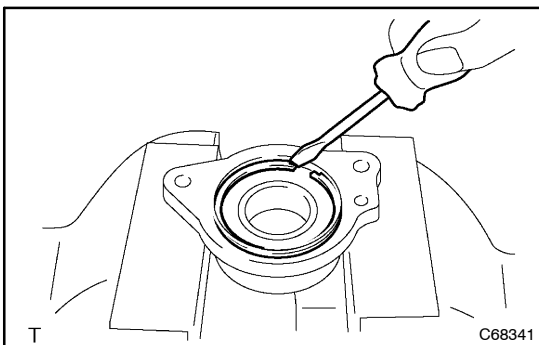


- (b) Using SST and a press, remove the bearing.
SST 09527-10011
- (c) Remove the snap ring.



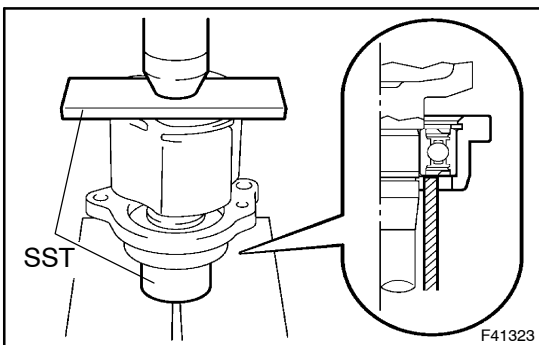
29. INSTALL FRONT DRIVE SHAFT BEARING

- (a) Using SST and a press, install a new bearing.
SST 09950-60020 (09951-00710), 09950-70010
(09951-07100)



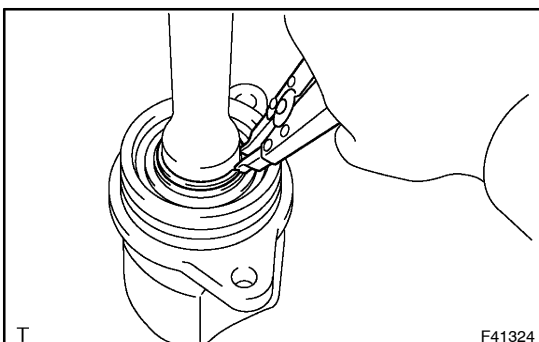
30. INSTALL CASE SUB ASSY, DRIVE SHAFT BEARING SNAP RING

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

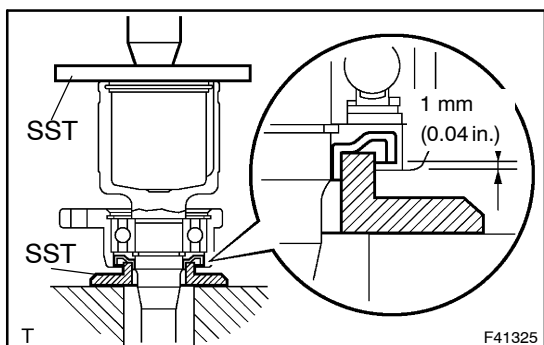


31. INSTALL DRIVE SHAFT BEARING CASE SUB ASSY

- (a) Using SST and a press, install the bearing case to the in-board joint.
SST 09527-10011, 09710-14013



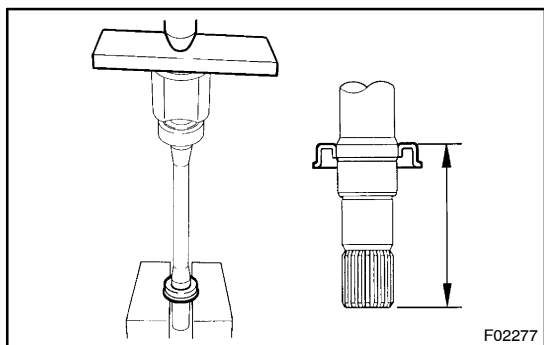
- (b) Using snap ring expander, install a new snap ring.

**32. INSTALL FRONT DRIVE SHAFT DUST COVER**

- (a) Using SST and a press, install a new dust cover.
SST 09726-40010, 09527-10011

NOTICE:

Do not damage the dust cover.

