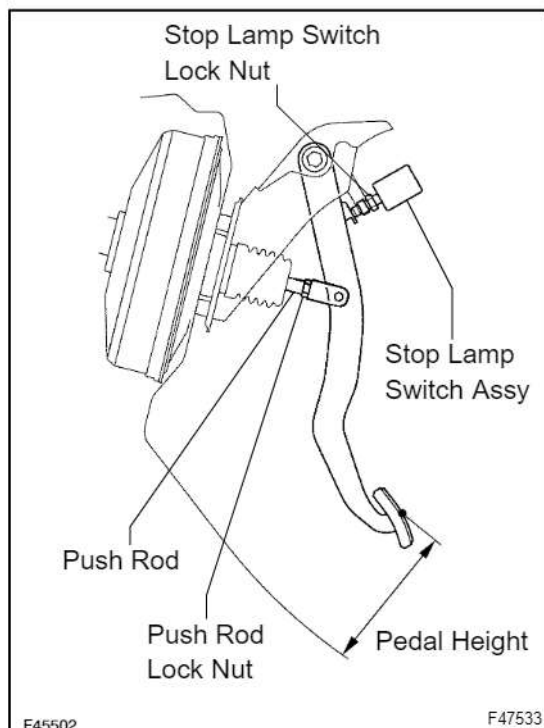


# BRAKE PEDAL SUB-ASSY ADJUSTMENT

3203C-05



## 1. CHECK AND ADJUST BRAKE PEDAL HEIGHT

- (a) Check brake pedal height.

**Pedal height from asphalt sheet:**

**150 to 160 mm (5.906 to 6.299 in.)**

- (b) Adjust brake pedal height.

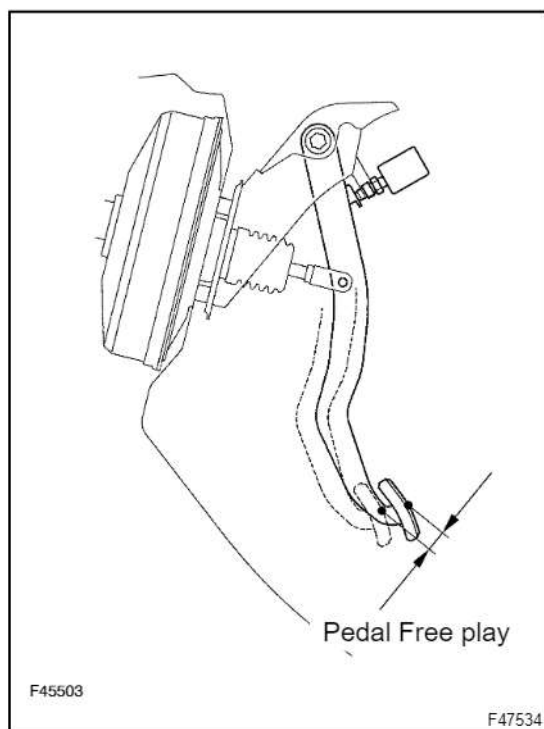
- (1) Disconnect the connector from the stop lamp switch assy.
- (2) Loosen the stop lamp switch lock nut and remove the stop lamp switch assy.
- (3) Loosen the push rod lock nut.
- (4) Adjust the pedal height by turning the pedal push rod.
- (5) Tighten the push rod lock nut.

**Torque: 26 N·m (265 kgf·cm, 19 ft·lbf)**

- (6) Install the stop lamp switch assy.
- (7) Connect the connector to the stop lamp switch assy.
- (8) Push the brake pedal in 5 to 10 mm (0.20 to 0.39 in.) and turn the stop lamp switch assy to lock the nut in the position where the stop lamp goes off.
- (9) After installation, push the brake pedal in 5 to 10 mm (0.20 to 0.39 in.), and check that the stop lamp comes on.

- (10) Tighten the stop lamp switch lock nut.

**Torque: 17 N·m (173 kgf·cm, 13 ft·lbf)**



## 2. CHECK PEDAL FREE PLAY

- (a) Stop the engine and depress the brake pedal several times until no vacuum remains in the booster.
- (b) Press the pedal until resistance is felt. Measure the distance as shown in the illustration.

**Pedal free play: 2.0 to 3.0 mm (0.079 to 0.118 in.)**

If incorrect, proceed to the following step.

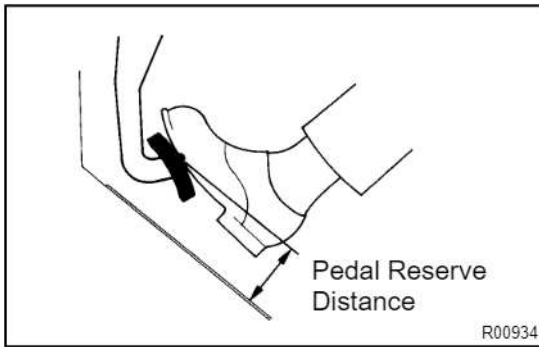
- (1) Check the stop lamp switch clearance.

**Stop lamp switch clearance:**

**0.5 to 2.6 mm (0.020 to 0.102 in.)**

If the clearance is OK, then troubleshoot the brake system.

If incorrect, adjust the stop lamp switch clearance.



### 3. CHECK PEDAL RESERVE DISTANCE

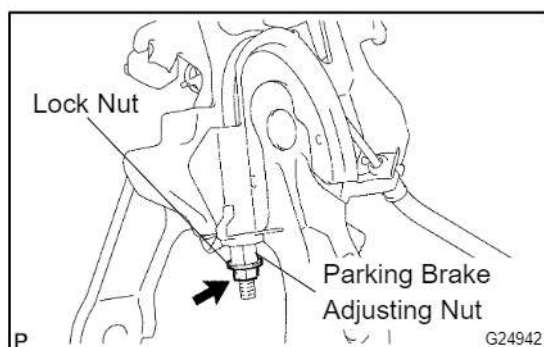
- (a) Release the parking brake pedal.
- (b) With engine running, depress the pedal and measure the pedal reserve distance, as shown in the illustration.

**Pedal reserve distance from asphalt sheet at 490 N (50 kgf, 110.2 lbf): More than 83 mm (3.3 in.)**

If incorrect, troubleshoot the brake system.

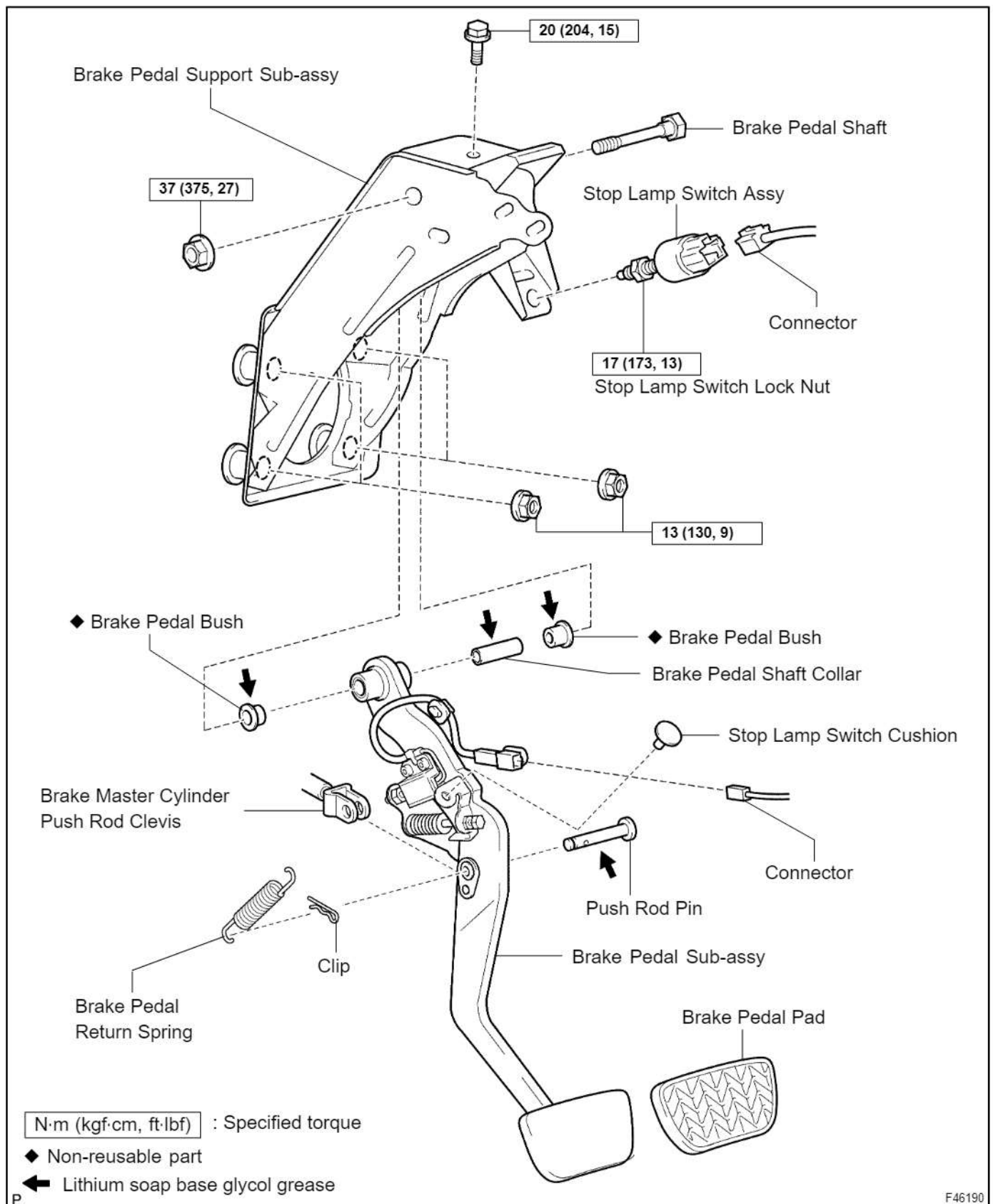
## ADJUSTMENT

1. REMOVE REAR WHEEL
2. ADJUST PARKING BRAKE SHOE CLEARANCE (SEE PAGE 33-19 )
3. INSTALL REAR WHEEL  
Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)
4. INSPECT PARKING BRAKE PEDAL TRAVEL
  - (a) Strongly step on the parking brake pedal.
  - (b) Release the parking brake.
  - (c) Once more, slowly depress the parking brake pedal all the way, and count the number of clicks.  
**Parking brake pedal travel: 5 to 7 clicks at 300 N (31 kgf, 67.46 lbf)**



5. ADJUST PARKING BRAKE PEDAL TRAVEL
  - (a) Remove the instrument panel finish panel sub-assy lower.(see page 71-10 )
  - (b) Remove the instrument PNL insert sub-assy LWR LH.(see page 71-10 )
  - (c) Depress the parking brake pedal 5 clicks to make room for the procedure, and loosen the lock nut with fixing adjusting nut by wrench.
  - (d) Release the parking brake pedal to the original position.
  - (e) Turn the parking brake wire adjusting nut until the parking brake pedal travel is correct.
  - (f) Using a spanner or equivalent to hold the parking brake adjusting nut, tighten the lock nut.  
**Torque: 6.0 N·m (61 kgf·cm, 53 in·lbf)**
  - (g) Count the number of clicks after depressing and canceling the parking brake pedal 3 to 4 times.
  - (h) Check whether the parking brake drags or not.
  - (i) When operating the parking brake pedal, check that the parking brake pedal indicator light is lit.

