

AXLE – FRONT AXLE HUB

AH-7

REMOVAL

HINT:

- Use the same procedures for the RH side and LH side.
- The procedures listed below are for the LH side.

1. REMOVE FRONT WHEEL

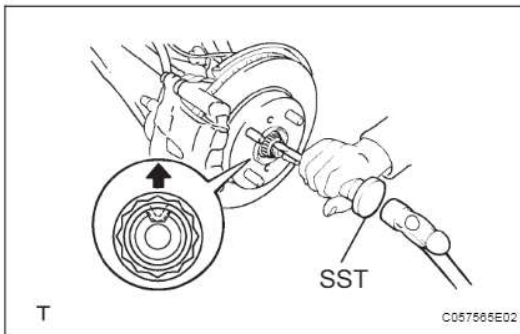
2. REMOVE FRONT AXLE HUB NUT

- (a) Using SST and a hammer, pry up the retaining tab(s) of the hub nut.

SST 09930-00010**NOTICE:**

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

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

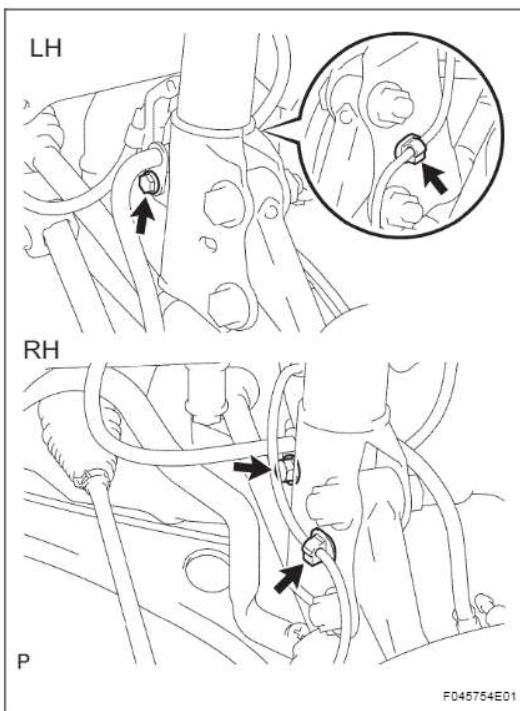


3. DISCONNECT FRONT SPEED SENSOR

- (a) Remove the bolt and clip, and disconnect the front speed sensor and flexible hose from the front shock absorber.

HINT:

The positions of the bolt and clip on the right side differ from those on the left side.



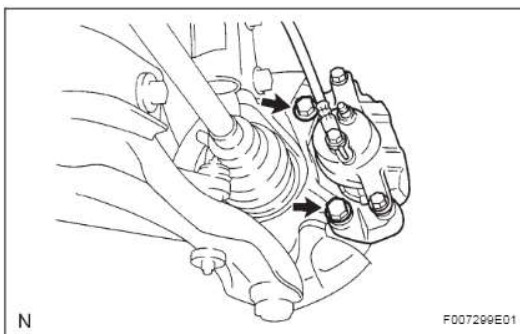
4. DISCONNECT FRONT DISC BRAKE CYLINDER ASSEMBLY

- (a) Remove the 2 bolts, and separate the brake cylinder from the steering knuckle.

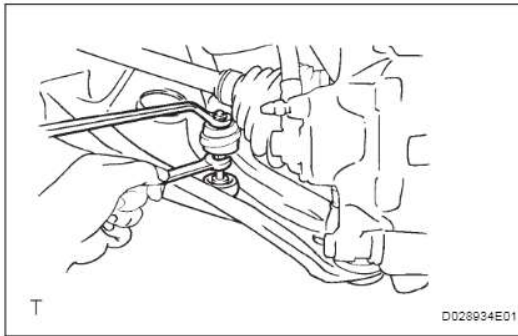
NOTICE:

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

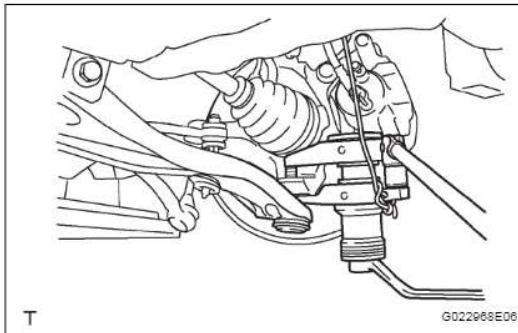
5. REMOVE FRONT DISC



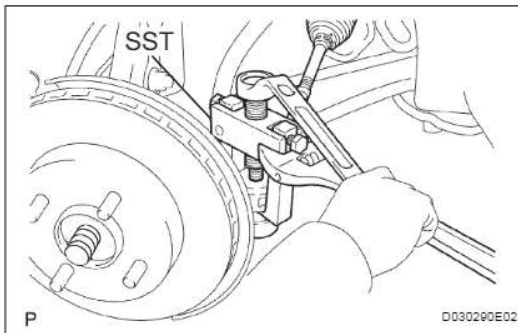
AH

AH-8**AXLE – FRONT AXLE HUB****6. DISCONNECT FRONT STABILIZER BAR**

- (a) Hold the bolt with a wrench and remove the nut.
- (b) Remove the 2 cushion retainers and 2 cushions, and disconnect the front stabilizer bar.

**7. DISCONNECT FRONT NO. 1 SUSPENSION LOWER ARM SUB-ASSEMBLY**

- (a) Remove the clip and nut.
- (b) Using SST, disconnect the front suspension lower arm from the steering knuckle.

SST 09628-00011**8. DISCONNECT TIE ROD END SUB-ASSEMBLY**

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

SST 09628-62011**9. DISCONNECT FRONT DRIVE SHAFT ASSEMBLY**

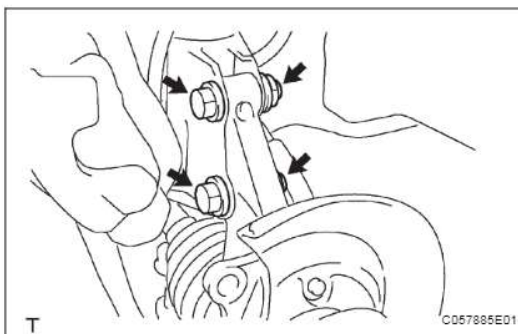
- (a) Using a plastic-faced hammer, tap the drive shaft and disconnect it.