**33. INSTALL FRONT DRIVE SHAFT DUST COVER RH**

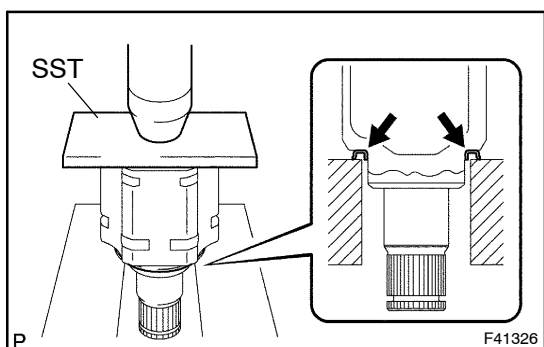
- (a) Using SST and a press, install a new dust cover until the distance from the tip of center drive shaft to the dust cover reaches the specification, as shown in the illustration.

SST 09527-10011

Distance: 91.5 ± 0.5 mm (3.6024 ± 0.0197 in.)

NOTICE:

Do not damage the dust cover.

**34. INSTALL FRONT DRIVE SHAFT DUST COVER LH**

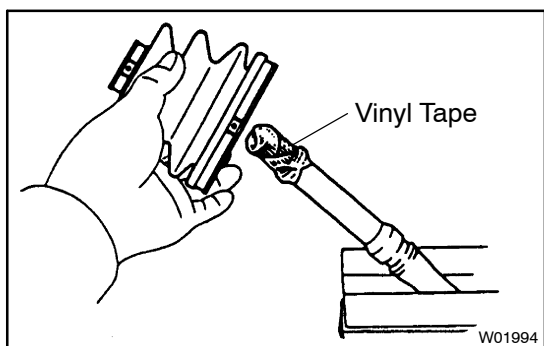
- (a) Using SST and a press, install a new dust cover.
SST 09527-10011

NOTICE:

Do not damage the dust cover.

35. INSTALL FRONT DRIVE SHAFT LH HOLE SNAP RING

- (a) Install a new hole snap ring.

**36. INSTALL OUTBOARD JOINT BOOT****HINT:**

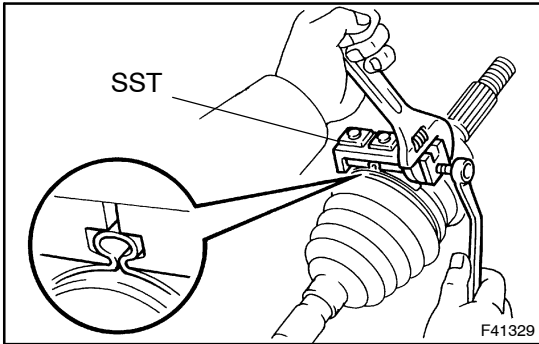
Before installing the boots, wrap the spline of the drive shaft with vinyl tape to prevent the boots from being damaged.

- (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

1CD-FTV E/G : 205 – 215 g (7.23 – 7.58 oz.)

1AZ-FE E/G : 190 – 200 g (6.70 – 7.05 oz.)

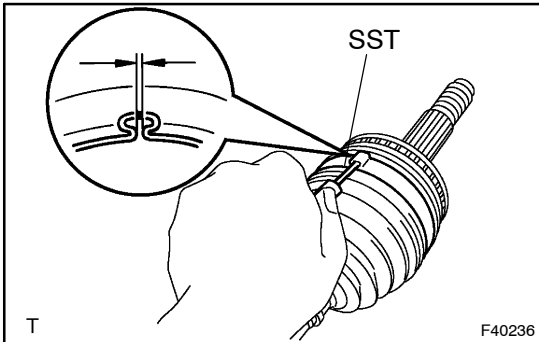


37. INSTALL FRONT AXLE OUTBOARD JOINT BOOT CLAMP

- (a) Pinch the No. 2 clamp.
- (b) Secure the No. 2 clamp onto the boot.
- (c) Place SST onto the No. 2 clamp.
SST 09521-24010
- (d) Tighten the SST so that the No. 2 clamp is pinched.

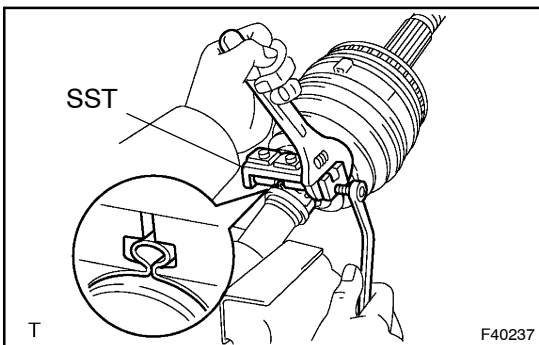
NOTICE:

Do not overtighten the SST.