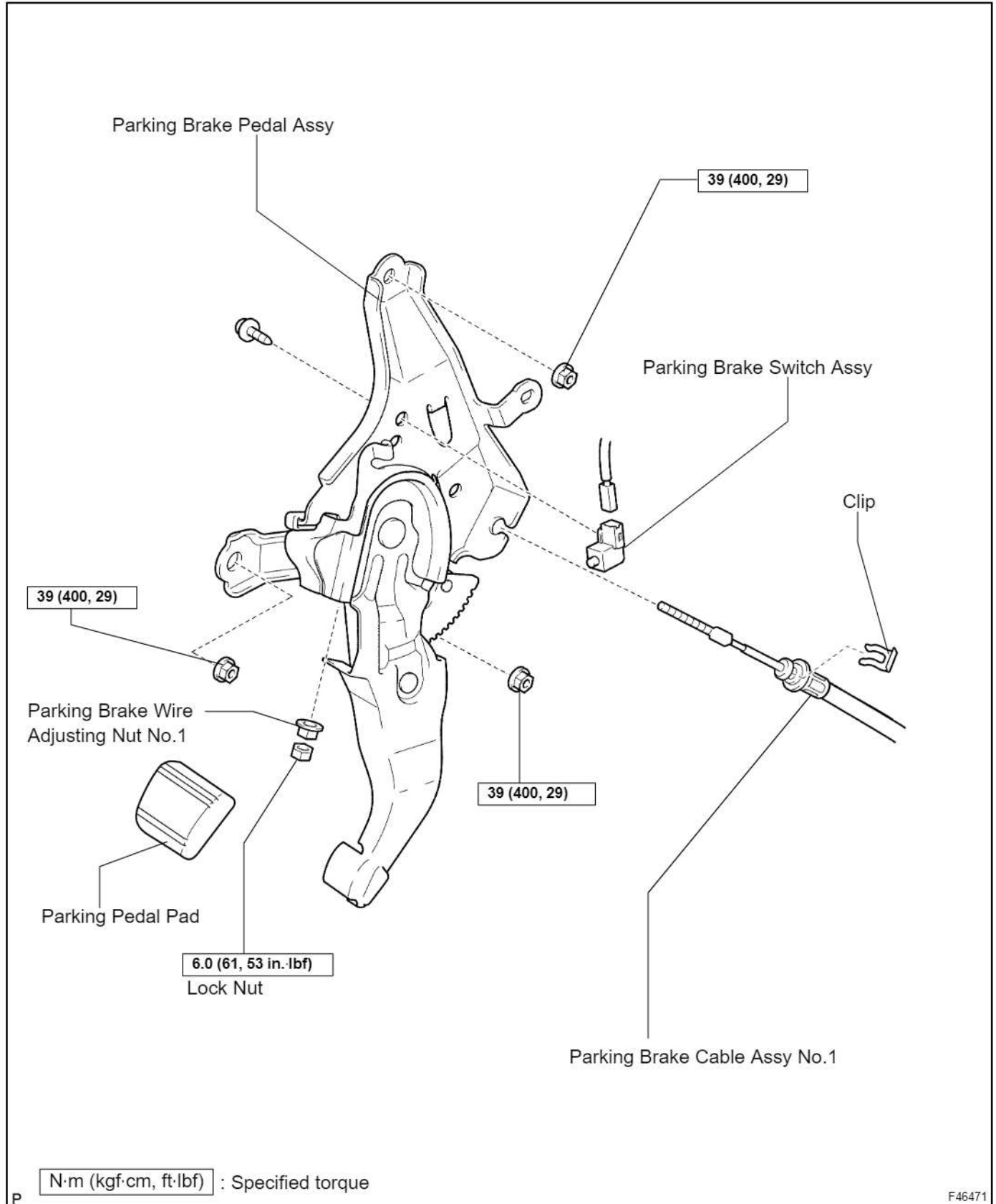
# COMPONENTS

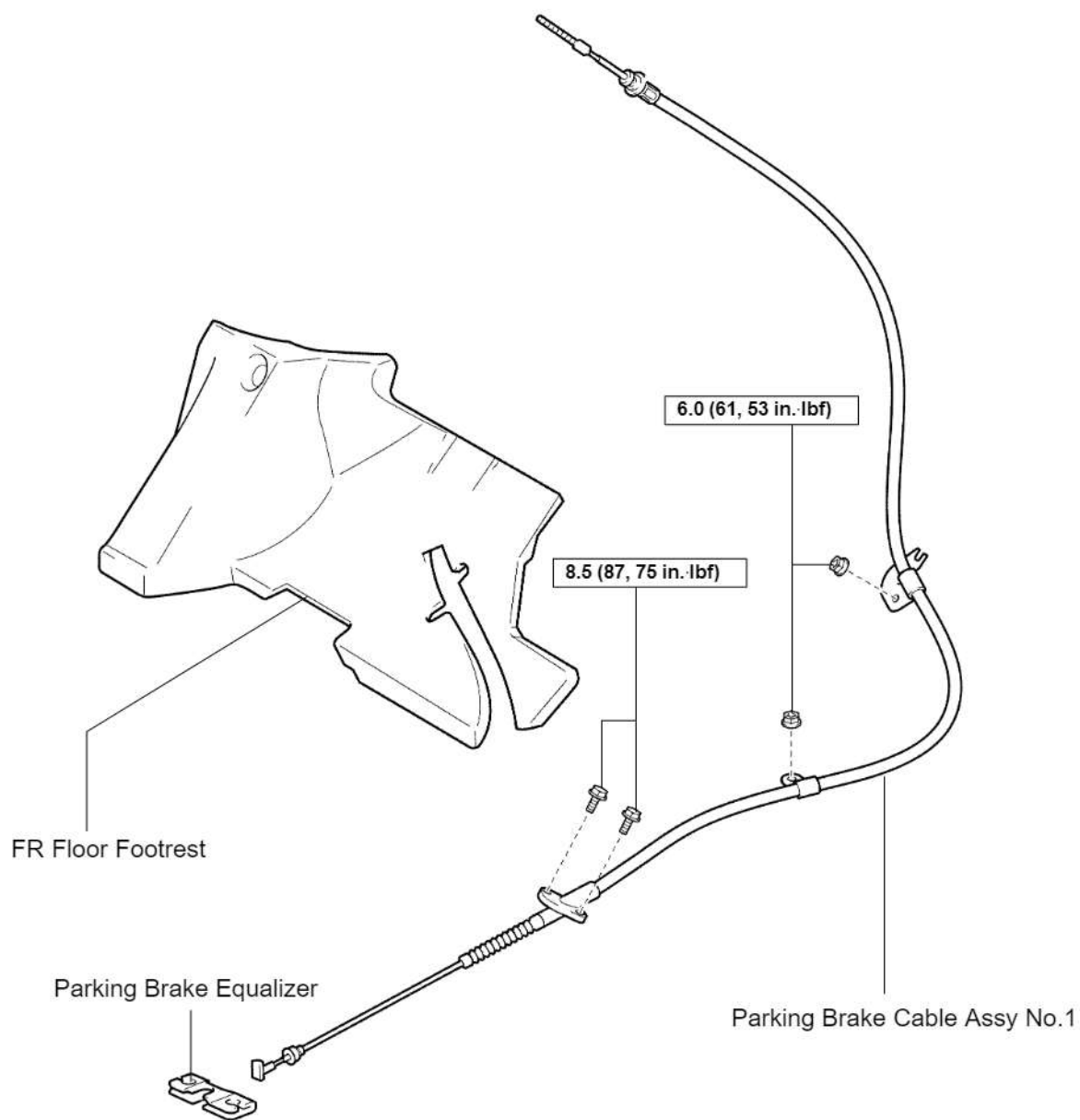


F46190

# PARKING BRAKE CONTROL PEDAL ASSY COMPONENTS

330CL-04



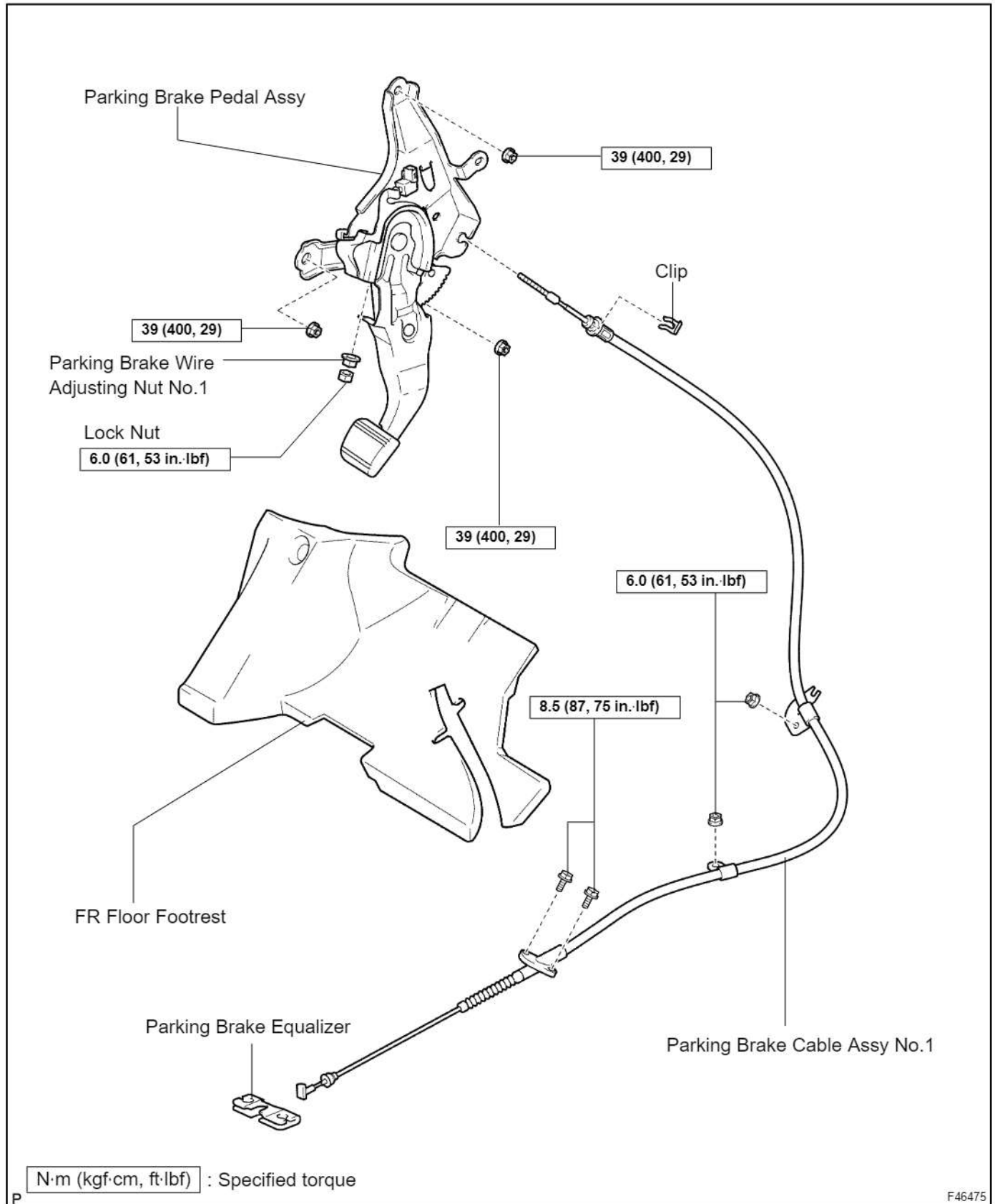


N·m (kgf·cm, ft·lbf) : Specified torque

F45547

# PARKING BRAKE CABLE ASSY NO.1 COMPONENTS

330CN-04

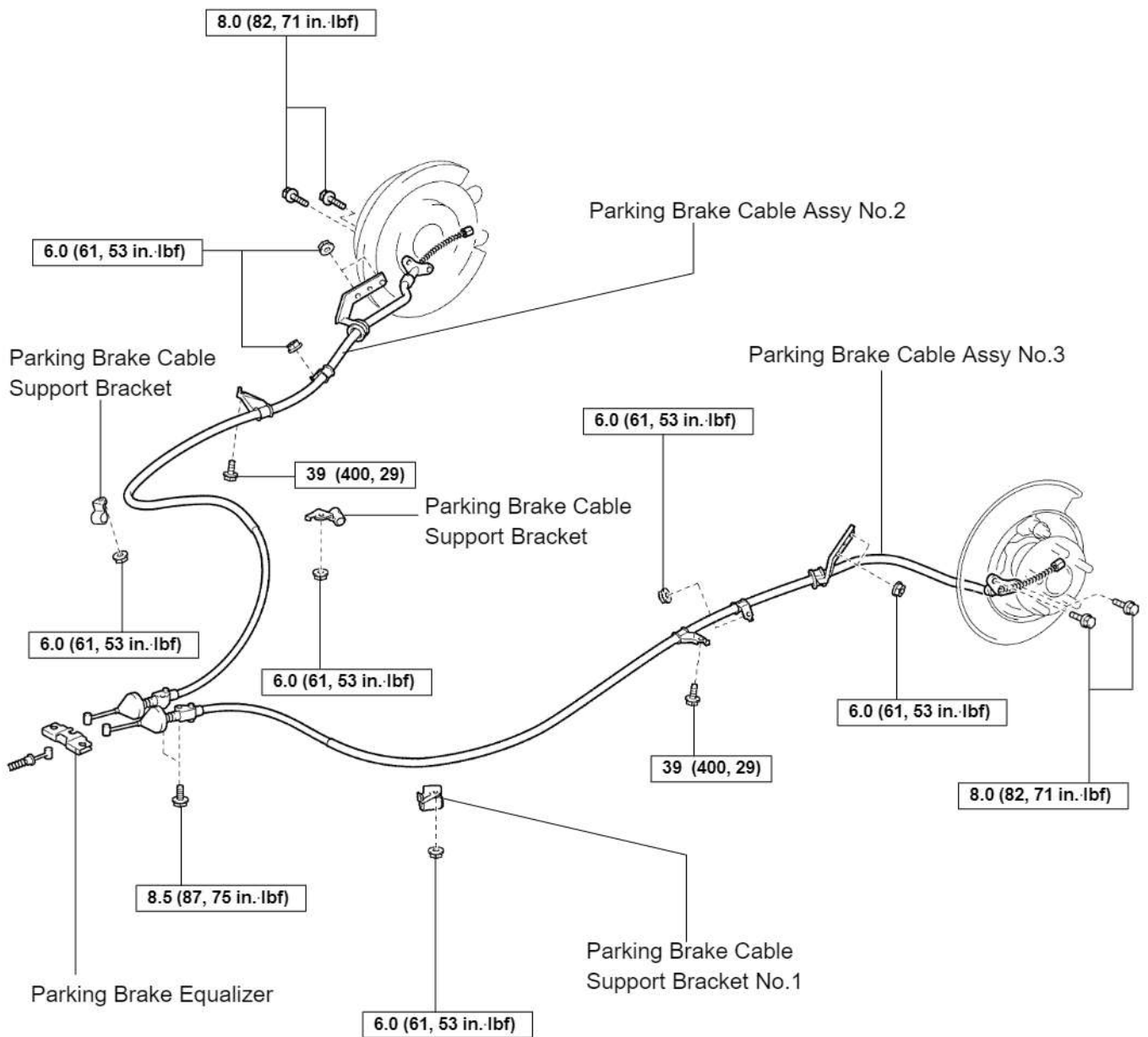


F46475

# PARKING BRAKE CABLE ASSY NO.3 COMPONENTS

330CP-04

FF:

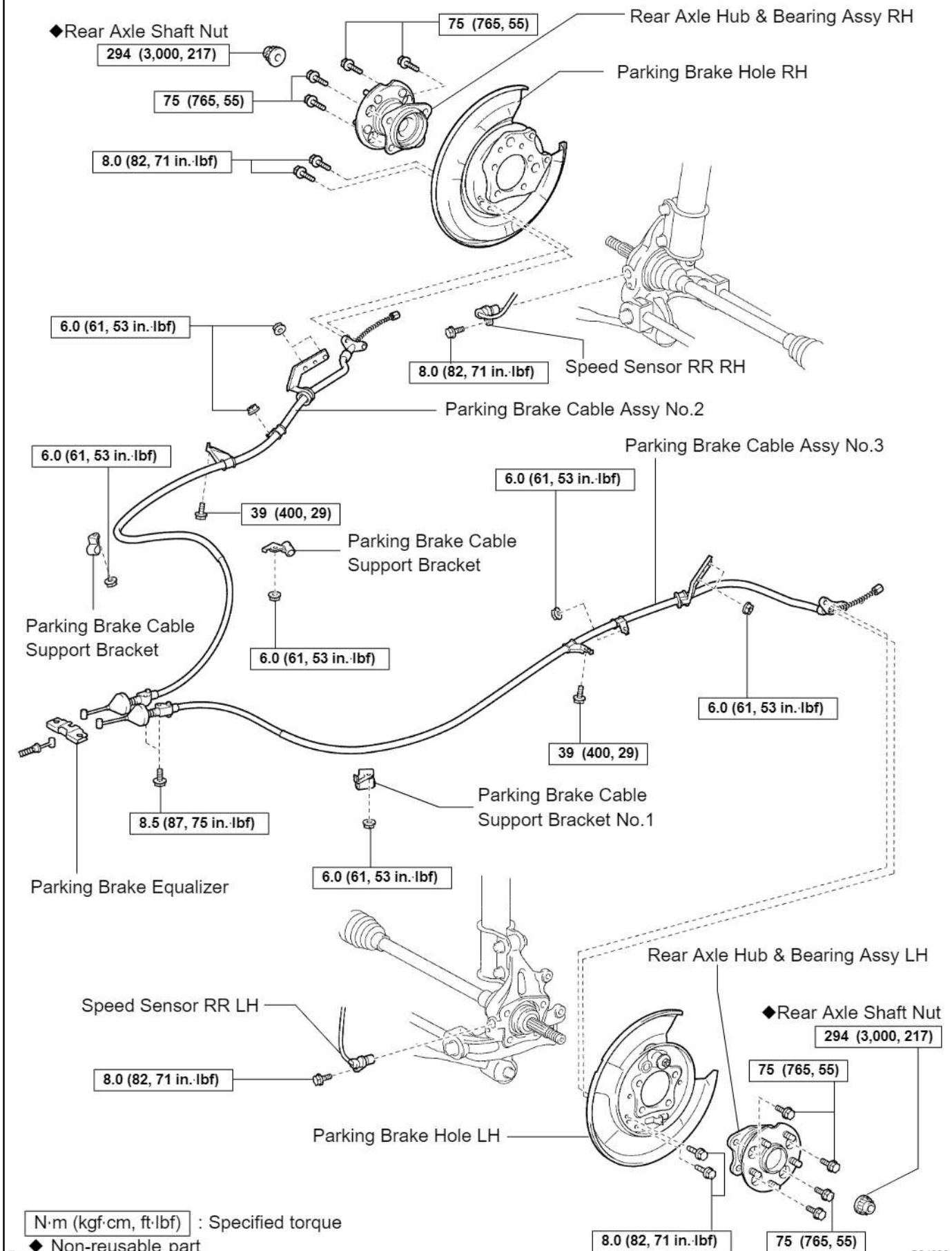


N·m (kgf·cm, ft·lbf) : Specified torque

P

G24937

## 4WD:

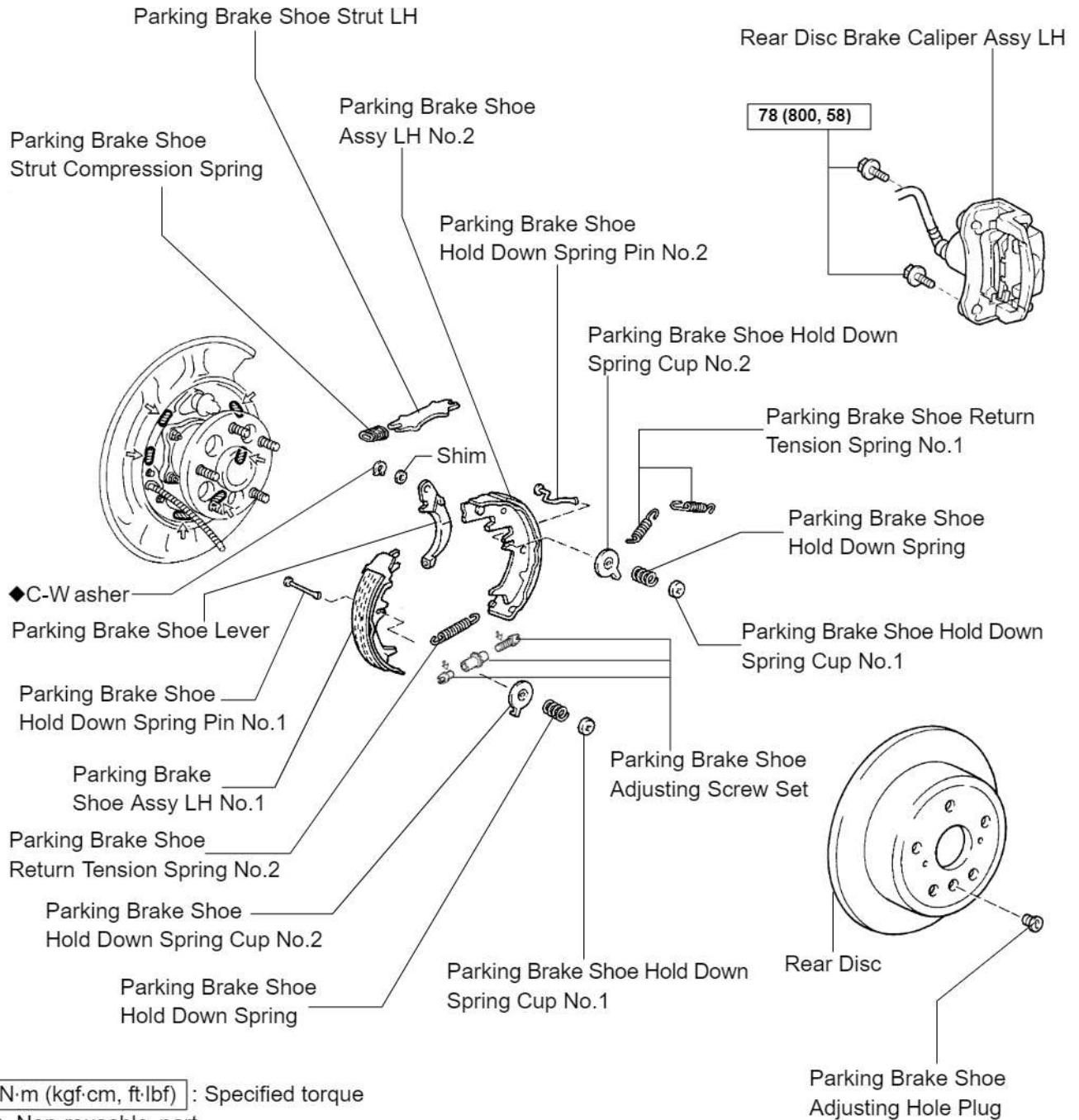


G24939

# PARKING BRAKE ASSY COMPONENTS

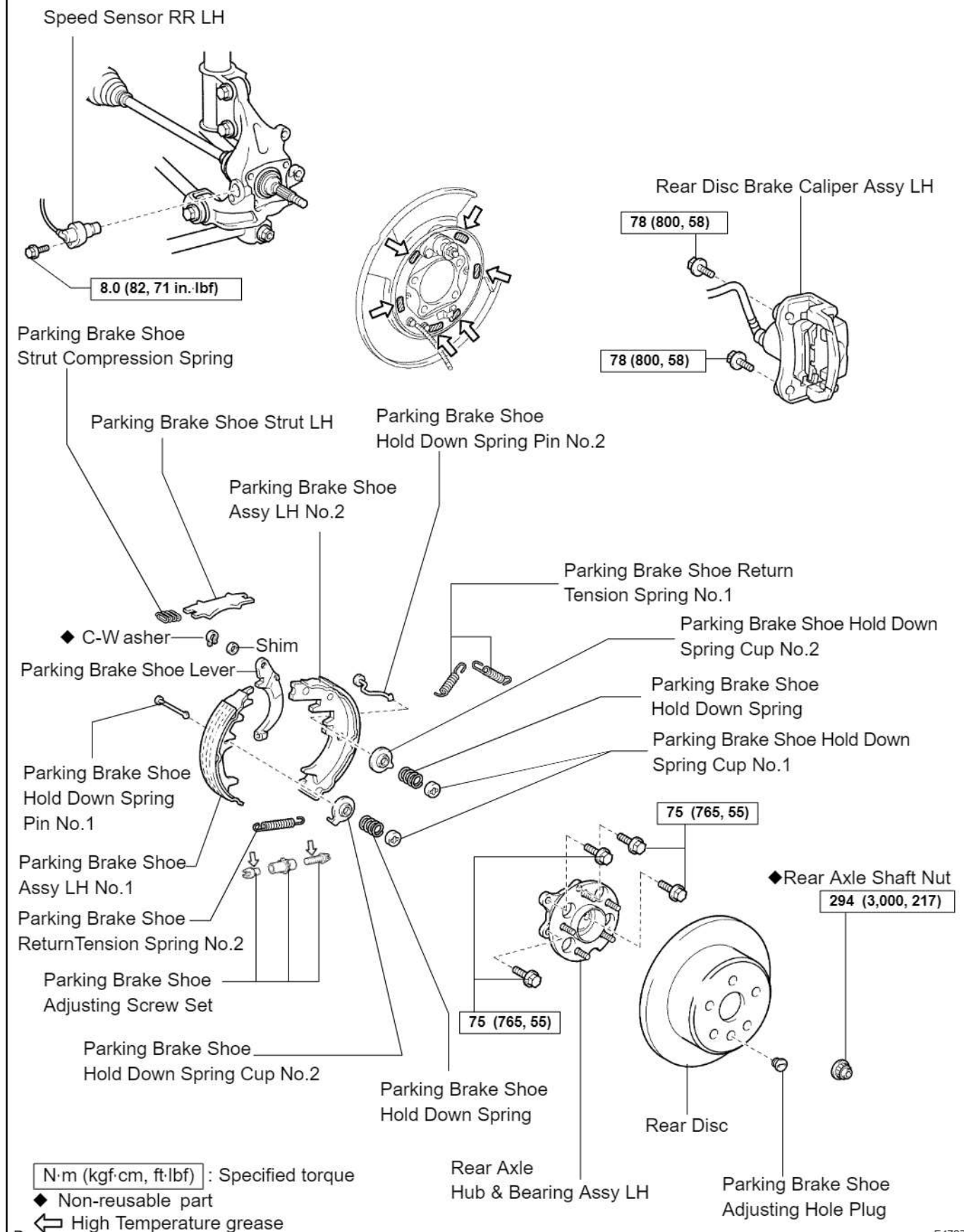
330CR-03

FF:



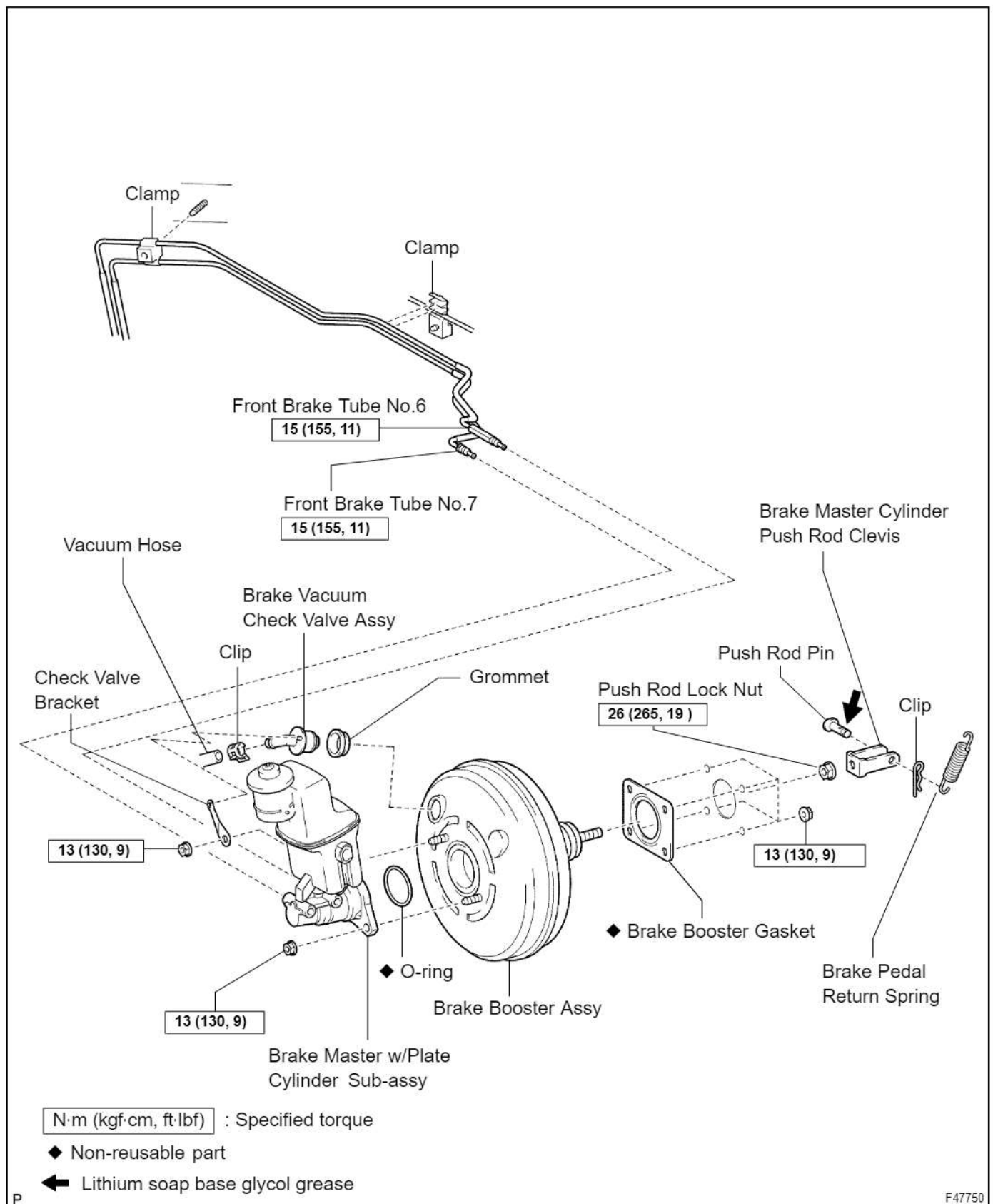
F47274

## 4WD:



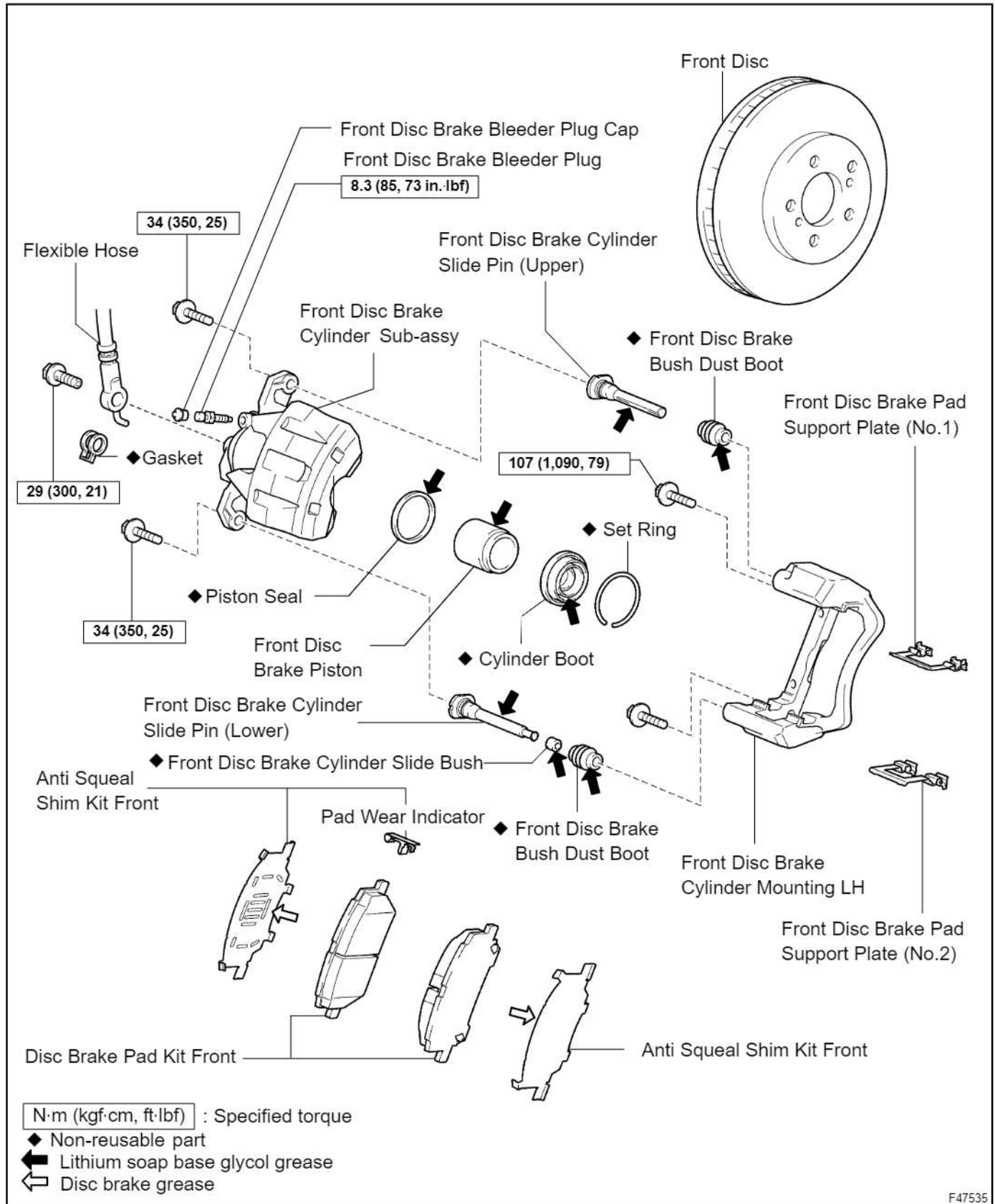
F47275

## COMPONENTS



# FRONT BRAKE COMPONENTS

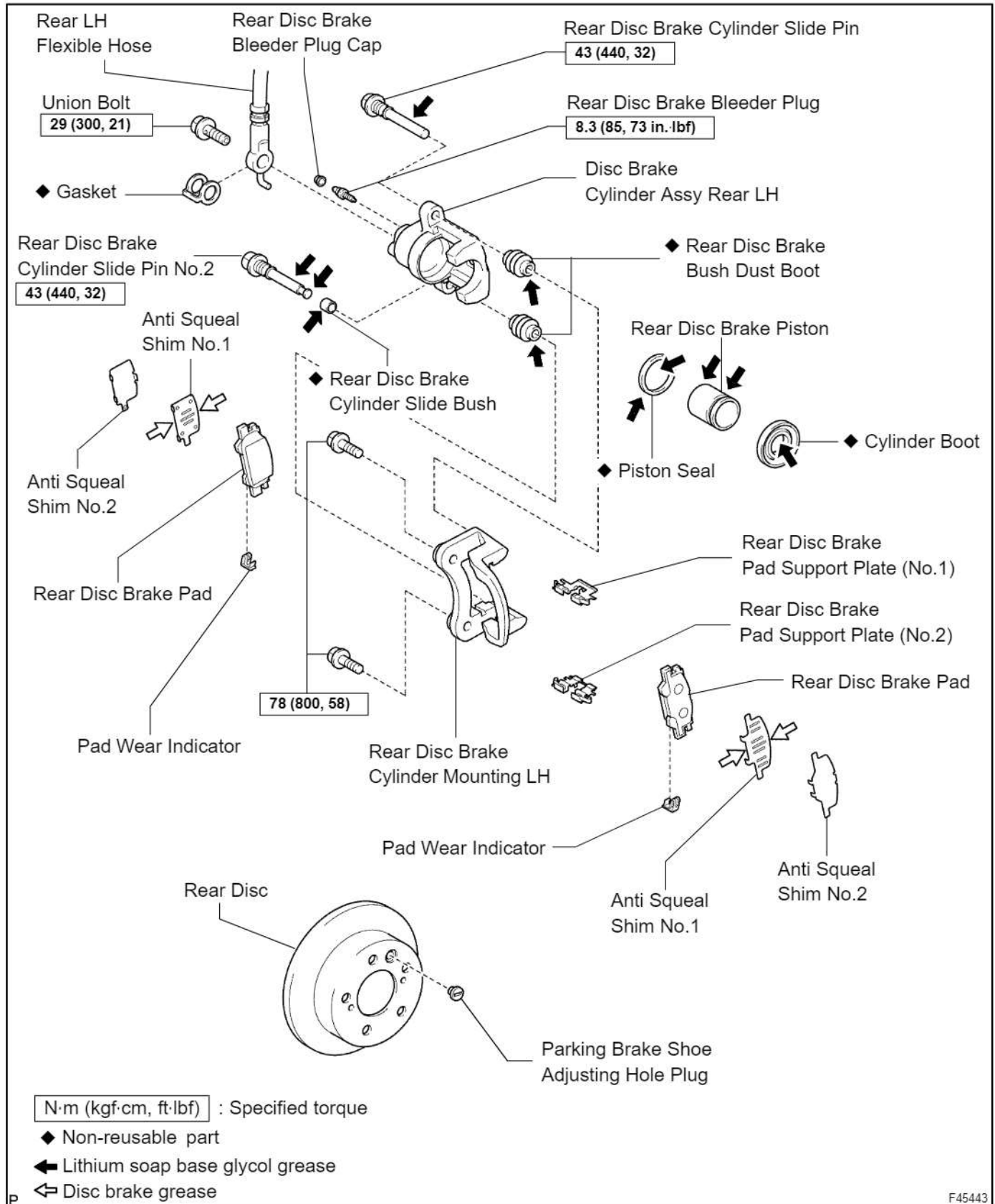
3215R-01



F47535

# REAR BRAKE COMPONENTS

320E7-05



F45443

# BRAKE FLUID

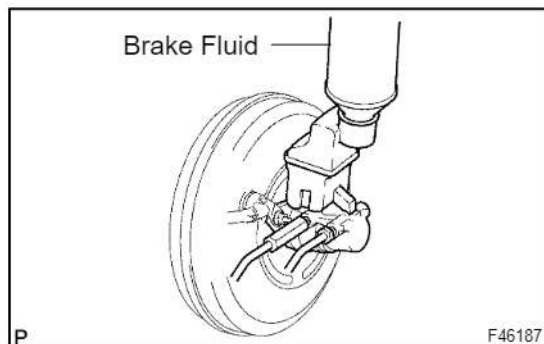
## BLEEDING

### HINT:

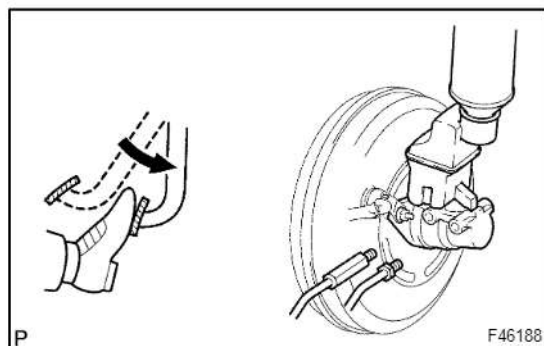
If any work is performed on the brake system or if air in the brake lines is suspected, bleed the air out of the brake system.

### NOTICE:

Wash brake fluid off immediately if it adheres to any painted surface.



1. **FILL RESERVOIR WITH BRAKE FLUID**  
Fluid: SAE J1703 or FMVSS No. 116 DOT3

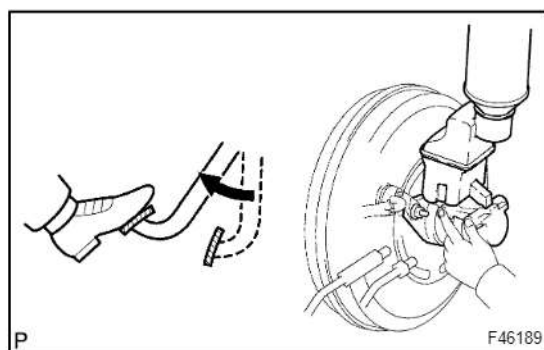


2. **BLEED MASTER CYLINDER**

### HINT:

If the master cylinder has been disassembled or if the reservoir becomes empty, bleed the air out of the master cylinder.

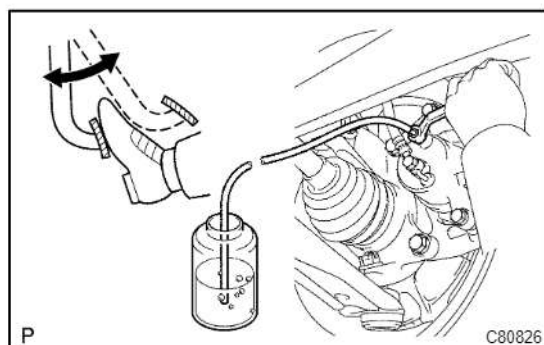
- (a) Using SST, disconnect the brake lines from the master cylinder.  
SST 09023-00101
- (b) Slowly depress and hold the brake pedal.



- (c) Cover the outer holes with your fingers, and release the brake pedal.
- (d) Repeat (b) and (c) 3 or 4 times.
- (e) Using SST, connect the brake lines from the master cylinder.

SST 09023-00101

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



3. **BLEED BRAKE LINE**

- (a) Connect the vinyl tube to the bleeder plug.
- (b) Depress the brake pedal several times, then loosen the bleeder plug with the pedal depressed.
- (c) At the point when fluid stops coming out, tighten the bleeder plug, then release the brake pedal.
- (d) Repeat (b) and (c) until all the air in the fluid is completely bled out.
- (e) Tighten the bleeder plug completely.

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

- (f) Repeat the previous procedures for each wheel to bleed the air out of the brake line.

#### 4. BLEED BRAKE ACTUATOR ASSY

##### NOTICE:

After bleeding the air from the brake system, if the height or feel of the brake pedal cannot be obtained, perform air bleeding in the brake actuator assy with a hand-held tester by following the procedures below.

- (a) Depress the brake pedal more than 20 times with the engine off.
- (b) Connect the hand-held tester to the DLC3, then turn the ignition switch to the ON position.

##### NOTICE:

**Do not start the engine.**

- (c) Select "AIR BLEEDING" on the hand-held tester.

##### HINT:

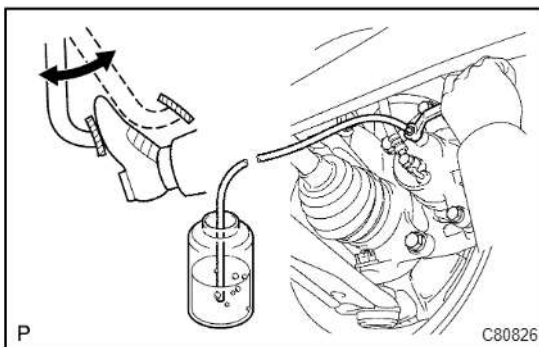
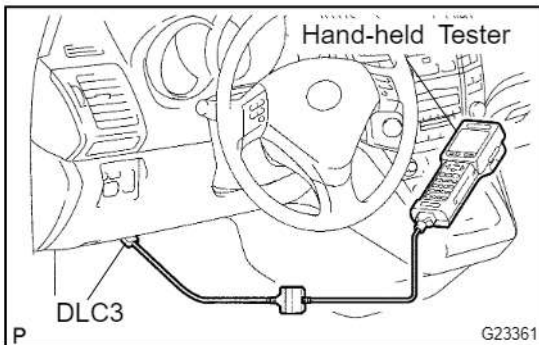
Please refer to the hand-held tester operator's manual for further details.

- (d) Bleed the air out of the regular brake line when "Step 1: Increase" appears on the hand-held tester display.

##### NOTICE:

- Bleed the air by following the steps displayed on the hand-held tester.
- Make sure that the brake fluid in the master cylinder reservoir tank does not become empty.

- (1) Connect the vinyl tube to either one of the bleeder plugs.



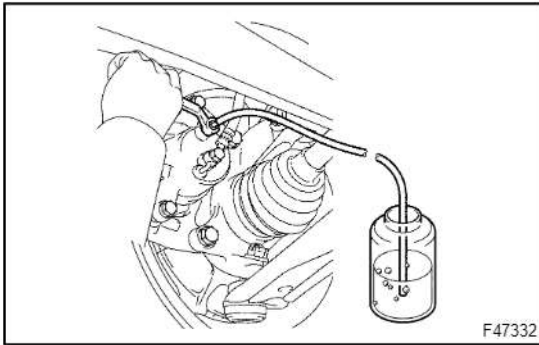
- (2) Depress the brake pedal several times, then loosen the bleeder plug connected to the vinyl tube with the pedal depressed.
- (3) When fluid stops coming out, tighten the bleeder plug and release the brake pedal.
- (4) Repeat (2) and (3) until all the air in the fluid is completely bled out.
- (5) Tighten the bleeder plug completely.

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

- (6) Repeat the above procedures for each wheel to bleed the air out of the brake line.
- (e) Bleed the air out of the suction line when "Step 2: Inhalation" appears on the hand-held tester display.

##### NOTICE:

- Bleed the air by following the steps displayed on the hand-held tester.
- Make sure that the brake fluid in the master cylinder reservoir tank does not become empty.



- (1) Connect the vinyl tube to the bleeder plug at the right front wheel or the right rear wheel and loosen the bleeder plug.
- (2) Operate the brake actuator assy to bleed the air using the hand-held tester.

**NOTICE:**

- **This operation stops automatically after 4 seconds.**
- **At this time, be sure to release the brake pedal.**
- (3) Check if the operation has stopped by referring to the hand-held tester display.
- (4) Repeat (2) and (3) until all air in the fluid is completely bled out.
- (5) Tighten the bleeder plug completely.

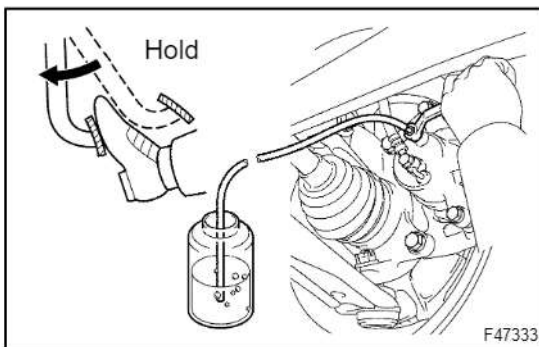
**Torque: 8.3 N·m (85 kgf·cm, 73 in·lbf)**

- (6) Repeat the above procedures to bleed the air out of the brake line for each wheel.
- (f) Bleed the air out of the pressure reduction line when "Step 3: Decrease" appears on the hand-held tester display.

**NOTICE:**

- **Bleed the air by following the steps displayed on the hand-held tester.**
- **Make sure that the brake fluid in the master cylinder reservoir tank does not become empty.**

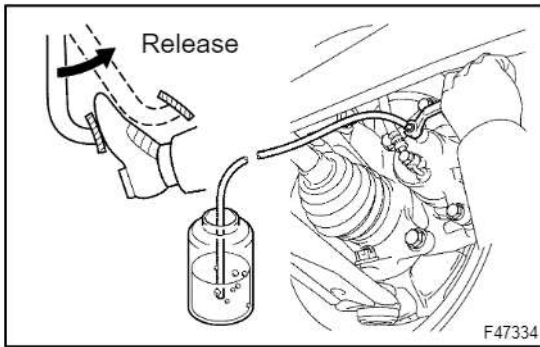
- (1) Connect a vinyl tube to either one of the bleeder plugs.
- (2) Loosen the bleeder plug.



- (3) Using the hand-held tester, operate the brake actuator assy, completely depress the brake pedal and keep it.

**NOTICE:**

- **The operation stops automatically after 4 seconds. When performing this procedure continuously, set an interval of at least 20 seconds.**
- **When the operation is complete, the brake pedal goes down slightly. This is a normal phenomenon caused when the solenoid opens.**
- **During this procedure, the pedal will feel heavy, but completely depress it so that the brake fluid comes out from the bleeder plug.**
- **Be sure to keep depressing the brake pedal. Do not depress and release the pedal repeatedly.**



- (4) Tighten the bleeder plug, then release the brake pedal.
- (5) Repeat (2) to (4) until all the air in the fluid is completely bled out.
- (6) Tighten the bleeder plug completely.

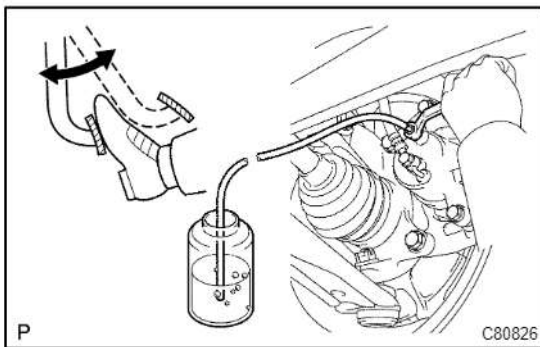
**Torque: 8.3 N·m (85 kgf·cm, 73 in·lbf)**

- (7) Repeat the above procedures for each wheel to bleed the air out of the brake line.
- (g) Bleed the air out of the regular brake line again when "Step 4: Increase" appears on the hand-held tester display.

**NOTICE:**

- **Bleed the air by following the steps displayed on the hand-held tester.**
- **Make sure that the brake fluid in the master cylinder reservoir tank does not become empty.**

- (1) Connect the vinyl tube to either one of the bleeder plugs.



- (2) Depress the brake pedal several times, then loosen the bleeder plug connected to the vinyl tube with the pedal depressed.
- (3) When fluid stops coming out, tighten the bleeder plug, then release the brake pedal.
- (4) Repeat (2) and (3) until all the air in the fluid is completely bled out.
- (5) Tighten the bleeder plug completely.

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

- (6) Repeat the above procedures for each wheel to bleed the air out of the brake line.

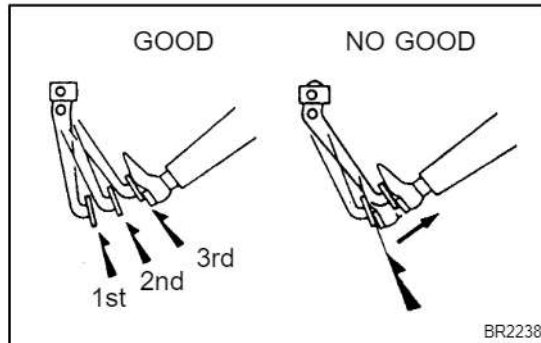
**5. CHECK FLUID LEVEL IN RESERVOIR**

- (a) Check the fluid level and add fluid if necessary.