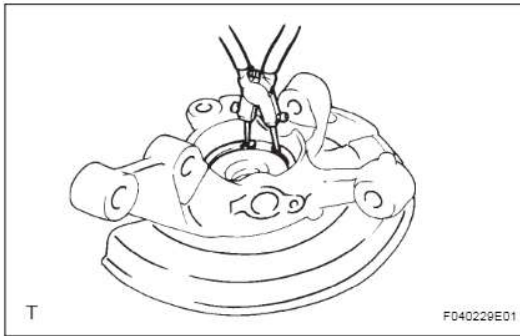
NOTICE:

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

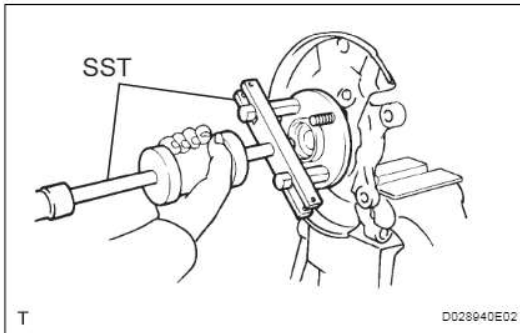
10. REMOVE FRONT AXLE ASSEMBLY

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

**AH**

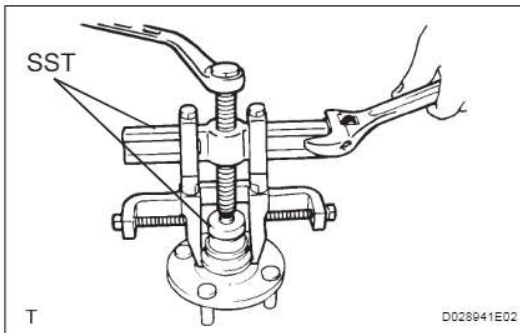
AXLE – FRONT AXLE HUB**AH-9****11. REMOVE FRONT AXLE HUB HOLE SNAP RING**

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

**12. REMOVE FRONT AXLE HUB SUB-ASSEMBLY**

- (a) Using SST, tap out the axle hub.

SST 09520-00031

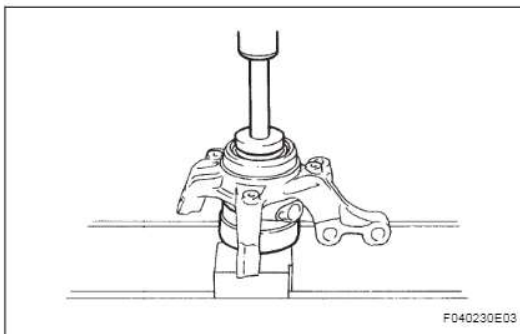


- (b) Using SST, remove the inner race of the hub bearing from the axle hub.

SST 09950-60010 (09951-00370), 09950-40011 (09951-04020, 09952-04010, 09953-04020, 09954-04010, 09955-04011, 09957-04010, 09958-04011)

13. REMOVE FRONT DISC BRAKE DUST COVER

- (a) Remove the 3 bolts and front dust cover.

**14. REMOVE FRONT AXLE HUB BEARING**

- (a) Place the inner race of the hub bearing on the outer race of the hub bearing.
 (b) Using SST and a press, press out the hub bearing from the steering knuckle.

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

NOTICE:

Be sure to position the steering knuckle horizontally.

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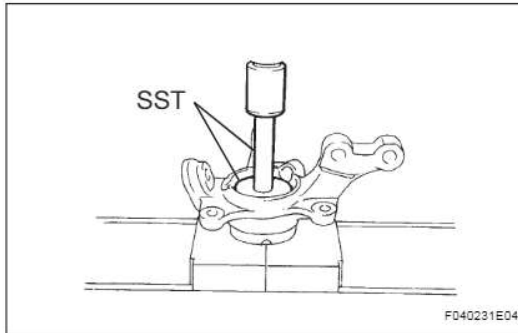
AH-10

AXLE – FRONT AXLE HUB

INSTALLATION

HINT:

- Use the same procedures for the RH side and LH side.
- The procedures listed below are for the LH side.



1. INSTALL FRONT AXLE HUB BEARING

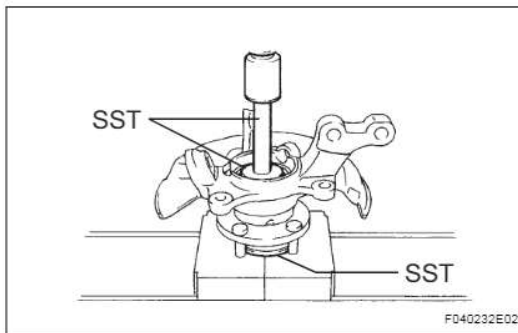
- (a) Using SST and a press, press a new hub bearing in the steering knuckle.

SST 09950-60020 (09951-00680), 09950-70010 (09951-07100)

2. INSTALL FRONT DISC BRAKE DUST COVER

- (a) Install the front dust cover with the 3 bolts.

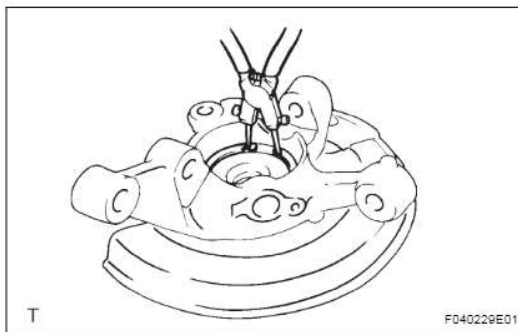
Torque: 8.3 N*m (85 kgf*cm, 73 in.*lbf)



3. INSTALL FRONT AXLE HUB SUB-ASSEMBLY

- (a) Using SST and a press, press the axle hub in the steering knuckle.