- (e) Using SST, adjust the clearance of the No. 2 clamp.
SST 09240-00020

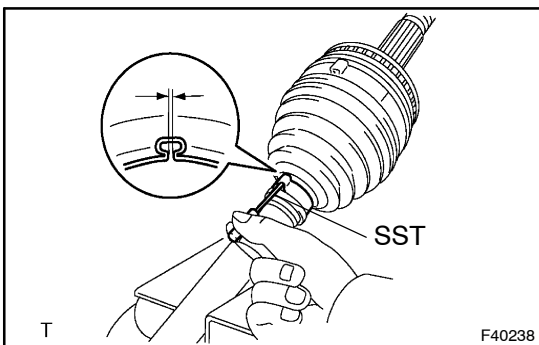
Clearance: 0.8 mm (0.031 in.) or less



- (f) Pinch the clamp.
- (g) Secure the clamp onto the boot.
- (h) Place SST onto the clamp.
SST 09521-24010
- (i) Tighten the SST so that the clamp is pinched.

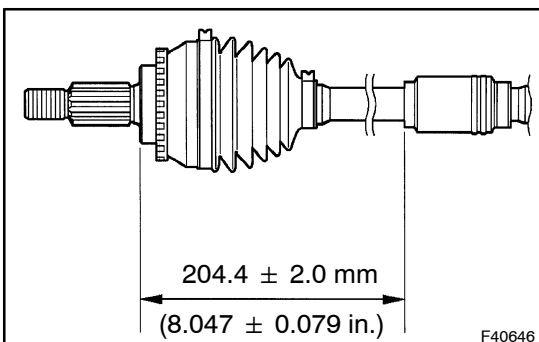
NOTICE:

Do not overtighten the SST.



- (j) Using SST, adjust the clearance of the small clamp.
SST 09240-00020

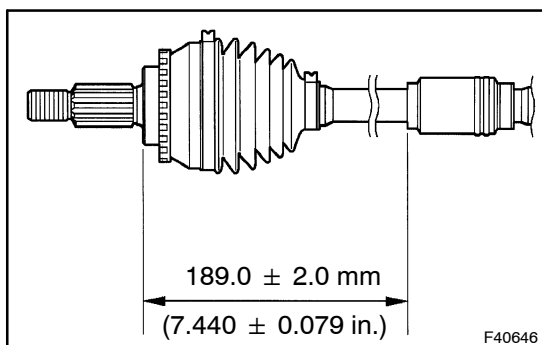
Clearance: 0.8 mm (0.031 in.) or less



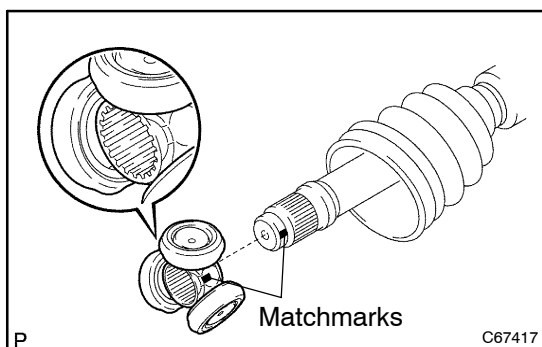
38. INSTALL DRIVE SHAFT DAMPER(W/ DRIVE SHAFT DAMPER)

- (a) RH and 1AZ-FE E/G A/T LH:
 - (1) Make sure that the damper is on the shaft groove.
 - (2) Set the distance, as described below.

Distance: 204.4 ± 2.0 mm (8.047 ± 0.079 in.)