**Fluid: SAE J1703 or FMVSS No. 116 DOT3**

# BRAKE BOOSTER ASSY ON-VEHICLE INSPECTION

3203F-11



## 1. INSPECT BRAKE BOOSTER

### (a) Airtightness check.

- (1) Start the engine and stop it after 1 or 2 minutes. Depress the brake pedal several times slowly.

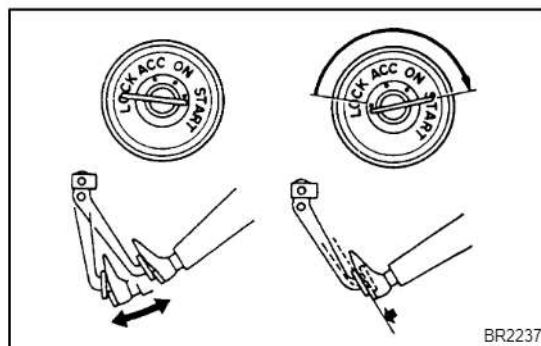
#### HINT:

If the pedal can be depressed (to the floor) the first time, but cannot be depressed as far on the 2nd or 3rd time, the booster is airtight.

- (2) Depress the brake pedal while the engine is running, and stop the engine with the pedal depressed.

#### HINT:

If there is no change in the pedal reserve distance while holding the pedal for 30 seconds, the booster is airtight.



### (b) Operating check.

- (1) Depress the brake pedal several times with the ignition switch off and check that there is no change in the pedal reserve distance.
- (2) Start the engine with the brake pedal depressed.

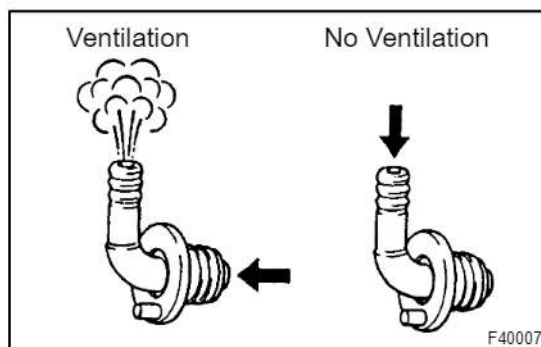
#### HINT:

If the pedal goes down slightly, operation is normal.

## 2. INSPECT VACUUM CHECK VALVE

### (a) Check vacuum check valve.

- (1) Slide the clip and disconnect the vacuum hose.
- (2) Remove the vacuum check valve.

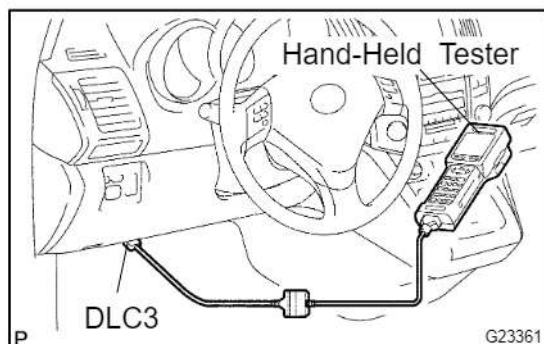


- (3) Check that there is ventilation from the booster to engine, and no ventilation from the engine to the booster.
- (4) If any fault is found, replace the vacuum check valve.

# BRAKE ACTUATOR ASSY

## ON-VEHICLE INSPECTION

320WL-05



### 1. CONNECT HAND-HELD TESTER:

- (a) Connect the hand-held tester to the DLC3.
- (b) Start the engine and run at idle.
- (c) Select the ACTIVE TEST mode on the hand-held tester.

#### HINT:

Please refer to the hand-held tester operator's manual for further details.

### 2. INSPECT ACTUATOR MOTOR OPERATION

- (a) With the motor relay on, check the actuator motor operation noise.
- (b) Turn the motor relay off.
- (c) Depress the brake pedal and hold it for about 15 seconds. Check that the brake pedal cannot be depressed.
- (d) With the motor relay on, check that the pedal does not pulsate.

#### NOTICE:

**Do not keep a motor relay on for more than 5 seconds continuously. When operating it continuously, set an interval of more than 20 seconds.**

- (e) Turn the motor relay off and release the brake pedal.

### 3. INSPECT RIGHT FRONT WHEEL OPERATION

#### NOTICE:

**Never turn on the solenoids in a manner different to those described below.**

- (a) With the brake pedal depressed, perform the following operations.
- (b) Turn the SFRH and SFRR solenoids on simultaneously, and check that the pedal cannot be depressed.

#### NOTICE:

**Do not keep a solenoid turned on for more than 10 seconds continuously. When operating it continuously, set an interval of more than 20 seconds.**

- (c) Turn the SFRH and SFRR solenoids off simultaneously, and check that the pedal can be depressed.
- (d) Turn the motor relay on, and check that the pedal returns.

#### NOTICE:

**Do not keep a motor relay turned on for more than 5 seconds continuously. When operating it continuously, set an interval of more than 20 seconds.**

- (e) Turn the motor relay off and release the brake pedal.

### 4. INSPECT OTHER WHEEL OPERATION

- (a) Using the same procedure, check the solenoids of the other wheels.

#### HINT:

Left front wheel: SFLH, SFLR

Right rear wheel: SRRH, SRRR

Left rear wheel: SRLH, SRLR

# BRAKE SYSTEM

## PRECAUTION

320WA-03

### NOTICE:

- Care must be taken to replace each part properly as it could affect the performance of the brake system and result in a driving hazard. Replace the parts with parts having the same part number or equivalent.
- It is very important to keep parts and the area clean when repairing the brake system.
- If the vehicle is equipped with a mobile communication system, refer to the precaution in the INTRODUCTION section.

# PARKING BRAKE SYSTEM

330CH-04

## PROBLEM SYMPTOMS TABLE

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

| Symptom    | Suspect Area                                        | See page              |
|------------|-----------------------------------------------------|-----------------------|
| Brake drag | 1. Parking brake pedal travel (Out of adjustment)   | <a href="#">33-2</a>  |
|            | 2. Parking brake wire (Sticking)                    | <a href="#">33-10</a> |
|            |                                                     | <a href="#">33-14</a> |
|            | 3. Parking brake shoe clearance (Out of adjustment) | <a href="#">33-19</a> |
|            | 4. Parking brake shoe lining (Cracked or distorted) | <a href="#">33-19</a> |
|            | 5. Tension or return spring (Damaged)               | <a href="#">33-19</a> |

## PROBLEM SYMPTOMS TABLE

### HINT:

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

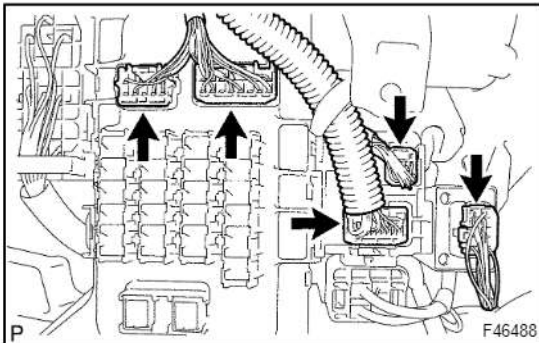
| Symptom                          | Suspected Area                                      | See page |
|----------------------------------|-----------------------------------------------------|----------|
| Low pedal or spongy pedal        | 7. Fluid leaks in brake system                      | -        |
|                                  | 8. Air in brake system                              | 32-4     |
|                                  | 9. Piston seals (Worn or damaged)                   | 32-23    |
|                                  | 10. Master cylinder (Faulty)                        | 32-29    |
|                                  | 11. Booster push rod (Out of adjustment)            | 32-14    |
| Brake drag                       | 1. Brake pedal free play (Minimal)                  | 32-8     |
|                                  | 2. Parking brake pedal travel (Out of adjustment)   | 33-2     |
|                                  | 3. Parking brake wire (Sticking)                    | 33-10    |
|                                  |                                                     | 33-14    |
|                                  | 4. Parking brake shoe clearance (Out of adjustment) | 33-19    |
|                                  | 5. Pad (Cracked or distorted)                       | 32-23    |
|                                  |                                                     | 32-29    |
|                                  | 6. Piston (Stuck)                                   | 32-23    |
|                                  |                                                     | 32-29    |
|                                  | 7. Piston (Frozen)                                  | 32-23    |
|                                  |                                                     | 32-29    |
| Brake pull                       | 8. Booster push rod (Out of adjustment)             | 32-14    |
|                                  | 9. Vacuum leaks in booster system                   | 32-17    |
|                                  | 10. Master cylinder (Faulty)                        | 32-14    |
|                                  | 1. Piston (Stuck)                                   | 32-23    |
|                                  |                                                     | 32-29    |
| Hard pedal but brake inefficient | 2. Pad (Oily)                                       | 32-23    |
|                                  |                                                     | 32-29    |
|                                  | 3. Piston (Frozen)                                  | 32-23    |
|                                  |                                                     | 32-29    |
|                                  | 4. Disc (Scored)                                    | 32-23    |
|                                  |                                                     | 32-29    |
|                                  | 5. Pad (Cracked or distorted)                       | 32-23    |
|                                  |                                                     | 32-29    |
|                                  | 1. Fluid leaks in brake system                      | -        |
|                                  | 2. Air in brake system                              | 32-4     |
|                                  | 3. Pad (Worn)                                       | 32-23    |
|                                  |                                                     | 32-29    |
|                                  | 4. Pad (Cracked or distorted)                       | 32-23    |
|                                  |                                                     | 32-29    |
|                                  | 5. Pad (Oily)                                       | 32-23    |
|                                  |                                                     | 32-29    |
|                                  | 6. Pad (Glanzed)                                    | 32-23    |
|                                  |                                                     | 32-29    |
|                                  | 7. Disc (Scored)                                    | 32-23    |
|                                  |                                                     | 32-29    |
|                                  | 8. Booster push rod (Out of adjustment)             | 32-14    |
|                                  | 9. Vacuum leaks in booster system                   | 32-17    |

## BRAKE - BRAKE SYSTEM

|             |                               |       |
|-------------|-------------------------------|-------|
| Brake noise | 1. Pad (Cracked or distorted) | 32-23 |
|             |                               | 32-29 |
|             | 2. Installation bolt (Loose)  | 32-23 |
|             |                               | 32-29 |
|             | 3. Disc (Scored)              | 32-23 |
|             |                               | 32-29 |
|             | 4. Pad support plate (Loose)  | 32-23 |
|             |                               | 32-29 |
|             | 5. Sliding pin (Worn)         | 32-23 |
|             |                               | 32-29 |
|             | 6. Pad (Dirty)                | 32-23 |
|             |                               | 32-29 |
|             | 7. Pad (Glanzed)              | 32-23 |
|             |                               | 32-29 |
|             | 8. Anti-squeal shim (Damaged) | 32-23 |
|             |                               | 32-29 |

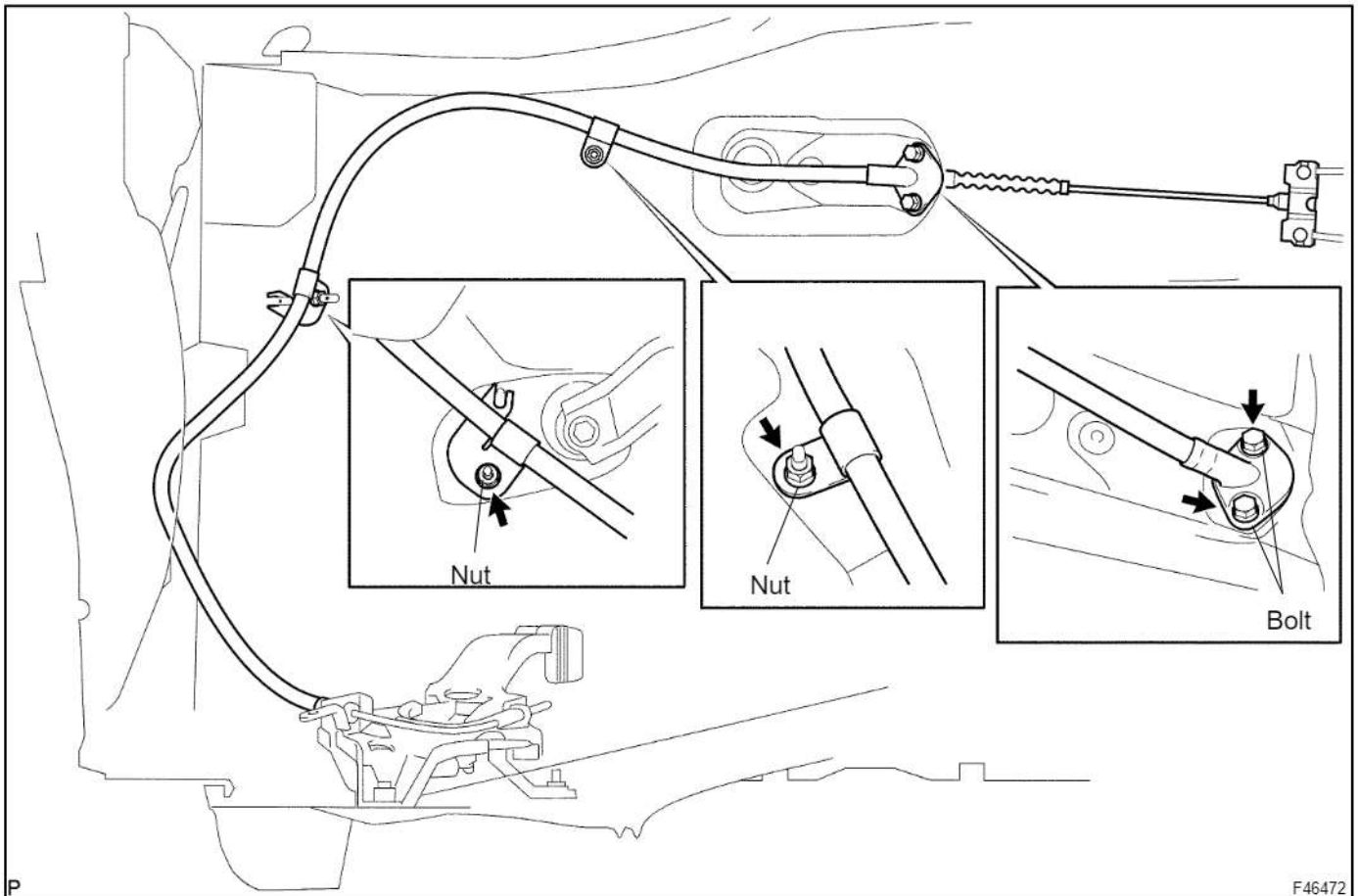
## OVERHAUL

1. PRECAUTION (W/ SIDE AIRBAG) (SEE PAGE 60-1 )
2. DISCONNECT BATTERY NEGATIVE TERMINAL (SEE PAGE 60-1 )
3. REMOVE INSTRUMENT PANEL FINISH PANEL SUB-ASSY LOWER (SEE PAGE 71-10 )
4. REMOVE INSTRUMENT PNL INSERT SUB-ASSY LWR LH (SEE PAGE 71-10 )
5. REMOVE INSTRUMENT CLUSTER FINISH PANEL ASSY CENTER (SEE PAGE 71-10 )
6. REMOVE FLOOR CARPET COVER CENTER RH (SEE PAGE 71-10 )
7. REMOVE FLOOR CARPET COVER CENTER LH (SEE PAGE 71-10 )
8. REMOVE FRONT SEAT ASSEMBLY RH
9. REMOVE FRONT SEAT ASSEMBLY LH (SEE PAGE 72-11, 72-19 )
10. REMOVE CONSOLE BOX ASSY (SEE PAGE 71-10 )
11. DISCONNECT TURN SIGNAL FLASHER ASSY
12. REMOVE FR FLOOR FOOTREST
  - (a) Remove the front floor footrest from the floor.

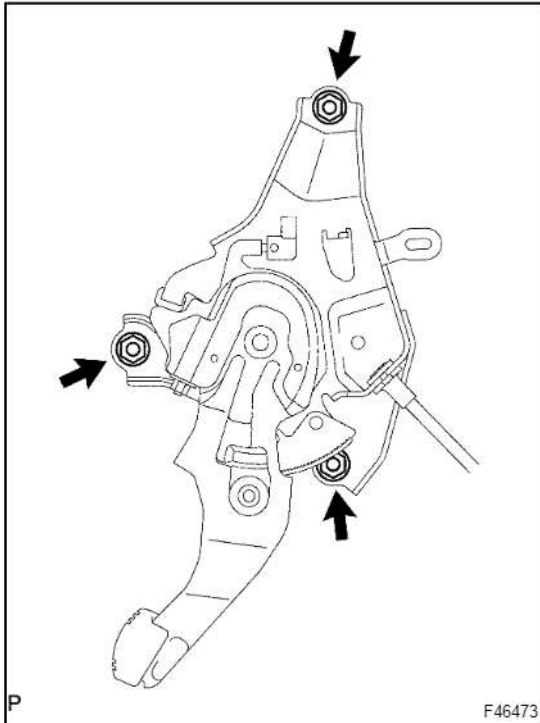


### 13. REMOVE PARKING BRAKE CONTROL PEDAL ASSY

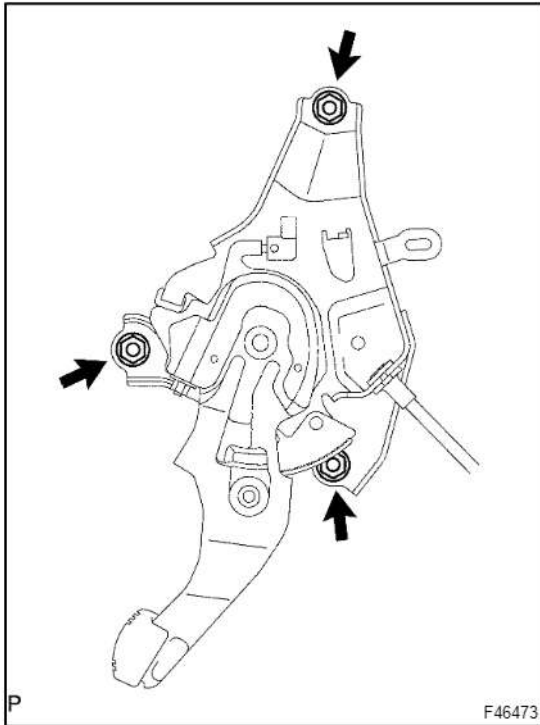
- (a) Disconnect the connectors.
- (b) Remove the 2 nuts.
- (c) Separate the instrument panel junction block assy.
- (d) Release the parking brake pedal to the original position.
- (e) Remove the 2 bolts and nuts, and separate the parking brake cable assy No.1 from the floor.



- (f) Remove the parking brake cable assy No.1 from the parking brake equalizer.
- (g) Disconnect the parking brake switch connector.
- (h) Remove the 3 nuts and separate the instrument panel junction block assy w/ bracket from the body.
- (i) Remove the 3 nuts and parking brake control pedal assy.



- 14. REMOVE PARKING BRAKE CABLE ASSY NO.1 (SEE PAGE 33-10 )**
- 15. REMOVE PARKING BRAKE SWITCH ASSY**
  - (a) Remove the screw and parking brake switch assy.
- 16. REMOVE PARKING PEDAL PAD**
  - (a) Remove the parking pedal pad.
- 17. INSTALL PARKING PEDAL PAD**
  - (a) Install the parking pedal pad.
- 18. INSTALL PARKING BRAKE SWITCH ASSY**
  - (a) Install the parking brake switch assy with the screw.
- 19. INSTALL PARKING BRAKE CABLE ASSY NO.1 (SEE PAGE 33-10 )**



## 20. INSTALL PARKING BRAKE CONTROL PEDAL ASSY

- (a) Install the parking brake control pedal assy with the 3 nuts.

**Torque: 39 N·m (400 kgf·cm, 29 ft·lbf)**

- (b) Connect the parking brake switch connector.  
 (c) Connect the instrument panel junction block assy w/ bracket with the 3 nuts.