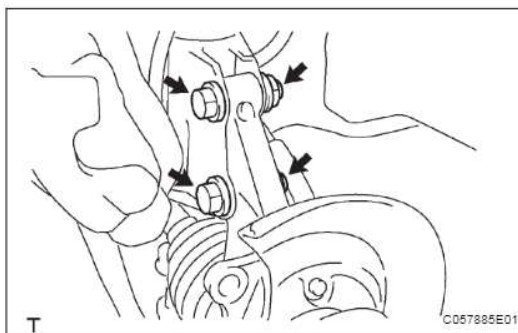
SST 09950-60020 (09951-00680), 09950-70010 (09951-07100), 09608-32010



4. INSTALL FRONT AXLE HUB HOLE SNAP RING

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

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5. INSTALL FRONT AXLE ASSEMBLY

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

Torque: 132 N*m (1,350 kgf*cm, 97 ft.*lbf)

NOTICE:

Only when reusing the bolts and nuts, apply a small amount of engine oil to the screw part of the nuts.

6. CONNECT FRONT DRIVE SHAFT ASSEMBLY

- (a) Install the drive shaft to the front axle.

NOTICE:

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

AXLE – FRONT AXLE HUB

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- Do not excessively push the front axle assembly.

7. CONNECT TIE ROD END SUB-ASSEMBLY

- Connect the tie rod end to the steering knuckle with the nut.

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

- Install a new cotter pin.

NOTICE:

If the holes for the cotter pin are not aligned, tighten the nut an additional 60°.

8. CONNECT FRONT NO. 1 SUSPENSION LOWER ARM SUB-ASSEMBLY

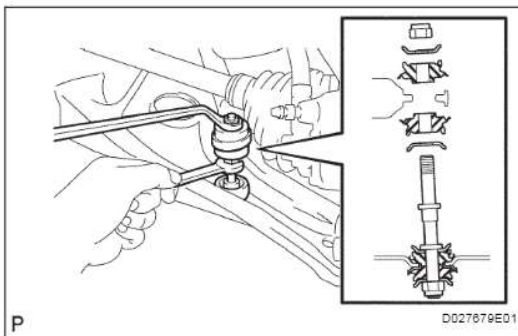
- Connect the front suspension lower arm to the steering knuckle with the nut.

Torque: 98 N*m (999 kgf*cm, 72 ft.*lbf)

- Install a new clip.

NOTICE:

If the holes for the clip are not aligned, tighten the nut an additional 60°.



9. CONNECT FRONT STABILIZER BAR

- Connect the front stabilizer bar with the 2 cushion retainers, 2 cushions and nut, as shown in the illustration.

NOTICE:

Be sure to install the cushion and retainer in the correct direction.

- Hold the bolt with a wrench spanner and install the nut.

Torque: 18 N*m (184 kgf*cm, 13 ft.*lbf)

10. INSTALL FRONT DISC

11. CONNECT FRONT DISC BRAKE CYLINDER ASSEMBLY

- Install the brake cylinder with the 2 bolts to the steering knuckle.

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

12. INSTALL FRONT AXLE HUB NUT

- Install a new hub nut.

Torque: 216 N*m (2,200 kgf*cm, 159 ft.*lbf)

13. DISCONNECT FRONT DISC BRAKE CYLINDER ASSEMBLY

NOTICE:

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

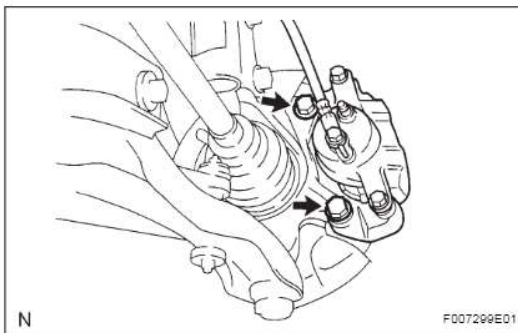
14. REMOVE FRONT DISC

15. INSPECT FRONT AXLE DEVIATION AND BACKLASH

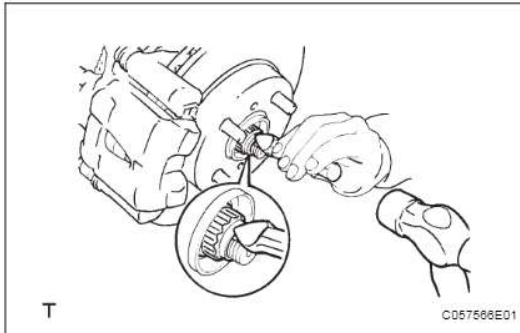
- Inspect the front axle deviation and backlash (see page AH-6).

16. INSTALL FRONT DISC

17. CONNECT FRONT DISC BRAKE CYLINDER ASSEMBLY



AH

AH-12**AXLE – FRONT AXLE HUB****18. INSTALL FRONT SPEED SENSOR**

- (a) Install the front speed sensor (see page [BC-168](#)).

19. STAKE FRONT AXLE HUB NUT

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

20. INSTALL FRONT WHEEL

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

21. INSPECT AND ADJUST FRONT WHEEL ALIGNMENT

- (a) Inspect and adjust the front wheel alignment (see page [SP-2](#)).

22. CHECK ABS SPEED SENSOR SIGNAL

- (a) Check the ABS speed sensor signal (see page [BC-8](#)).