- (b) 1CD-FTV E/G LH:
- (1) Make sure that the damper is on the shaft groove.
 - (2) Set the distance, as described below.
- Distance: 189.0 ± 2.0 mm (7.440 ± 0.079 in.)**

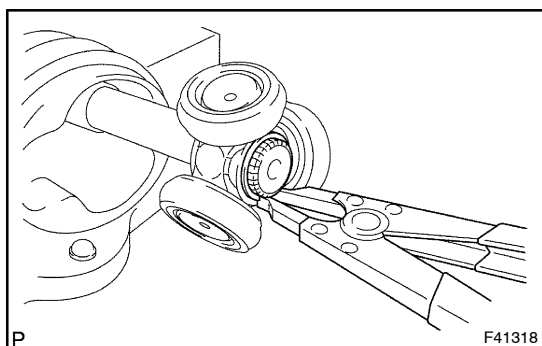


39. INSTALL FRONT DRIVE INBOARD JOINT ASSY LH

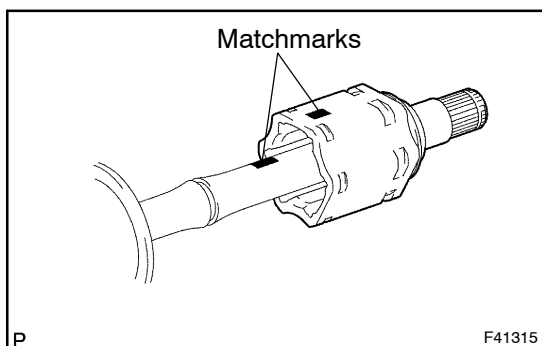
- (a) Wrap the spline of the outboard joint shaft with vinyl tape to prevent them from being damaged.
- (b) Install new parts to the inboard joint shaft assy in the following order.
 - (1) clamp
 - (2) Inboard joint boot
 - (3) No. 2 clamp
- (c) Align the matchmarks and install tripod joint assy to the outboard joint assy.
- (d) Using a brass bar and hammer, install the tripod joint assy.

NOTICE:

Do not tap the roller.



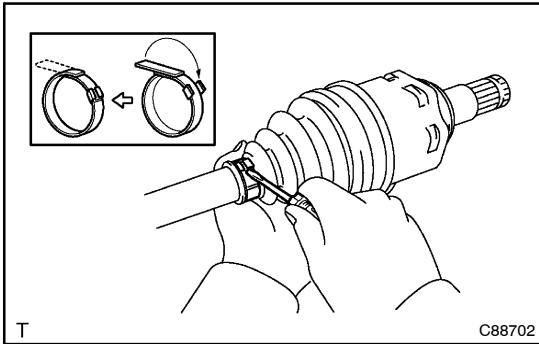
- (e) Using a snap ring expander, install a new snap ring.
 - (f) Pack the inboard joint assy LH with grease.
- Grease capacity: 185 – 195 g (6.52 – 6.88 oz.)**



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

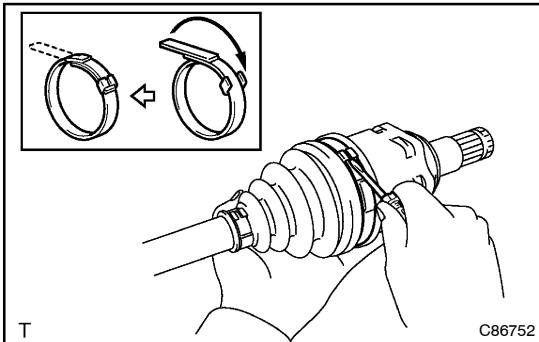
40. INSTALL FR AXLE INBOARD JOINT BOOT

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

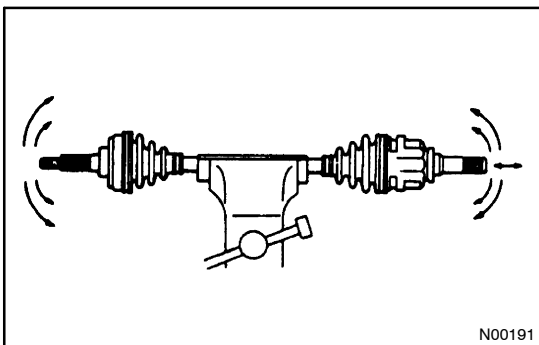


41. INSTALL FRONT AXLE INBOARD JOINT BOOT CLAMP

- (a) Using a screwdriver, install the clamp to the inboard joint boot, as shown in the illustration.



- (b) Using a screwdriver, install the No. 2 clamp to the inboard joint boot, as shown in the illustration.



42. INSPECT FRONT DRIVE SHAFT

- (a) Check to see that there is no remarkable play in the out-board 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.