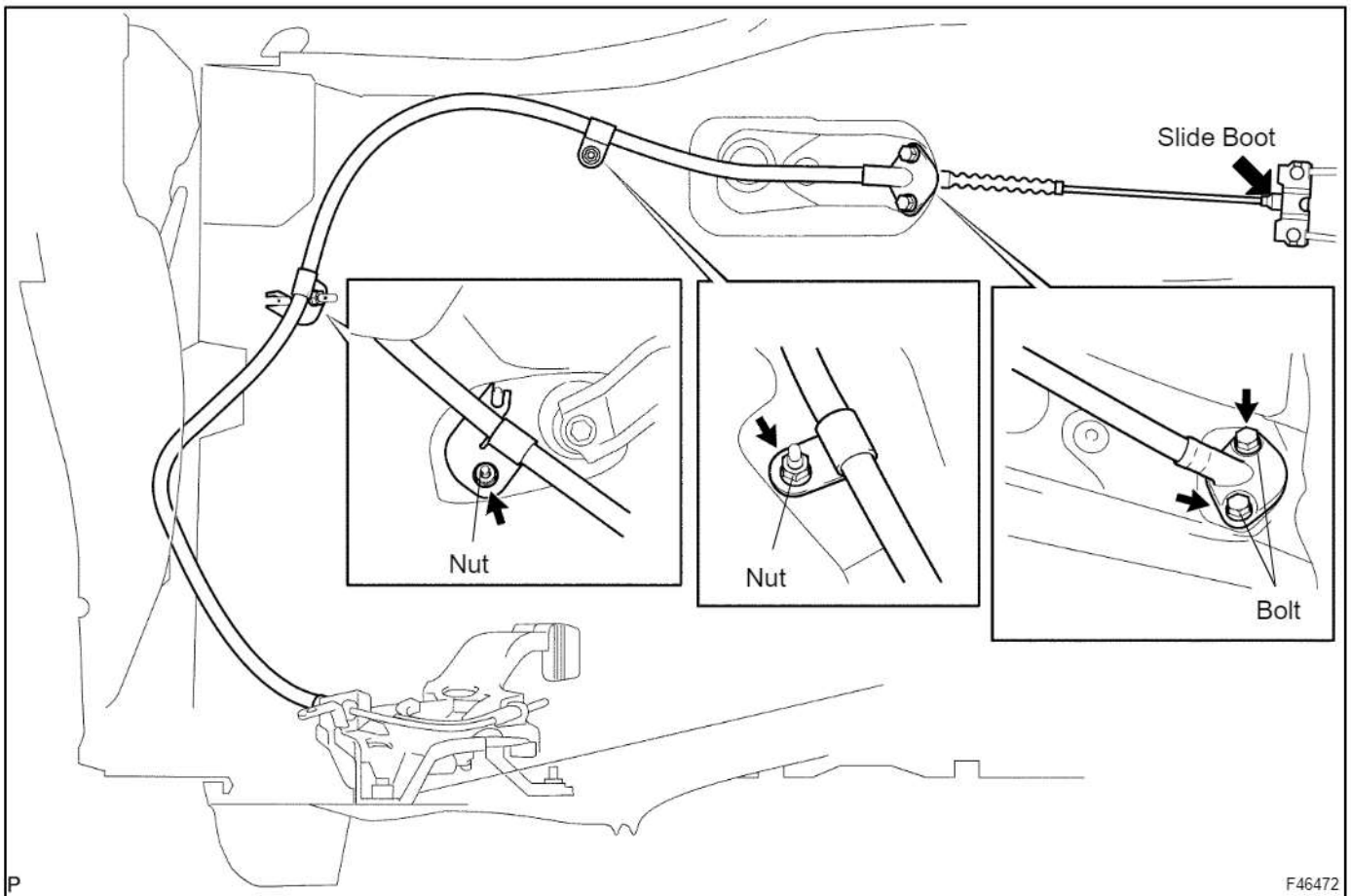
- (d) Attach the parking brake cable assy No.1 to the parking brake equalizer and slide boot stopper of No.1 cable should be inserted into groove of T-Metal fitting.

- (e) Install the parking brake cable assy No.1 with the 2 bolts and 2 nuts.

**Torque:**

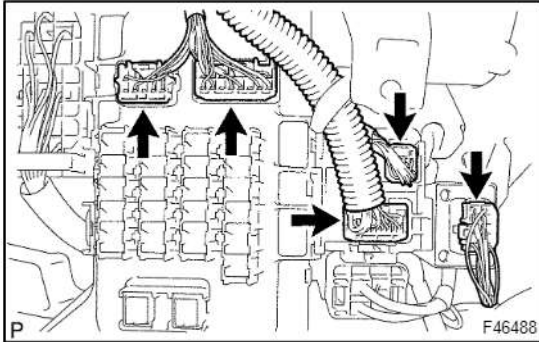
**Bolt: 8.5 N·m (87 kgf·cm, 75 in·lbf)**

**Nut: 6.0 N·m (61 kgf·cm, 53 in·lbf)**



- (f) Install the instrument panel junction block assy with the 2 nuts.

**Torque: 7.3 N·m (74 kgf·cm, 65 in·lbf)**



- (g) Connect the connectors.

## 21. INSTALL FR FLOOR FOOTREST

- (a) Install the front floor footrest on the floor.

## 22. INSTALL FRONT SEAT ASSEMBLY RH

## 23. INSTALL FRONT SEAT ASSEMBLY LH (SEE PAGE 72-11, 72-19)

## 24. REMOVE REAR WHEEL

## 25. ADJUST PARKING BRAKE SHOE CLEARANCE (SEE PAGE 33-19)

## 26. INSTALL REAR WHEEL

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

## 27. INSPECT PARKING BRAKE PEDAL TRAVEL (SEE PAGE 33-2)

## 28. ADJUST PARKING BRAKE PEDAL TRAVEL (SEE PAGE 33-2)

## 29. CONNECT BATTERY NEGATIVE TERMINAL

## 30. INSPECT SRS WARNING LIGHT (W/ SIDE AIRBAG) (SEE PAGE 05-1207)

## OVERHAUL

### HINT:

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

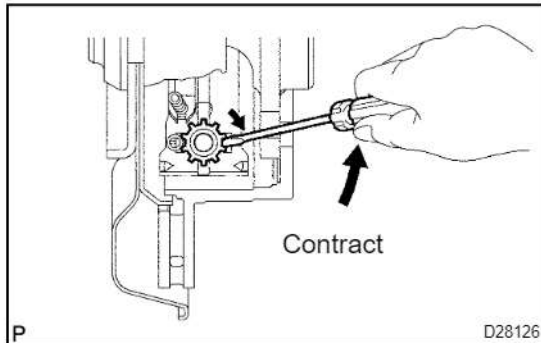
#### 1. REMOVE REAR WHEEL

#### 2. SEPARATE REAR DISC BRAKE CALIPER ASSY LH

- (a) Remove the 2 bolts and separate the rear disc brake caliper assy LH.

### HINT:

Do not disconnect the flexible hose from the disc brake caliper assy LH.

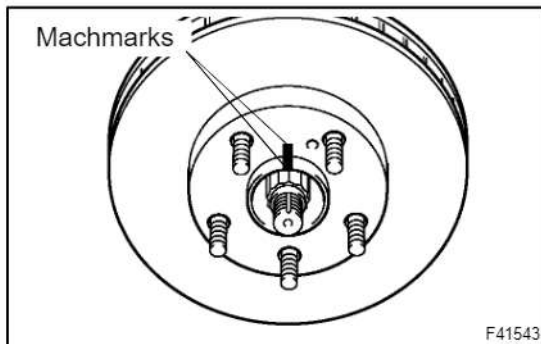


#### 3. REMOVE REAR DISC

- (a) Release the parking brake, and remove the rear disc.

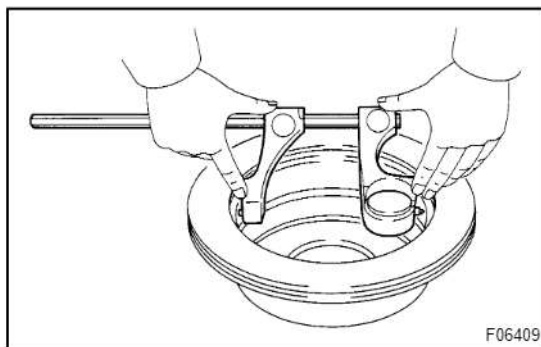
### HINT:

If the disc cannot be removed easily, turn the shoe adjuster until the wheel turns freely.



- (b) Place machmarks on the rear disc and the axle hub.

- (c) Remove the rear disc.



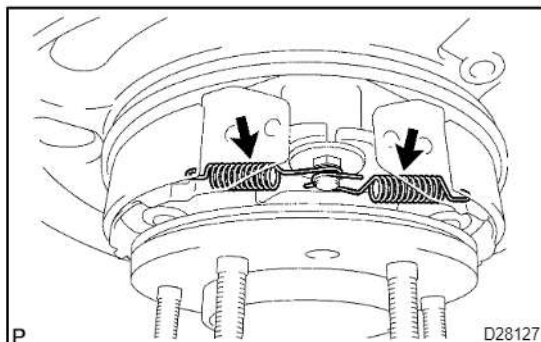
#### 4. INSPECT BRAKE DISC INSIDE DIAMETER

- (a) Using a brake drum gauge or equivalent tool, measure the inside diameter of the rear disc.

**Standard inside diameter: 190 mm (7.480 in.)**

**Maximum inside diameter: 191 mm (7.520 in.)**

If the inside diameter exceeds the maximum, replace the brake disc.

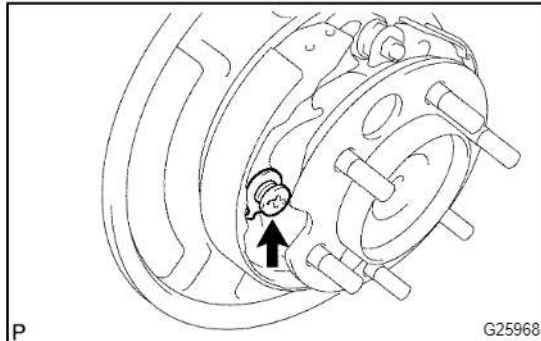


#### 5. REMOVE PARKING BRAKE SHOE RETURN TENSION SPRING

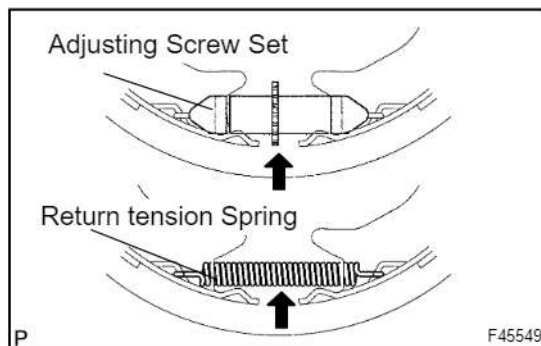
- (a) Using needle-nose pliers, remove the 2 parking brake shoe return tension springs No.1.

**6. REMOVE PARKING BRAKE SHOE STRUT LH**

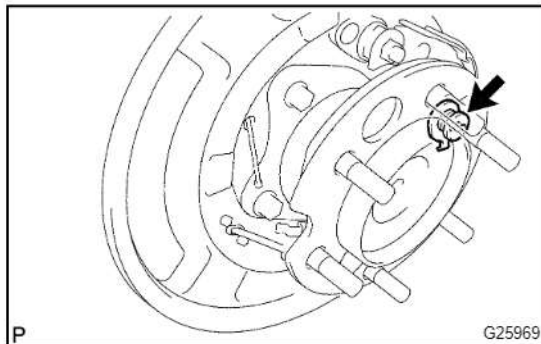
- (a) Remove the parking brake shoe strut LH and the parking brake shoe strut compression spring.

**7. REMOVE PARKING BRAKE SHOE ASSY LH NO.1**

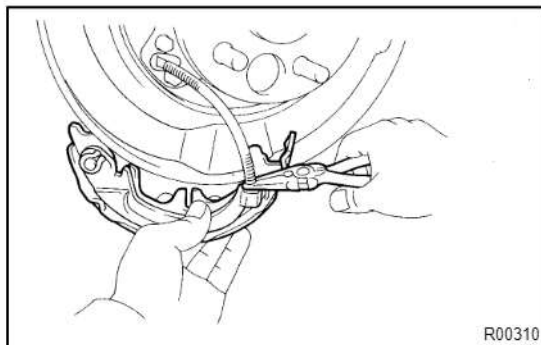
- (a) Remove the parking brake shoe hold down spring cup No.1, parking brake shoe hold down spring and parking brake shoe hold down spring cup No.2.
- (b) FF:  
Remove the parking brake shoe hold down spring pin No.1.
- (c) Disconnect the parking brake shoe return spring No.2 and remove the parking brake shoe assy LH No.1.

**8. REMOVE PARKING BRAKE SHOE ADJUSTING SCREW SET**

- (a) Remove the parking brake shoe adjusting screw set.
- (b) Remove the parking brake shoe return tension spring No.2.

**9. REMOVE PARKING BRAKE SHOE ASSY LH NO.2**

- (a) Remove the parking brake shoe hold down spring cup No.1, parking brake shoe hold down spring, parking brake shoe hold down spring cup No.2 and parking brake shoe hold down spring pin No.2.
- (b) Remove the parking brake shoe assy LH No.2.



- (c) Using needle-nose pliers, disconnect the parking brake cable No.3 from the parking brake cable shoe lever.

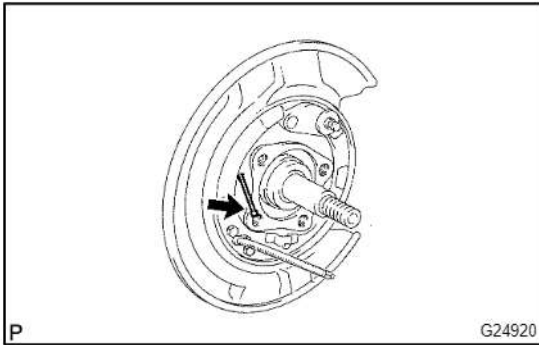
**NOTICE:**

**Be careful not to damage parking brake cable No.3.**

**10. SEPARATE SPEED SENSOR REAR LH (4WD DRIVE TYPE) (SEE PAGE 30-60 )****11. REMOVE REAR AXLE SHAFT LH NUT (4WD DRIVE TYPE) (SEE PAGE 30-60 )**

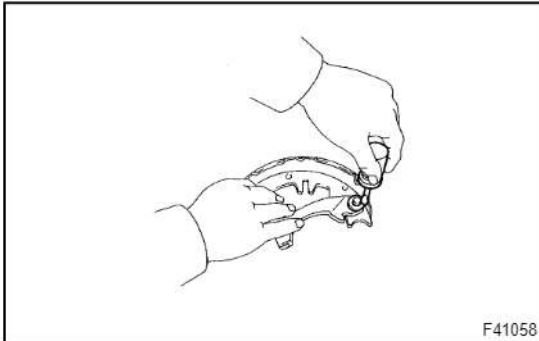
SST 09930-00010

**12. REMOVE REAR AXLE HUB & BEARING ASSY LH (4WD DRIVE TYPE) (SEE PAGE 30-60 )**



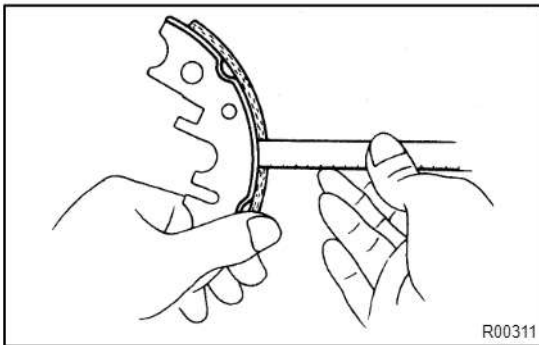
### 13. REMOVE PARKING BRAKE SHOE HOLD DOWN SPRING PIN (4WD DRIVE TYPE)

- (a) Remove the parking brake shoe hold down spring pin No.1.



### 14. REMOVE PARKING BRAKE SHOE TYPE C WASHER

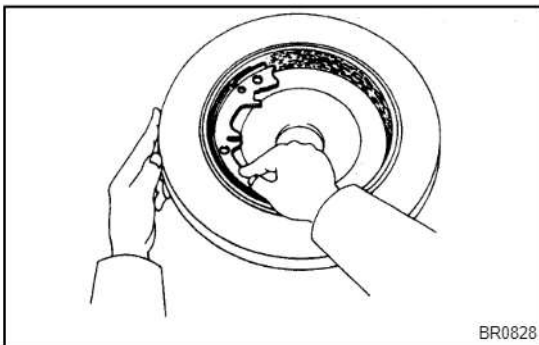
- (a) Using a screwdriver, remove the C-washer.  
 (b) Remove the shim and parking brake shoe lever from parking brake shoe assy LH No.2.



### 15. INSPECT PARKING BRAKE SHOE LINING THICKNESS

- (a) Using a ruler, measure the thickness of the shoe lining.  
**Standard thickness: 2.5 mm (0.098 in.)**  
**Minimum thickness: 1.0 mm (0.039 in.)**

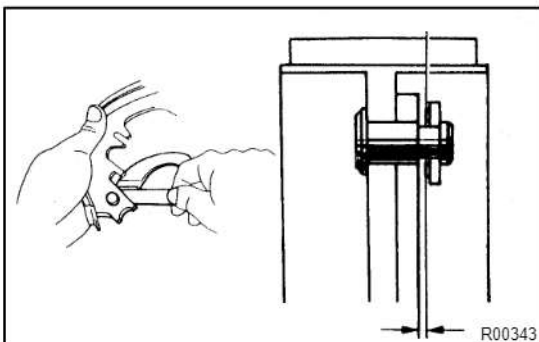
If the lining thickness is less than or equal to the minimum, or if there is severe or uneven wear, replace the brake shoe.



### 16. INSPECT BRAKE DISC AND PARKING BRAKE SHOE LINING FOR PROPER CONTACT

- (a) Apply chalk to the inside surface of the disc, then grind down the brake shoe lining to fit disc.

If the contact between the brake disc and the shoe lining is improper, repair it using a brake shoe grinder or replace the brake shoe assembly.

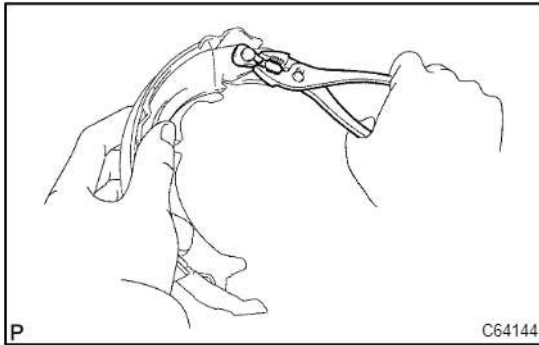


### 17. INSTALL PARKING BRAKE SHOE TYPE C WASHER

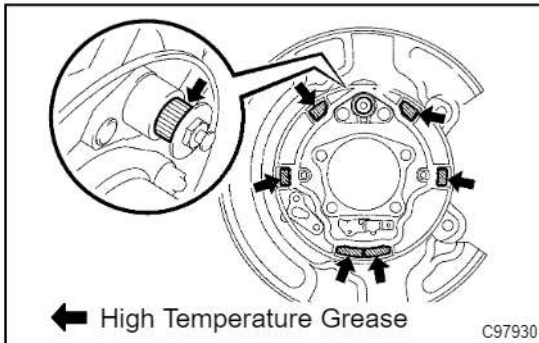
- (a) Using a feeler gauge, measure the clearance.  
**Standard clearance: Less than 0.35 mm (0.014 in.)**

If the clearance is not within the specifications, replace the shim with one of the correct size.

| Shim Thickness     | Shim Thickness     |
|--------------------|--------------------|
| 0.3 mm (0.012 in.) | 0.9 mm (0.035 in.) |
| 0.6 mm (0.024 in.) | -                  |

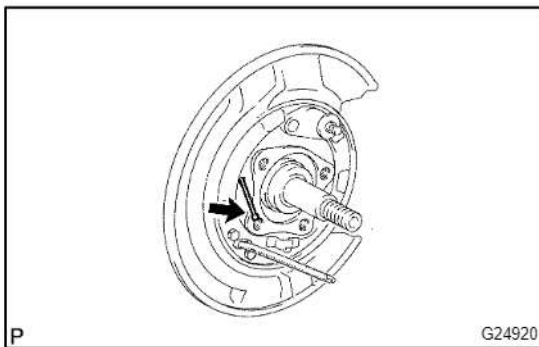


- (b) Using pliers, install the parking brake shoe lever LH and the shim with a new C-washer.



### 18. APPLY HIGH TEMPERATURE GREASE

- (a) Apply high temperature grease to the shaded parts shown in the illustration of the backing plate which make contact with the shoe.



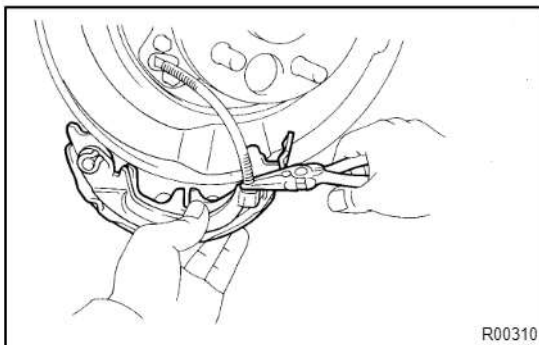
### 19. INSTALL PARKING BRAKE SHOE HOLD DOWN SPRING PIN (4WD DRIVE TYPE)

- (a) Install the parking brake shoe hold down spring pin No.1.