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AXLE – REAR AXLE HUB

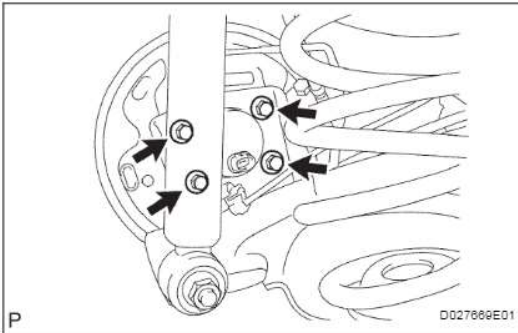
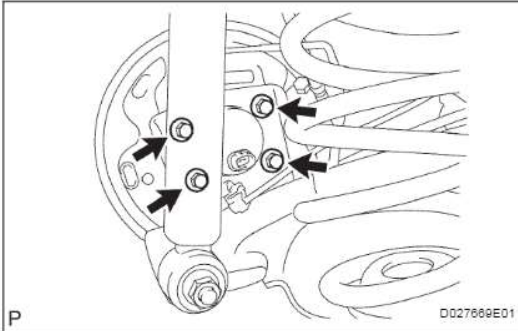
REMOVAL

HINT:

- Use the same procedures for the RH side and LH side.
- The procedures listed below are for the LH side.

1. REMOVE REAR WHEEL
2. REMOVE REAR BRAKE DRUM SUB-ASSEMBLY
3. REMOVE REAR AXLE HUB AND BEARING ASSEMBLY

- (a) Disconnect the skid control sensor connector.
- (b) Remove the 4 bolts, hub and bearing assembly.



INSTALLATION

1. INSTALL REAR AXLE HUB AND BEARING ASSEMBLY
 - (a) Install the hub and bearing assembly with the 4 bolts.
Torque: 61 N*m (622 kgf*cm, 45 ft.*lbf)
 - (b) Connect the skid control sensor connector.
NOTICE:
Do not twist the sensor wire when connecting it.
2. INSPECT REAR AXLE DEVIATION AND BACKLASH
 - (a) Inspect the rear axle deviation and backlash (see page [AH-15](#)).
3. INSTALL REAR BRAKE DRUM SUB-ASSEMBLY
4. INSTALL REAR WHEEL
Torque: 103 N*m (1,050 kgf*cm, 76 ft.*lbf)
5. CHECK ABS SPEED SENSOR SIGNAL
 - (a) Check the ABS speed sensor signal (see page [BC-8](#)).

AH

AXLE SYSTEM

PROBLEM SYMPTOMS TABLE

HINT:

Use the table below to help determine the cause of the problem symptom. The potential causes of the symptoms are listed in order of probability in the "Suspected Area" column of the table. Check each symptom by checking the suspected areas in the order they are listed. Replace parts as necessary.

Axle system

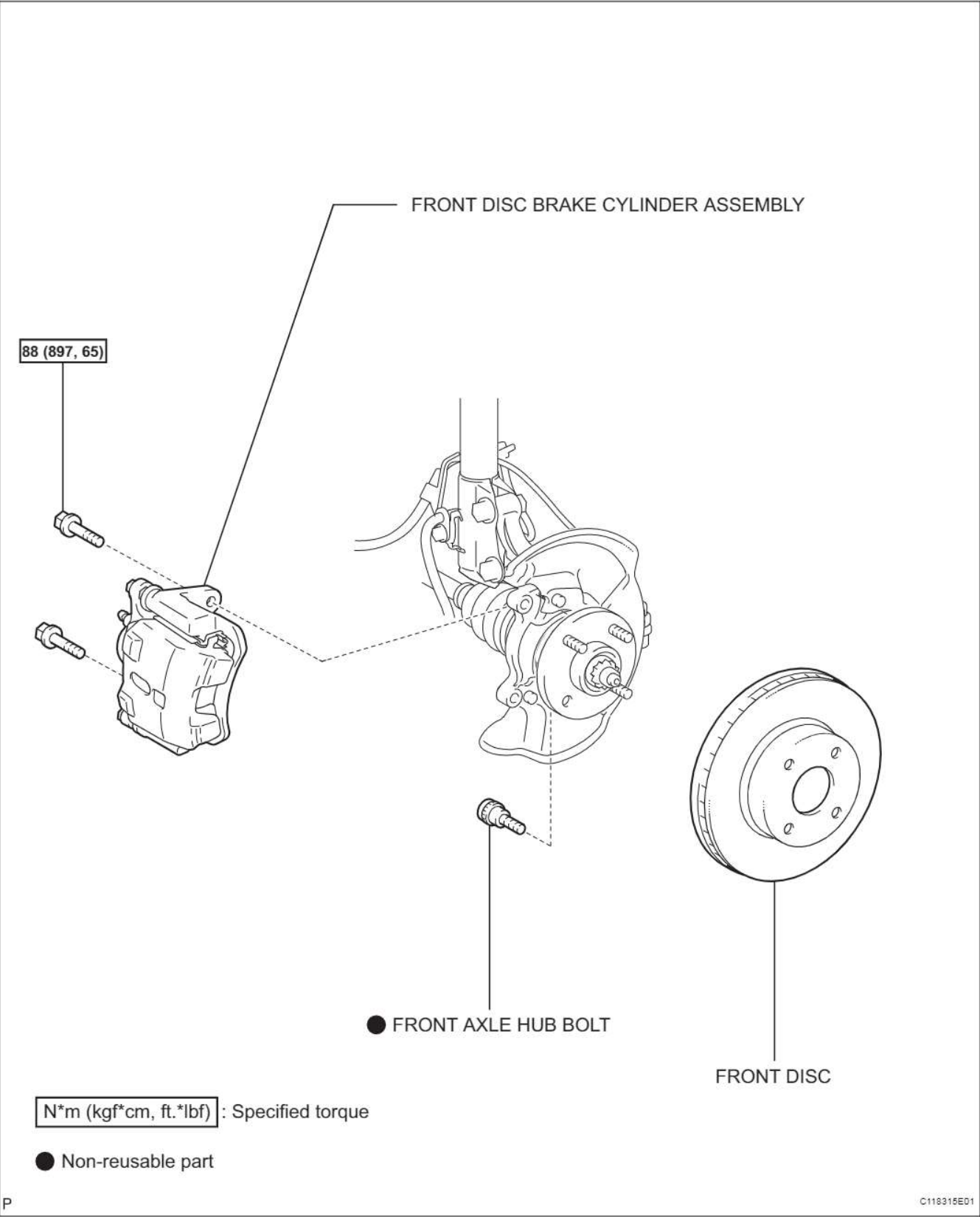
Symptom	Suspected area	See page
Wander or pulls	1. Tires (worn or improperly inflated)	TW-3
	2. Wheel alignment (incorrect)	SP-2
	3. Hub bearings (loose or worn)	AH-6
	4. Steering gear (adjustment required or broken)	PS-25
	5. Suspension parts (worn out) for automatic transaxle	SP-17
	6. Suspension parts (worn out) for manual transaxle	SP-21
Front wheel shimmy	1. Tires (worn or improperly inflated)	TW-3
	2. Wheels (out of balance)	TW-3
	3. Shock absorber (worn out)	SP-12
	4. Wheel alignment (incorrect)	SP-2
	5. Ball joint (worn) for automatic transaxle	SP-17
	6. Ball joint (worn) for manual transaxle	SP-21
	7. Hub bearings (loose or worn)	AH-6
	8. Steering gear	PS-25
Rear wheel shimmy	1. Tires (worn or improperly inflated)	TW-3
	2. Wheels (out of balance)	TW-3
	3. Shock absorber (worn out)	SP-31
	4. Wheel alignment (incorrect)	SP-8
	5. Axle bearings (loose or worn)	AH-15