43. INSTALL FRONT DRIVE SHAFT ASSY LH

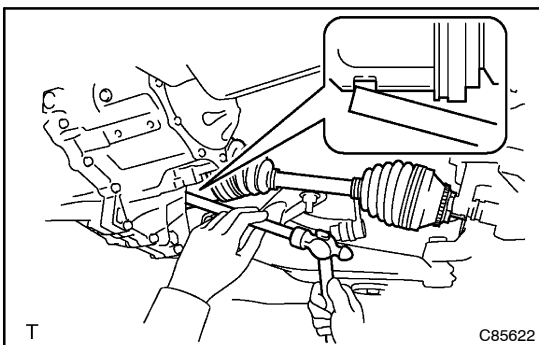
- (a) A/T only:
Coat the spline of the inboard joint shaft assy with ATF.
 (b) M/T only:
Coat the spline of the inboard joint shaft assy with gear oil.
 (c) Align the shaft splines and install the drive shaft assy with brass bar and hammer.

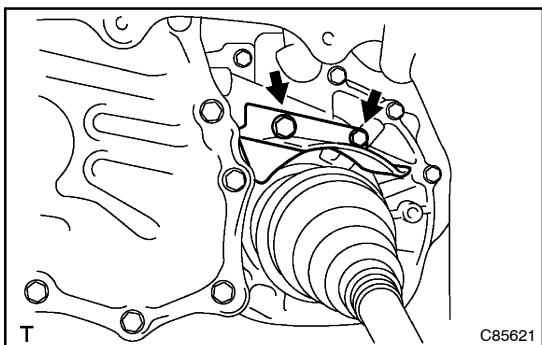
NOTICE:

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

HINT:

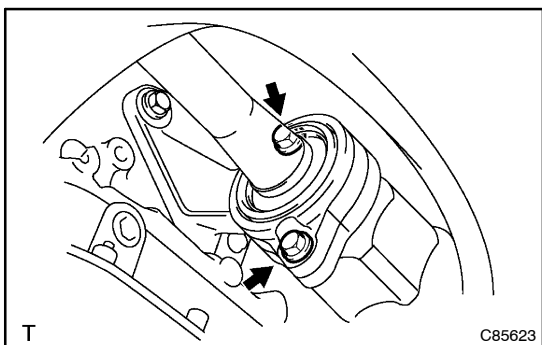
Whether the inboard joint shaft is in contact with the pinion shaft or not can be known from the sound or feeling when driving it.





44. INSTALL MANUAL TRANSMISSION CASE PROTECTOR(M/T TRANSAXLE)

- (a) Install the transmission case protector with the 2 bolts.
Torque: 18 N·m (184 kgf·cm, 13 ft·lbf)



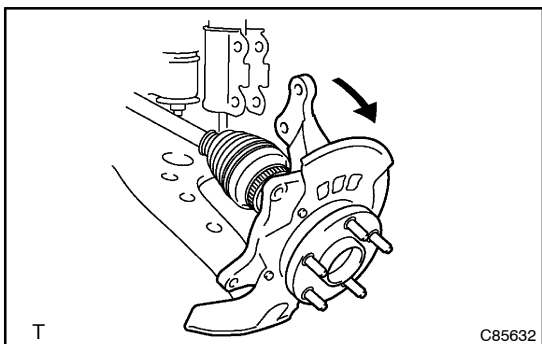
45. INSTALL FRONT DRIVE SHAFT ASSY RH

- (a) A/T only:
 Coat the spline of the inboard joint shaft assy with ATF.
- (b) M/T only:
 Coat the spline of the inboard joint shaft assy with gear oil.
- (c) Align the shaft splines and install the drive shaft assy with the 2 bolts.

Torque: 63.7 N·m (650 kgf·cm, 47 ft·lbf)

NOTICE:

Do not damage the oil seal.



46. INSTALL FRONT AXLE ASSY LH

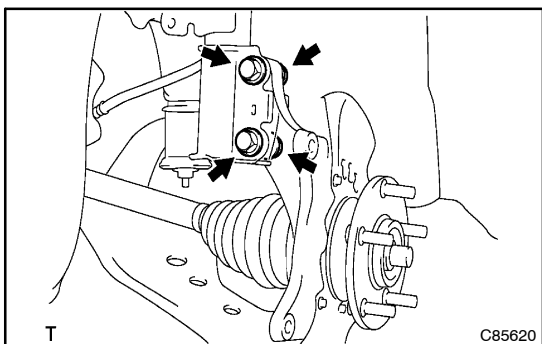
- (a) Push the front axle assy toward the outside of the vehicle, fit the splined part of the drive shaft assy to that of the front axle assy and insert the drive shaft assy into the front axle assy.