20. INSTALL REAR AXLE HUB & BEARING ASSY LH (4WD DRIVE TYPE) (SEE PAGE 30-60 )

21. INSTALL REAR AXLE SHAFT LH NUT (4WD DRIVE TYPE) (SEE PAGE 30-60 )

22. INSTALL SPEED SENSOR REAR LH (4WD DRIVE TYPE) (SEE PAGE 30-60 )

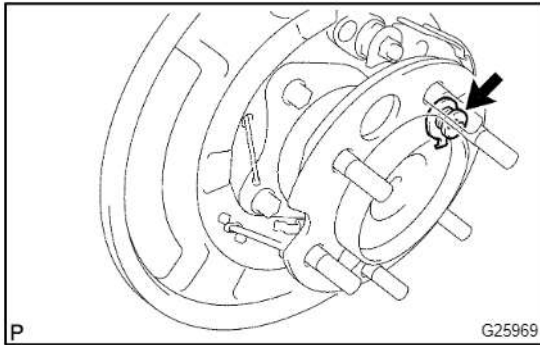


### 23. INSTALL PARKING BRAKE SHOE ASSY LH NO.2

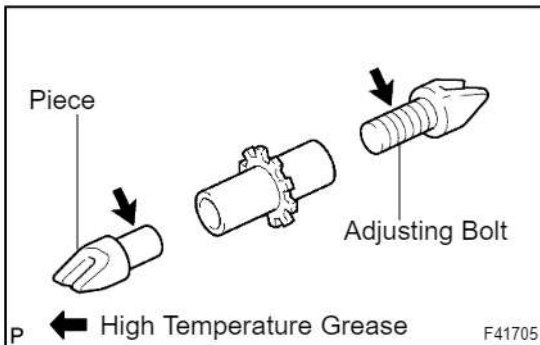
- (a) Using needle-nose pliers, connect the parking brake cable No.3 to the parking brake cable shoe lever.

#### NOTICE:

Be careful not to damage the parking brake cable No.3.

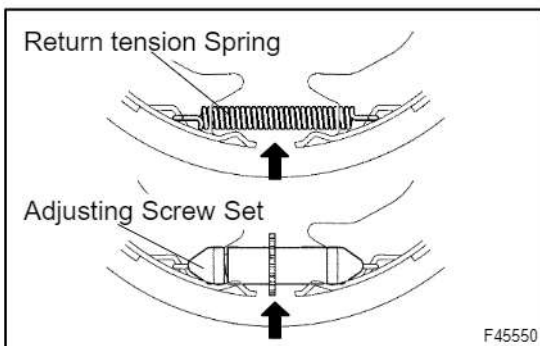


- (b) Install the parking brake shoe assy LH No.2 with the parking brake shoe hold down spring, parking brake shoe hold down spring cup No.1, parking brake shoe hold down spring cup No.2 and parking brake shoe hold down spring pin No.2.

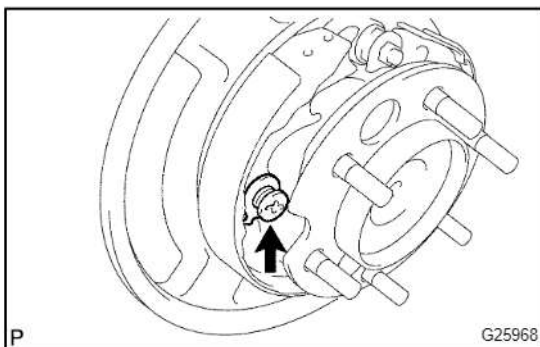


## 24. INSTALL PARKING BRAKE SHOE ADJUSTING SCREW SET

- (a) Apply high temperature grease to the parking brake shoe adjusting bolt and piece.



- (b) Attach the parking brake shoe return tension spring No.2 to parking brake shoe assy LH No.1 and parking brake shoe assy LH No.2.
- (c) Attach the parking brake shoe adjusting screw set to the parking brake shoe assy LH No.1 and parking brake shoe assy LH No.2.

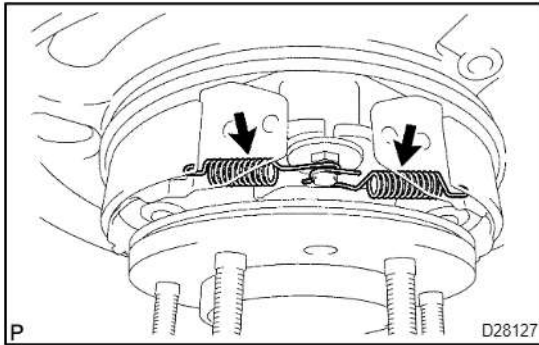


## 25. INSTALL PARKING BRAKE SHOE ASSY LH NO.1

- (a) FF:
- Install the parking brake shoe hold down spring pin No.1.
- (b) Install the parking brake shoe assy LH No.1 with the parking brake shoe hold down spring, parking brake shoe hold down spring cup No.2, parking brake shoe hold down spring cup No.2.

## 26. INSTALL PARKING BRAKE SHOE STRUT LH

- (a) Attach the parking brake shoe strut LH and the parking brake shoe strut compression spring to parking brake shoe assy LH No.2 and parking brake shoe assy LH No.1.



## 27. INSTALL PARKING BRAKE SHOE RETURN TENSION SPRING

- (a) Using needle-nose pliers, install the 2 return tension springs No.1 as shown in the illustration.

**HINT:**

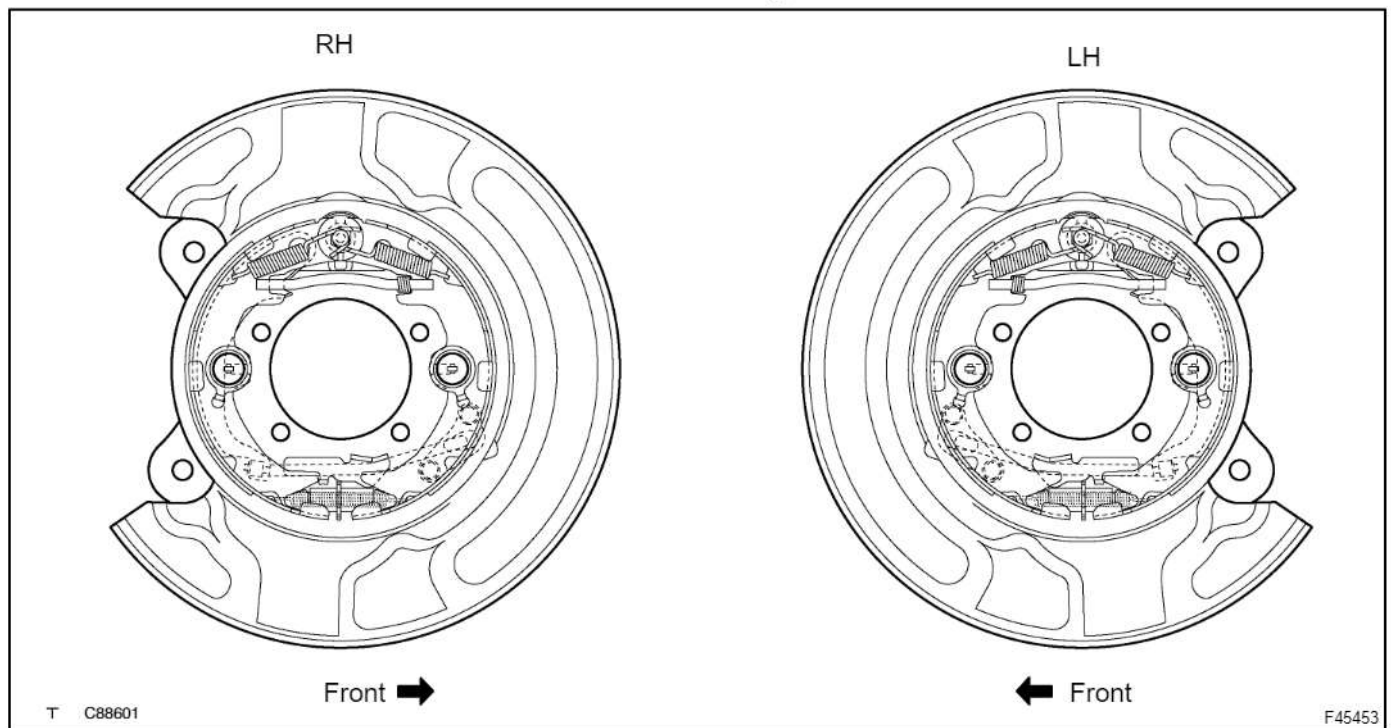
First install the front side spring then the rear side spring.

## 28. CHECK PARKING BRAKE INSTALLATION

- (a) Check that each part is installed properly.

**NOTICE:**

There should be no oil or grease on the friction surface of the shoe lining and disc.

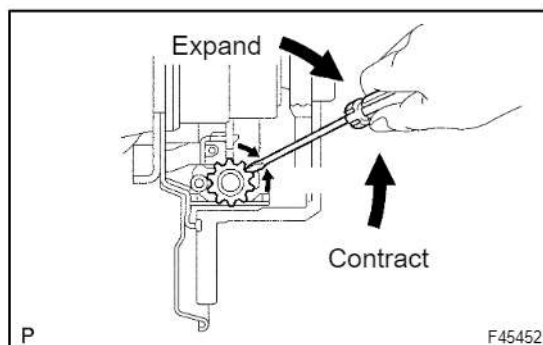


## 29. INSPECT BEARING BACKLASH (4WD DRIVE TYPE) (SEE PAGE 30-3 )

## 30. INSPECT AXLE HUB DEVIATION (4WD DRIVE TYPE) (SEE PAGE 30-3 )

## 31. INSTALL REAR DISC

- (a) Aligning the matchmarks, install the rear disc.



## 32. ADJUST PARKING BRAKE SHOE CLEARANCE

- (a) Temporarily install the hub nuts.  
 (b) Remove the hole plug, turn the adjuster and expand the shoes until the disc locks.  
 (c) Contract the shoe adjuster until the disc rotates smoothly.  
**Standard : Return 8 notches**  
 (d) Check that the shoe has no brake drag.  
 (e) Install the hole plug.

**33. CONNECT REAR DISC BRAKE CALIPER ASSY LH**

- (a) Install the rear disc brake caliper assy LH with the 2 bolts.  
Torque: 78 N·m (800 kgf·cm, 58 ft·lbf)

**34. INSTALL REAR WHEEL**

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

**35. INSPECT PARKING BRAKE PEDAL TRAVEL (SEE PAGE 33-2 )****36. ADJUST PARKING BRAKE PEDAL TRAVEL (SEE PAGE 33-2 )****37. CHECK ABS SPEED SENSOR SIGNAL (4WD DRIVE TYPE) (SEE PAGE 05-765 )**

## OVERHAUL

### 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 BRAKE FLUID

### NOTICE:

Wash brake fluid off immediately if it adheres to any painted surface.

### 3. REMOVE FRONT DISC BRAKE CYLINDER SUB-ASSY

- Remove the union bolt and gasket from the disc brake cylinder sub-assy, then disconnect the flexible hose.
- Remove the 2 bolts and disc brake cylinder sub-assy.

### 4. REMOVE DISC BRAKE PAD KIT FRONT (PAD ONLY)

- Remove the 2 brake pads with anti-squeal shim.

### 5. REMOVE ANTI SQUEAL SHIM KIT FRONT

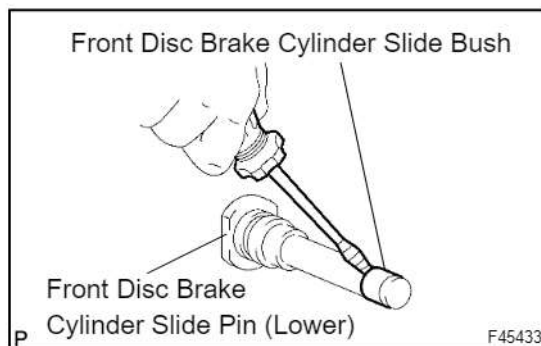
- Remove the anti-squeal shim and pad wear indicator plate from inner pad.
- Remove the anti-squeal shim from outer pad.

### 6. REMOVE FRONT DISC BRAKE PAD SUPPORT PLATE

- Remove the front disc brake pad support plate (No.1) and front disc brake pad support plate (No.2) from the disk brake cylinder mounting LH.

### 7. REMOVE FRONT DISC BRAKE CYLINDER SLIDE PIN

- Remove the 2 front disc brake cylinder slide pins from the front disc brake cylinder mounting LH.



### 8. REMOVE FRONT DISC BRAKE CYLINDER SLIDE BUSH

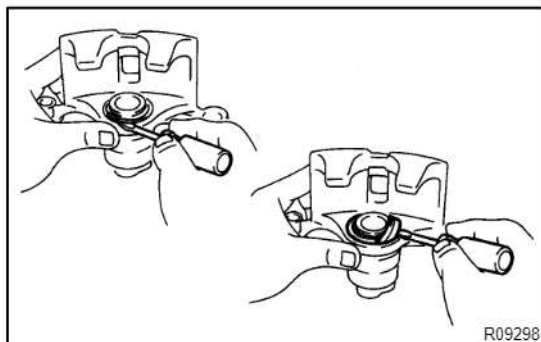
- Using a screwdriver, remove the front disc brake cylinder slide bush from the front disc brake cylinder slide pin (lower).

### 9. REMOVE FRONT DISC BRAKE BUSH DUST BOOT

- Remove the 2 front disc brake bush dust boots from the front disc brake cylinder mounting.

### 10. REMOVE FRONT DISC BRAKE CYLINDER MOUNTING LH

- Remove the 2 bolts and front disc brake cylinder mounting LH.

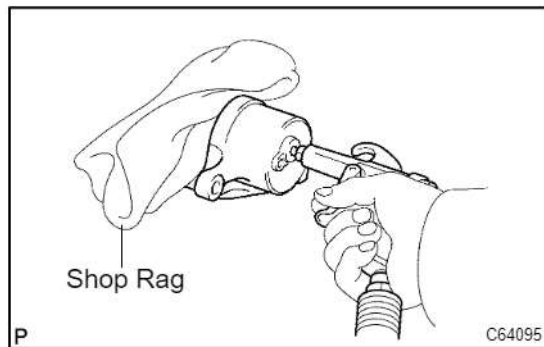


### 11. REMOVE CYLINDER BOOT

- Using a screwdriver, remove the set ring and cylinder boot.

### NOTICE:

Do not damage the inner cylinder and cylinder groove.

**12. REMOVE FRONT DISC BRAKE PISTON**

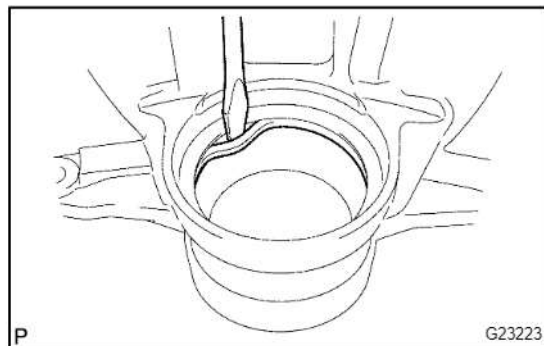
- (a) Place a piece of shop rag or equivalent between the front disc brake piston and the front disc brake cylinder sub-assy.
- (b) Use compressed air to remove the front disc brake piston from the front disc brake cylinder sub-assy.

**CAUTION:**

**Do not place your fingers in front of the piston when using compressed air.**

**NOTICE:**

**Do not spatter the brake fluid.**

**13. REMOVE PISTON SEAL**

- (a) Using a screwdriver, remove the piston seal from the front disc brake cylinder sub-assy.

**NOTICE:**

**Do not damage the inner cylinder and cylinder groove.**

**14. REMOVE FRONT DISC BRAKE BLEEDER PLUG CAP**

- (a) Remove the front disc brake bleeder plug cap from the front disc brake bleeder plug.

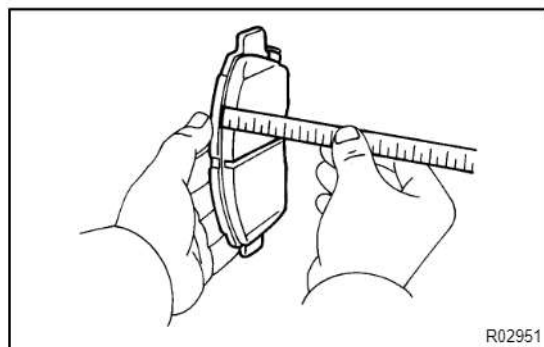
**15. REMOVE FRONT DISC BRAKE BLEEDER PLUG**

- (a) Remove the front disc brake bleeder plug from the front disc brake cylinder sub-assy.

**16. INSPECT BRAKE CYLINDER AND PISTON**

- (a) Check the cylinder bore and front disc brake piston for rust or scoring.

If necessary, replace the front disc brake cylinder sub-assy and front disc brake piston.

**17. INSPECT PAD LINING THICKNESS**

- (a) Using a ruler, measure the pad lining thickness.

**Standard thickness: 12.7 mm (0.500 in.)**

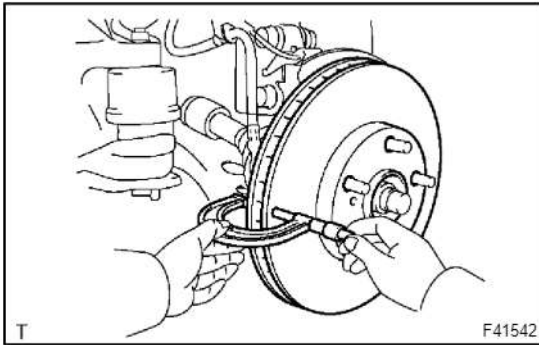
**Minimum thickness: 1.0 mm (0.039 in.)**

If the pad lining thickness is equal to the minimum thickness or less, replace the brake pad.

**18. INSPECT FRONT DISC BRAKE PAD SUPPORT PLATE**

- (a) Inspect the front disc brake pad support plate (No.1) and front disc brake pad support plate (No.2).
  - (1) Make sure that both have sufficient rebound, have no deformation, cracks or wear, and that all rust and dirt is cleaned off.

If necessary, replace the brake pad support plate.



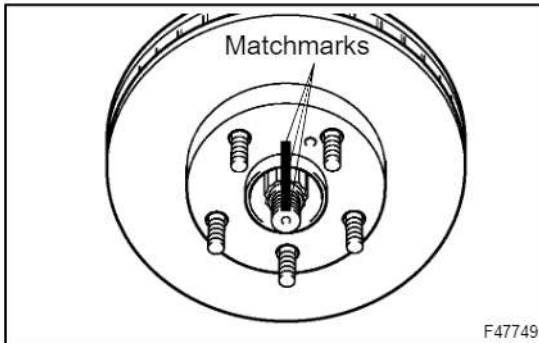
### 19. INSPECT DISC THICKNESS

- (a) Using a micrometer, measure the disc thickness.

**Standard thickness: 28.0 mm (1.102 in.)**

**Minimum thickness: 26.0 mm (1.024 in.)**

If the disc thickness is less than the minimum, replace the disc.



### 20. REMOVE FRONT DISC

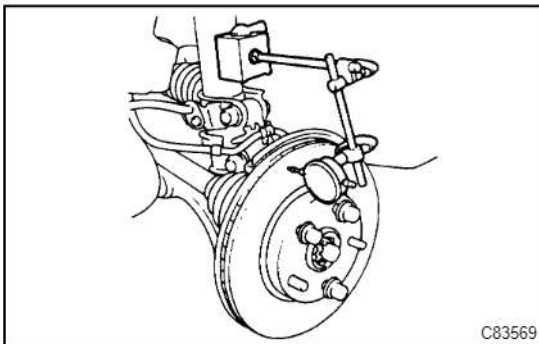
- (a) Put matchmarks on the disc and the axle hub.  
(b) Remove the disc.

### 21. INSTALL FRONT DISC

- (a) Aligning the matchmarks, install the front disc.

**HINT:**

When replacing the disc with a new one, select the installation position where the front disc has the minimum runout.



### 22. INSPECT DISC RUNOUT

- (a) Temporarily fasten the disc with hub nuts.  
**Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)**
- (b) Using a dial indicator, measure the disc runout 10 mm (0.39 in.) away from the outer edge of the disc.  
**Maximum disc runout: 0.05 mm (0.0020 in.)**
- (c) If the runout exceeds the maximum value, change the installation positions of the disc and axle so that the runout will become minimal. If the runout exceeds the maximum even when the installation positions are changed, check the bearing play in the axial direction and the axle hub runout (see page 30-3). If the bearing play and the axle hub runout are normal and if the disc thickness is not within the specified range, shave the disc. If the disc thickness is less than the minimum, replace the disc.

