

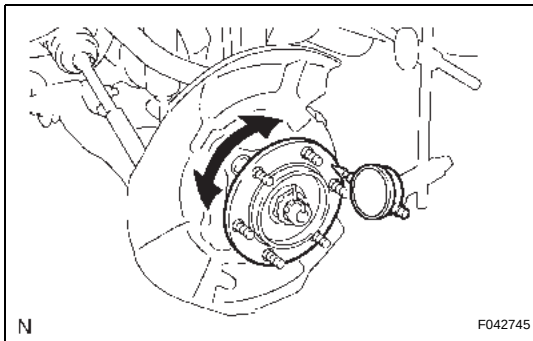
AXLE SYSTEM

PROBLEM SYMPTOMS TABLE

HINT:

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

Symptom	Suspected area	See page
Wander/pulls	1. Tires (Worn or improperly inflated)	TW-1
	2. Front wheel alignment (Incorrect) (2WD)	SP-2
	3. Front wheel alignment (Incorrect) (4WD and Pre-Runner)	SP-7
	4. Hub bearings (Loosen or worn)	AH-1
	5. Steering gear (Out of adjustment or broken)	-
Front wheel shimmy	1. Tires (Worn or improperly inflated)	TW-1
	2. Wheels (Out of balance)	TW-1
	3. Front shock absorber (Worn out) (2WD)	SP-16
	4. Front shock absorber (Worn out) (4WD and Pre-Runner)	SP-22
	5. Front wheel alignment (Incorrect) (2WD)	SP-2
	6. Front wheel alignment (Incorrect) (4WD and Pre-Runner)	SP-7
	7. Upper ball joints (Worn) (2WD)	SP-27
	8. Upper ball joints (Worn) (4WD and Pre-Runner)	SP-31
	9. Lower ball joints (Worn) (2WD)	SP-36
	10. Lower ball joints (Worn) (4WD and Pre-Runner)	SP-43
	11. Hub bearings (Loosen or worn)	AH-1
	12. Steering gear (Out of adjustment or broken)	-
Rear wheel shimmy	1. Tires (Worn or improperly inflated)	TW-1
	2. Wheels (Out of balance)	TW-1
	3. Rear shock absorber (Worn out)	SP-60
	4. Hub bearings (Loosen or worn)	AH-2



ON-VEHICLE INSPECTION

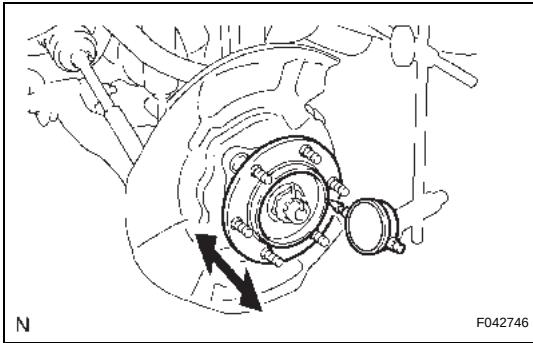
1. INSPECT FRONT AXLE HUB BEARING

- (a) Remove the front wheel.
- (b) for 4WD:
 - (1) Remove the front axle hub grease cap (See page [AH-16](#)).
- (c) for 2WD:
 - (1) Remove the front disc brake caliper (See page [AH-7](#)).
- (d) for 4WD and Pre-Runner
 - (1) Remove the front disc brake caliper (See page [AH-15](#)).
- (e) Remove the front disc.
- (f) Inspect the axle hub backlash.
 - (1) 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.



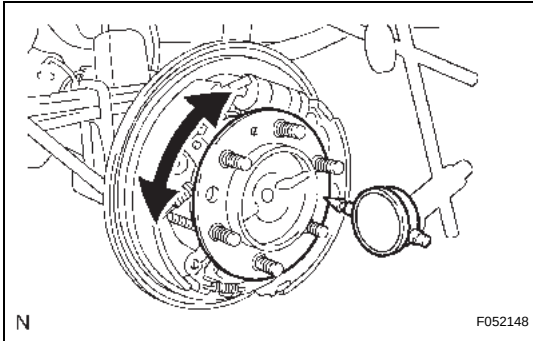
(g) Inspect the axle hub deviation.

- (1) Using a dial indicator, check the distortion of the surface of the axle hub.

Maximum:

0.05 mm (0.0020 in.)

If the deviation exceeds the maximum, replace the bearing.



2. INSPECT REAR AXLE HUB BEARING

(a) Remove the rear wheel.

(b) Remove the rear brake drum (See page [BR-68](#)).

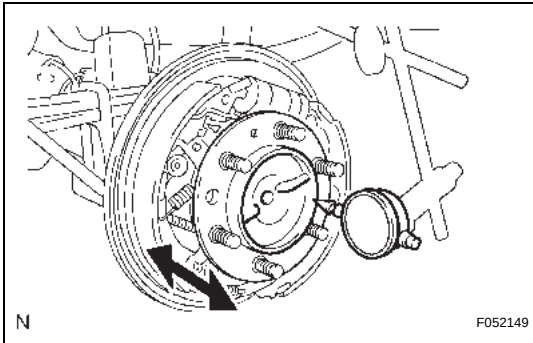
(c) Inspect the axle shaft backlash.

- (1) Using a dial indicator, check the backlash near the center of the axle shaft.

Maximum:

0.05 mm (0.0020 in.)

If the backlash exceeds the maximum, replace the bearing.



(d) Inspect the axle shaft deviation.

- (1) Using a dial indicator, check the distortion of the surface of the axle shaft.

Maximum:

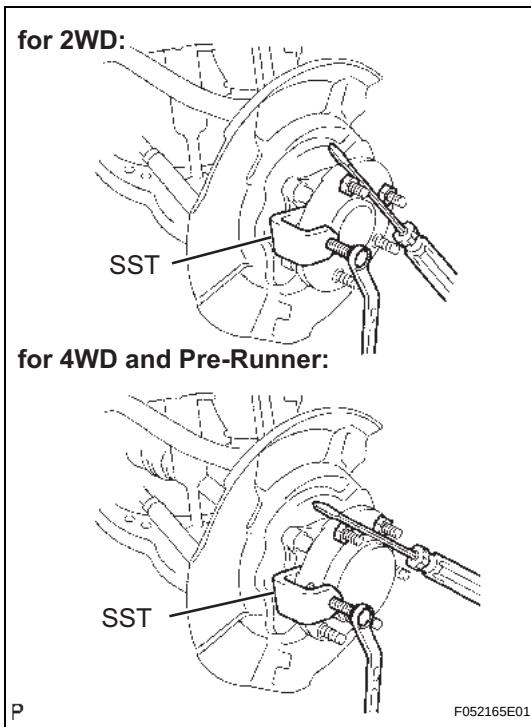
0.05 mm (0.0020 in.)

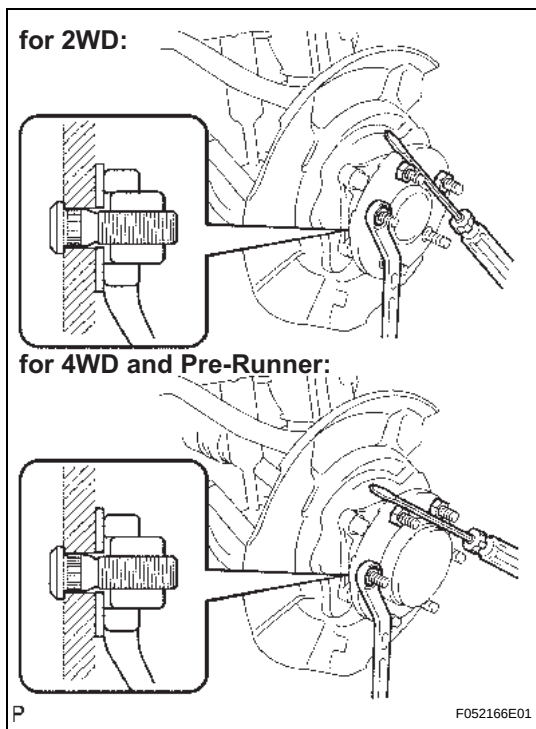
If the deviation exceeds the maximum, replace the bearing.

FRONT AXLE HUB BOLT

REMOVAL

1. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL
2. REMOVE FRONT WHEEL
3. DRAIN BRAKE FLUID
NOTICE:
Immediately wash off any brake fluid that comes into contact with painted surfaces.
4. REMOVE FRONT DISC BRAKE CALIPER ASSEMBLY (for 2WD) (See page [AH-7](#))
5. REMOVE FRONT DISC BRAKE CALIPER ASSEMBLY (for 4WD and Pre-Runner) (See page [AH-15](#))
6. REMOVE FRONT DISC
7. REMOVE FRONT AXLE HUB BOLT
 - (a) Using SST and a screwdriver, remove the hub bolt.
SST 09611-12010



