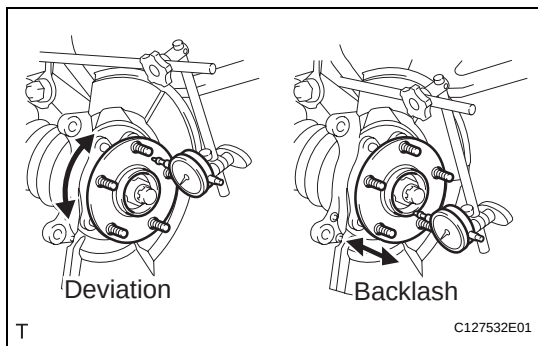


ON-VEHICLE INSPECTION

1. CHECK FRONT AXLE HUB BEARING

- (a) Remove the front wheel.
- (b) Disconnect the front disc brake cylinder (see page [BR-40](#)).
- (c) Remove the front disc.
- (d) Inspect the axle hub backlash.
 - (1) Using a dial indicator, check the backlash near the center of the axle hub.
Maximum 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, check 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.



REMOVAL

(2005/11-2006/01)

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. DRAIN AUTOMATIC TRANSAXLE FLUID

- Drain the automatic transaxle fluid for U140F (see page [AX-147](#)).
- Drain the automatic transaxle fluid for U241E (see page [AX-146](#)).

3. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to prevent airbag and seat belt pretensioner activation.

AH

4. REMOVE FRONT AXLE HUB NUT

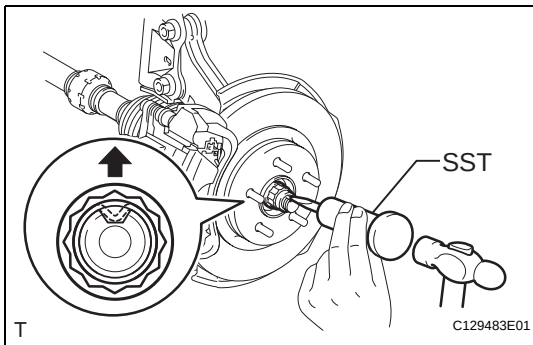
- Using SST and a hammer, unstake the staked part of the nut.

SST 09930-00010

NOTICE:

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

- While applying the brakes, remove the lock axle hub nut.



5. REMOVE FRONT SPEED SENSOR LH (See page [BC-191](#))

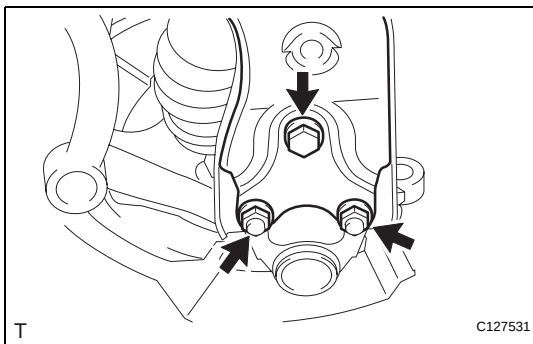
6. REMOVE FRONT DISC BRAKE CYLINDER ASSEMBLY LH (See page [BR-40](#))

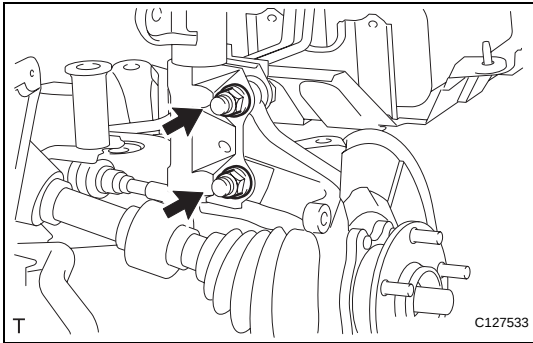
7. REMOVE FRONT DISC (See page [BR-42](#))

8. DISCONNECT TIE ROD END SUB-ASSEMBLY LH (See page [PS-42](#))

9. DISCONNECT FRONT SUSPENSION NO. 1 LOWER ARM SUB-ASSEMBLY LH

- Remove the bolt and 2 nuts.
- Disconnect the lower arm from the ball joint.



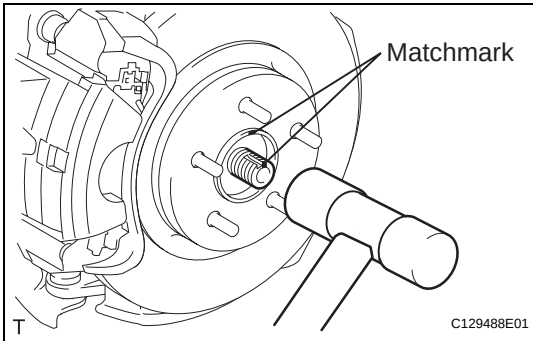


10. REMOVE STEERING KNUCKLE WITH AXLE HUB

- (a) Remove the 2 bolts and 2 nuts, and disconnect the shock absorber from the steering knuckle.

HINT:

While fixing the nuts in place, loosen and remove the bolts.



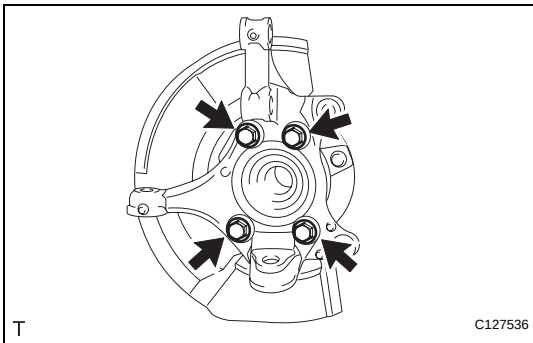
- (b) Put matchmarks on the drive shaft and the axle hub.

- (c) Using a plastic-faced hammer, remove the steering knuckle with axle hub.

NOTICE:

Be careful not to damage the boot and speed sensor rotor. Do not excessively push out the drive shaft from the axle assembly.

11. REMOVE FRONT LOWER BALL JOINT ASSEMBLY LH (See page [SP-27](#))



12. REMOVE FRONT AXLE HUB SUB-ASSEMBLY LH

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

NOTICE:

Do not place the hub and bearing's magnet rotor side so that it is facing downward, and do not allow the magnet rotor side to become damaged or contact foreign matter.

- (b) Remove the dust cover from the steering knuckle.

REMOVAL

(2006/01-)

HINT:

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

1. REMOVE FRONT WHEEL

2. DRAIN AUTOMATIC TRANSAXLE FLUID

- Drain the automatic transaxle fluid for U140F (see page [AX-147](#)).
- Drain the automatic transaxle fluid for U241E (see page [AX-146](#)).
- Drain the automatic transaxle fluid for U151E (see page [AX-172](#)).
- Drain the automatic transaxle fluid for U151F (see page [AX-173](#)).

3. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to prevent airbag and seat belt pretensioner activation.

4. REMOVE FRONT AXLE HUB LH NUT

- Using SST and a hammer, unstake the staked part of the nut.

SST 09930-00010

NOTICE:

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

- While applying the brakes, remove the lock axle hub nut.