AH-2

AXLE – FRONT AXLE HUB BOLT

FRONT AXLE HUB BOLT

COMPONENTS

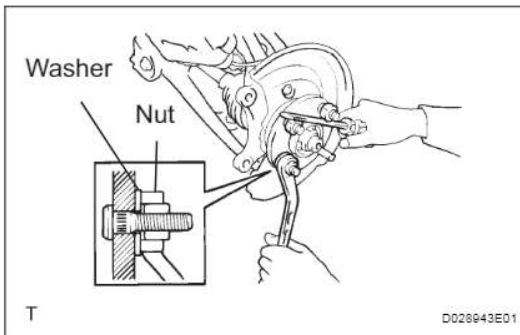
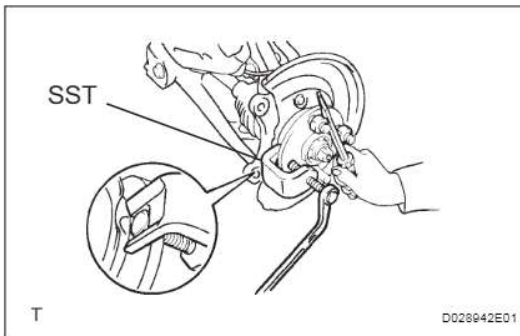


AXLE – FRONT AXLE HUB BOLT

AH-3

REPLACEMENT

1. **REMOVE FRONT WHEEL**
2. **DISCONNECT FRONT DISC BRAKE CYLINDER ASSEMBLY**
 - (a) Disconnect the front disc brake cylinder assembly (see page [BR-23](#)).
3. **REMOVE FRONT DISC**
4. **REMOVE FRONT AXLE HUB BOLT**
 - (a) Using SST and a screwdriver or an equivalent to hold the axle hub, remove the hub bolt.
SST 09628-10011



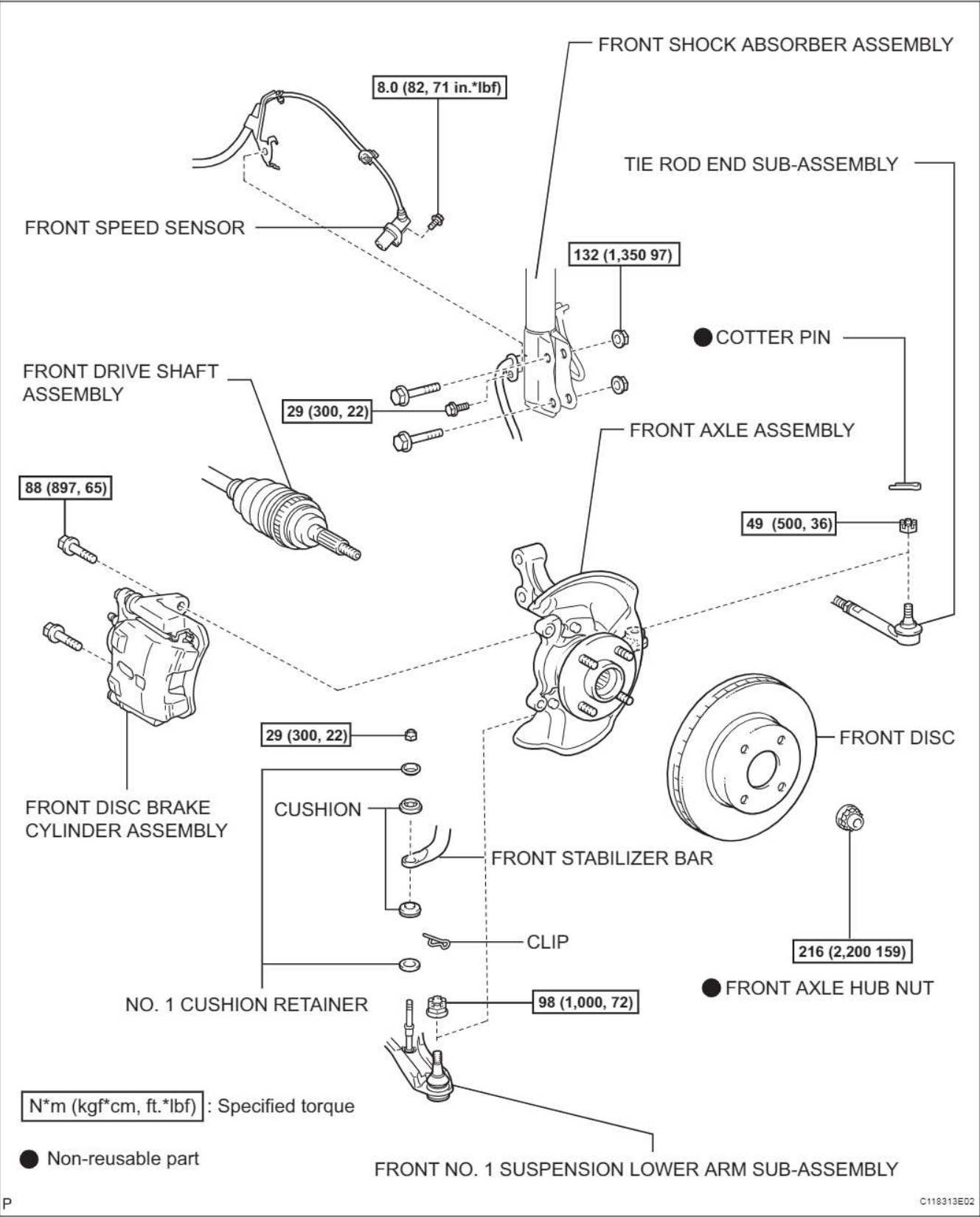
5. **INSTALL FRONT AXLE HUB BOLT**
 - (a) Install the washer and nut to a new hub bolt as shown in the illustration.
 - (b) Using a screwdriver or an equivalent to hold the axle hub, install the hub bolt by tightening the nut.
6. **INSTALL FRONT DISC**
7. **CONNECT FRONT DISC BRAKE CYLINDER ASSEMBLY**
 - (a) Connect the front disc brake cylinder assembly (see page [BR-27](#)).
8. **INSTALL FRONT WHEEL**
Torque: 103 N*m (1,050 kgf*cm, 76 ft.*lbf)