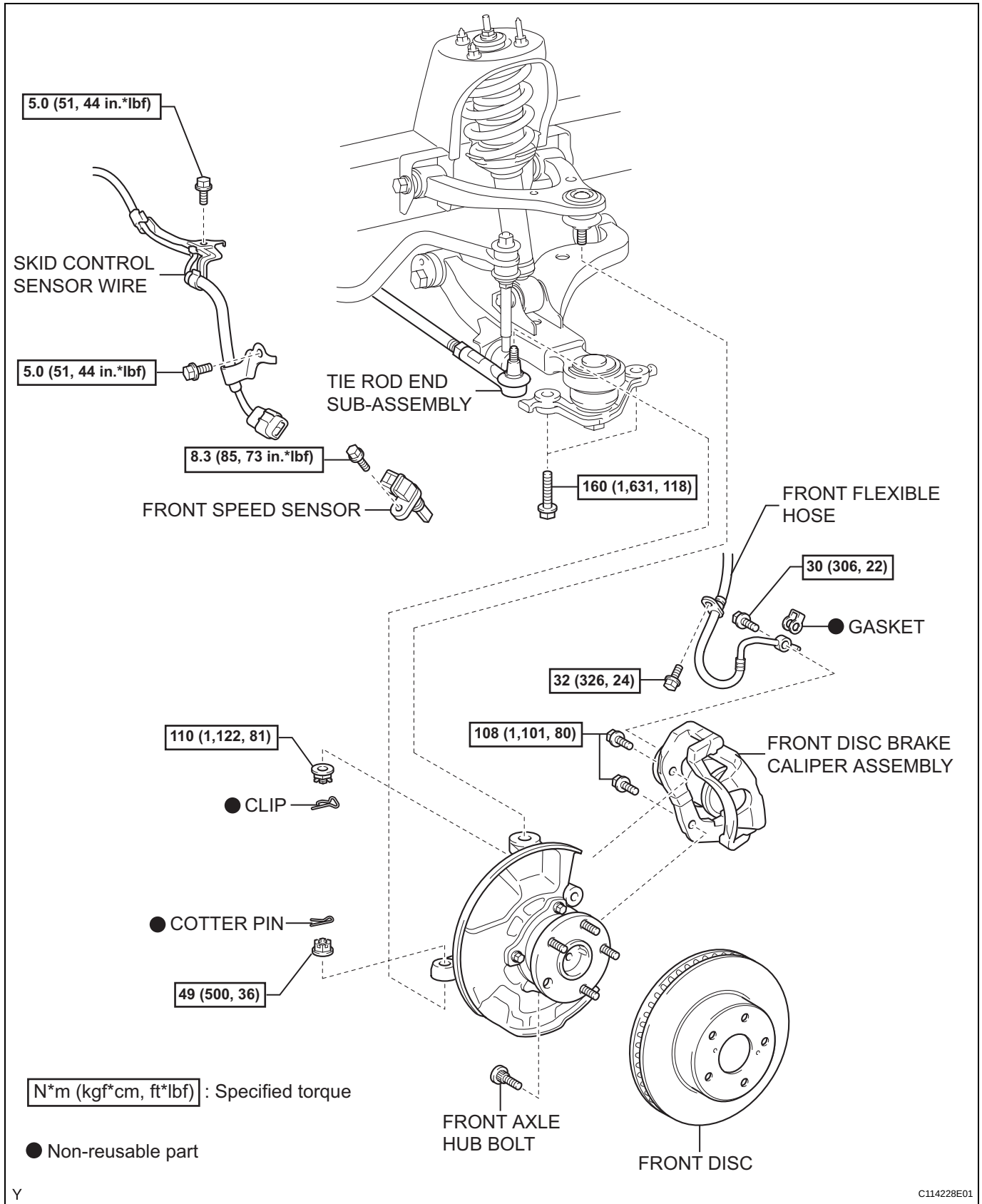


INSTALLATION

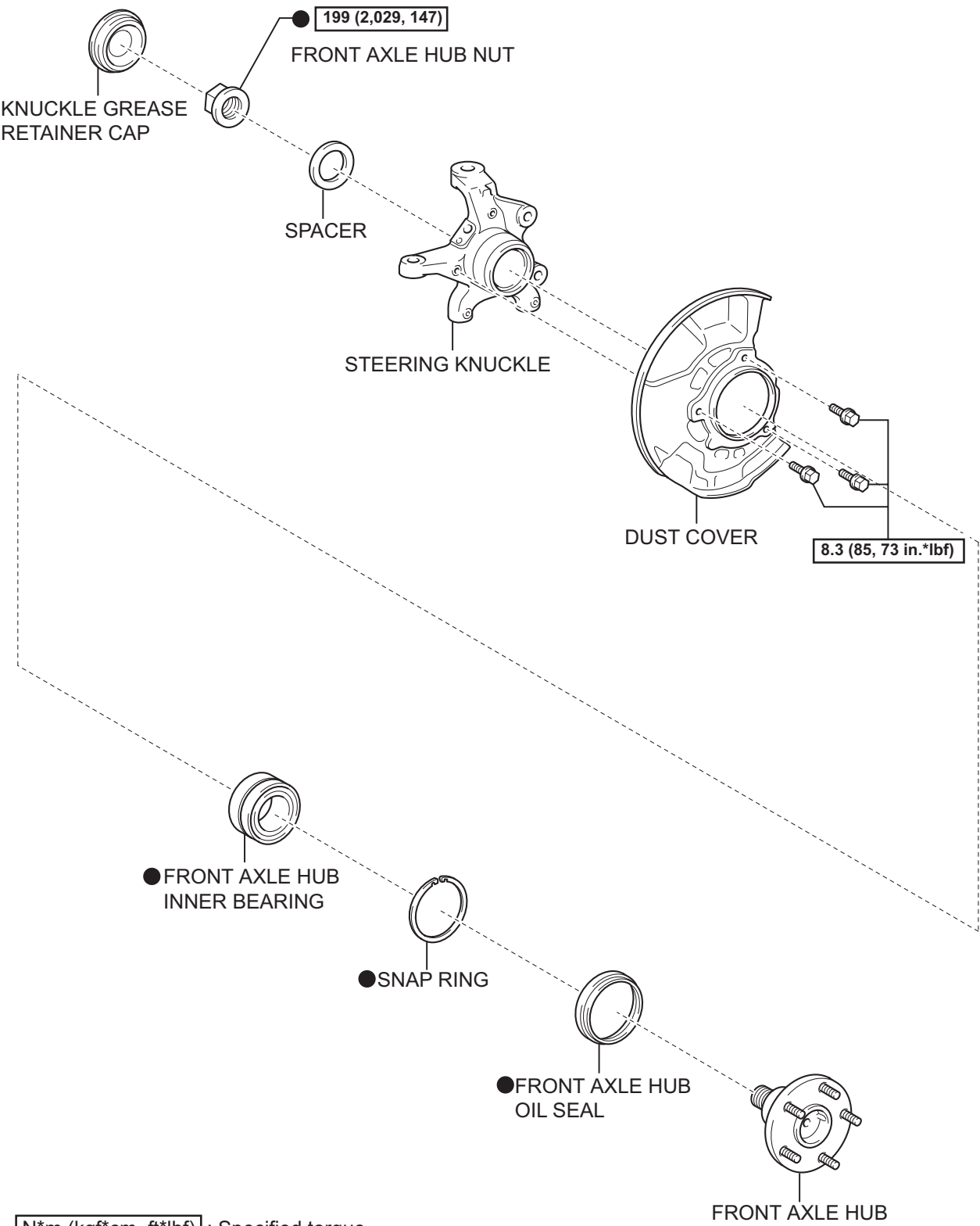
1. **INSTALL FRONT AXLE HUB BOLT**
 - (a) Install a new hub bolt through the axle hub.
 - (b) Install the washer plate, as shown in the illustration, through the hub bolt, and install the hub bolt by tightening the hub nut.
2. **INSTALL FRONT DISC**
3. **INSTALL FRONT DISC BRAKE CALIPER ASSEMBLY (for 2WD)** (See page [AH-11](#))
4. **INSTALL FRONT DISC BRAKE CALIPER ASSEMBLY (for 4WD and Pre-Runner)** (See page [AH-21](#))
5. **INSTALL FRONT WHEEL**
Torque: 113 N*m (1,152 kgf*cm, 83 ft.*lbf)
6. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**
Torque: 3.9 N*m (40 kgf*cm, 35 in.*lbf)
(See page [IN-5](#))
7. **FILL RESERVOIR WITH BRAKE FLUID (w/ VSC)** (See page [BR-4](#))
8. **FILL RESERVOIR WITH BRAKE FLUID (w/o VSC)**
(See page [BR-7](#))
9. **BLEED MASTER CYLINDER (w/o VSC)** (See page [BR-7](#))
10. **BLEED BRAKE LINE (w/ VSC)** (See page [BR-4](#))
11. **BLEED BRAKE LINE (w/o VSC)** (See page [BR-7](#))
12. **CHECK FLUID LEVEL IN RESERVOIR (w/ VSC)** (See page [BR-6](#))
13. **CHECK FLUID LEVEL IN RESERVOIR (w/o VSC)** (See page [BR-8](#))
14. **CHECK FOR BRAKE FLUID LEAKAGE**

FRONT AXLE HUB (for 2WD)

COMPONENTS



AH

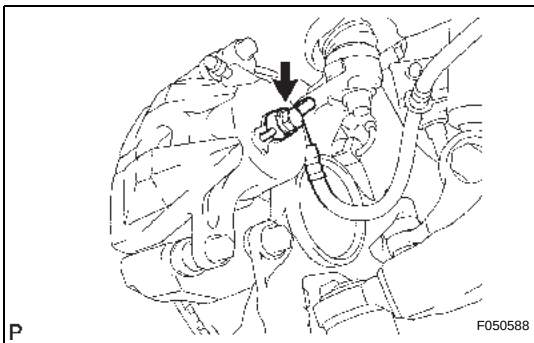
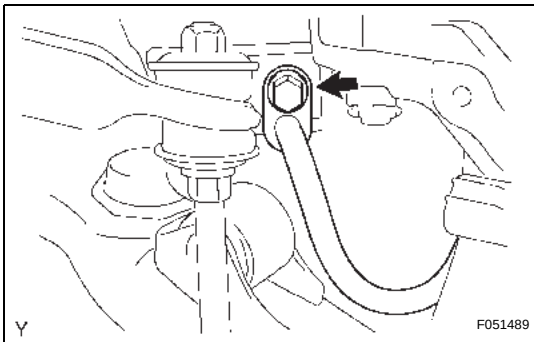
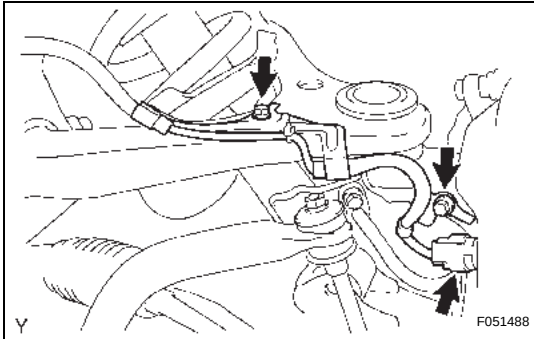


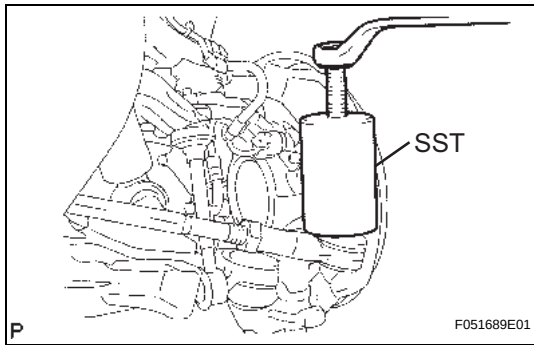
N*m (kgf*cm, ft*lbf) : Specified torque

● Non-reusable part

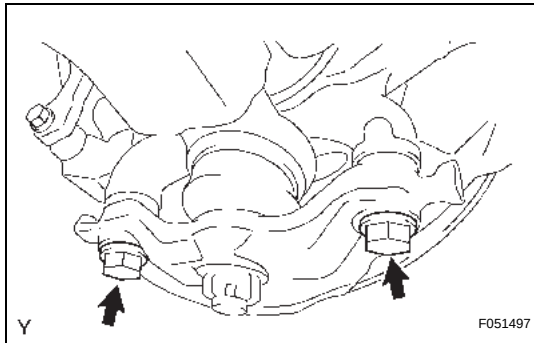
REMOVAL

1. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**
2. **REMOVE FRONT WHEEL**
3. **SEPARATE SKID CONTROL SENSOR WIRE**
 - (a) Remove the speed sensor connector.
 - (b) Remove the 2 bolts, and separate the skid control sensor wire.
4. **REMOVE FRONT SPEED SENSOR**
 - (a) Remove the bolt, and then remove the front speed sensor.
5. **SEPARATE FRONT FLEXIBLE HOSE**
 - (a) Remove the bolt, and separate the front flexible hose.
6. **REMOVE FRONT DISC BRAKE CALIPER ASSEMBLY**
 - (a) Remove the union bolt and gasket from the disc brake cylinder and then disconnect the flexible hose.
 - (b) Remove the 2 bolts, and then remove the brake caliper.
7. **REMOVE FRONT DISC**
8. **SEPARATE TIE ROD END SUB-ASSEMBLY**
 - (a) Remove the cotter pin and nut.



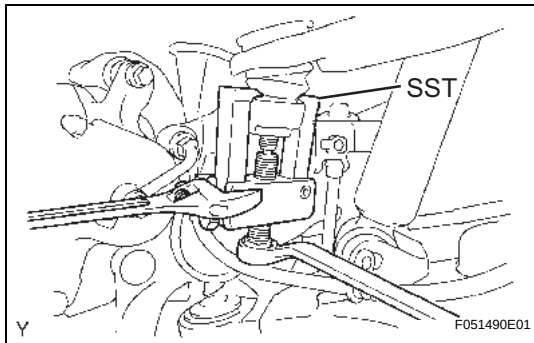


- (b) Using SST, separate the tie rod end from the steering knuckle arm.
SST 09610-20012



9. SEPARATE FRONT SUSPENSION LOWER ARM

- (a) Remove the 2 bolts, and separate the front lower ball joint attachment from the front axle.



10. SEPARATE FRONT SUSPENSION UPPER ARM

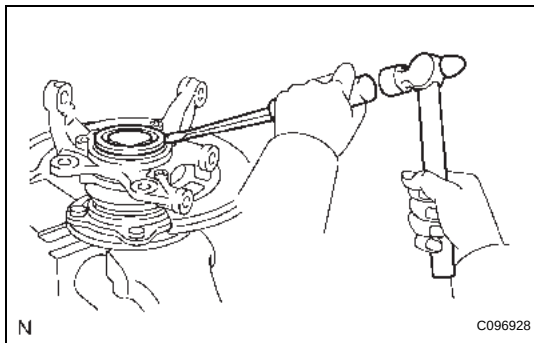
- (a) Remove the clip and nut.
 (b) Using SST, separate the upper ball joint from the steering knuckle.
SST 09628-62011

11. REMOVE FRONT AXLE HUB

DISASSEMBLY

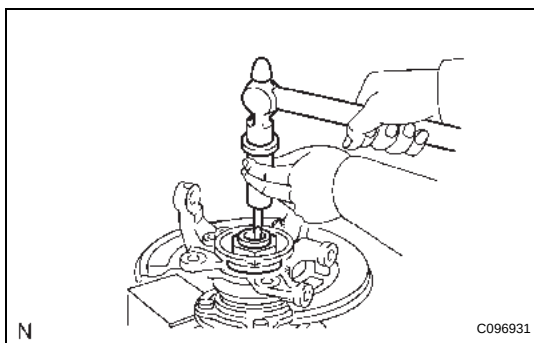
1. REMOVE KNUCKLE GREASE RETAINER CAP

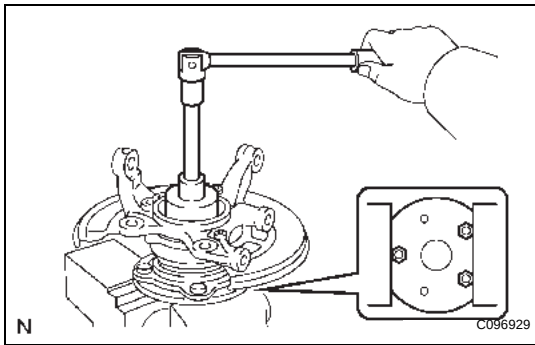
- (a) Using a screwdriver and a hammer, tap out the knuckle grease retainer cap.



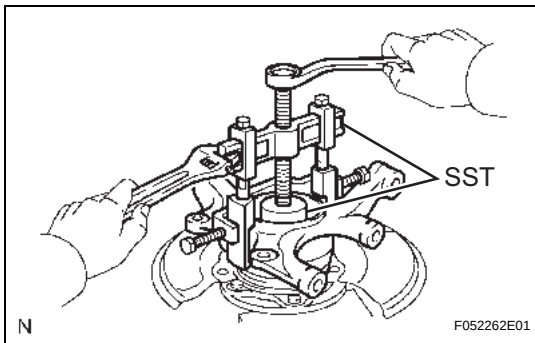
2. REMOVE FRONT AXLE HUB NUT

- (a) Using SST and a hammer, loosen the staked part of the lock nut.
SST 09930-00010





- (b) Attach the 3 bolts onto the hub bolt in the position shown in the illustration, and screw them into the flange, then fix them in a vice.
- (c) Using a socket wrench (36 mm), remove the lock nut.
- (d) Remove the spacer.

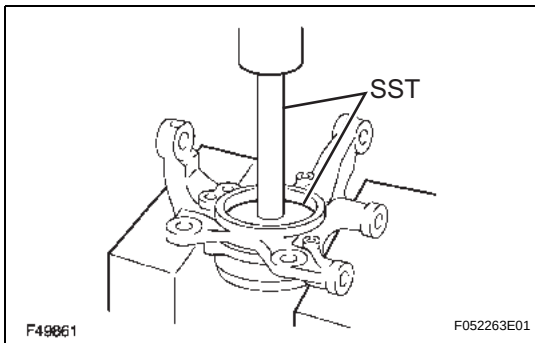


3. REMOVE STEERING KNUCKLE

- (a) Remove the 3 bolts and shift the dust cover towards the hub side (outside).
- (b) Using SST, remove the steering knuckle.
SST 09710-30021 (09710-03131), 09950-40011 (09951-04020, 09952-04010, 09953-04020, 09954-04010, 09955-04031, 09957-04010, 09958-04011)
- (c) Remove the dust cover from the axle hub.

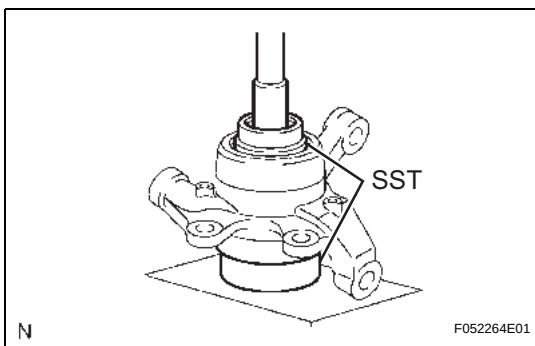
4. REMOVE FRONT AXLE HUB OIL SEAL

- (a) Using a screwdriver, pry out the oil seal from the steering knuckle.