5. REMOVE FRONT SPEED SENSOR LH (See page [BC-191](#))

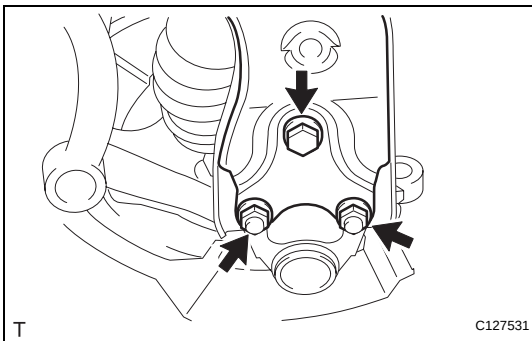
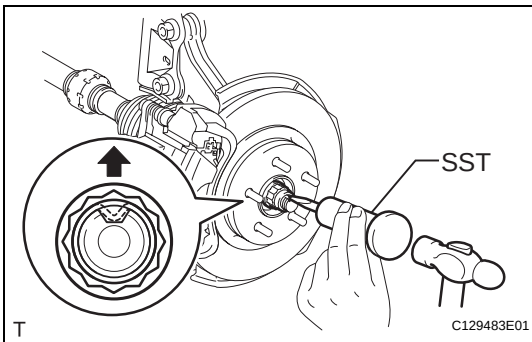
6. REMOVE FRONT DISC BRAKE CYLINDER ASSEMBLY LH (See page [BR-40](#))

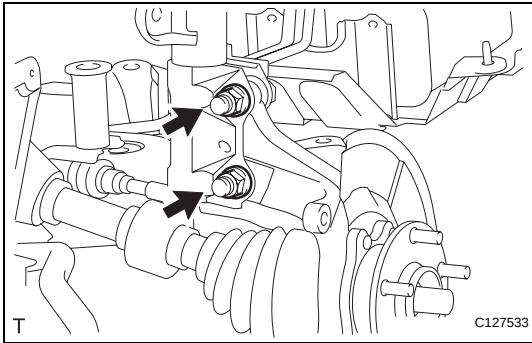
7. REMOVE FRONT DISC (See page [BR-42](#))

8. DISCONNECT TIE ROD END SUB-ASSEMBLY LH (See page [PS-42](#))

9. DISCONNECT FRONT SUSPENSION NO. 1 LOWER ARM SUB-ASSEMBLY LH

- Remove the bolt and 2 nuts.
- Disconnect the lower arm from the ball joint.



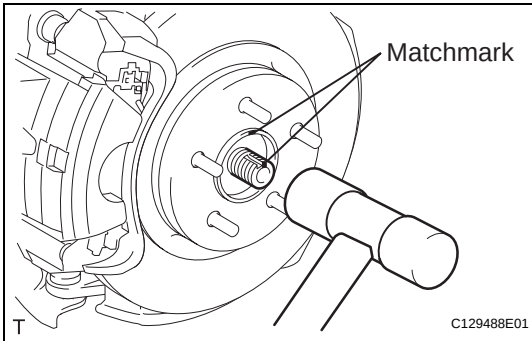


10. REMOVE STEERING KNUCKLE WITH AXLE HUB

- (a) Remove the 2 bolts and 2 nuts, and disconnect the shock absorber from the steering knuckle.

HINT:

While fixing the nuts in place, loosen and remove the bolts.



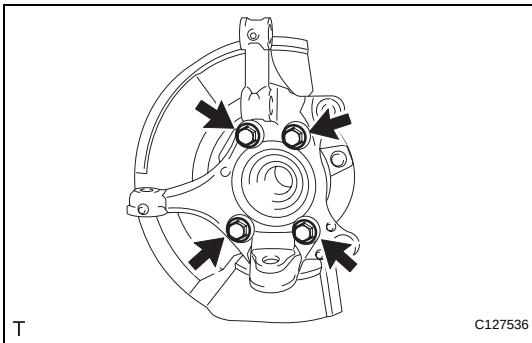
- (b) Put matchmarks on the drive shaft and axle hub.

- (c) Using a plastic-faced hammer, remove the steering knuckle with axle hub.

NOTICE:

Be careful not to damage the boot and speed sensor rotor. Do not excessively push out the drive shaft from the axle assembly.

11. REMOVE FRONT LOWER BALL JOINT ASSEMBLY LH (See page [SP-27](#))



12. REMOVE FRONT AXLE HUB SUB-ASSEMBLY LH

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

NOTICE:

Do not place the hub and bearing's magnet rotor side so that it is facing downward, and do not allow the magnet rotor side to become damaged or contact foreign matter.

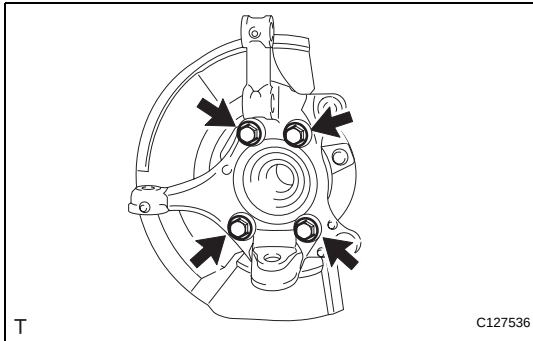
- (b) Remove the dust cover from the steering knuckle.

INSTALLATION

(2005/11-2006/01)

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 SUB-ASSEMBLY LH

- (a) Install the dust cover to the steering knuckle.
- (b) Install the axle hub with the 4 bolts.

Torque: 96 N*m (979 kgf*cm, 1 ft.*lbf)

NOTICE:

Do not place the hub and bearing's magnet rotor side so that it is facing downward, and do not allow the magnet rotor side to become damaged or contact foreign matter.

2. INSTALL FRONT LOWER BALL JOINT ASSEMBLY LH (See page [SP-28](#))

3. INSTALL STEERING KNUCKLE WITH AXLE HUB

- (a) Align the shaft splines and drive in the drive shaft.
- (b) Install the steering knuckle with axle hub with the 2 bolt and 2 nuts.

Torque: 240 N*m (2,447 kgf*cm, 177 ft.*lbf)

NOTICE:

Do not tighten the nuts.

4. CONNECT FRONT SUSPENSION NO. 1 LOWER ARM SUB-ASSEMBLY LH

- (a) Connect the lower arm to the ball joint with the 2 bolts and nut.

Torque: 92 N*m (938 kgf*cm, 68 ft.*lbf)

5. CONNECT TIE ROD END SUB-ASSEMBLY LH (See page [PS-45](#))

6. INSTALL FRONT SPEED SENSOR LH (See page [BC-193](#))

7. CHECK FRONT AXLE HUB BEARING

- (a) Check the axle hub bearing (see page [AH-6](#)).

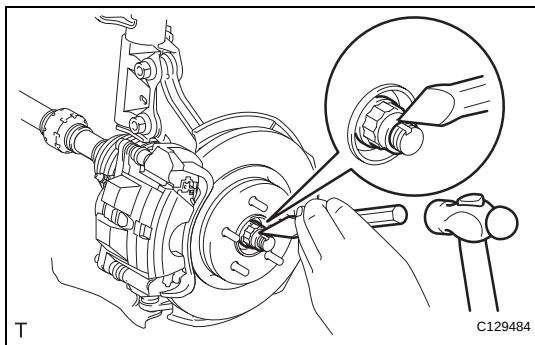
8. INSTALL FRONT DISC (See page [BR-43](#))

9. INSTALL FRONT DISC BRAKE CYLINDER ASSEMBLY LH (See page [BR-46](#))

10. INSTALL FRONT AXLE HUB 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.

11. INSTALL FRONT WHEEL

Torque: 103 N*m (1,050 kgf*cm, 6 ft.*lbf)

12. INSPECT AND ADJUST FRONT WHEEL ALIGNMENT

(a) Inspect and adjust the wheel alignment (see page [SP-3](#)).

13. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL

14. CHECK SPEED SENSOR SIGNAL

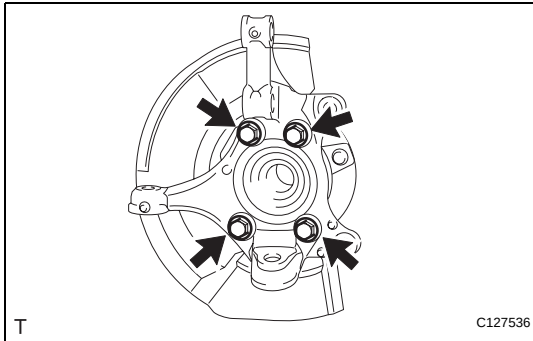
(a) Check the speed sensor signal (see page [BC-44](#)).

INSTALLATION

(2006/01-)

HINT:

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



1. INSTALL FRONT AXLE HUB SUB-ASSEMBLY LH

- (a) Install the dust cover to the steering knuckle.
- (b) Install the axle hub with the 4 bolts.

Torque: 96 N*m (979 kgf*cm, 71 ft.*lbf)

NOTICE:

Do not place the hub and bearing's magnet rotor side so that it is facing downward, and do not allow the magnet rotor side to become damaged or contact foreign matter.

2. INSTALL FRONT LOWER BALL JOINT ASSEMBLY LH (See page [SP-28](#))

3. INSTALL STEERING KNUCKLE WITH AXLE HUB

- (a) Align the shaft splines and drive in the drive shaft.
- (b) Install the steering knuckle with axle hub with the 2 bolts and 2 nuts.

Torque: 240 N*m (2,447 kgf*cm, 177 ft.*lbf)

NOTICE:

Do not tighten the bolts.

4. CONNECT FRONT SUSPENSION NO. 1 LOWER ARM SUB-ASSEMBLY LH

- (a) Connect the lower arm to the ball joint with the bolt and 2 nuts.

Torque: 92 N*m (938 kgf*cm, 68 ft.*lbf)

5. CONNECT TIE ROD END SUB-ASSEMBLY LH (See page [PS-45](#))

6. INSTALL FRONT SPEED SENSOR LH (See page [BC-193](#))

7. CHECK FRONT AXLE HUB BEARING

- (a) Check the axle hub bearing (see page [AH-6](#)).

8. INSTALL FRONT DISC (See page [BR-43](#))

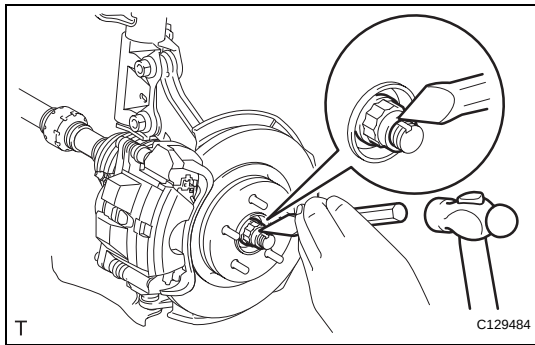
9. INSTALL FRONT DISC BRAKE CYLINDER ASSEMBLY LH (See page [BR-46](#))

10. INSTALL FRONT AXLE HUB LH NUT

- (a) Install a new hub nut.

Torque: 216 N*m (2,203 kgf*cm, 159 ft.*lbf) for ϕ 26 for 2AZ-FE

292 N*m (2,978 kgf*cm, 215 ft.*lbf) for ϕ 30 for 2GR-FE



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

11. ADD AUTOMATIC TRANSAXLE FLUID

- (a) Add the automatic transaxle for U140F (see page [AX-152](#)).
- (b) Add the automatic transaxle for U241E (see page [AX-151](#)).
- (c) Add the automatic transaxle for U151E (see page [AX-177](#)).
- (d) Add the automatic transaxle for U151F (see page [AX-178](#)).

12. CHECK FOR AUTOMATIC TRANSAXLE FLUID LEAKAGE

13. INSTALL FRONT WHEEL

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

14. INSPECT AND ADJUST FRONT WHEEL ALIGNMENT

- (a) Inspect and adjust the front wheel alignment (see page [SP-3](#)).

15. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL

16. CHECK SPEED SENSOR SIGNAL

- (a) Check the speed sensor signal (see page [BC-44](#)).

ON-VEHICLE INSPECTION

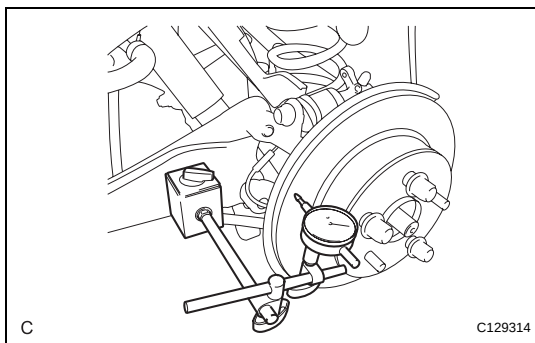
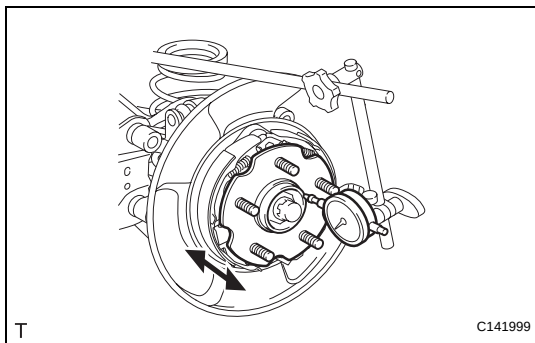
1. REMOVE REAR WHEEL
2. DISCONNECT REAR DRIVE SHAFT ASSEMBLY LH (for 4WD)
 - (a) Disconnect the drive shaft (see page [DS-69](#)).
3. REMOVE REAR DISC BRAKE CYLINDER ASSEMBLY LH (See page [BR-55](#))
4. REMOVE REAR DISC (See page [BR-57](#))
5. CHECK BEARING BACKLASH AND AXLE HUB DEVIATION

- (a) 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 axle hub.



- (b) Using a dial indicator, measure the disc runout 10 mm (0.39 in.) inside the outer edge of the disc.

Maximum deviation:

0.08 mm (0.0031 in.) for 2WD

0.06 mm (0.0024 in.) for 4WD

NOTICE:

If the runout exceeds the maximum, change the installation positions of the rear disc and axle hub so that the runout will be as low as possible. If the runout exceeds the maximum even when the installation positions are changed, shave the rear disc. If the rear disc needs to be shaved to less than the minimum, replace the rear disc. If the rear disc is replaced, perform the runout inspection again. If the runout still exceeds the maximum, replace the hub and bearing with a new one.

REMOVAL

1. REMOVE REAR WHEEL
2. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to prevent airbag and seat belt pretensioner activation.

3. REMOVE REAR AXLE SHAFT NUT (for 4WD)

- (a) Using SST and hammer, unstake the staked part of the nut.

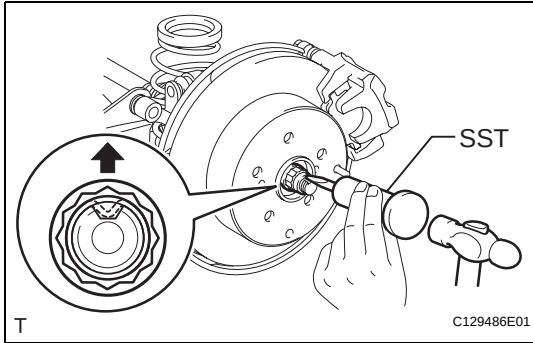
SST 09930-00010

NOTICE:

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

- (b) While applying the brake, remove the lock axle hub nut.