AH

AH-4

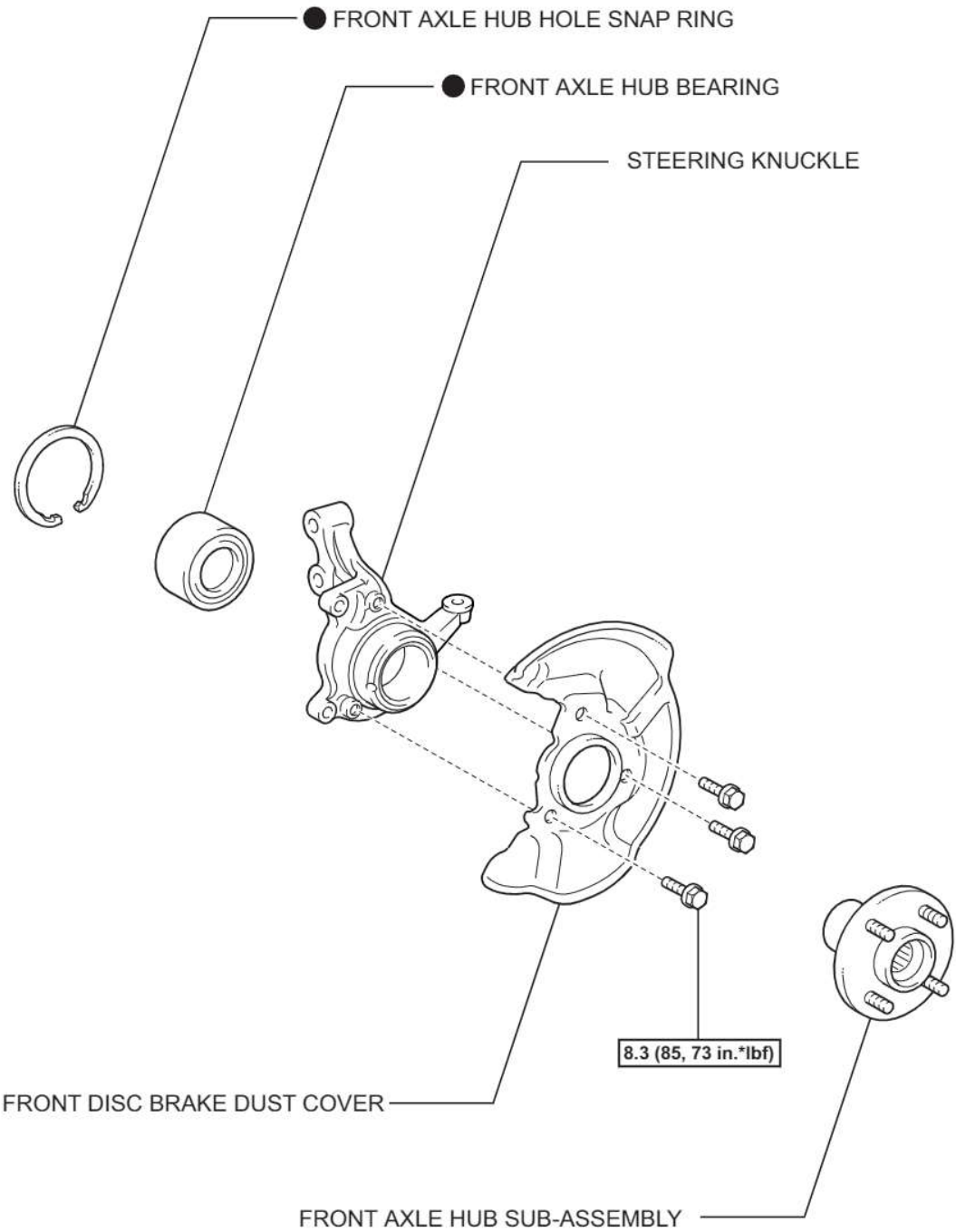
AXLE – FRONT AXLE HUB

FRONT AXLE HUB
COMPONENTS



AXLE – FRONT AXLE HUB

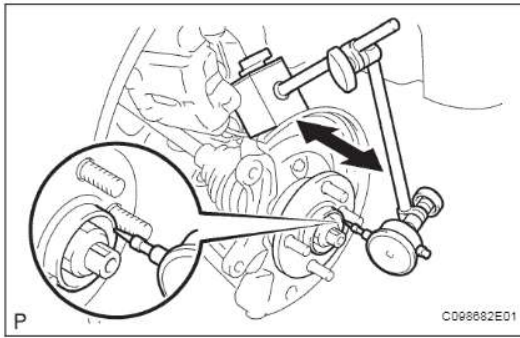
AH-5



AH

AH-6

AXLE – FRONT AXLE HUB

**ON-VEHICLE INSPECTION****1. CHECK FRONT AXLE HUB BEARING**

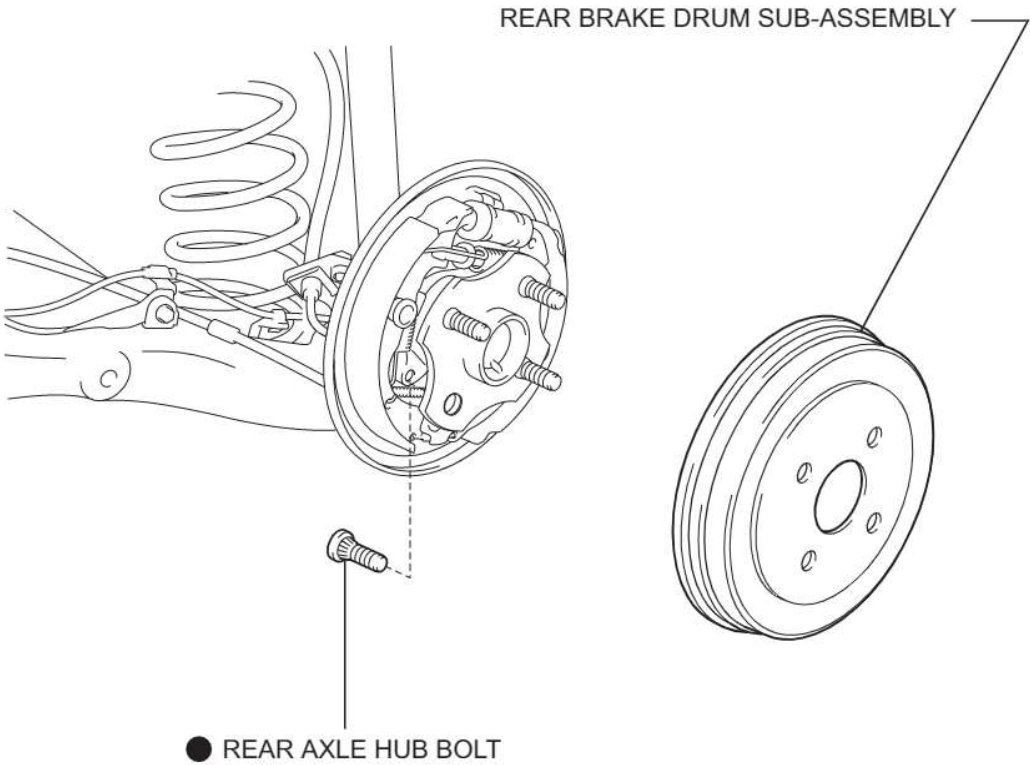
- (a) Remove the front wheel.
- (b) Disconnect the front disc brake cylinder (see page [BR-24](#)).
- (c) Remove the front disc.
- (d) Inspect the axle hub backlash.
 - (1) Using a dial indicator, measure the backlash near the center of the axle hub.
Maximum backlash:
0.05 mm (0.0020 in.)
If the backlash is greater than the maximum, replace the bearing.
- (e) Inspect the axle hub deviation.
 - (1) Using a dial indicator, measure the deviation on the surface of the axle hub.
Maximum deviation:
0.05 mm (0.0020 in.)
If the deviation is greater than the maximum, replace the bearing.