NOTICE:

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

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

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



47. INSTALL TIE ROD END SUB-ASSY LH

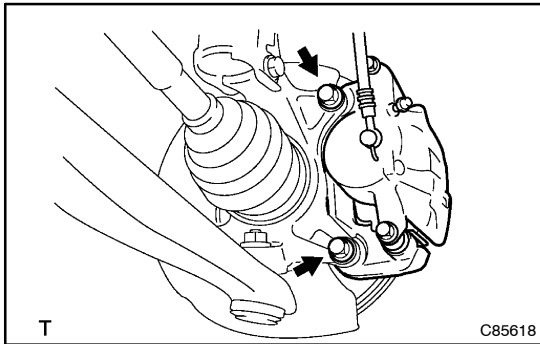
- (a) Install the tie rod end to the steering knuckle with the nut.

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

- (b) Install a new cotter pin.

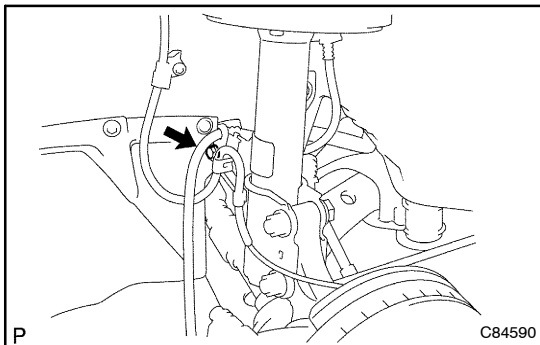
NOTICE:

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

48. INSTALL FRONT DISC**49. INSTALL FRONT DISC BRAKE CALIPER ASSY LH**

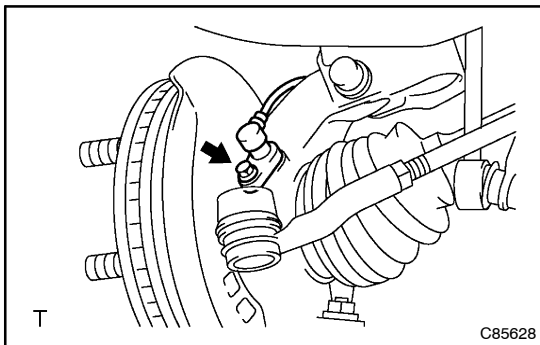
- (a) Install the brake caliper assembly with the 2 bolts to the steering knuckle.

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

**50. INSTALL SPEED SENSOR FRONT LH**

- (a) Install the flexible hose and speed sensor wire harness to shock absorber assy with the bolt.

Torque: 19 N·m (194 kgf·cm, 14 ft·lbf)

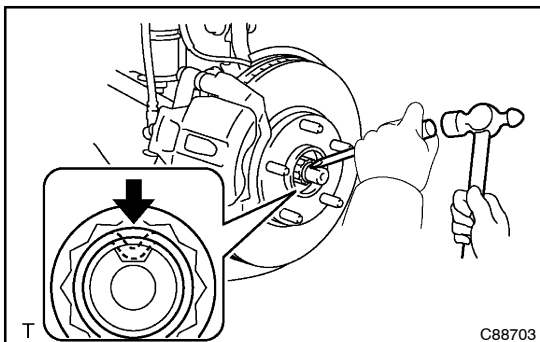


- (b) Install the speed sensor LH to the steering knuckle with the bolt.

Torque: 7.8 N·m (80 kgf·cm, 69 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.

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

- (a) Install a new hub nut.

Torque: 216 N·m (2,203 kgf·cm, 159 ft·lbf)

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

52. INSTALL FRONT WHEEL

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

53. ADD AUTOMATIC TRANSAXLE FLUID(A/T TRANSAXLE)**54. □ INSPECT AUTOMATIC TRANSAXLE FLUID(A/T TRANSAXLE)(See page 40-2)****55. ADD MANUAL TRANSAXLE OIL(M/T TRANSAXLE)****56. □ INSPECT MANUAL TRANSAXLE OIL(M/T TRANSAXLE)(See page 41-2)****57. □ ADJUST FRONT WHEEL ALIGNMENT(See page 26-4)****58. □ CHECK ABS SPEED SENSOR SIGNAL(See page 05-295)**