AH



4. REMOVE REAR DISC BRAKE CYLINDER ASSEMBLY LH (See page [BR-55](#))

5. REMOVE REAR DISC (See page [BR-57](#))

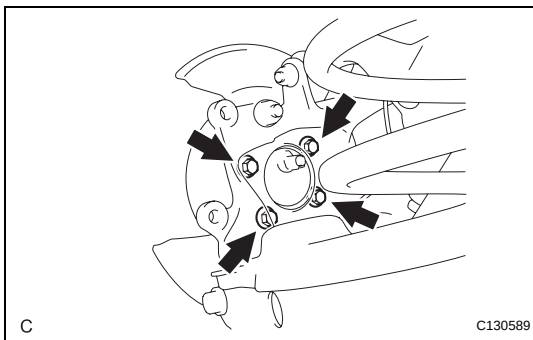
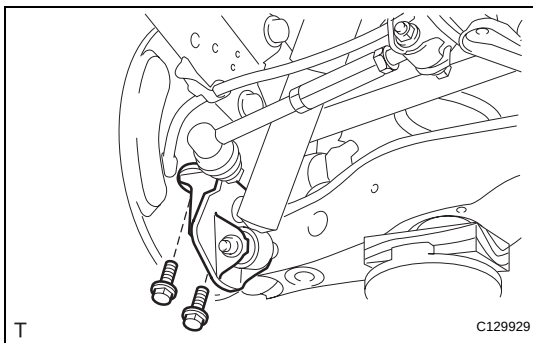
6. REMOVE SKID CONTROL SENSOR WIRE (for 2WD) (See page [BC-198](#))

7. REMOVE REAR SPEED SENSOR LH (for 4WD) (See page [BC-205](#))

8. REMOVE REAR SUSPENSION NO. 1 ARM ASSEMBLY LH (See page [SP-42](#))

9. DISCONNECT REAR SHOCK ABSORBER ASSEMBLY LH

- (a) Remove the 2 bolts and disconnect the shock absorber with bracket from the axle carrier.



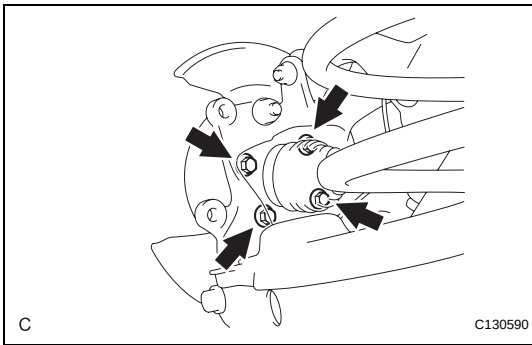
10. REMOVE REAR AXLE HUB AND BEARING ASSEMBLY LH

- (a) for 2WD:

- (1) Remove the 4 bolts, and axle hub and the bearing from the axle carrier.

NOTICE:

Do not place the hub and bearing's magnet rotor side so that it is facing downward, and do not allow the magnet rotor side to become damaged or contact foreign matter.



(b) for 4WD:

- (1) Put matchmarks on the drive shaft and the axle hub and bearing.
- (2) Remove the 4 bolts, and the axle hub and bearing from the axle carrier.

NOTICE:

Do not place the hub and bearing's magnet rotor side so that it is facing downward, and do not allow the magnet rotor side to become damaged or contact foreign matter.

INSTALLATION

1. INSTALL REAR AXLE HUB AND BEARING ASSEMBLY LH

(a) for 2WD:

- (1) Install the axle hub and bearing to the axle carrier with the 4 bolts.

Torque: 90 N*m (918 kgf*cm, 68 ft.*lbf)

NOTICE:

Do not place the hub and bearing's magnet rotor side so that it is facing downward, and do not allow the magnet rotor side to become damaged or contact foreign matter.

(b) for 4WD:

- (1) Align the shaft splines and drive in the drive shaft to the axle hub and bearing.
- (2) Install the axle hub and bearing assembly to the axle carrier with the 4 bolts.

Torque: 90 N*m (918 kgf*cm, 68 ft.*lbf)

NOTICE:

Do not place the hub and bearing's magnet rotor side so that it is facing downward, and do not allow the magnet rotor side to become damaged or contact foreign matter.

2. CONNECT REAR SHOCK ABSORBER ASSEMBLY LH

- (a) Install the shock absorber to the axle carrier with bracket with the 2 bolts.

3. TEMPORARILY INSTALL REAR SUSPENSION NO. 1 ARM ASSEMBLY LH (See page [SP-43](#))

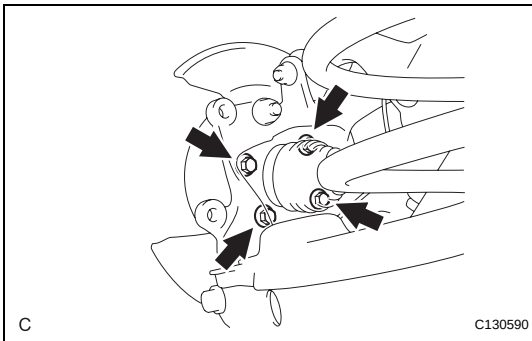
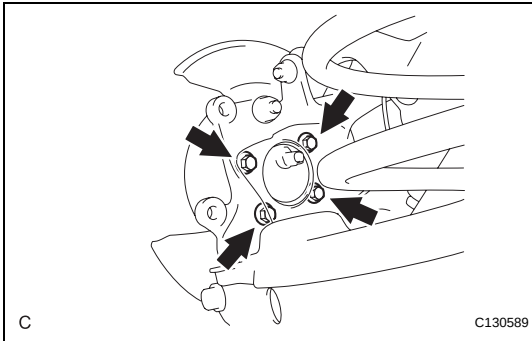
4. INSTALL SKID CONTROL SENSOR WIRE (for 2WD) (See page [BC-201](#))

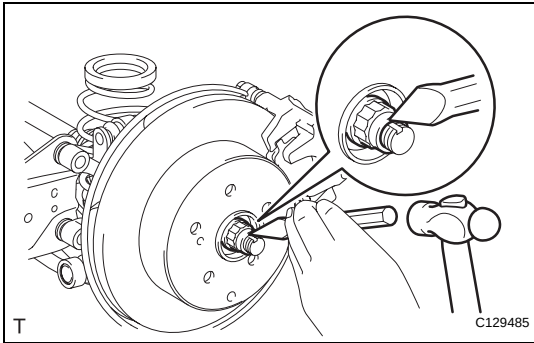
5. INSTALL REAR SPEED SENSOR LH (for 4WD) (See page [BC-206](#))

6. INSTALL REAR DISC (See page [BR-58](#))

7. INSTALL REAR BRAKE CYLINDER ASSEMBLY LH (See page [BR-61](#))

AH





8. **INSTALL REAR AXLE SHAFT NUT (for 4WD)**
 - (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.
9. **INSTALL REAR WHEEL**
Torque: 103 N*m (1,050 kgf*cm, 76 ft.*lbf)
10. **STABILIZE SUSPENSION** (See page [SP-37](#))
11. **TIGHTEN FRONT SHOCK ABSORBER ASSEMBLY LH** (See page [SP-37](#))
12. **TIGHTEN REAR SUSPENSION NO. 1 ARM ASSEMBLY LH** (See page [SP-43](#))
13. **INSPECT REAR WHEEL ALIGNMENT**
 - (a) Inspect the rear wheel alignment (see page [SP-7](#)).
14. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**
15. **CHECK SPEED SENSOR SIGNAL**
 - (a) Check the speed sensor signal (see page [BC-44](#)).