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AXLE – REAR AXLE HUB BOLT

REAR AXLE HUB BOLT

COMPONENTS



AH

● Non-reusable part

P

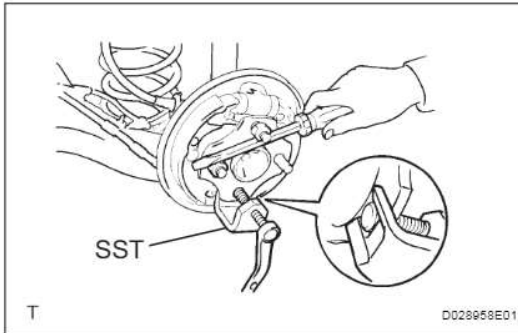
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AXLE – REAR AXLE HUB BOLT**AH-13****REPLACEMENT****HINT:**

- Use the same procedures for the RH side and LH side.
- The procedures listed below are for the LH side.

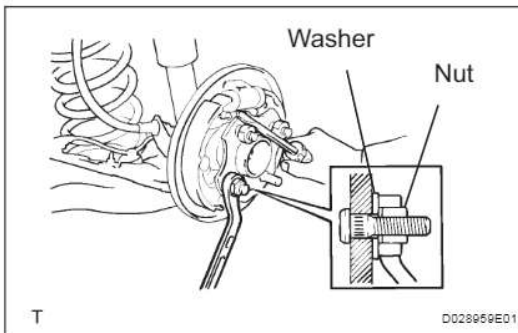
- 1. REMOVE REAR WHEEL**
- 2. REMOVE REAR BRAKE DRUM SUB-ASSEMBLY**
- 3. REMOVE REAR AXLE HUB BOLT**

- (a) Using SST and a screwdriver or an equivalent, remove the hub bolt.

SST 09628-10011

- 4. INSTALL REAR AXLE HUB BOLT**

- (a) Install the washer and nut to a new hub bolt as shown in the illustration.
- (b) Using a screwdriver or an equivalent to hold the hub and bearing assembly, install the hub bolt by tightening the nut.