### 23. TEMPORARILY TIGHTEN FRONT DISC BRAKE BLEEDER PLUG

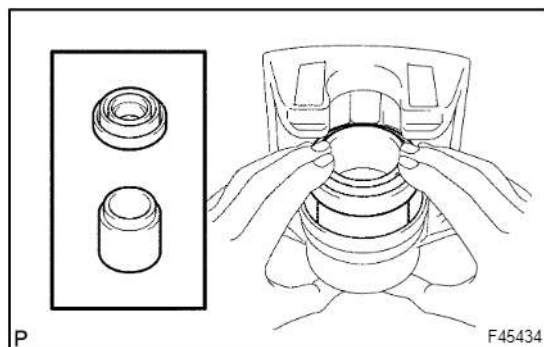
- (a) Temporarily tighten the front disc brake bleeder plug to the front disc brake cylinder sub-assy.

### 24. INSTALL FRONT DISC BRAKE BLEEDER PLUG CAP

- (a) Install the front disc brake bleeder plug cap to the front disc brake bleeder plug.

### 25. INSTALL PISTON SEAL

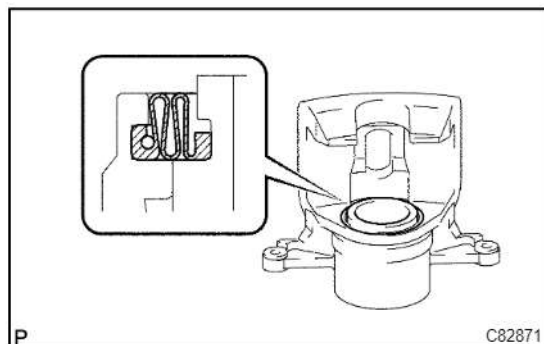
- (a) Apply lithium soap base glycol grease to a new piston seal.  
(b) Install the piston seal to the front disc brake cylinder sub-assy.

**26. INSTALL FRONT DISC BRAKE PISTON**

- (a) Apply lithium soap base glycol grease to the front disc brake piston.
- (b) Install the front disc brake piston to the front disc brake cylinder sub-assy smoothly.

**NOTICE:**

**Do not install the front disc brake piston forcibly in the front disc brake cylinder sub-assy.**

**27. INSTALL CYLINDER BOOT**

- (a) Apply lithium soap base glycol grease to a new cylinder boot. Install the cylinder boot to the front disc brake cylinder sub-assy.

**HINT:**

Install the boot securely to the grooves of the cylinder and piston.

- (b) Using a screwdriver, install a new set ring.

**NOTICE:**

- Install the boot securely to the grooves of the cylinder and piston.
- Do not damage the cylinder boot.

**28. INSTALL FRONT DISC BRAKE CYLINDER MOUNTING LH**

- (a) Install the front disc brake cylinder mounting LH with the 2 bolts.

**Torque: 107 N·m (1,090 kgf·cm, 79 ft·lbf)**

**29. INSTALL FRONT DISC BRAKE BUSH DUST BOOT**

- (a) Apply lithium soap base glycol grease to seal surface of 2 new front disc brake bush dust boots.
- (b) Install the 2 front disc brake bush dust boots to the front disc brake cylinder mounting LH.

**30. INSTALL FRONT DISC BRAKE CYLINDER SLIDE BUSH**

- (a) Apply lithium soap base glycol grease to a new front disc brake cylinder slide bush.
- (b) Install the front disc brake cylinder slide bush to the front disc brake cylinder slide pin (lower).

**31. INSTALL FRONT DISC BRAKE CYLINDER SLIDE PIN**

- (a) Apply lithium soap base glycol grease to the sliding part and the seal surface of the 2 front disc brake cylinder slide pins.
- (b) Install the 2 front disc brake cylinder slide pins to the front disc brake cylinder mounting LH.

**NOTICE:**

**Insert the slide pin with slide bush into the lower side.**

**32. INSTALL FRONT DISC BRAKE PAD SUPPORT PLATE**

- (a) Install the front disc brake pad support plate (No.1) and front disc brake pad support plate (No.2) to the front disc brake cylinder mounting LH.

**33. INSTALL ANTI SQUEAL SHIM KIT FRONT****NOTICE:**

- If necessary, replace the anti squeal shim kit when replacing the brake pad.
  - Install the shims in the correct position and direction.
- (a) Apply disc brake grease to inside of each anti-squeal shim.
  - (b) Install anti-squeal shims on each pad.
  - (c) Install the pad wear indicator plate to the inner pad.

**34. INSTALL DISC BRAKE PAD KIT FRONT (PAD ONLY)**

- (a) Install the inner pad with the pad wear indicator plate facing upward, and install the outer pad.

**NOTICE:**

There should be no oil or grease on the friction surface of the pads and the disc.

**35. INSTALL FRONT DISC BRAKE CYLINDER SUB-ASSY**

- (a) Install the front disc brake cylinder sub-assy with the 2 bolts.

**Torque: 34 N·m (350 kgf·cm, 25 ft·lbf)**

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

**Torque: 29 N·m (300 kgf·cm, 21 ft·lbf)**

**NOTICE:**

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

**36. FILL RESERVOIR WITH BRAKE FLUID (SEE PAGE 32-4 )****37. BLEED MASTER CYLINDER (SEE PAGE 32-4 )**

SST 09023-00101

**38. BLEED BRAKE LINE (SEE PAGE 32-4 )****39. BLEED BRAKE ACTUATOR ASSY (SEE PAGE 32-4 )****40. CHECK BRAKE FLUID LEAKAGE****41. CHECK FLUID LEVEL IN RESERVOIR (SEE PAGE 32-4 )****42. INSTALL FRONT WHEEL**

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

## OVERHAUL

### 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

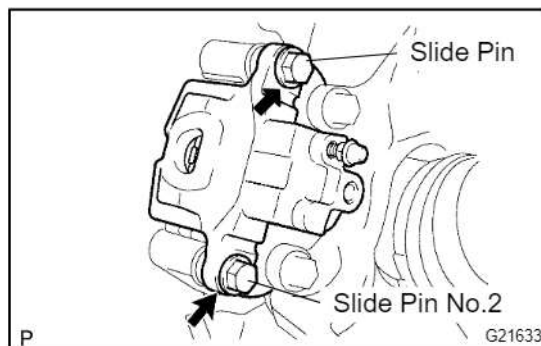
### 2. DRAIN BRAKE FLUID

### NOTICE:

Wash brake fluid off immediately if it adheres to any painted surface.

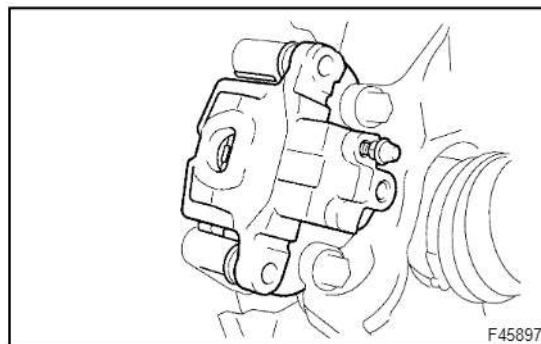
### 3. DISCONNECT REAR LH FLEXIBLE HOSE

- Remove the union bolt and gasket from the rear disc brake cylinder, then disconnect the flexible hose from the rear disc brake cylinder.



### 4. REMOVE REAR DISC BRAKE CYLINDER SLIDE PIN

- Remove the rear disc brake cylinder slide pin and rear disc brake cylinder slide pin No.2.



### 5. REMOVE DISC BRAKE CYLINDER ASSY REAR LH

- Remove the disc brake cylinder assy rear LH.

### 6. REMOVE DISC BRAKE PAD KIT REAR (PAD ONLY)

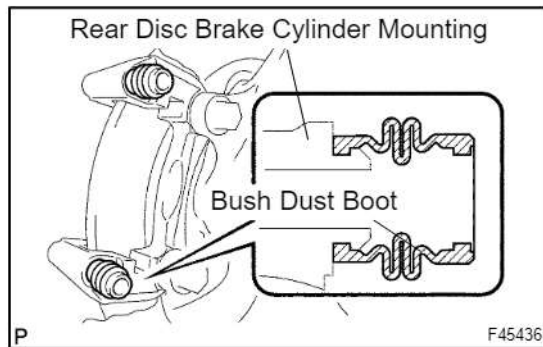
- Remove the 2 brake pads with the anti squeal shim.

### 7. REMOVE ANTI SQUEAL SHIM KIT REAR

- Remove the 4 anti squeal shims from each pad.
- Using a screwdriver, remove the 2 pad wear indicators from each pad.

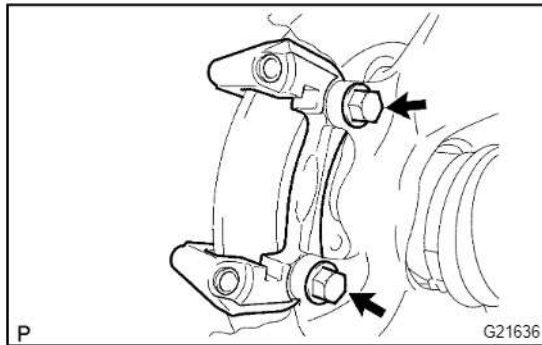
### 8. REMOVE REAR DISC BRAKE PAD SUPPORT PLATE

- Remove the rear disc brake pad support plate (No.1) and the rear disc brake pad support plate (No.2) from the rear disc brake cylinder mounting LH.



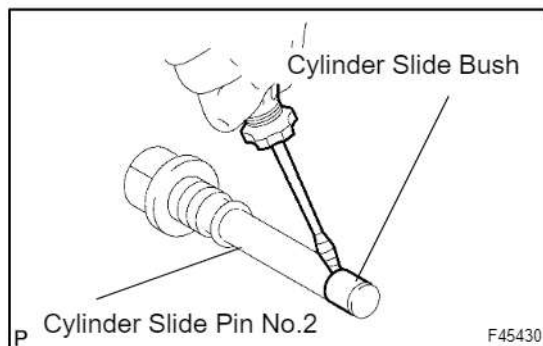
### 9. REMOVE REAR DISC BRAKE BUSH DUST BOOT

- (a) Remove the 2 rear disc brake bush dust boots from the rear disc brake cylinder mounting LH.



### 10. REMOVE REAR DISC BRAKE CYLINDER MOUNTING LH

- (a) Remove the 2 bolts and the rear disc brake cylinder mounting LH.

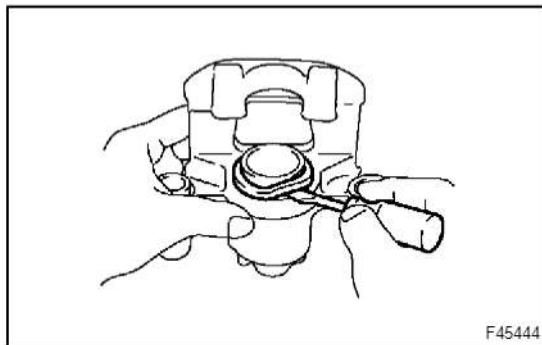


### 11. REMOVE REAR DISC BRAKE CYLINDER SLIDE BUSH

- (a) Using a screwdriver, remove the rear disc brake cylinder slide bush from the rear disc brake cylinder slide pin No.2.

**NOTICE:**

Do not damage the front disc brake cylinder slide pin No.2.

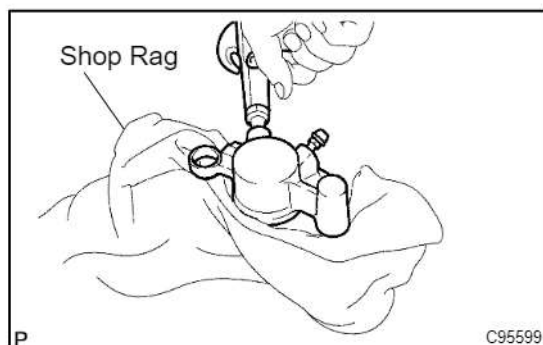


### 12. REMOVE CYLINDER BOOT

- (a) Using a screwdriver, remove the cylinder boot.

**NOTICE:**

Do not damage the inner cylinder and cylinder groove.



### 13. REMOVE REAR DISC BRAKE PISTON

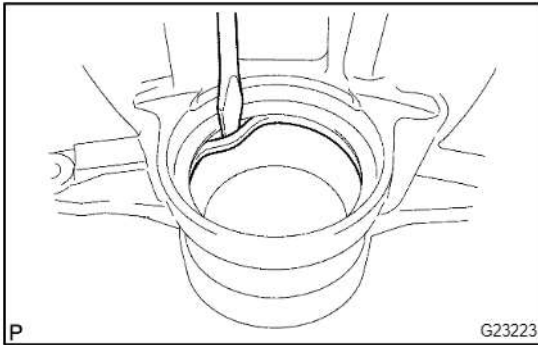
- (a) Place a shop rag between the rear disc brake piston and the disc brake cylinder assy rear LH.
- (b) Use compressed air to remove the rear disc brake piston from the disc brake cylinder assy rear LH.

**CAUTION:**

Do not place your fingers in front of the brake piston when using compressed air.

**NOTICE:**

Do not spatter the brake fluid.

**14. REMOVE PISTON SEAL**

- (a) Using a screwdriver, remove the piston seal from the disc brake cylinder assy rear LH.

**NOTICE:**

Do not damage the inner cylinder and the cylinder groove.

**15. REMOVE REAR DISC BRAKE BLEEDER PLUG CAP**

- (a) Remove the rear disc brake bleeder plug cap from the rear disc brake bleeder plug.

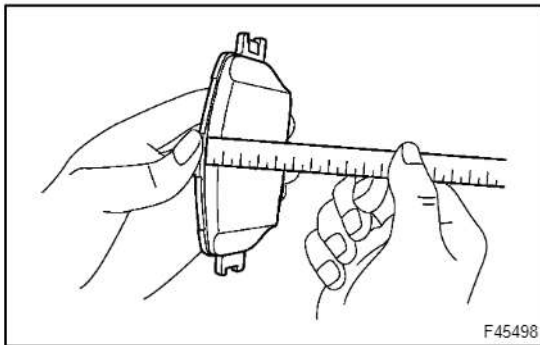
**16. REMOVE REAR DISC BRAKE BLEEDER PLUG**

- (a) Remove the rear disc brake bleeder plug from the disc brake cylinder assy rear LH.

**17. INSPECT BRAKE CYLINDER AND PISTON**

- (a) Inspect the cylinder bore and the brake piston for rust or scoring.

If necessary, replace the brake cylinder and piston.

**18. INSPECT PAD LINING THICKNESS**

- (a) Using a ruler, measure the pad lining thickness.

**Standard thickness: 10.0 mm (0.394 in.)**

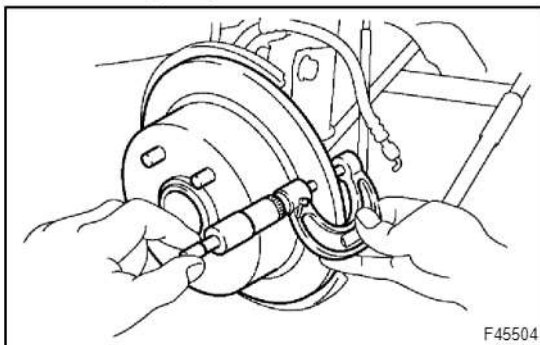
**Minimum thickness: 1.0 mm (0.039 in.)**

If the pad lining thickness is equal to the minimum thickness or less, replace the brake pad.

**19. INSPECT REAR DISC BRAKE PAD SUPPORT PLATE**

- (a) Inspect the rear disc brake pad support plate (No.1) and the rear disc brake pad support plate (No.2).  
 (1) Make sure that both have sufficient rebound, have no deformation, cracks or wear, and that all rust and dirt are cleaned off.

If necessary, replace the rear disc brake pad support plate.

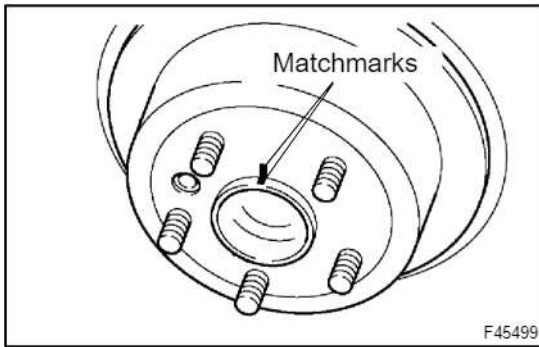
**20. INSPECT DISC THICKNESS**

- (a) Using a micrometer, measure the disc thickness.

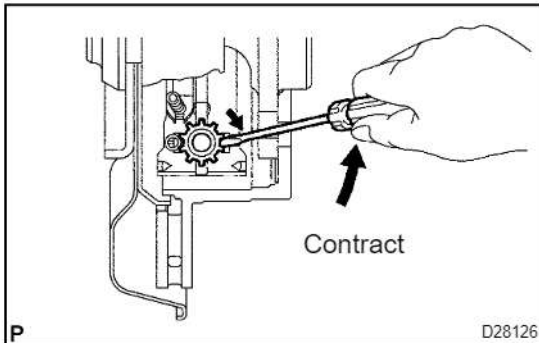
**Standard thickness: 10.0 mm (0.394 in.)**

**Minimum thickness: 8.5 mm (0.335 in.)**

If the disc thickness is less than the minimum, replace the disc.

**21. REMOVE REAR DISC**

- (a) Put matchmarks on the rear disc and the axle hub.



- (b) Release the parking brake, and remove the rear disc.

**HINT:**

If the disc cannot be removed easily, turn the shoe adjuster until the wheel turns freely.

**22. REMOVE PARKING BRAKE SHOE ADJUSTING HOLE PLUG**

- (a) Remove the parking brake shoe adjusting hole plug from the rear disc.

**23. INSTALL PARKING BRAKE SHOE ADJUSTING HOLE PLUG**

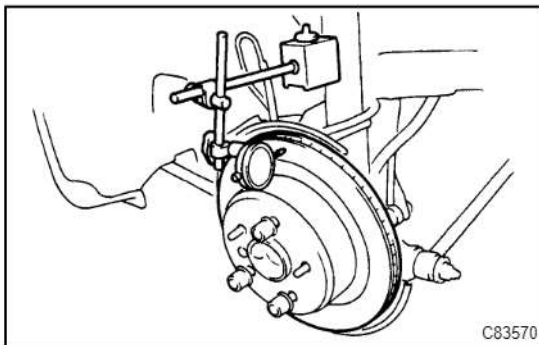
- (a) Install the parking brake shoe adjusting hole plug to the rear disc.

**24. INSTALL REAR DISC**

- (a) Aligning the matchmarks, install the rear disc.

**HINT:**

When replacing the rear disc with a new one, select the installation position where the rear disc has the minimum runout.

**25. INSPECT DISC RUNOUT**

- (a) Temporarily fasten the rear disc with hub nuts.

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

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

**Maximum disc runout: 0.15 mm (0.0059 in.)**

- (c) If the runout exceeds the maximum value, change the installation positions of the disc and axle so that the runout will become minimal. If the runout exceeds the maximum even when the installation positions are changed, check the bearing play in the axial direction and the axle hub runout (see page 30-3). If the bearing play and the axle hub runout are normal and if the disc thickness is not within the specified range, shave the disc. If the disc thickness is less than the minimum, replace the disc.

**26. ADJUST PARKING BRAKE SHOE CLEARANCE (SEE PAGE 33-19)****27. TEMPORARILY TIGHTEN REAR DISC BRAKE BLEEDER PLUG**

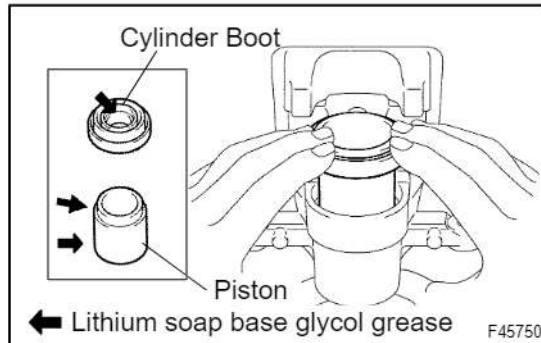
- (a) Temporarily tighten the rear disc brake bleeder plug to the disc brake cylinder assy rear LH.

**28. INSTALL REAR DISC BRAKE BLEEDER PLUG CAP**

- (a) Install the rear disc brake bleeder plug cap to the rear disc brake bleeder plug.

**29. INSTALL PISTON SEAL**

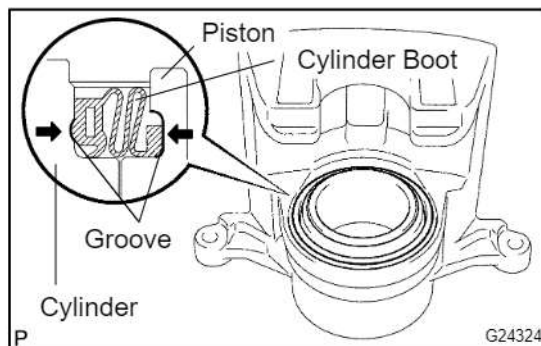
- (a) Apply lithium soap base glycol grease to a new piston seal.
- (b) Install the piston seal to the disc brake cylinder assy rear LH.