AXLE SYSTEM

PROBLEM SYMPTOMS TABLE

HINT:

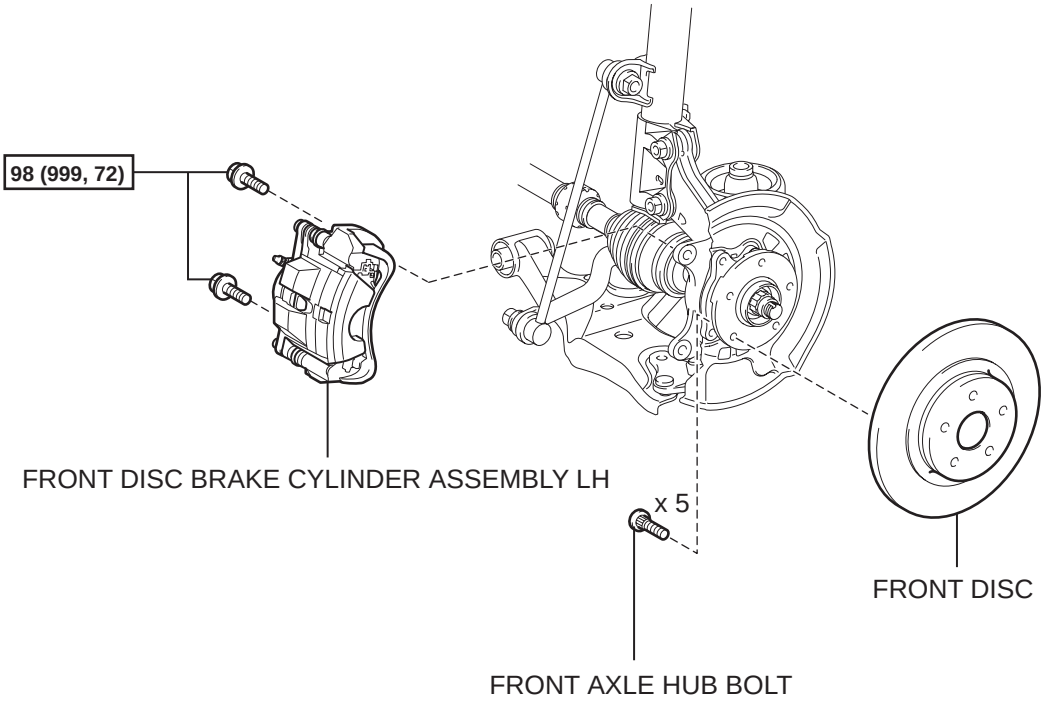
Use the table below to help determine the cause of the problem symptom. The potential causes of the symptoms are listed in order of probability in the "Suspected area" column of the table. Check each symptom by checking the suspected areas in the order they are listed. Replace parts as necessary.

Axle system

Symptom	Suspected area	See page
Wander or pulls	1. Tires (worn or improperly inflated)	TW-1
	2. Front wheel alignment (incorrect)	SP-3
	3. Rear wheel alignment (incorrect)	SP-7
	4. Steering linkage (loose or worn)	-
	5. Front hub bearings (loose or worn)	AH-6
	6. Rear hub bearings (loose or worn)	AH-15
	7. Steering gear (adjustment required or broken)	PS-44
	8. Suspension parts (worn out)	-
Front wheel shimmy	1. Tires (worn or improperly inflated)	TW-1
	2. Wheels (out of balance)	TW-1
	3. Shock absorber (worn out)	SP-10
	3. Shock absorber for sports package (worn out)	-
	4. Front wheel alignment (incorrect)	SP-3
	5. Lower ball joint (worn)	SP-27
	6. Axle hub bearings (loose or worn)	AH-6
	7. Steering linkage (loose or worn)	-
Rear wheel shimmy	8. Steering gear (adjustment required or broken)	PS-44
	1. Tires (worn or improperly inflated)	TW-1
	2. Wheels (out of balance)	TW-1
	3. Shock absorber (worn out)	SP-36
	4. Axle hub bearings	AH-15
	6. Rear wheel alignment (incorrect)	SP-7

FRONT AXLE HUB BOLT

COMPONENTS



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

REPLACEMENT

HINT:

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

1. REMOVE FRONT WHEEL

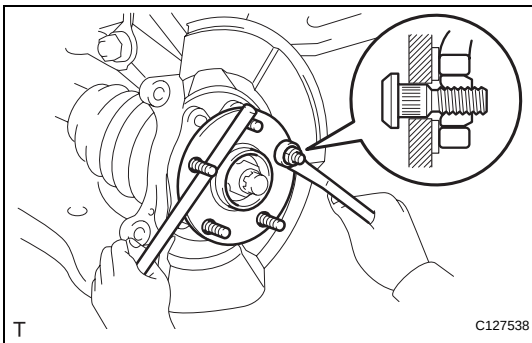
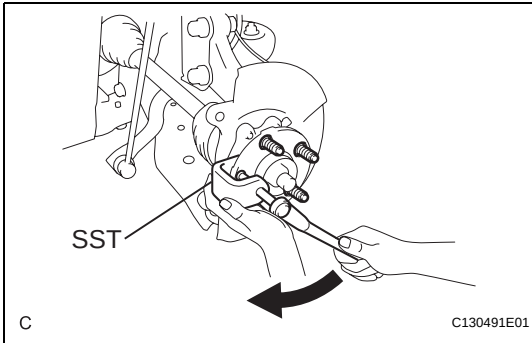
2. REMOVE FRONT DISC BRAKE CYLINDER ASSEMBLY LH (See page [BR-40](#))

3. REMOVE FRONT DISC (See page [BR-42](#))

4. REMOVE FRONT AXLE HUB BOLT

- (a) Using SST, remove the hub bolt that needs to be replaced.

SST 09650-17011



5. INSTALL FRONT AXLE HUB BOLT

- (a) Insert a new hub bolt into the bolt hole. Set a plate washer and nut on the hub bolt end.
- (b) Using a brass bar or equivalent to hold the front axle, install the hub bolt by tightening the nut. Then remove the nut and plate washer.