5. REMOVE FRONT AXLE HUB INNER BEARING

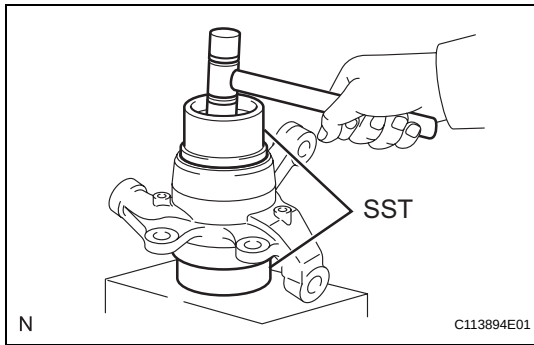
- (a) Using snap ring pliers, remove the snap ring.
- (b) Using SST and a press, press the bearing out of the steering knuckle.
SST 09950-60020 (09951-00710), 09950-70010 (09951-07150)



REASSEMBLY

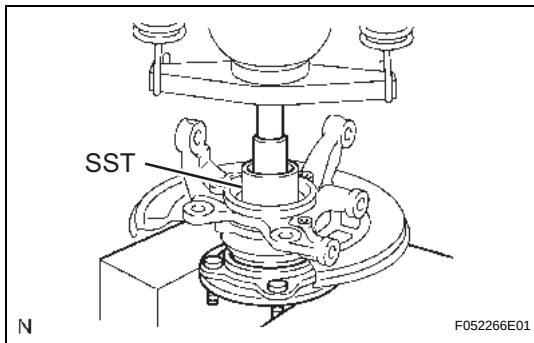
1. INSTALL FRONT AXLE HUB INNER BEARING

- (a) Using SST and a press, press a new bearing into the steering knuckle.
SST 09527-17011, 09608-10010
- (b) Using snap ring pliers, install a new snap ring.



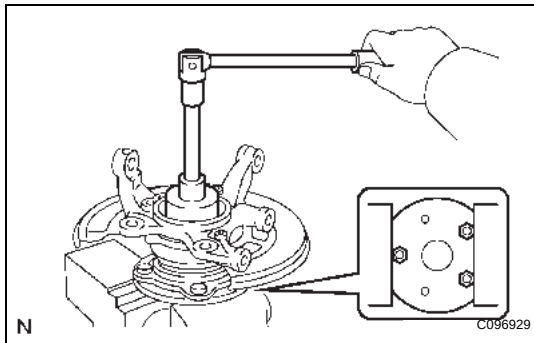
2. INSTALL FRONT AXLE HUB OIL SEAL

- Using SST and a plastic-faced hammer, tap in a new oil seal.
SST 09223-15020, 09527-17011
- Coat MP grease to the oil seal lip.



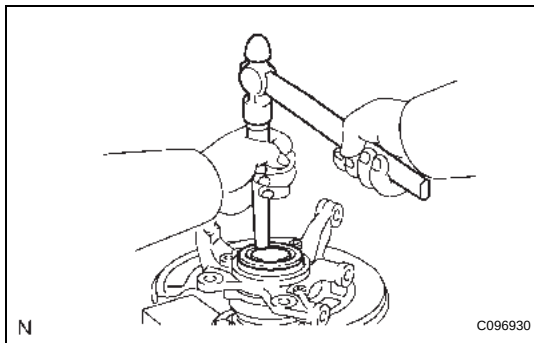
3. INSTALL STEERING KNUCKLE

- Install the dust cover onto the steering knuckle with the 3 bolts.
Torque: 8.3 N*m (85 kgf*cm, 73 in.*lbf)
- Using SST and a press, press in the axle hub to the steering knuckle.
SST 09710-30050



4. INSTALL FRONT AXLE HUB NUT

- Attach the 3 bolts onto the hub bolt in the position shown in the illustration, and screw them into the flange, then fix them in a vice.
- Install the spacer.
- Using a socket wrench (36 mm), install a new lock nut onto the axle hub.
Torque: 199 N*m (2,029 kgf*cm, 147 ft.*lbf)
- Using a chisel and hammer, stake the lock nut.

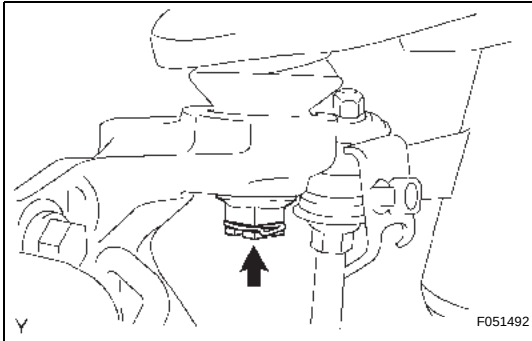


5. INSTALL KNUCKLE GREASE RETAINER CAP

- Using a brass bar and hammer, install the knuckle grease retainer cap.
NOTICE:
Do not damage the knuckle grease retainer cap.

INSTALLATION

1. INSTALL FRONT AXLE HUB

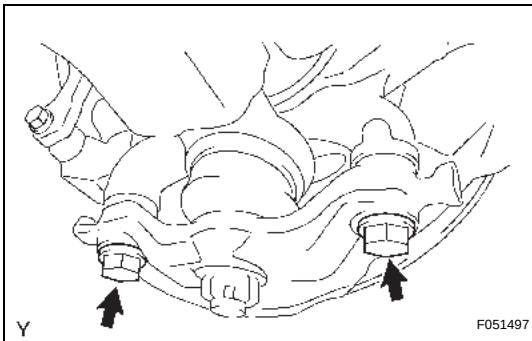


2. INSTALL FRONT SUSPENSION UPPER ARM

- (a) Install the upper arm with a new nut.
Torque: 110 N*m (1,122 kgf*cm, 81 ft.*lbf)
- (b) Install the clip.

NOTICE:

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



3. INSTALL FRONT SUSPENSION LOWER ARM

- (a) Install the front lower ball joint attachment LH with the 2 bolts.
Torque: 160 N*m (1,631 kgf*cm, 118 ft.*lbf)

4. INSTALL TIE ROD END SUB-ASSEMBLY

- (a) Install the tie rod end onto the steering knuckle arm.
- (b) Install the nut.
Torque: 49 N*m (500 kgf*cm, 36 ft.*lbf)
- (c) Install a new cotter pin.

NOTICE:

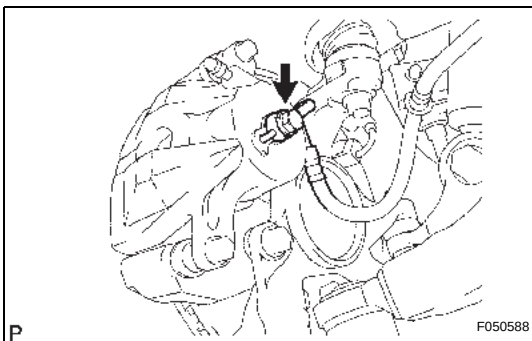
If the holes in the cotter pin are not aligned, tighten the nut an additional 60°.



5. INSTALL FRONT DISC

6. INSTALL FRONT DISC BRAKE CALIPER ASSEMBLY

- (a) Install the brake caliper with the 2 bolts.
Torque: 108 N*m (1,101 kgf*cm, 80 ft.*lbf)

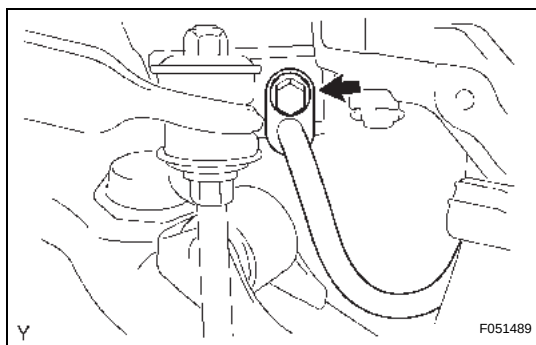


- (b) Install a new gasket and flexible hose with the union bolt.

Torque: 30 N*m (306 kgf*cm, 22 ft.*lbf)

HINT:

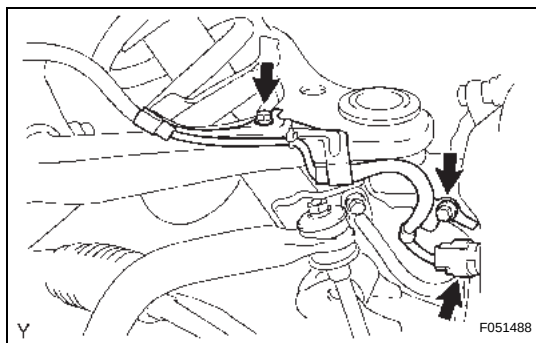
Install the flexible hose lock securely into the lock hole in the disc brake cylinder.

**7. INSTALL FRONT FLEXIBLE HOSE**

- (a) Install the front flexible hose with the bolt.
Torque: 32 N*m (326 kgf*cm, 24 ft.*lbf)

8. INSTALL FRONT SPEED SENSOR

- (a) Install the speed sensor front with the bolt.
Torque: 8.3 N*m (85 kgf*cm, 73 in.*lbf)
NOTICE:
Make sure that the sensor tip is clean.

**9. INSTALL SKID CONTROL SENSOR WIRE**

- (a) Install the skid control sensor wire with the 2 bolts.
Torque: 5.0 N*m (51 kgf*cm, 44 in.*lbf)
 (b) Connect the speed sensor connector.

10. INSTALL FRONT WHEEL

Torque: 113 N*m (1,152 kgf*cm, 83 ft.*lbf)

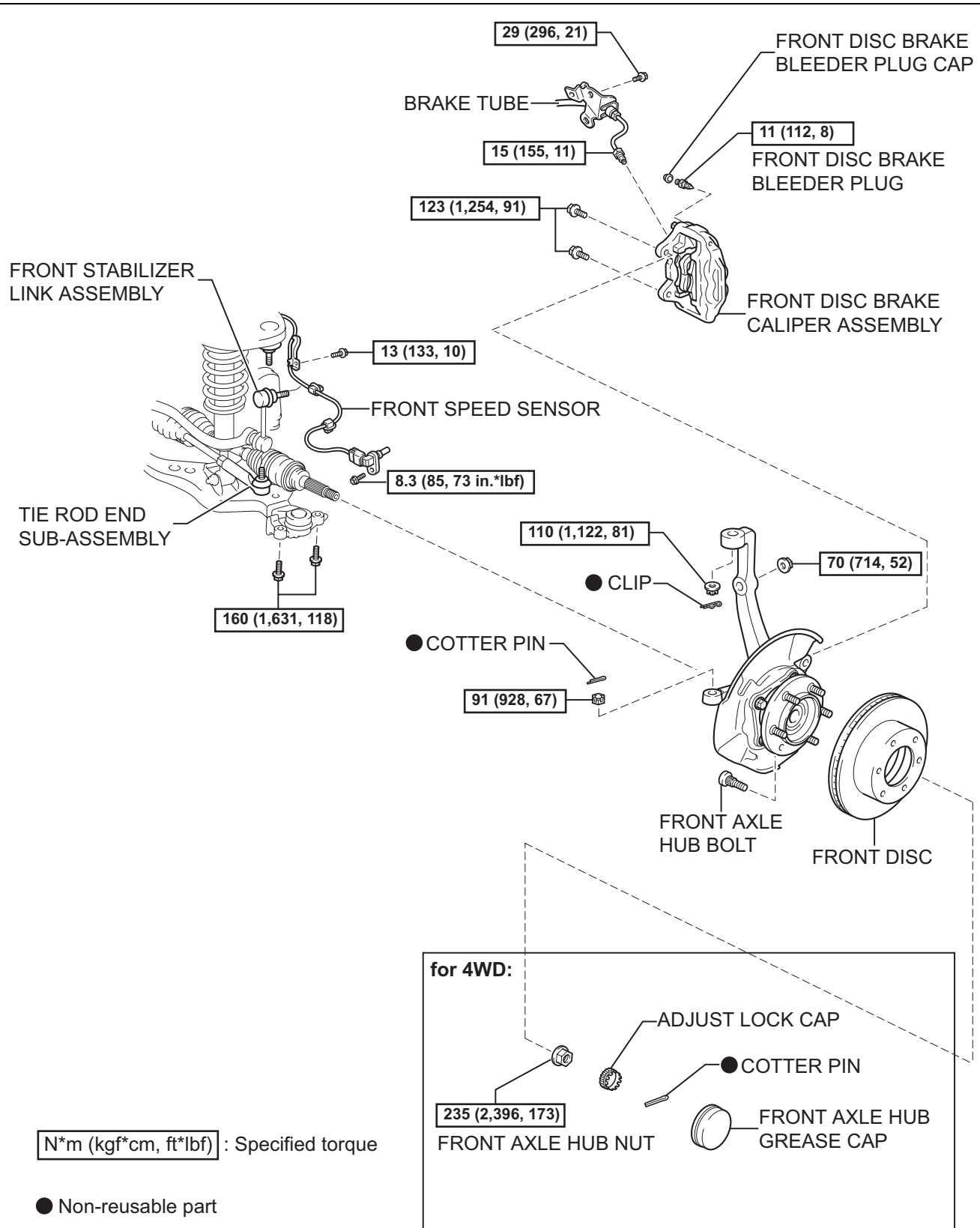
11. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL

Torque: 3.9 N*m (40 kgf*cm, 35 in.*lbf)
 (See page [IN-5](#))

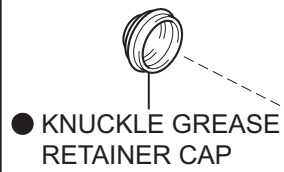
12. FILL RESERVOIR WITH BRAKE FLUID (w/ VSC) (See page [BR-4](#))**13. FILL RESERVOIR WITH BRAKE FLUID (w/o VSC) (See page [BR-7](#))****14. BLEED MASTER CYLINDER (w/o VSC) (See page [BR-7](#))****15. BLEED BRAKE LINE (w/ VSC) (See page [BR-4](#))****16. BLEED BRAKE LINE (w/o VSC) (See page [BR-7](#))****17. CHECK FLUID LEVEL IN RESERVOIR (w/ VSC) (See page [BR-6](#))****18. CHECK FLUID LEVEL IN RESERVOIR (w/o VSC) (See page [BR-8](#))****19. CHECK FOR BRAKE FLUID LEAKAGE****20. CHECK VSC SENSOR SIGNAL (w/ VSC) (See page [BC-103](#))****21. CHECK ABS SENSOR SIGNAL (w/o VSC) (See page [BC-7](#))****22. INSPECT AND ADJUST FRONT WHEEL ALIGNMENT (See page [SP-2](#))**

FRONT AXLE HUB (for 4WD and Pre-Runner)

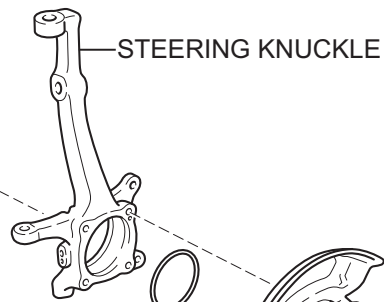
COMPONENTS



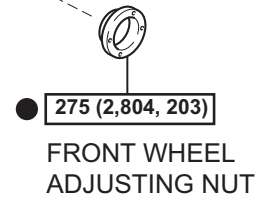
for Pre-Runner:



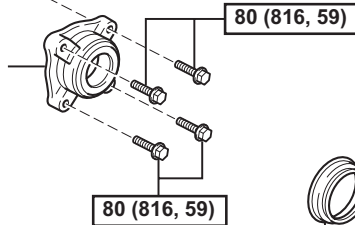
for 4WD:



for Pre-Runner:



● FRONT AXLE WITH ABS ROTOR BEARING ASSEMBLY



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

● Non-reusable part

← MP Grease

REMOVAL

1. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

2. REMOVE FRONT WHEEL

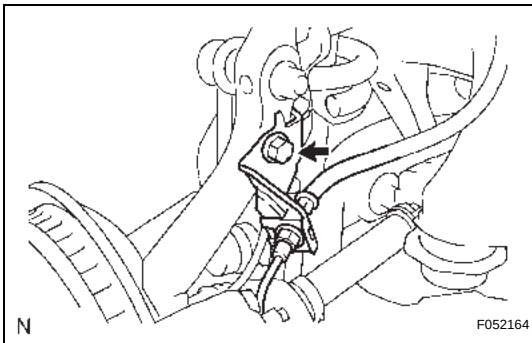
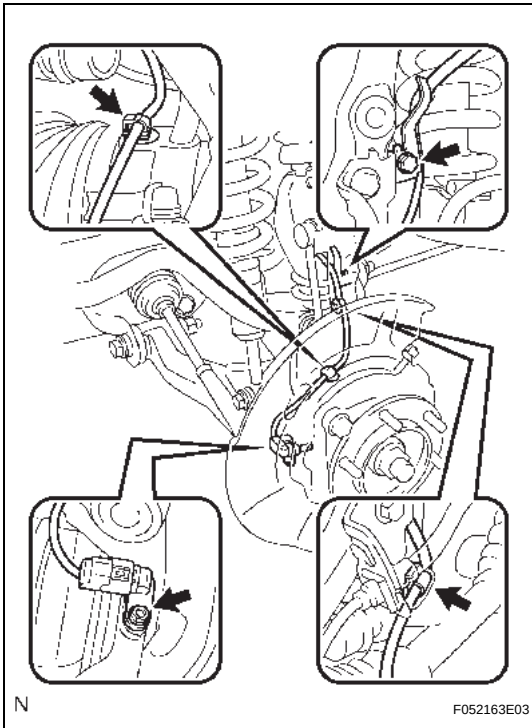
3. DRAIN BRAKE FLUID

NOTICE:

Immediately wash off any brake fluid that comes into contact with painted surfaces.

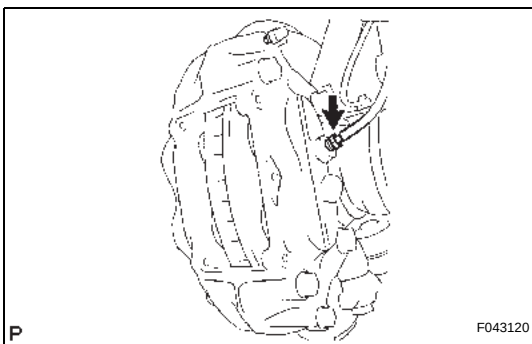
4. SEPARATE FRONT SPEED SENSOR

- (a) Remove the bolt and separate the speed sensor front LH.
- (b) Disengage the 2 clamps.
- (c) Remove the bolt and separate the speed sensor wire harness from the steering knuckle.



5. REMOVE FRONT DISC BRAKE CALIPER ASSEMBLY

- (a) Remove the bolt and separate the brake tube bracket from the steering knuckle.

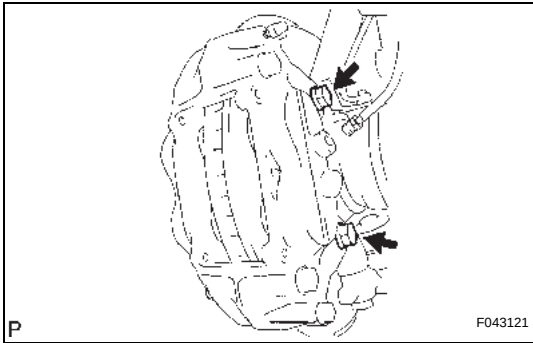


- (b) Using SST, disconnect the brake tube from the disc brake cylinder.

SST 09023-00101

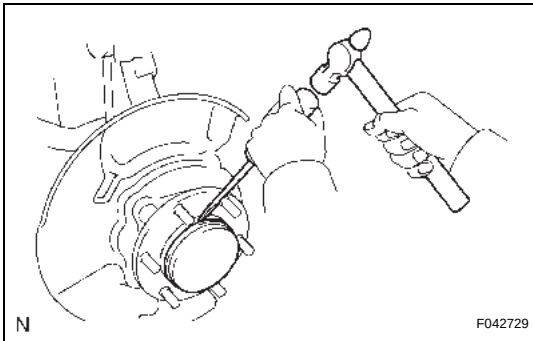
NOTICE:

Use a container to catch the brake fluid as it drains out.



(c) Remove the 2 bolts and disc brake caliper.

6. REMOVE FRONT DISC

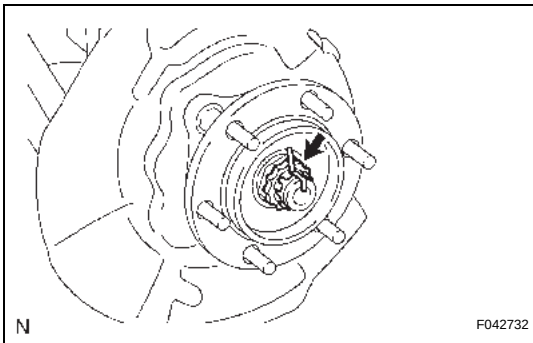


7. REMOVE FRONT AXLE HUB GREASE CAP (for 4WD)

(a) Using a screwdriver and a hammer, remove the front axle hub grease cap.

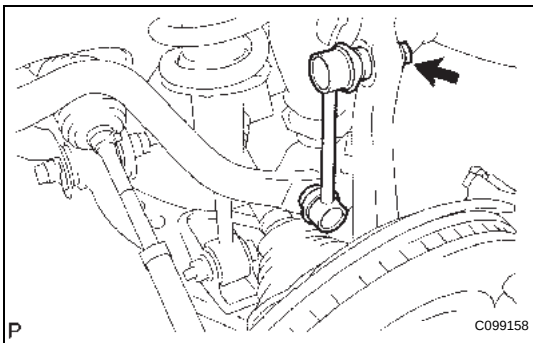
NOTICE:

Do not damage the axle hub.



8. REMOVE FRONT AXLE HUB NUT (for 4WD)

(a) Remove the cotter pin and lock cap.
(b) Remove the front axle hub nut.

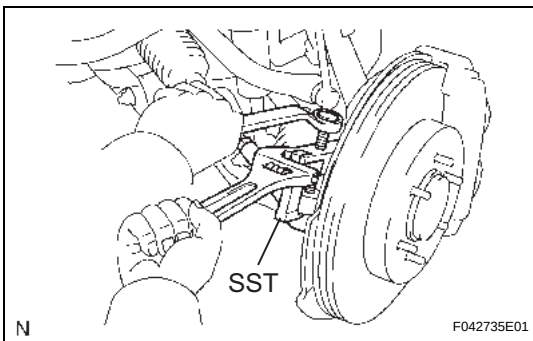


9. SEPARATE FRONT STABILIZER LINK ASSEMBLY

(a) Remove the nut and separate the stabilizer link from the steering knuckle.

HINT:

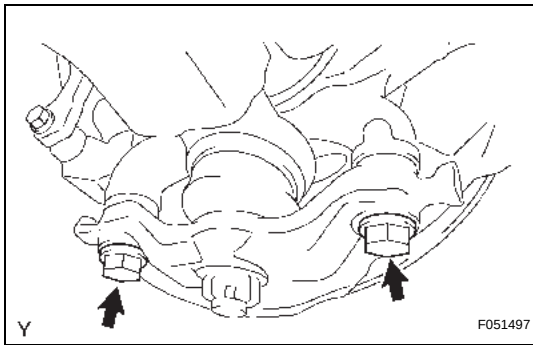
If the ball joint turns together with the nut, use a hexagon (6 mm) wrench to hold the stud.



10. SEPARATE TIE ROD END SUB-ASSEMBLY

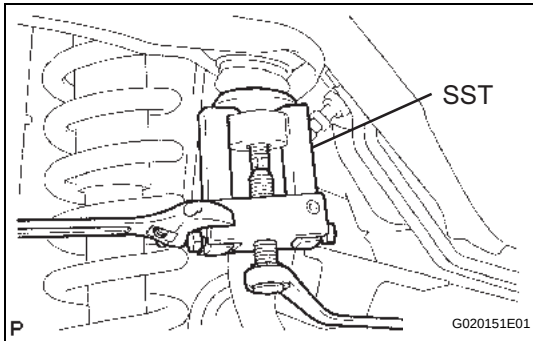
(a) Remove the cotter pin and nut.
(b) Using SST, separate the tie rod end from the steering knuckle.

SST 09628-62011



11. REMOVE FRONT SUSPENSION LOWER ARM

- (a) Remove the 2 bolts, and separate the front suspension lower arm from the front axle.



12. SEPARATE FRONT SUSPENSION UPPER ARM

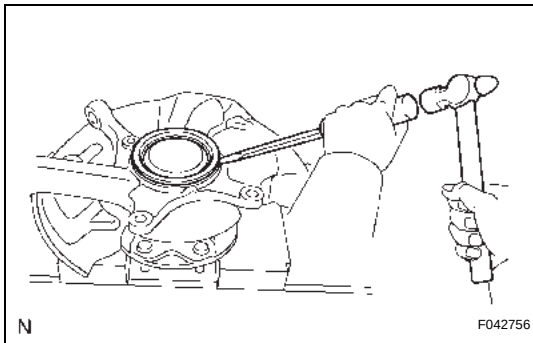
- (a) Support the front suspension lower arm with a jack.
- (b) Remove the clip and nut.
- (c) Using SST, separate the steering knuckle from the front suspension upper arm.

SST 09628-62011

13. REMOVE FRONT AXLE HUB

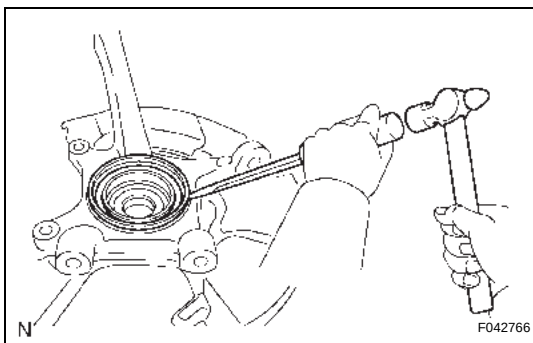
- (a) for 4WD:
 - (1) Using a plastic hammer, separate the front axle hub from the front drive shaft.
- (b) Remove the front axle hub.

DISASSEMBLY



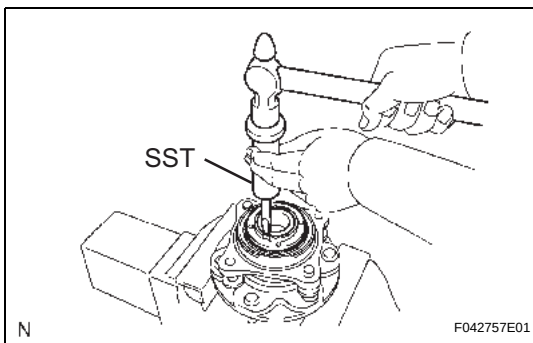
1. REMOVE KNUCKLE GREASE RETAINER CAP (for Pre-Runner)

- (a) Using a screwdriver and hammer, remove the knuckle grease retainer cap.



2. REMOVE FRONT AXLE HUB OIL SEAL (for 4WD)

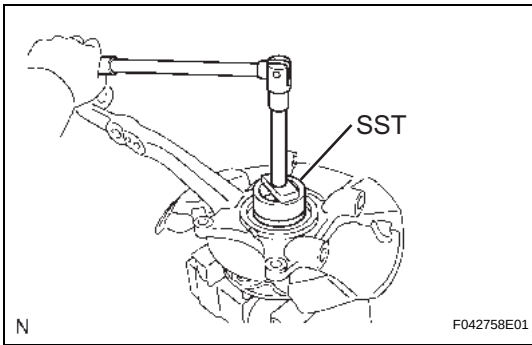
- (a) Using a screwdriver and hammer, remove the front axle hub oil seal.



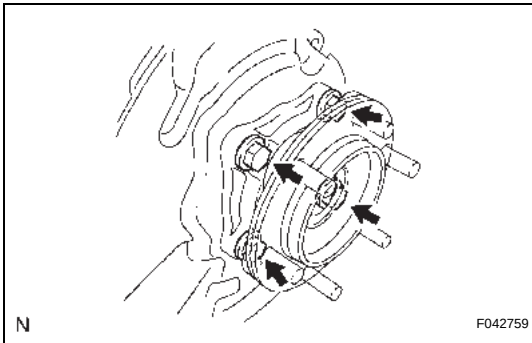
3. REMOVE FRONT WHEEL ADJUSTING NUT (for Pre-Runner)

- (a) Using SST and a hammer, unstick the front wheel adjusting nut.