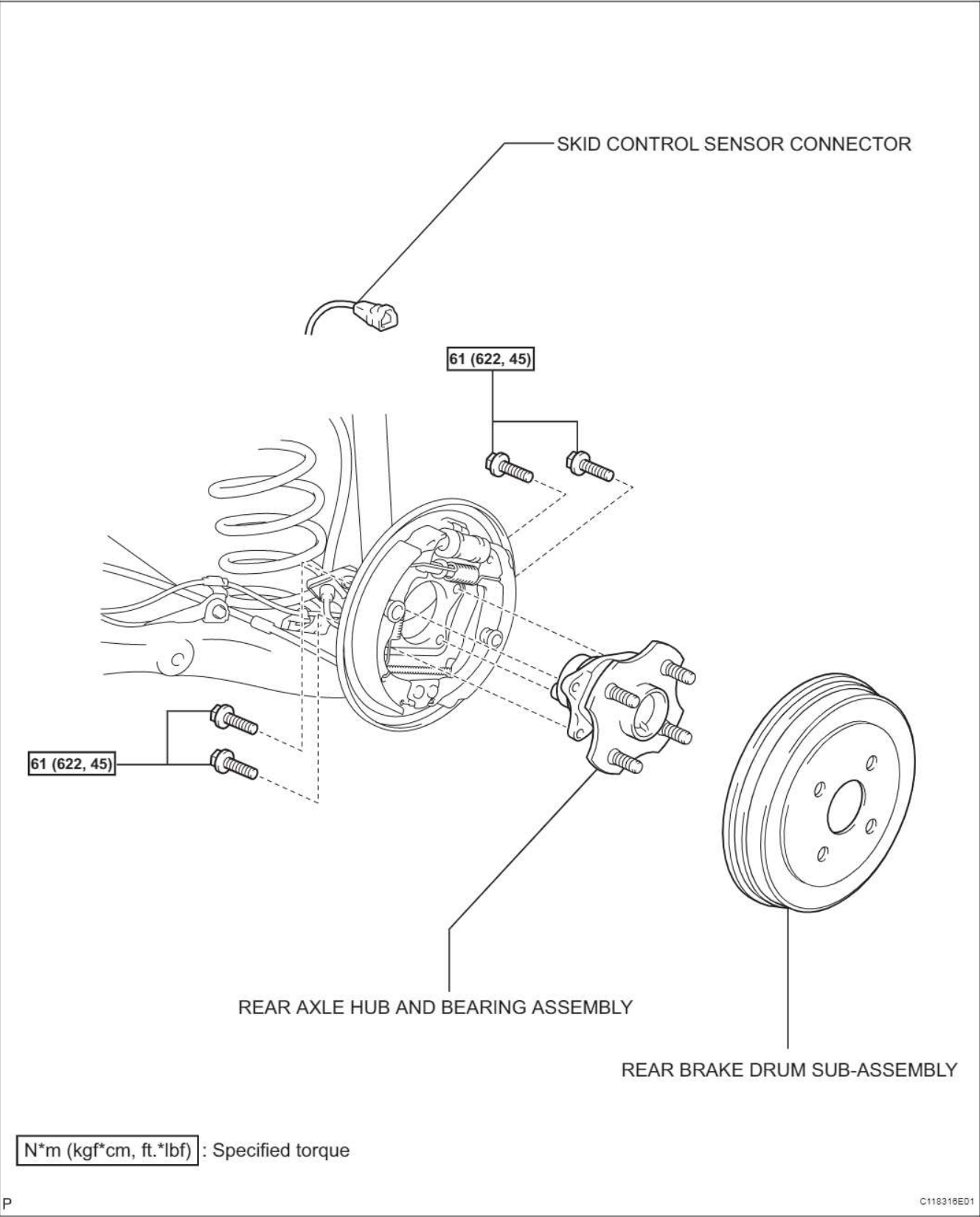
- 5. INSTALL REAR BRAKE DRUM SUB-ASSEMBLY**
- 6. INSTALL REAR WHEEL**

Torque: 103 N*m (1,050 kgf*cm, 76 ft.*lbf)**AH**

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AXLE – REAR AXLE HUB

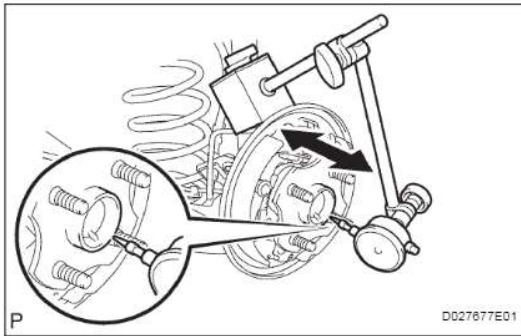
REAR AXLE HUB
COMPONENTS



AH

AXLE – REAR AXLE HUB

AH-15



ON-VEHICLE INSPECTION

1. CHECK REAR AXLE BEARING

- (a) Remove the rear wheel.
- (b) Remove the rear brake drum sub-assembly.
- (c) Inspect the bearing backlash.
 - (1) Using a dial indicator, check for backlash near the center of the axle hub.

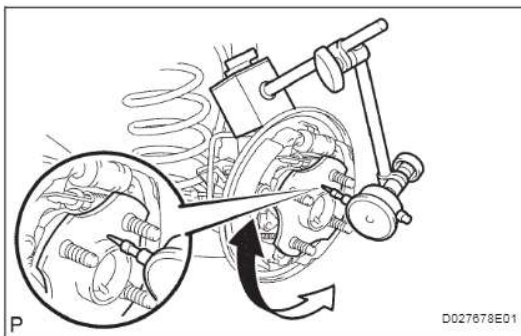
Maximum backlash:**0.05 mm (0.0020 in.)**

If the backlash exceeds the maximum, replace the rear axle hub and bearing assembly.

- (d) Inspect the axle hub deviation.
 - (1) Using a dial indicator, check for deviation in the surface of the axle hub inside the hub bolt.

Maximum deviation:**0.07 mm (0.0028 in.)**

If the deviation exceeds the maximum, replace the rear axle hub and bearing assembly.



AH