6. INSTALL FRONT DISC (See page [BR-43](#))

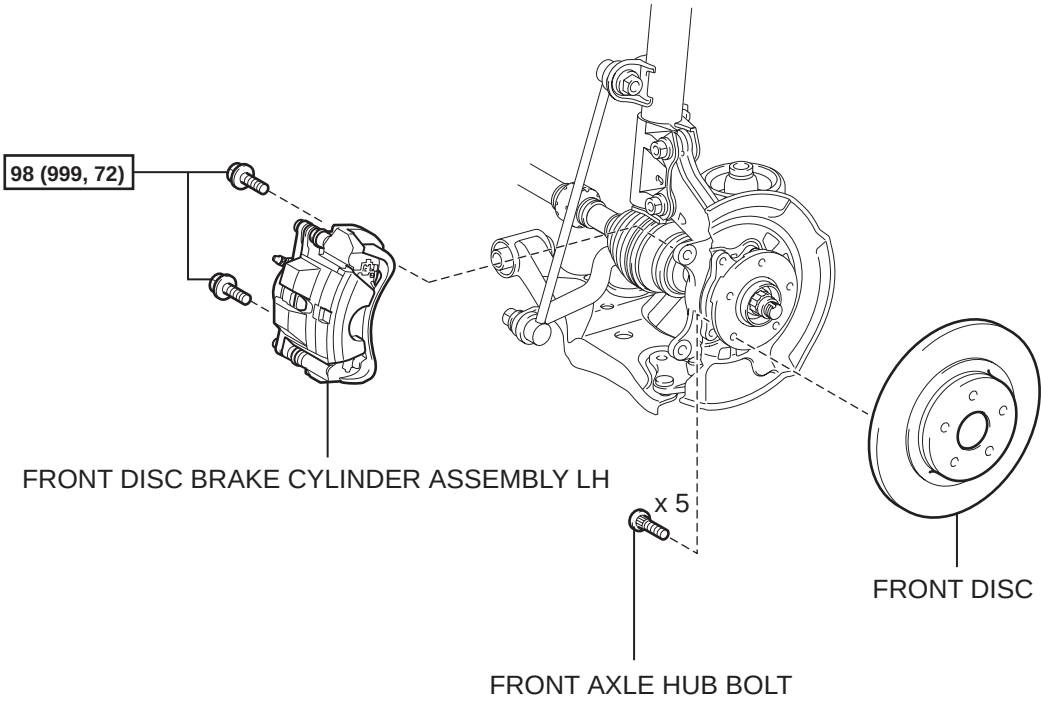
7. INSTALL FRONT DISC BRAKE CYLINDER ASSEMBLY LH (See page [BR-46](#))

8. INSTALL FRONT WHEEL

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

FRONT AXLE HUB BOLT

COMPONENTS



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

REPLACEMENT

HINT:

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

1. REMOVE FRONT WHEEL

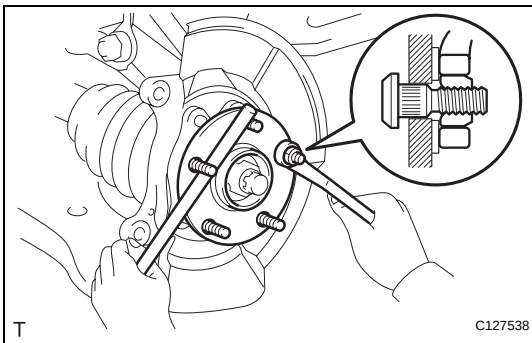
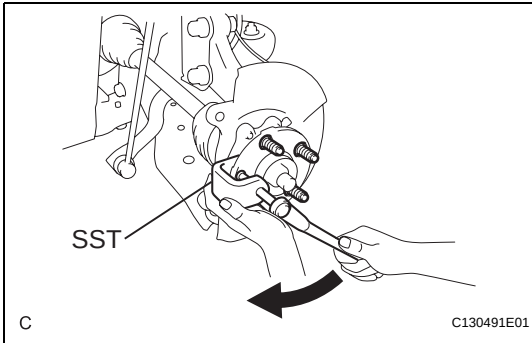
2. REMOVE FRONT DISC BRAKE CYLINDER ASSEMBLY LH (See page [BR-40](#))

3. REMOVE FRONT DISC (See page [BR-42](#))

4. REMOVE FRONT AXLE HUB BOLT

- (a) Using SST, remove the hub bolt that needs to be replaced.

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5. INSTALL FRONT AXLE HUB BOLT

- (a) Insert a new hub bolt into the bolt hole. Set a plate washer and nut on the hub bolt end.
- (b) Using a brass bar or equivalent to hold the front axle, install the hub bolt by tightening the nut. Then remove the nut and plate washer.

6. INSTALL FRONT DISC (See page [BR-43](#))

7. INSTALL FRONT DISC BRAKE CYLINDER ASSEMBLY LH (See page [BR-46](#))

8. INSTALL FRONT WHEEL

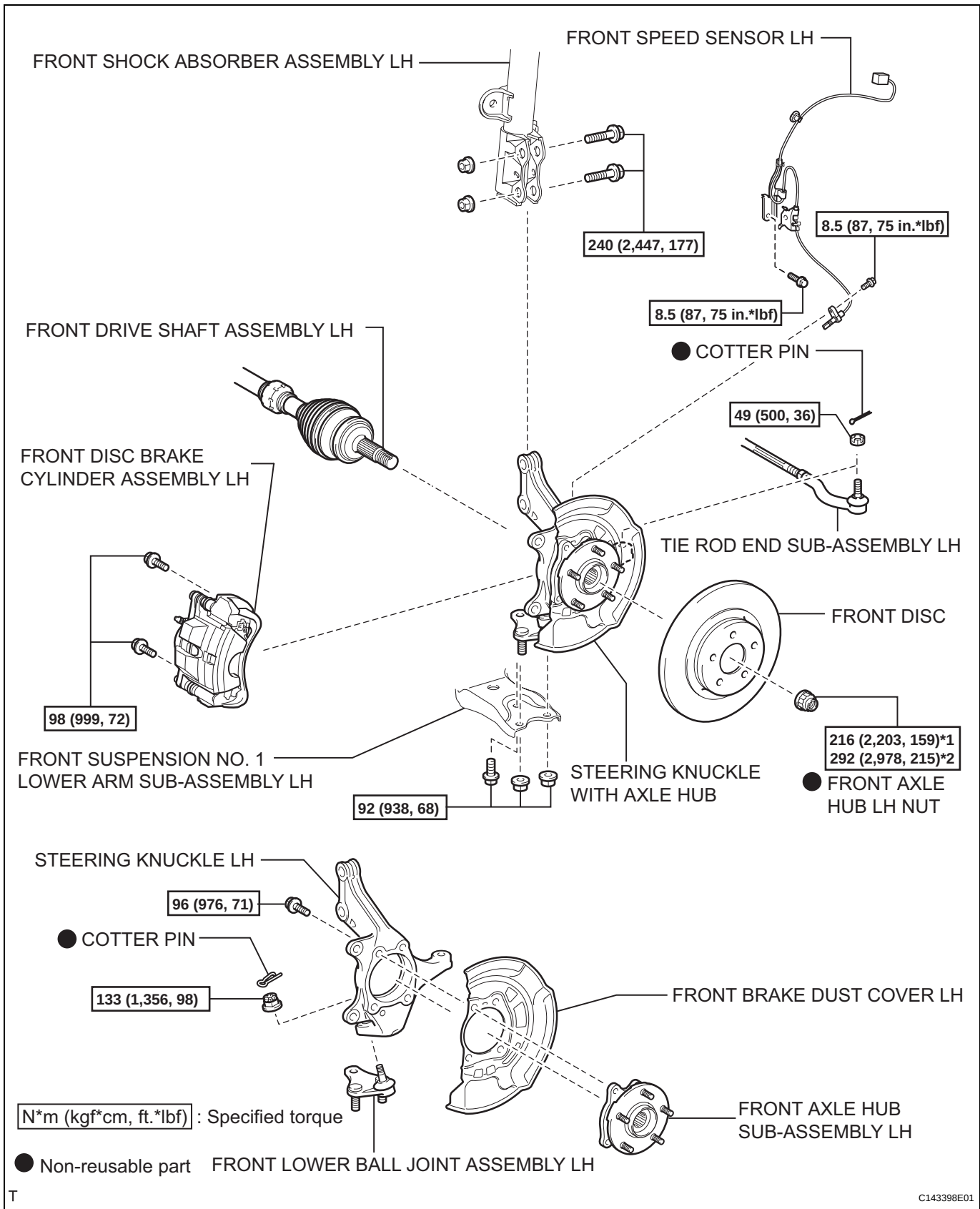
Torque: 103 N*m (1,050 kgf*cm, 76 ft.*lbf)