SST 09930-00010

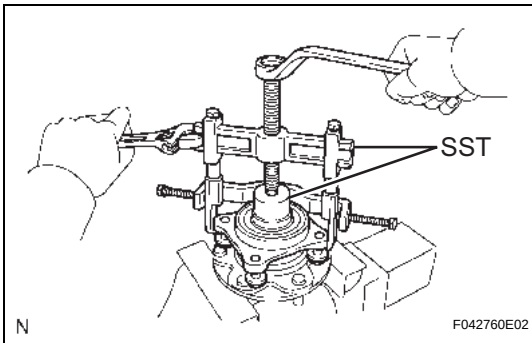


- (b) Using SST, remove the front wheel adjusting nut.
SST 09318-12010



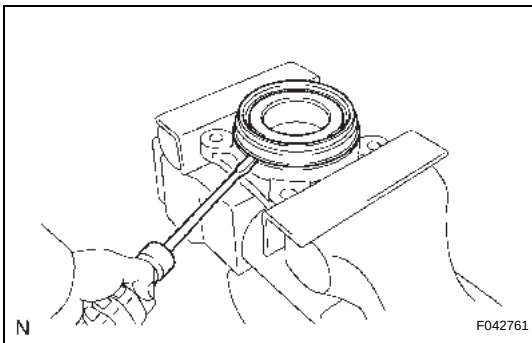
4. REMOVE FRONT AXLE HUB

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



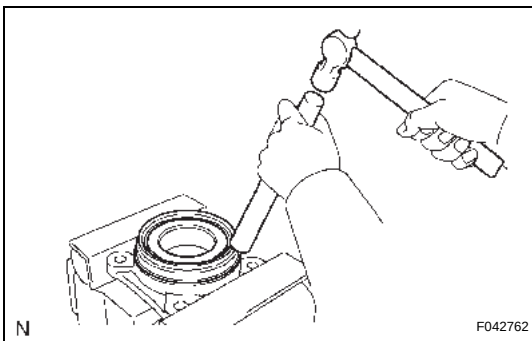
5. REMOVE FRONT AXLE WITH ABS ROTOR BEARING ASSEMBLY

- (a) Gently fix the front axle hub in a vise.
(b) Using SST, remove the bearing.
SST 09710-30021 (09710-03051), 09950-40011 (09951-04020, 09952-04010, 09953-04020, 09954-04010, 09955-04061, 09957-04010, 09958-04011)



6. REMOVE FRONT AXLE HUB OIL SEAL

- (a) Using a screwdriver, remove the front axle hub oil seal.



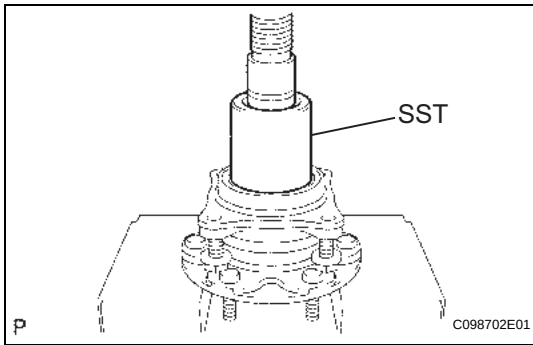
REASSEMBLY

1. INSTALL FRONT AXLE HUB OIL SEAL

- (a) Using a brass bar and a hammer, install a new front axle hub oil seal.

NOTICE:

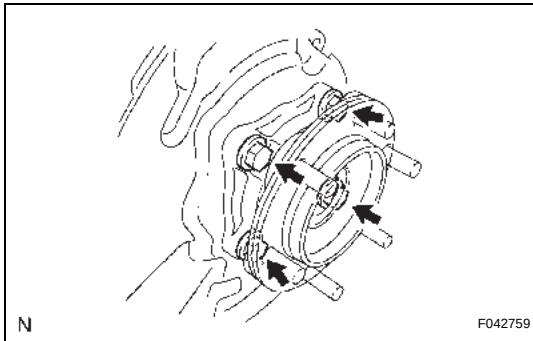
Do not damage the oil seal.



2. INSTALL FRONT AXLE WITH ABS ROTOR BEARING ASSEMBLY

- (a) Using SST and a press, install a new bearing onto the front axle hub.

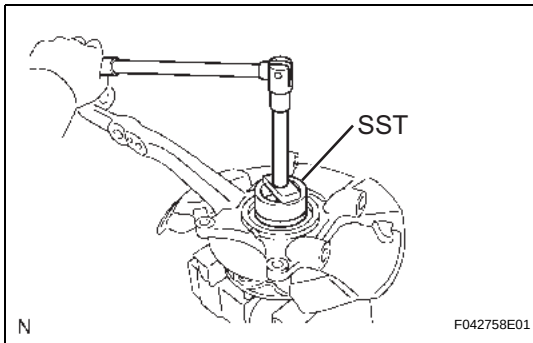
SST 09649-17010



3. INSTALL FRONT AXLE HUB

- (a) Apply MP grease to a new O-ring.
 (b) Install the new O-ring onto the axle hub.
 (c) Install the dust cover and axle hub onto the steering knuckle with the 4 bolts.

Torque: 80 N*m (816 kgf*cm, 59 ft.*lbf)

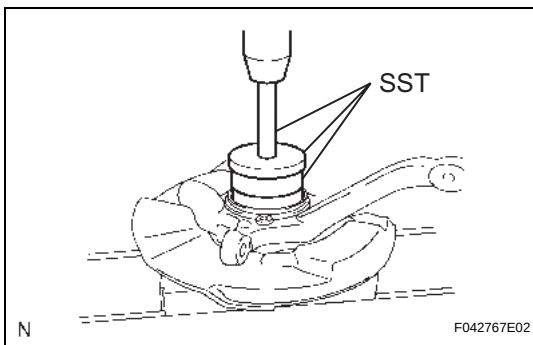


4. INSTALL FRONT WHEEL ADJUSTING NUT (for Pre-Runner)

- (a) Using SST, install a new front wheel adjusting nut.

SST 09318-12010

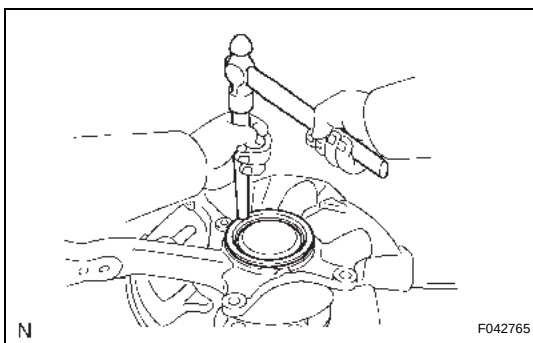
Torque: 275 N*m (2,804 kgf*cm, 203 ft.*lbf)



5. INSTALL FRONT AXLE HUB OIL SEAL (for 4WD)

- (a) Using SST and a press, install a new front axle hub oil seal.

SST 09527-17011, 09950-70010 (09951-07100), 09951-01000



6. INSTALL KNUCKLE GREASE RETAINER CAP (for Pre-Runner)

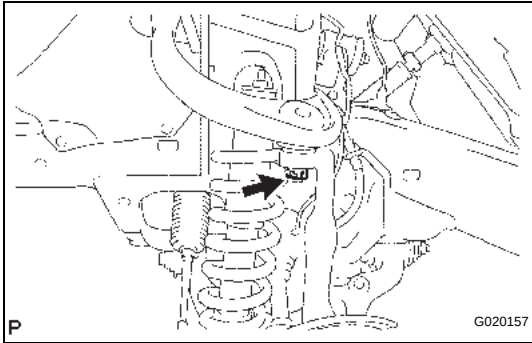
- (a) Using a brass bar and a hammer, install a new knuckle grease retainer cap.

NOTICE:

Do not damage the knuckle grease retainer cap.

INSTALLATION

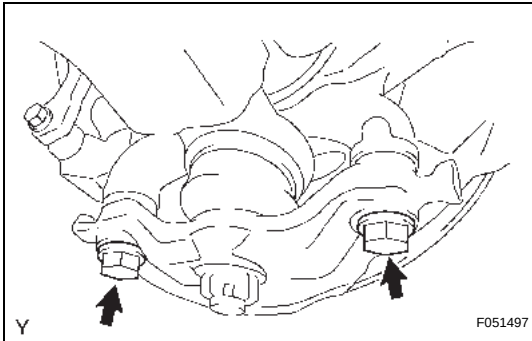
1. INSTALL FRONT AXLE HUB



2. INSTALL FRONT SUSPENSION UPPER ARM

- (a) Install a new nut and clip.

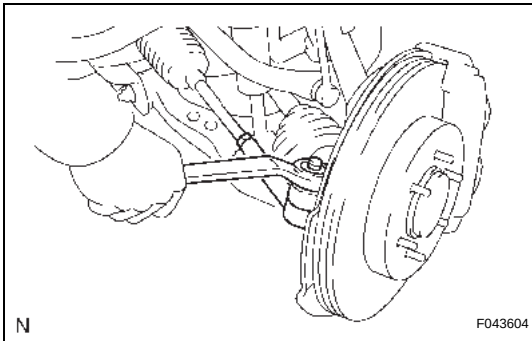
Torque: 110 N*m (1,122 kgf*cm, 81 ft.*lbf)



3. INSTALL FRONT SUSPENSION LOWER ARM

- (a) Install the front suspension lower arm with the 2 bolts.

Torque: 160 N*m (1,631 kgf*cm, 118 ft.*lbf)



4. INSTALL TIE ROD END SUB-ASSEMBLY

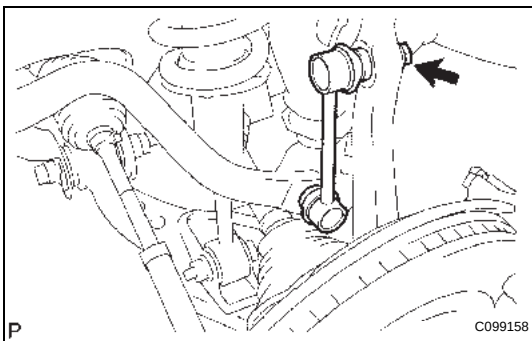
- (a) Install the tie rod end with the nut.

Torque: 91 N*m (928 kgf*cm, 67 ft.*lbf)

- (b) Install a new cotter pin.

NOTICE:

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



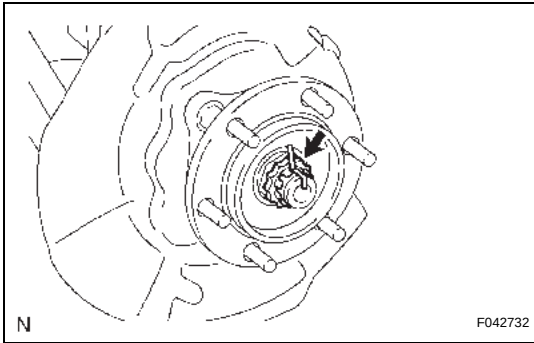
5. INSTALL FRONT STABILIZER LINK ASSEMBLY

- (a) Install the stabilizer link onto the steering knuckle with the nut.

Torque: 70 N*m (714 kgf*cm, 52 ft.*lbf)

HINT:

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



6. INSTALL FRONT AXLE HUB NUT (for 4WD)

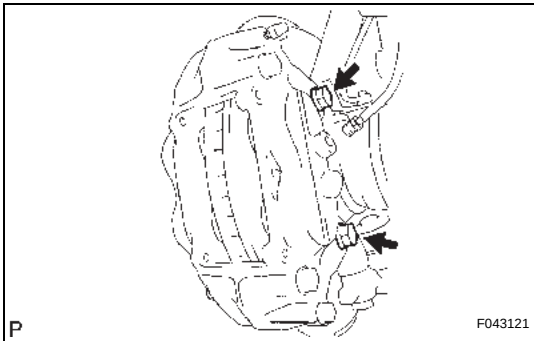
- (a) Install the hub nut.

Torque: 235 N*m (2,396 kgf*cm, 173 ft.*lbf)

- (b) Install the adjusting cap and cotter pin.

7. INSTALL FRONT AXLE HUB GREASE CAP (for 4WD)

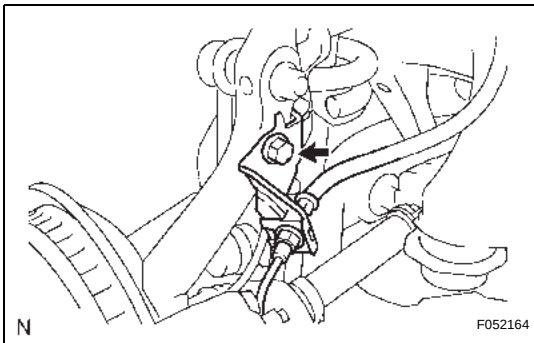
8. INSTALL FRONT DISC



9. INSTALL FRONT DISC BRAKE CALIPER ASSEMBLY

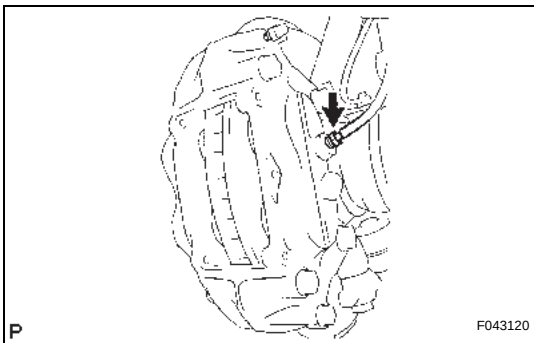
- (a) Install the front disc brake caliper with the 2 bolts.

Torque: 123 N*m (1,254 kgf*cm, 91 ft.*lbf)



- (b) Install the brake tube bracket onto the steering knuckle with the bolt.

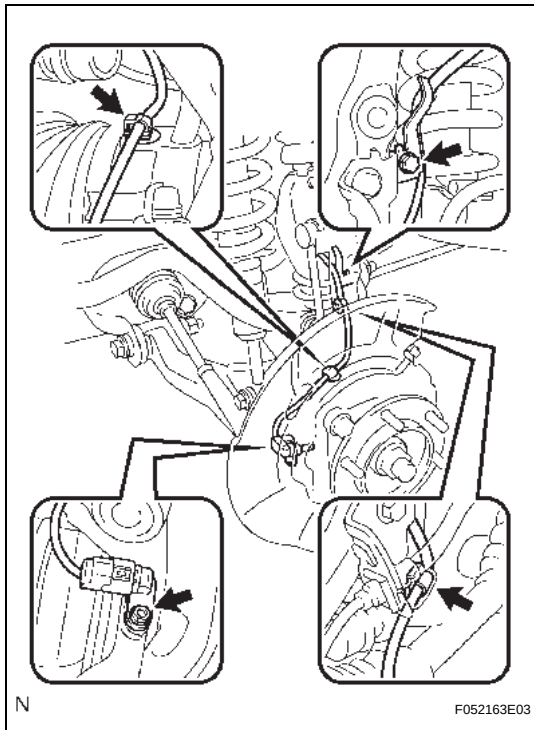
Torque: 29 N*m (296 kgf*cm, 21 ft.*lbf)



- (c) Using SST, connect the brake tube to the disc brake cylinder.

SST 09023-00101

Torque: 15 N*m (155 kgf*cm, 11 ft.*lbf)

**10. INSTALL FRONT SPEED SENSOR**

- (a) Install the speed sensor wire harness onto the steering knuckle with the bolt.

Torque: 13 N*m (133 kgf*cm, 10 ft.*lbf)

- (b) Engage the 2 clips.

- (c) Install the speed sensor with the bolt.