FRONT AXLE HUB

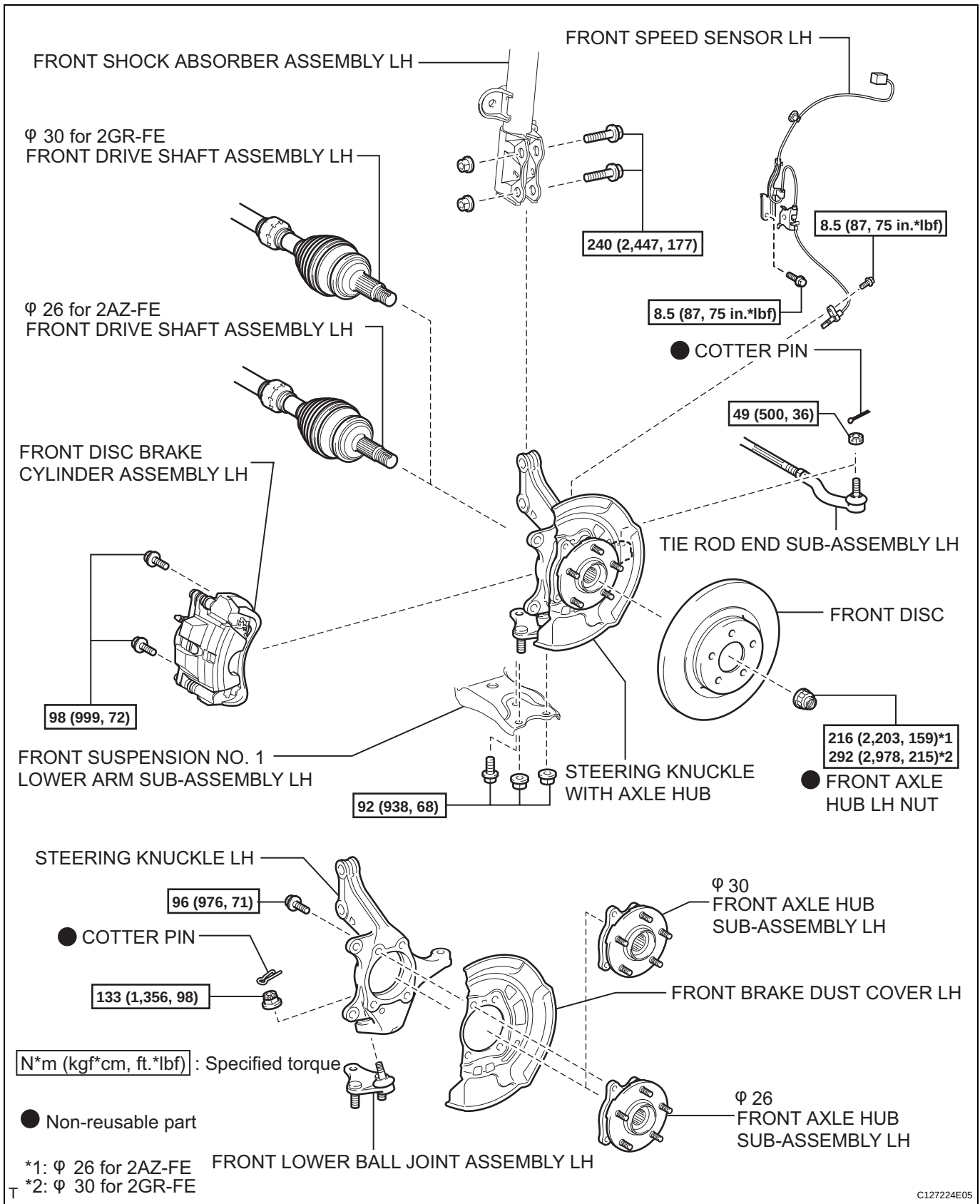
COMPONENTS

(2005/11-2006/01)

AH



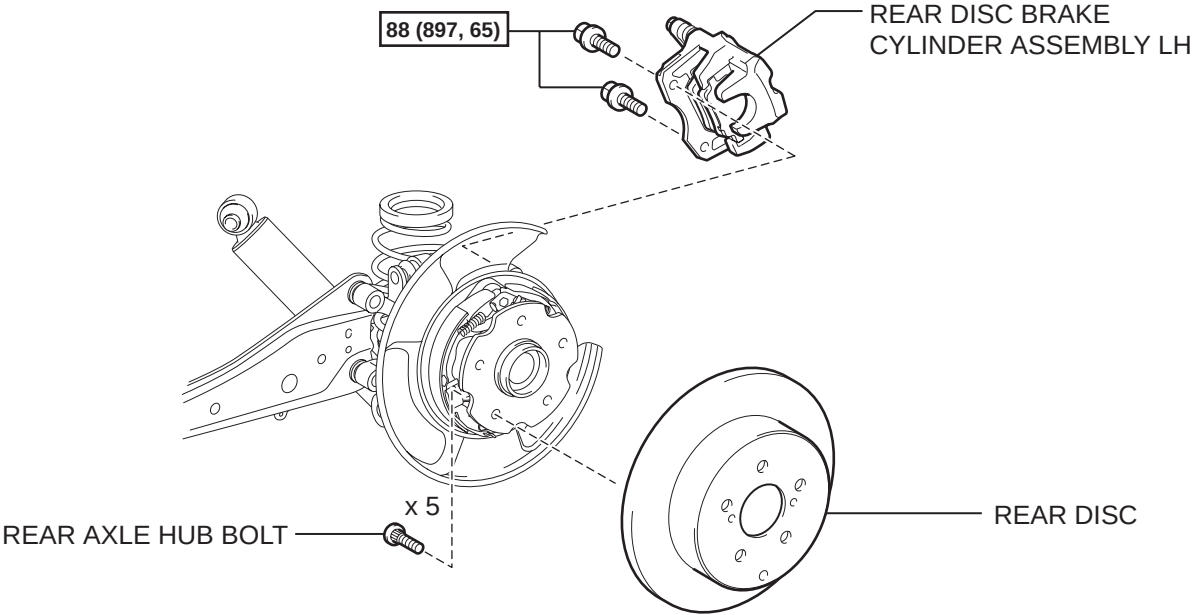
(2006/01-)



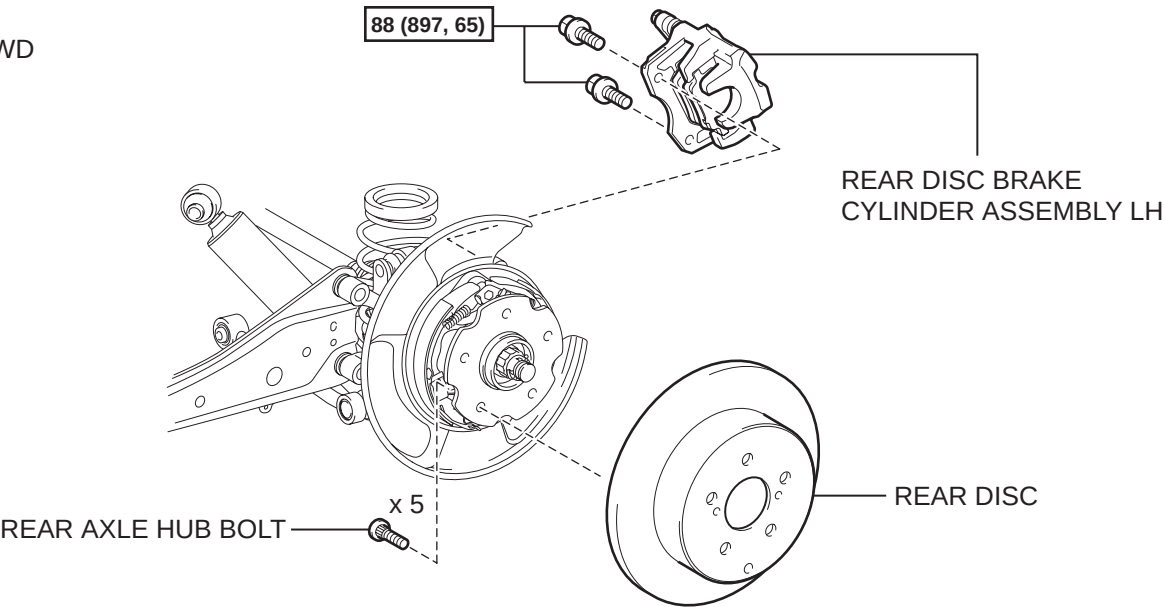
REAR AXLE HUB BOLT

COMPONENTS

for 2WD



for 4WD



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

REPLACEMENT

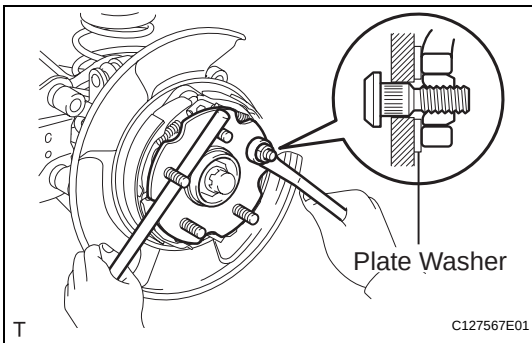
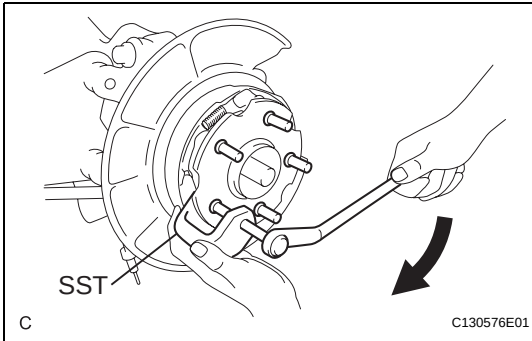
HINT:

- 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 DISC BRAKE CYLINDER ASSEMBLY LH (See page [BR-55](#))
3. REMOVE REAR DISC (See page [BR-57](#))
4. REMOVE REAR AXLE HUB BOLT

- (a) Using SST and a brass bar or equivalent to hold the axle shaft, remove the hub bolt that needs to be replaced.

SST 09650-17011

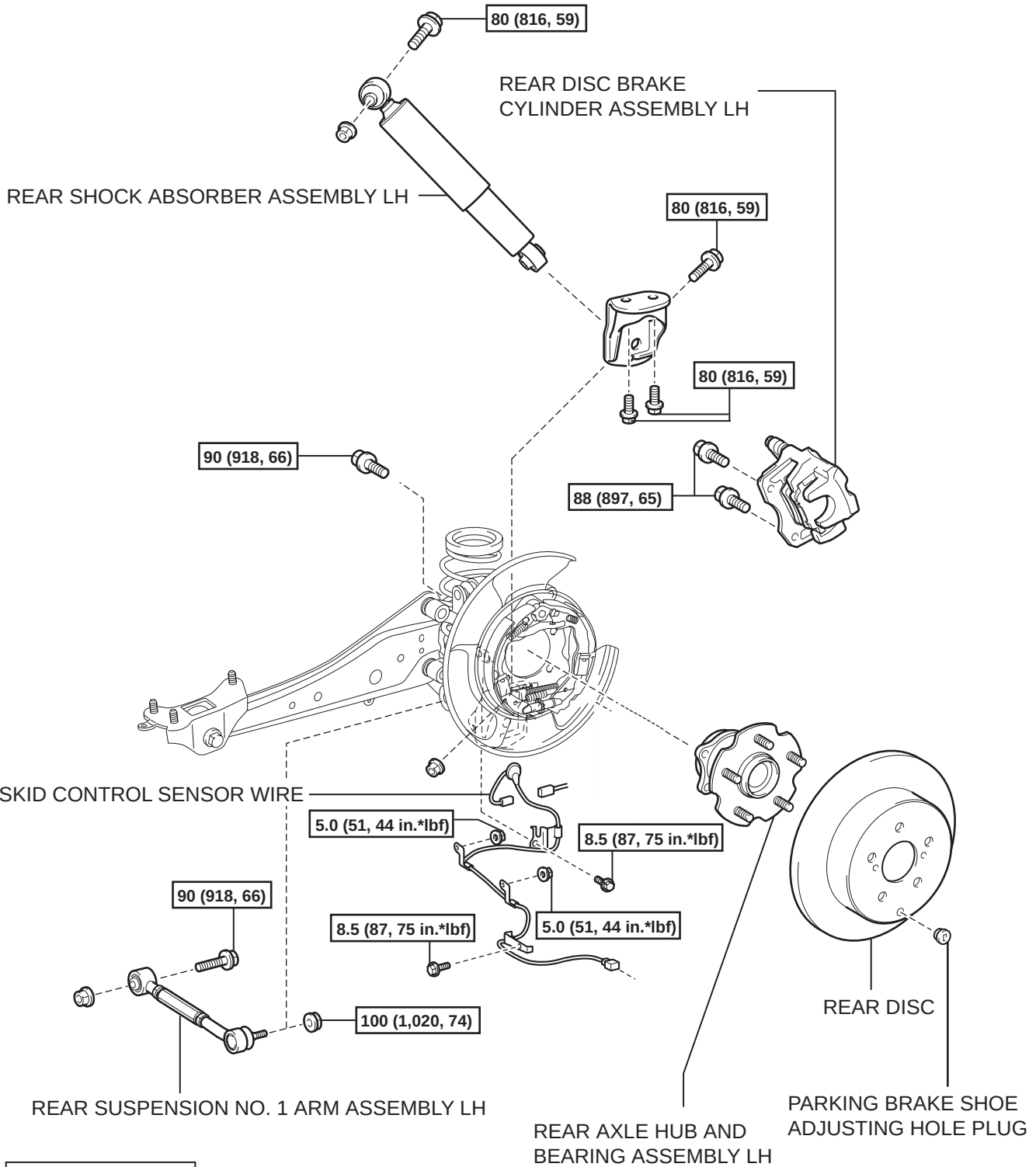


5. INSTALL REAR AXLE HUB BOLT
 - (a) Insert a new hub bolt into the bolt hole. Set a plate washer and nut on the hub bolt end.
 - (b) Using a brass bar or equivalent to hold the rear axle, install the hub bolt by tightening the nut. Then remove the nut and plate washer.
6. INSTALL REAR DISC (See page [BR-58](#))
7. INSTALL REAR DISC BRAKE CYLINDER ASSEMBLY LH (See page [BR-61](#))
8. INSTALL REAR WHEEL
Torque: 103 N*m (1,050 kgf*cm, 76 ft.*lbf)

REAR AXLE HUB AND BEARING

COMPONENTS

for 2WD



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

for 4WD