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

11. INSTALL FRONT WHEEL

Torque: 113 N*m (1,152 kgf*cm, 83 ft.*lbf)

12. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL

Torque: 3.9 N*m (40 kgf*cm, 35 in.*lbf)

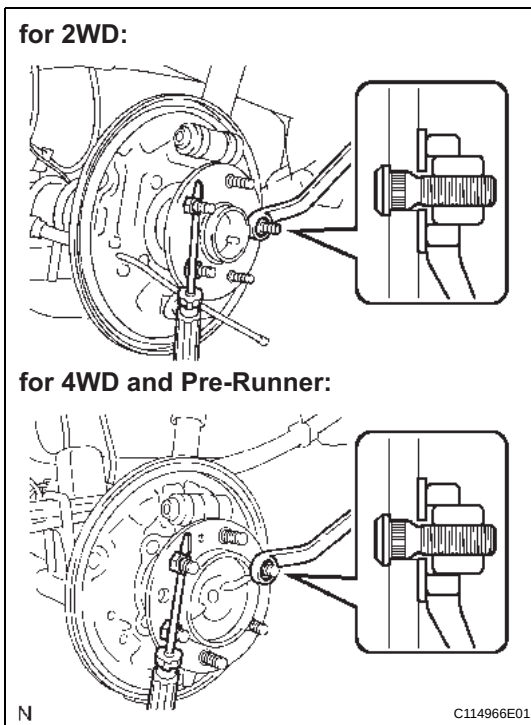
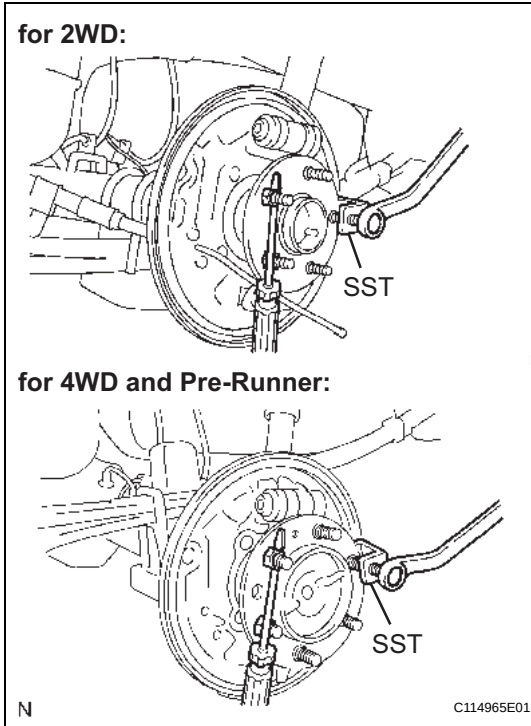
(See page [IN-5](#))

13. FILL RESERVOIR WITH BRAKE FLUID (w/ VSC) (See page [BR-4](#))**14. FILL RESERVOIR WITH BRAKE FLUID (w/o VSC) (See page [BR-7](#))****15. BLEED MASTER CYLINDER (w/o VSC) (See page [BR-7](#))****16. BLEED BRAKE LINE (w/ VSC) (See page [BR-4](#))****17. BLEED BRAKE LINE (w/o VSC) (See page [BR-7](#))****18. CHECK FLUID LEVEL IN RESERVOIR (w/ VSC) (See page [BR-6](#))****19. CHECK FLUID LEVEL IN RESERVOIR (w/o VSC) (See page [BR-8](#))****20. CHECK FOR BRAKE FLUID LEAKAGE****21. CHECK VSC SENSOR SIGNAL (w/ VSC) (See page [BC-103](#))****22. CHECK ABS SENSOR SIGNAL (w/o VSC) (See page [BC-7](#))****23. INSPECT AND ADJUST FRONT WHEEL ALIGNMENT (See page [SP-7](#))**

REAR AXLE HUB BOLT

REMOVAL

1. REMOVE REAR WHEEL
2. REMOVE REAR BRAKE DRUM SUB-ASSEMBLY (See page [BR-68](#))
3. REMOVE FRONT BRAKE SHOE (See page [BR-68](#))
4. REMOVE REAR BRAKE SHOE (See page [BR-69](#))
5. REMOVE REAR AXLE HUB BOLT
 - (a) Using SST, remove the hub bolt.
SST 09650-17011



INSTALLATION

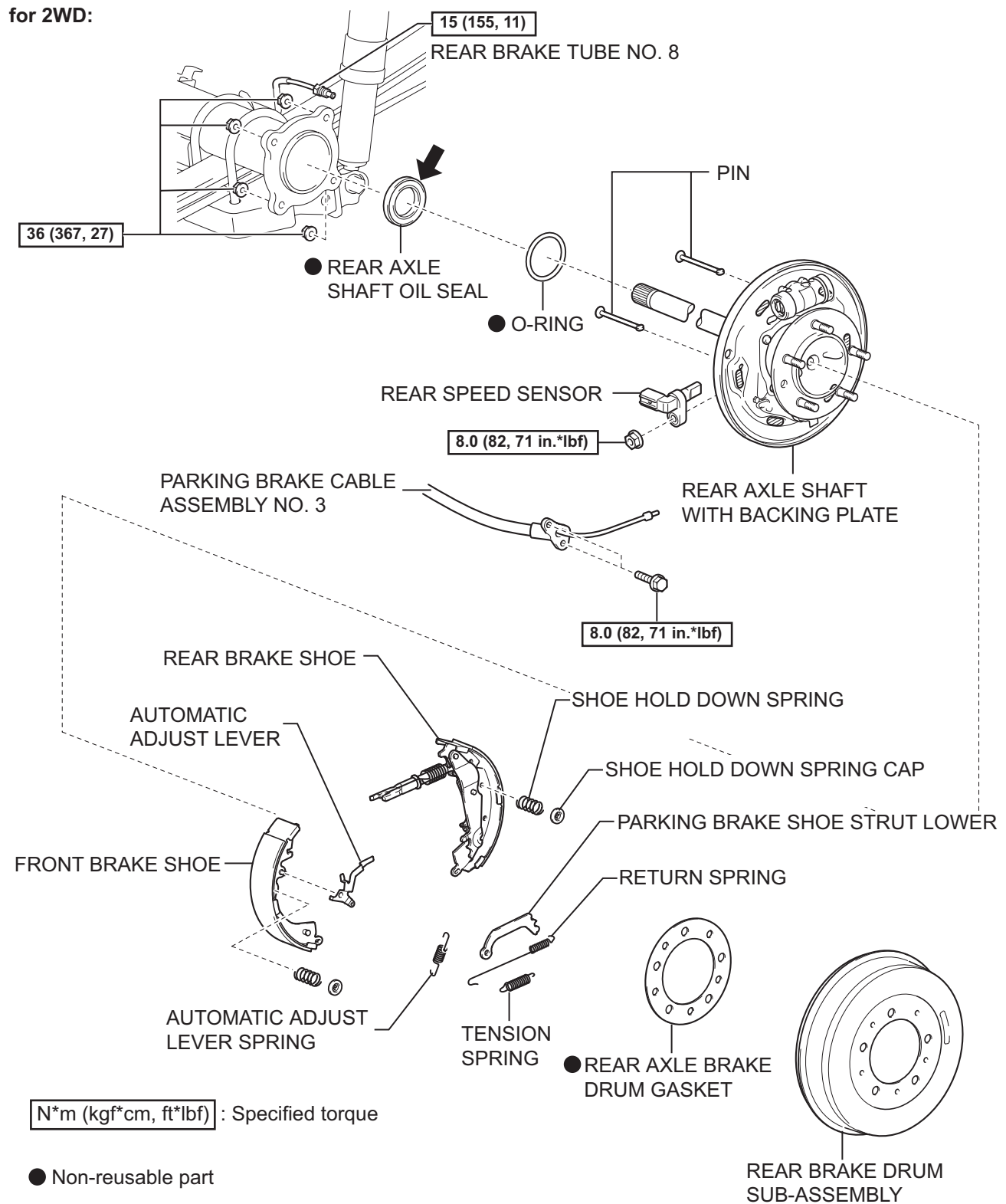
1. INSTALL REAR AXLE HUB BOLT
 - (a) Install a new hub bolt through the axle hub.
 - (b) Install the washer plate, as shown in the illustration, through the hub bolt, and install the hub bolt by tightening the hub nut.
2. APPLY HIGH TEMPERATURE GREASE (See page [BR-71](#))
3. INSTALL REAR BRAKE SHOE (See page [BR-71](#))
4. INSTALL FRONT BRAKE SHOE (See page [BR-72](#))
5. INSPECT REAR DRUM BRAKE INSTALLATION (See page [BR-73](#))
6. INSTALL REAR BRAKE DRUM SUB-ASSEMBLY (See page [BR-73](#))
7. ADJUST REAR DRUM BRAKE SHOE CLEARANCE (See page [BR-74](#))
8. INSTALL REAR WHEEL
Torque: 113 N*m (1,152 kgf*cm, 83 ft.*lbf)

9. INSPECT PARKING BRAKE PEDAL TRAVEL (for Automatic Transmission) (See page [PB-1](#))
10. INSPECT PARKING BRAKE LEVER TRAVEL (for Manual Transmission) (See page [PB-1](#))
11. ADJUST PARKING BRAKE PEDAL TRAVEL (for Automatic Transmission) (See page [PB-2](#))
12. ADJUST PARKING BRAKE LEVER TRAVEL (for Manual Transmission) (See page [PB-2](#))

REAR AXLE SHAFT

COMPONENTS

for 2WD:

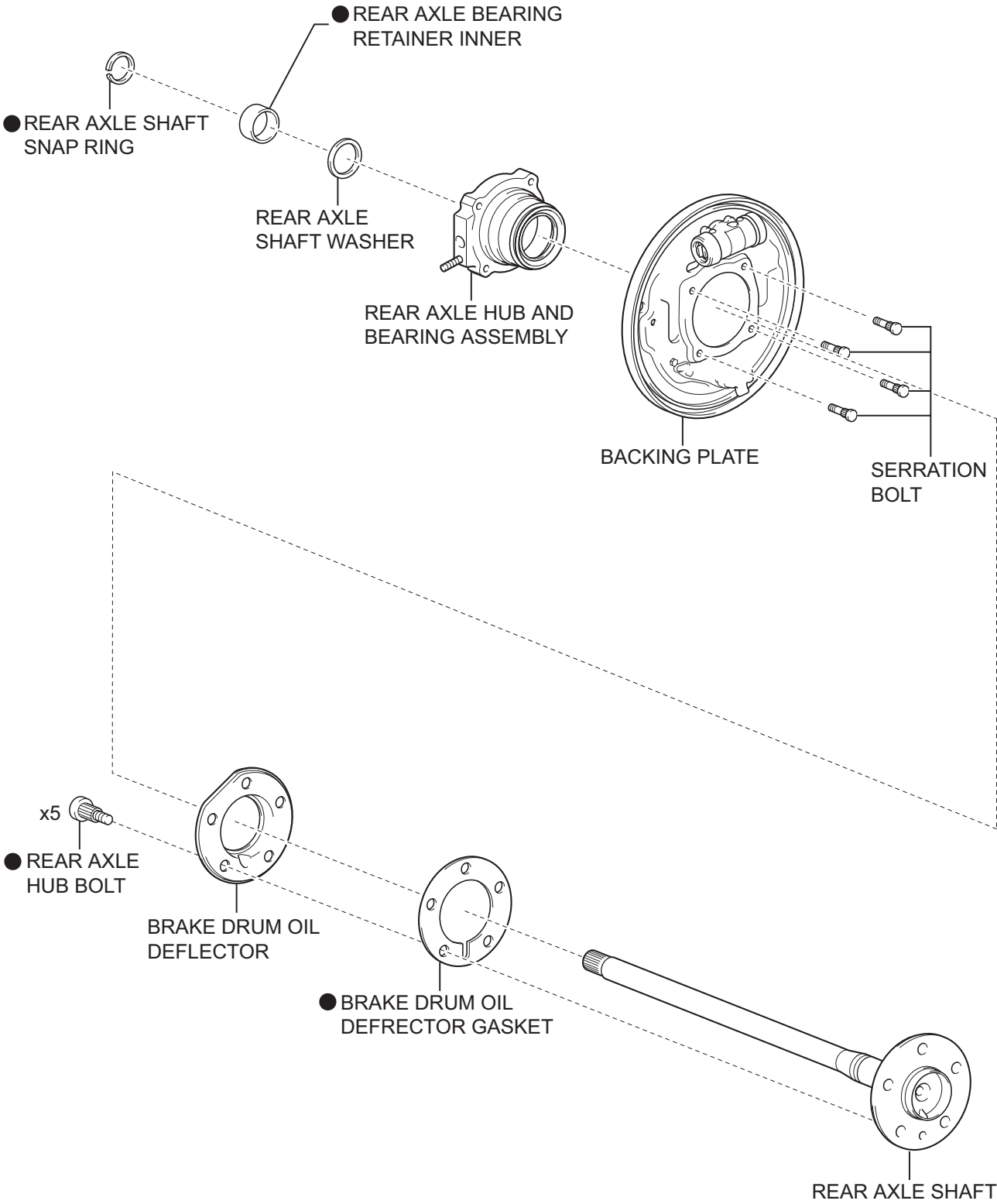


N*m (kgf*cm, ft*lbf) : Specified torque

● Non-reusable part

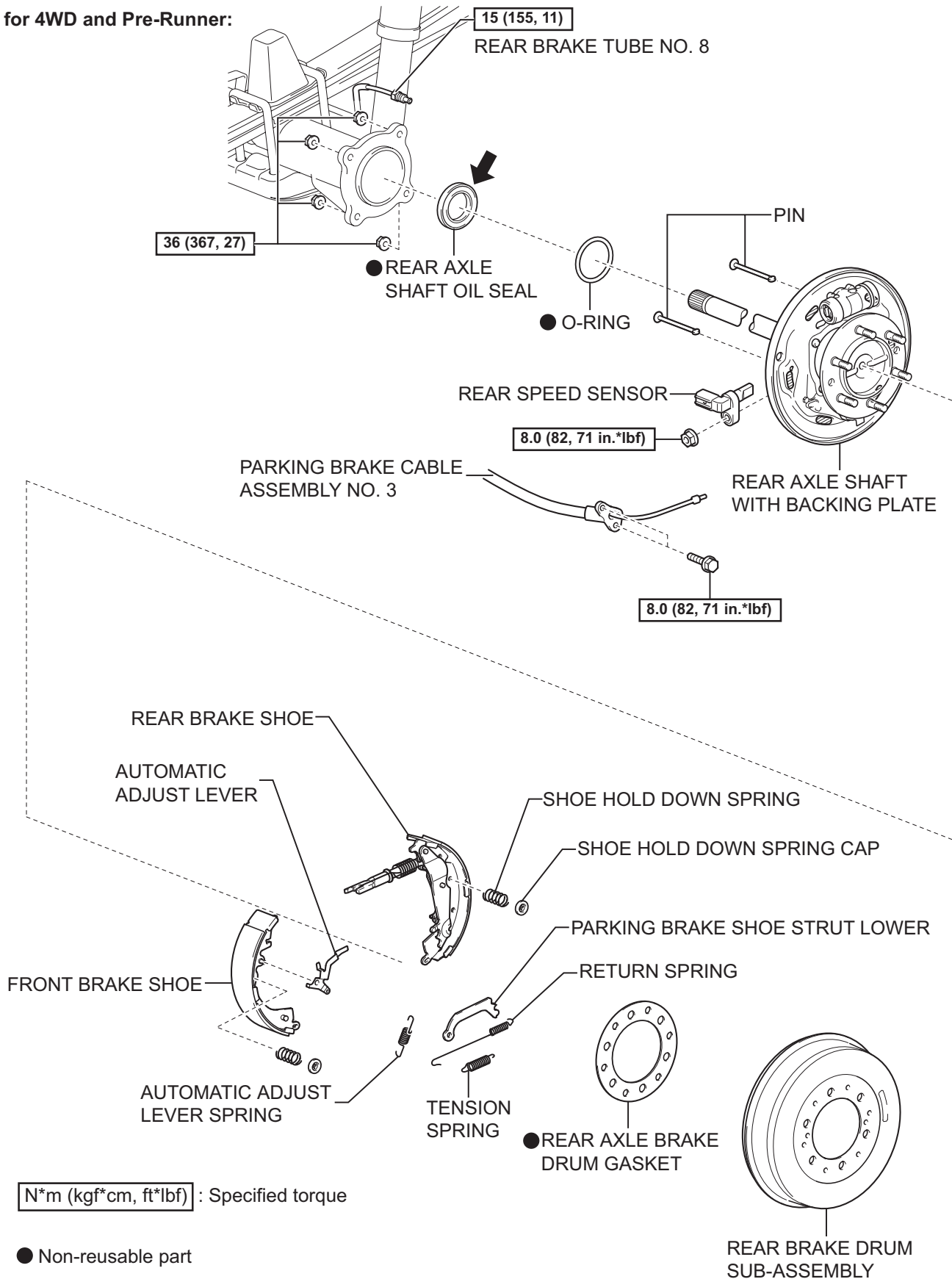
← Apply MP grease

for 2WD:



● Non-reusable part

for 4WD and Pre-Runner:

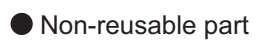


N*m (kgf*cm, ft*lbf) : Specified torque

● Non-reusable part

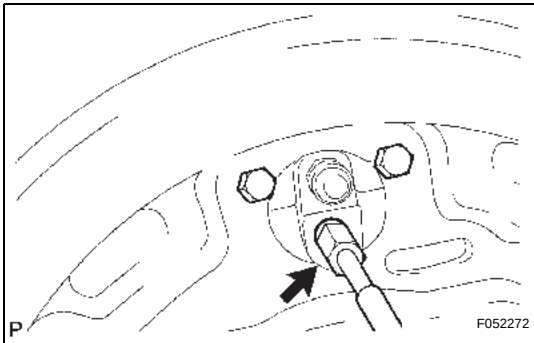
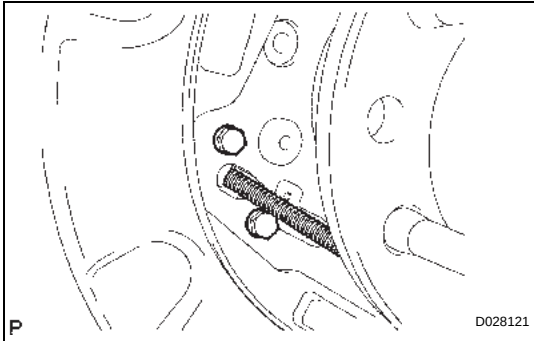
← Apply Mp grease

AH

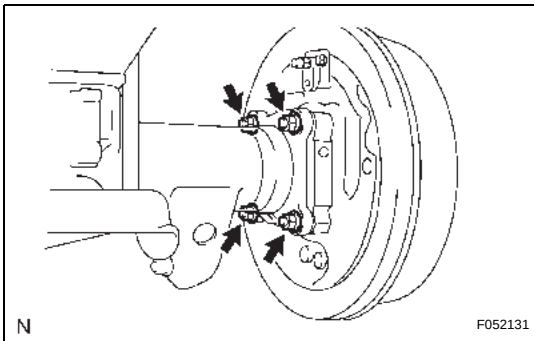


REMOVAL

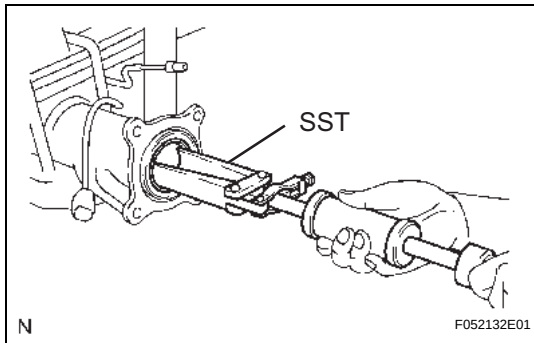
1. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL
2. REMOVE REAR WHEEL
3. DRAIN BRAKE FLUID
4. REMOVE REAR BRAKE DRUM SUB-ASSEMBLY (See page [BR-68](#))
5. REMOVE FRONT BRAKE SHOE (See page [BR-68](#))
6. REMOVE REAR BRAKE SHOE (See page [BR-69](#))
7. REMOVE REAR SPEED SENSOR (See page [BC-304](#))
8. SEPARATE PARKING BRAKE CABLE ASSEMBLY NO. 3
 - (a) Remove the 2 bolts and disconnect the parking brake cable from the backing plate.



9. SEPARATE REAR BRAKE TUBE NO. 8
 - (a) Using SST, separate the brake tube, and use a container to catch the brake fluid as it flows out.
SST 09023-00101



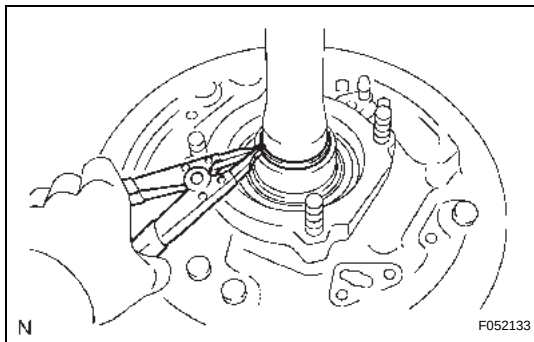
10. REMOVE REAR AXLE SHAFT WITH BACKING PLATE
 - (a) Remove the 4 nuts and rear axle shaft with backing plate.
 - (b) Remove the O-ring.



11. REMOVE REAR AXLE SHAFT OIL SEAL

- (a) Using SST, remove the oil seal.

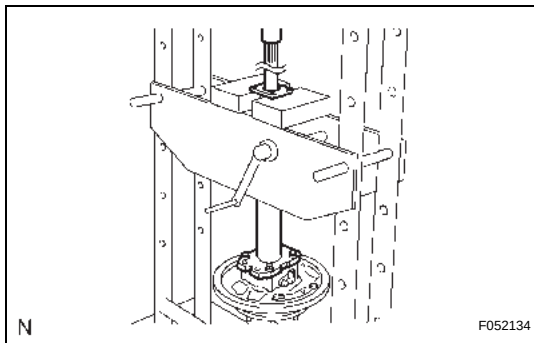
SST 09308-00010



DISASSEMBLY

1. REMOVE REAR AXLE SHAFT SNAP RING

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



2. REMOVE REAR AXLE SHAFT

- (a) Using SST and press, remove the rear axle shaft.

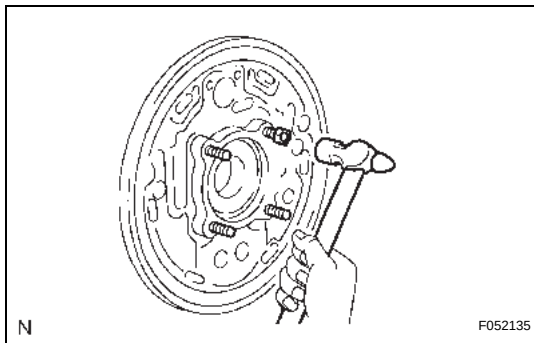
SST 09521-25011, 09521-25021

3. REMOVE REAR AXLE BEARING RETAINER INNER

- (a) Remove the rear axle bearing retainer inner from the rear axle bearing.

4. REMOVE REAR AXLE SHAFT WASHER

- (a) Remove the rear axle shaft washer from the rear axle bearing.

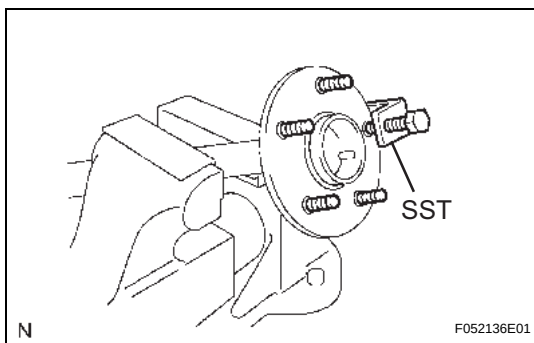


5. REMOVE REAR AXLE HUB AND BEARING ASSEMBLY

- (a) Attach the 4 nuts to the rear axle housing bolts.
 (b) Using a hammer, remove the 4 rear axle housing bolts and rear axle bearing.

NOTICE:

Do not reuse the nuts previously removed from the vehicle.



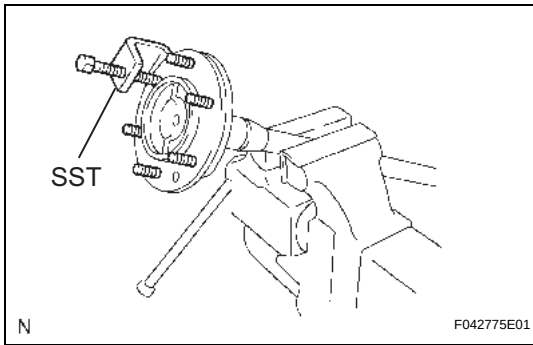
6. REMOVE REAR AXLE HUB BOLT

- (a) for 2WD:

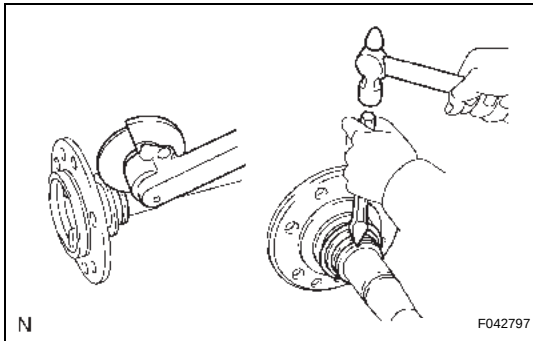
- (1) Using SST, remove the 5 hub bolts.

SST 09650-17011

- (b) Remove the deflector and deflector gasket from the rear axle shaft.

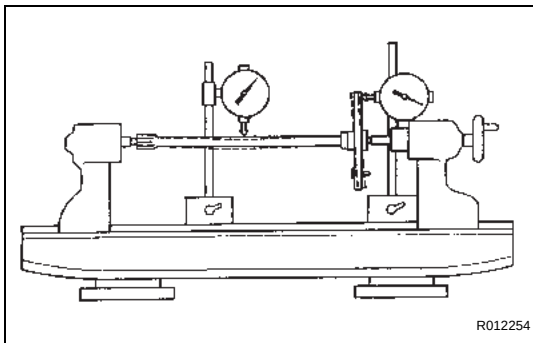


- (c) for 4WD and Pre-Runner:
 - (1) Using SST, remove the 6 hub bolts.
SST 09650-17011
- (d) Remove the deflector and deflector gasket from the rear axle shaft.



7. REMOVE REAR AXLE BEARING OIL SEAL

- (a) Grind the rear axle bearing inner race surface using a grinder, and then chisel them out with a chisel.
- (b) Remove the rear axle shaft oil seal from the rear axle shaft.



INSPECTION

1. INSPECT REAR AXLE SHAFT

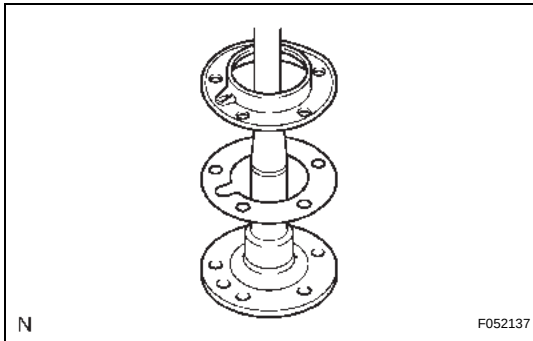
- (a) Using a dial indicator, measure the runout of the shaft and flange.

Maximum runout:

Shaft runout: 1.5 mm (0.0591 in.)

Flange runout: 0.05 mm (0.0020 in.)

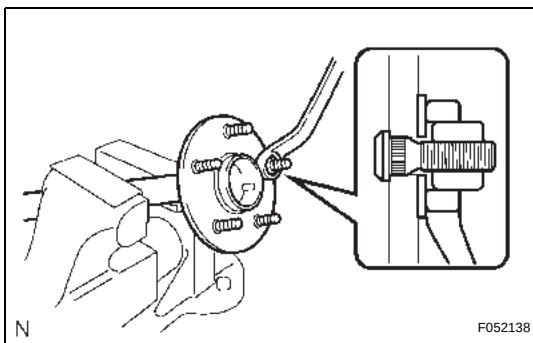
If the rear axle shaft or flange is damaged or worn, or the runout is greater than the maximum, replace the rear axle shaft.

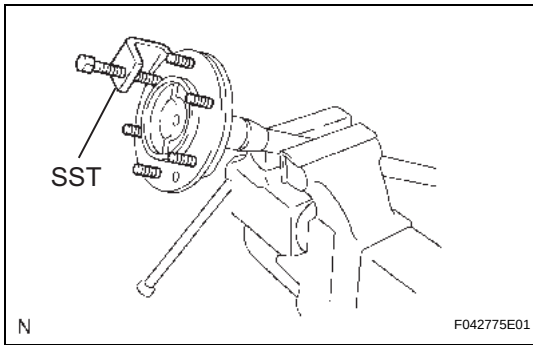


REASSEMBLY

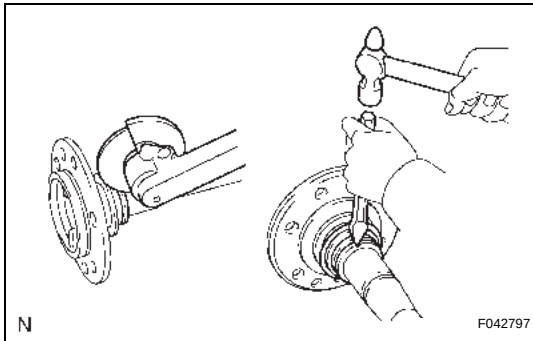
1. INSTALL REAR AXLE HUB BOLT

- (a) for 2WD:
 - (1) Install a new deflector gasket and deflector onto the rear axle shaft.
HINT:
Make sure that the deflector and deflector gasket are installed in the correct direction shown in the illustration.
 - (2) Install the 5 bolts through the axle hub.
 - (3) Install a washer plate, as shown in the illustration, through the hub bolt, and install the hub bolt by tightening the hub nut.



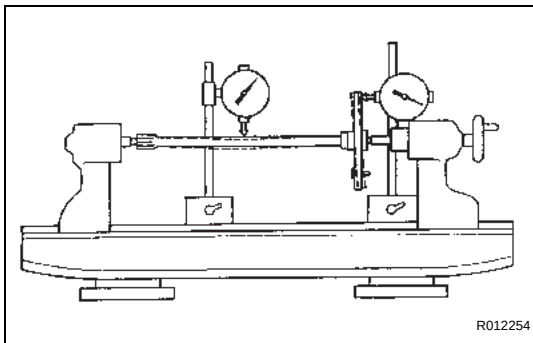


- (c) for 4WD and Pre-Runner:
 - (1) Using SST, remove the 6 hub bolts.
SST 09650-17011
- (d) Remove the deflector and deflector gasket from the rear axle shaft.



7. REMOVE REAR AXLE BEARING OIL SEAL

- (a) Grind the rear axle bearing inner race surface using a grinder, and then chisel them out with a chisel.
- (b) Remove the rear axle shaft oil seal from the rear axle shaft.



INSPECTION

1. INSPECT REAR AXLE SHAFT

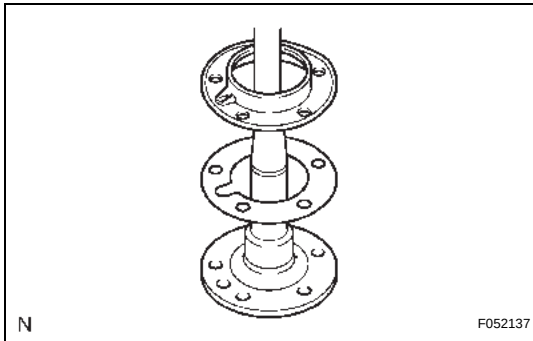
- (a) Using a dial indicator, measure the runout of the shaft and flange.

Maximum runout:

Shaft runout: 1.5 mm (0.0591 in.)

Flange runout: 0.05 mm (0.0020 in.)

If the rear axle shaft or flange is damaged or worn, or the runout is greater than the maximum, replace the rear axle shaft.



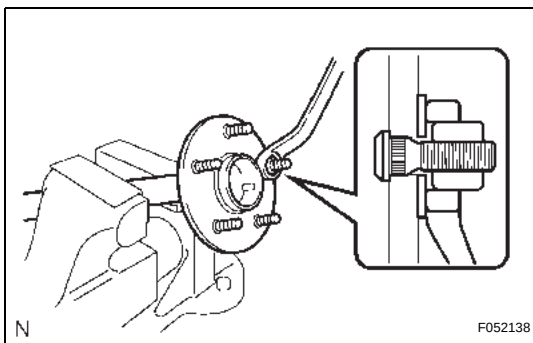
REASSEMBLY

1. INSTALL REAR AXLE HUB BOLT

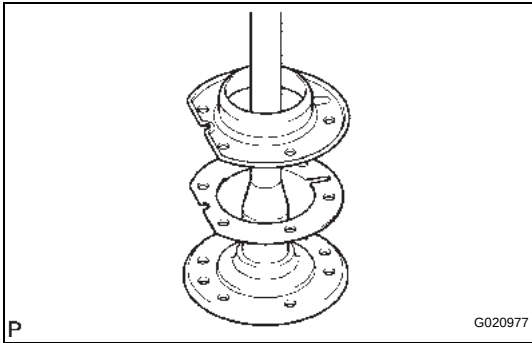
- (a) for 2WD:
 - (1) Install a new deflector gasket and deflector onto the rear axle shaft.

HINT:

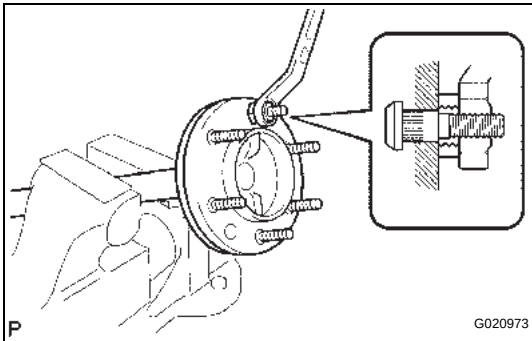
Make sure that the deflector and deflector gasket are installed in the correct direction shown in the illustration.



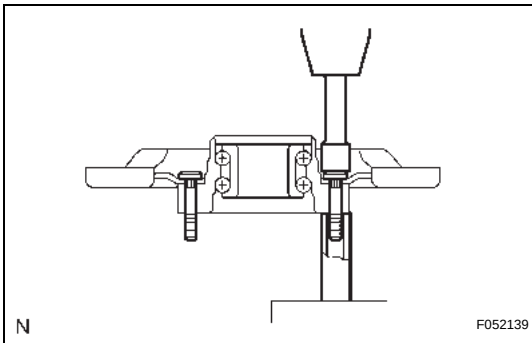
- (2) Install the 5 bolts through the axle hub.
- (3) Install a washer plate, as shown in the illustration, through the hub bolt, and install the hub bolt by tightening the hub nut.



- (b) for 4WD and Pre-Runner:
 (1) Install a new deflector gasket and deflector onto the rear axle shaft.
 HINT:
 Align the 2 notches.



- (2) Install the 6 bolts through the axle hub.
 (3) Install the washer plate, as shown in the illustration, through the hub bolt, and install the hub bolt by tightening the hub nut.



2. INSTALL REAR AXLE HUB AND BEARING ASSEMBLY

- (a) Position the backing plate on the rear axle bearing, and install the 4 parking brake plates onto the rear axle housing bolts using 2 socket wrenches and a press.

3. INSTALL REAR AXLE SHAFT WASHER

- (a) Install the rear axle shaft plate washer onto the rear axle shaft.

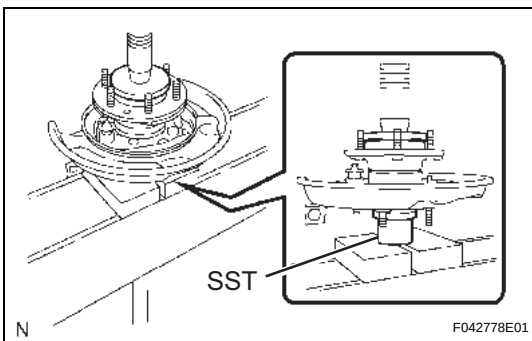
4. INSTALL REAR AXLE BEARING RETAINER INNER

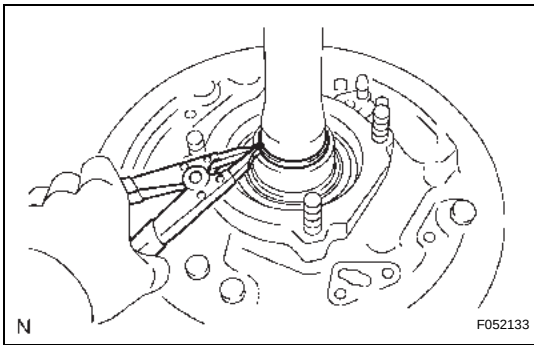
- (a) Install a new rear axle bearing retainer inner onto the rear axle shaft.

5. INSTALL REAR AXLE SHAFT

- (a) Using SST and a press, install the rear axle shaft onto the rear axle bearing.

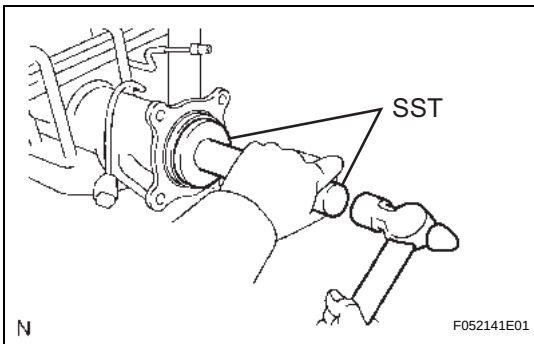
SST 09521-25011





6. INSTALL REAR AXLE SHAFT SNAP RING

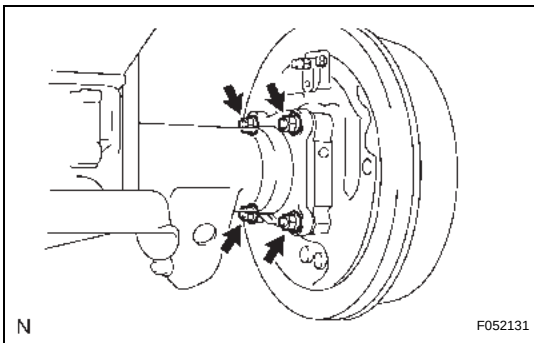
- (a) Using a snap ring expander, install a new snap ring.



INSTALLATION

1. INSTALL REAR AXLE SHAFT OIL SEAL

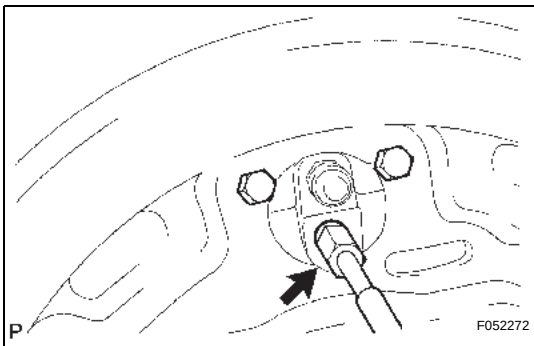
- (a) Using SST and a hammer, install a new oil seal.
SST 09950-60020 (09951-00770), 09950-70010 (09951-07150)



2. INSTALL REAR AXLE SHAFT WITH BACKING PLATE

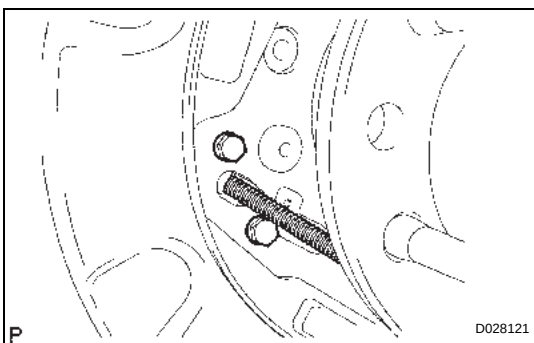
- (a) Install a new O-ring.
 (b) Install the rear axle shaft with backing plate with the 4 nuts.

Torque: 36 N*m (367 kgf*cm, 27 ft.*lbf)



3. INSTALL REAR BRAKE TUBE NO. 8

- (a) Using SST, connect the brake tube.
SST 09023-00101
Torque: 15 N*m (155 kgf*cm, 11 ft.*lbf)



4. INSTALL PARKING BRAKE CABLE ASSEMBLY NO. 3

- (a) Install the parking brake cable with the 2 bolts onto the backing plate.
Torque: 8.0 N*m (82 kgf*cm, 71 in.*lbf)

5. INSTALL REAR SPEED SENSOR (See page [BC-304](#))

6. APPLY HIGH TEMPERATURE GREASE (See page [BR-71](#))

7. INSTALL REAR BRAKE SHOE (See page [BR-71](#))

8. INSTALL FRONT BRAKE SHOE (See page [BR-72](#))

9. INSPECT REAR DRUM BRAKE INSTALLATION (See page [BR-73](#))
10. INSTALL REAR BRAKE DRUM SUB-ASSEMBLY (See page [BR-73](#))
11. ADJUST REAR DRUM BRAKE SHOE CLEARANCE (See page [BR-74](#))
12. INSTALL REAR WHEEL
Torque: 113 N*m (1,152 kgf*cm, 83 ft.*lbf)
13. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL
Torque: 3.9 N*m (40 kgf*cm, 35 in.*lbf)
(See page [IN-5](#))
14. FILL RESERVOIR WITH BRAKE FLUID (w/ VSC) (See page [BR-4](#))
15. FILL RESERVOIR WITH BRAKE FLUID (w/o VSC) (See page [BR-7](#))
16. BLEED MASTER CYLINDER (w/o VSC) (See page [BR-7](#))
17. BLEED BRAKE LINE (w/ VSC) (See page [BR-4](#))
18. BLEED BRAKE LINE (w/o VSC) (See page [BR-7](#))
19. CHECK FLUID LEVEL IN RESERVOIR (w/ VSC) (See page [BR-6](#))
20. CHECK FLUID LEVEL IN RESERVOIR (w/o VSC) (See page [BR-8](#))
21. CHECK FOR BRAKE FLUID LEAKAGE
22. INSPECT PARKING BRAKE PEDAL TRAVEL (for Automatic Transmission) (See page [PB-1](#))
23. INSPECT PARKING BRAKE LEVER TRAVEL (for Manual Transmission) (See page [PB-1](#))
24. ADJUST PARKING BRAKE PEDAL TRAVEL (for Automatic Transmission) (See page [PB-2](#))
25. ADJUST PARKING BRAKE LEVER TRAVEL (for Manual Transmission) (See page [PB-2](#))
26. CHECK VSC SENSOR SIGNAL (w/ VSC)
(See page [BC-103](#))
27. CHECK ABS SENSOR SIGNAL (w/o VSC)
(See page [BC-7](#))