**30. INSTALL REAR DISC BRAKE PISTON**

- (a) Apply lithium soap base glycol grease to the rear disc brake piston and a new cylinder boot.
- (b) Install the cylinder boot to the rear disc brake piston.
- (c) Install the piston to the disc brake cylinder assy rear LH.

**NOTICE:**

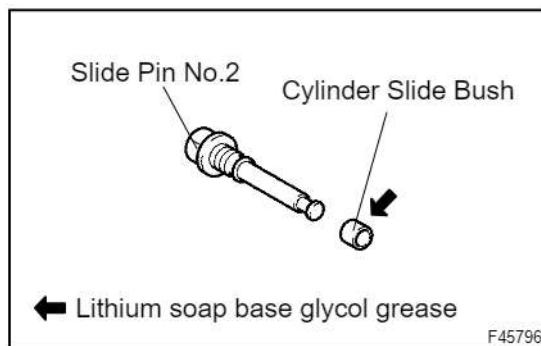
**Do not install the piston forcibly in the disc brake cylinder.**

**31. INSTALL CYLINDER BOOT**

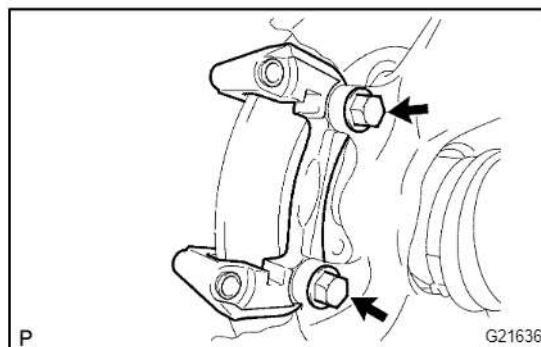
- (a) Install the cylinder boot to the disc brake cylinder assy rear LH.

**NOTICE:**

- Install the boot securely onto the grooves of the cylinder and the piston.
- Do not damage the cylinder boot.

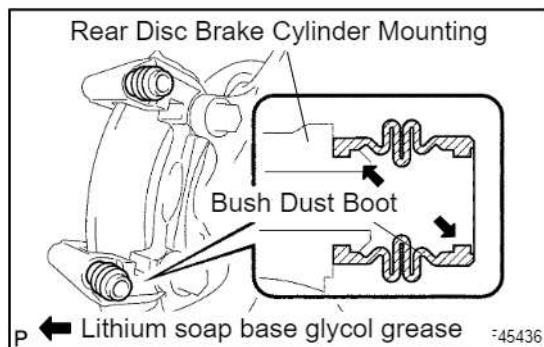
**32. INSTALL REAR DISC BRAKE CYLINDER SLIDE BUSH**

- (a) Apply lithium soap base glycol grease to a new rear disc brake cylinder slide bush.
- (b) Install the rear disc brake cylinder slide bush to the rear disc brake cylinder slide pin No.2.

**33. INSTALL REAR DISC BRAKE CYLINDER MOUNTING LH**

- (a) Install the rear disc brake cylinder mounting LH with the 2 bolts.

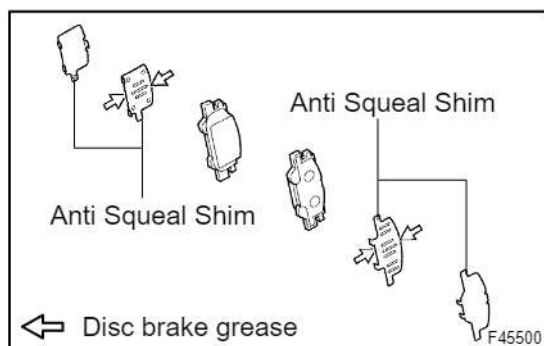
**Torque: 78 N·m (800 kgf·cm, 58 ft·lbf)**

**34. INSTALL REAR DISC BRAKE BUSH DUST BOOT**

- Apply lithium soap base glycol grease to the seal surface of 2 new rear disc brake bush dust boots.
- Install the 2 rear disc brake bush dust boots to the rear disc brake cylinder mounting LH.

**35. INSTALL REAR DISC BRAKE PAD SUPPORT PLATE**

- Install the rear disc brake pad support plate (No.1) and the rear disc brake pad support plate (No.2) to the rear disc brake cylinder mounting LH.

**36. INSTALL ANTI SQUEAL SHIM KIT REAR**

- Apply disc brake grease to the inside of the anti squeal shims and install them and the pad wear indicators to each of the 2 brake pads.

**NOTICE:**

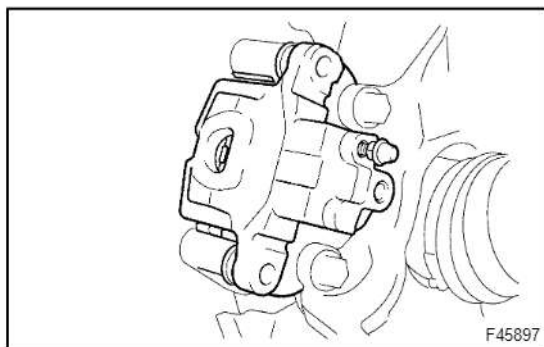
- When replacing worn pads, the anti squeal shims must be replaced together with the pads.
- Install the pad wear indicator and anti squeal shims in the correct positions and directions.

**37. INSTALL DISC BRAKE PAD KIT REAR (PAD ONLY)**

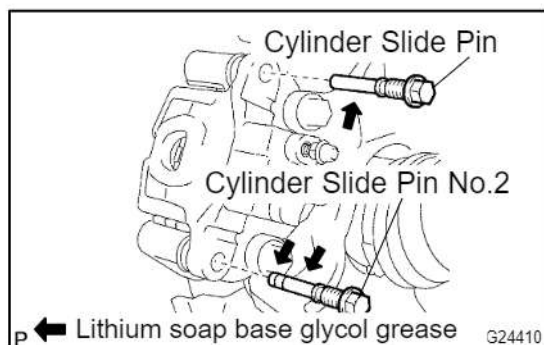
- Install the 2 brake pads with anti squeal shims to the rear disc brake cylinder mounting LH.

**NOTICE:**

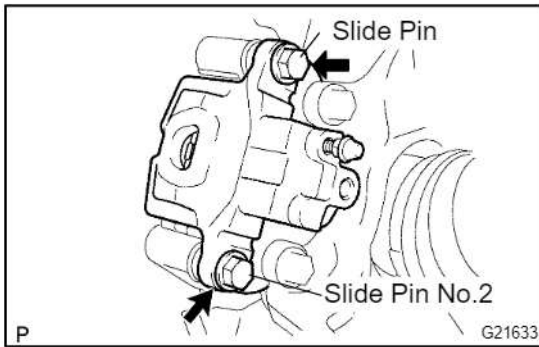
There should be no oil or grease on the friction surface of the pads and the disc.

**38. INSTALL DISC BRAKE CYLINDER ASSY REAR LH**

- Install the disc brake cylinder assy rear LH.

**39. INSTALL REAR DISC BRAKE CYLINDER SLIDE PIN**

- Apply lithium soap base glycol grease to the sliding part and the seal surface of the 2 slide pins.
- Install the rear disc brake cylinder slide pin.
- Install the rear disc brake cylinder slide pin No.2 to the bottom side of the rear disc brake cylinder mounting LH.



- (d) Fully tighten the rear disc brake cylinder slide pin and the rear disc brake cylinder slide pin No.2.  
Torque: 43 N·m (440 kgf·cm, 32 ft·lbf)

#### 40. CONNECT REAR LH FLEXIBLE HOSE

- (a) Connect the flexible hose with the union bolt and a new gasket.  
Torque: 29 N·m (300 kgf·cm, 21 ft·lbf)

#### 41. FILL RESERVOIR WITH BRAKE FLUID (SEE PAGE 32-4 )

42. BLEED MASTER CYLINDER (SEE PAGE 32-4 )  
SST 09023-00101

#### 43. BLEED BRAKE LINE (SEE PAGE 32-4 )

#### 44. BLEED BRAKE ACTUATOR ASSY (SEE PAGE 32-4 )

#### 45. CHECK BRAKE FLUID LEAKAGE

#### 46. CHECK FLUID LEVEL IN RESERVOIR (SEE PAGE 32-4 )

#### 47. INSTALL REAR WHEEL

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

# SPEED SENSOR FRONT LH

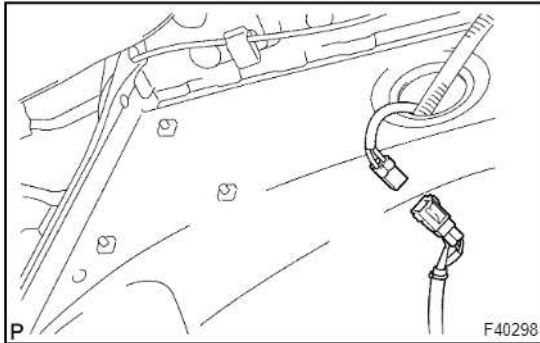
## REPLACEMENT

3215T-01

### HINT:

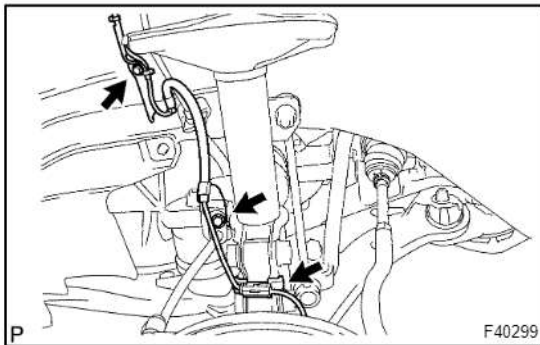
- Use the same procedures for the RH side and LH side.
- The procedures listed below are for the LH side.

1. **REMOVE FRONT WHEEL**
2. **REMOVE FRONT FENDER SPLASH SHIELD SUB-ASSY LH**

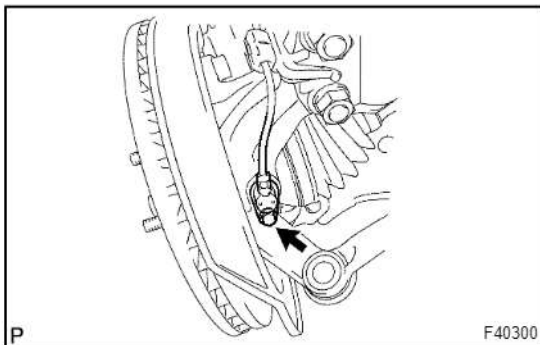


### 3. REMOVE SPEED SENSOR FRONT LH

- (a) Disconnect the speed sensor connector.



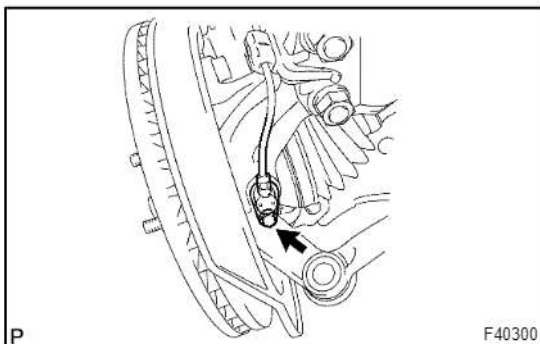
- (b) Remove the 2 bolts and the clamp from the body and the shock absorber Assy.



- (c) Remove the bolt and the speed sensor front.

### NOTICE:

Prevent foreign matter from attaching to the sensor tip.

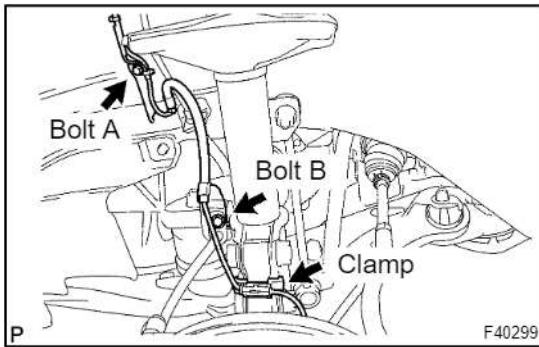


### 4. INSTALL SPEED SENSOR FRONT LH

- (a) Install the speed sensor front with the bolt.  
Torque: 8.0 N·m (82 kgf·cm, 71 in·lbf)

### NOTICE:

Prevent foreign matter from attaching to the sensor tip.



- (b) Install the speed sensor front with the 2 bolts and the clamp.

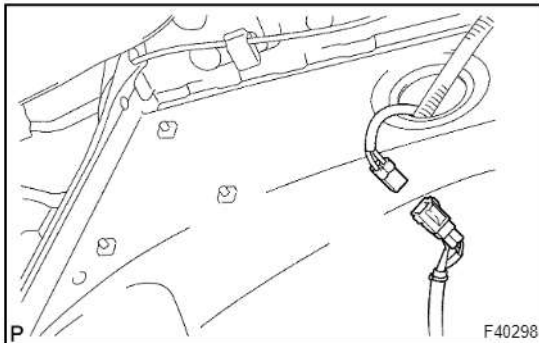
**Torque:**

**Bolt A:** 5.0 N·m (51 kgf·cm, 44 in·lbf)

**Bolt B:** 19 N·m (192 kgf·cm, 14 ft·lbf)

**NOTICE:**

**Do not twist the sensor wire when installing the sensor.**



- (c) Connect the speed sensor connector.

5. **INSTALL FRONT FENDER SPLASH SHIELD SUB-ASSY LH**
6. **INSTALL FRONT WHEEL**  
Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)
7. **CHECK ABS SPEED SENSOR SIGNAL (SEE PAGE [05-765](#) )**

## SKID CONTROL SENSOR (FF)

### REPLACEMENT

320WO-03

#### 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. **DISCONNECT SKID CONTROL SENSOR WIRE**
  - (a) Disconnect the connector from the skid control sensor.
  3. **SEPARATE REAR DISC BRAKE CALIPER ASSY LH (SEE PAGE 30-53 )**
  4. **REMOVE REAR DISC (SEE PAGE 30-53 )**
  5. **REMOVE REAR AXLE HUB & BEARING ASSY LH (SEE PAGE 30-53 )**

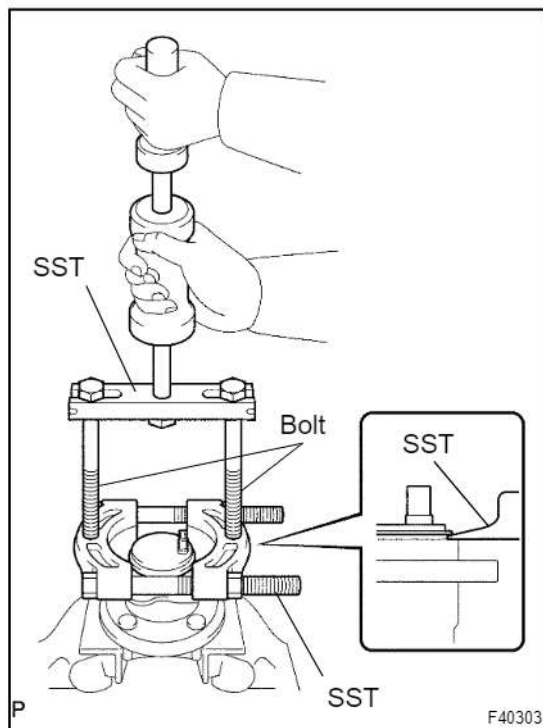
#### 6. REMOVE SKID CONTROL SENSOR

- (a) Mount the hub & bearing assy on a soft jaw vise.

#### NOTICE:

Replace the hub & bearing assy if it is dropped or receives a strong shock.

- (b) Using a pin punch and hammer, drive out the 2 pins and remove the 2 attachments from SST.

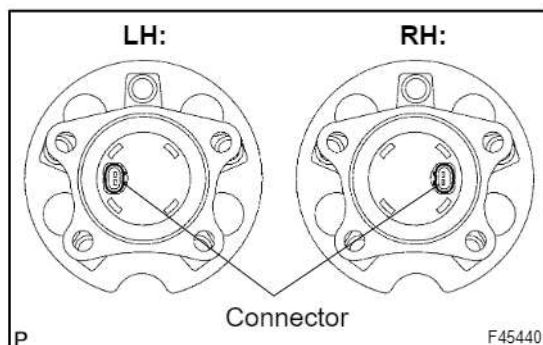


- (c) Using SST and 2 bolts (Diameter: 12 mm, pitch: 1.5 mm), remove the skid control sensor from the hub & bearing assy.

SST 09520-00031 (09520-00040), 09521-00020, 09950-00020

#### NOTICE:

- If damage is inflicted to the sensor rotor, replace the hub & bearing assy.
- Do not scratch the contacting surface of the hub & bearing assy and the skid control sensor.



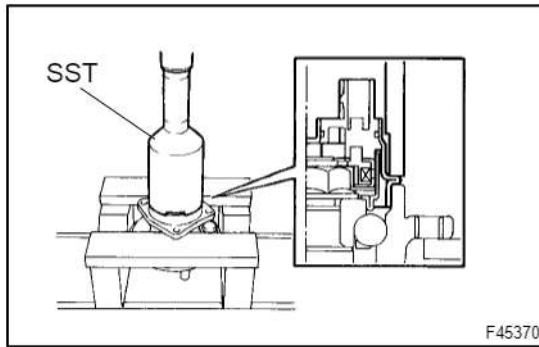
#### 7. INSTALL SKID CONTROL SENSOR

- (a) Clean the contacting surface of the rear axle hub and a assy and a new skid control sensor.

#### NOTICE:

Prevent foreign matter from attaching to the sensor rotor.

- (b) Place the skid control sensor on the rear axle hub so that the connector makes the lowest position under the on-vehicle condition.



- (c) Using SST and a press, install the skid control sensor onto the hub & bearing assy.  
SST 09214-7601 1

**NOTICE:**

- Do not tap the skid control sensor with a hammer directly.
- Check that there is no foreign matter on the skid control sensor detection portion.
- Press in the skid control sensor straight and slowly.

8. **INSTALL REAR AXLE HUB & BEARING ASSY LH (SEE PAGE 30-53 )**

9. **INSPECT BEARING BACKLASH (SEE PAGE 30-53 )**

10. **INSPECT AXLE HUB DEVIATION (SEE PAGE 30-53 )**

11. **INSTALL REAR DISC (SEE PAGE 30-53 )**

12. **INSTALL REAR DISC BRAKE CALIPER ASSY LH (SEE PAGE 30-53 )**

13. **CONNECT SKID CONTROL SENSOR WIRE**

(a) Connect the connector to the skid control sensor.

14. **INSTALL REAR WHEEL**

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

15. **INSPECT AND ADJUST REAR WHEEL ALIGNMENT (SEE PAGE 27-5 )**

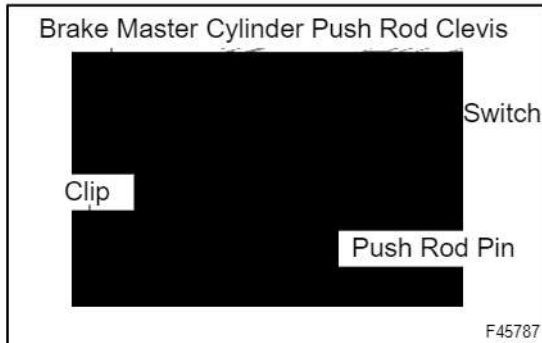
16. **CHECK ABS SPEED SENSOR SIGNAL (SEE PAGE 05-765 )**

## REPLACEMENT

### 1. REMOVE INSTRUMENT PANEL FINISH PANEL SUB-ASSY LOWER (SEE PAGE 71-10 )

### 2. REMOVE BRAKE PEDAL RETURN SPRING

- (a) Remove the brake pedal return spring.



### 3. REMOVE PUSH ROD PIN

- (a) Remove the clip and the push rod pin.  
 (b) Disconnect the stop lamp switch connector.  
 (c) Disconnect the pedal force switch connector and release the clip of the pedal force switch.

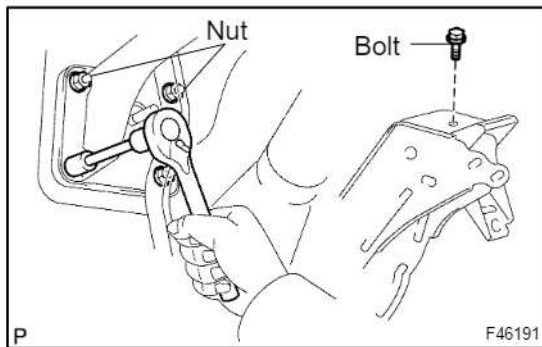
### 4. REMOVE INSTRUMENT CLUSTER FINISH PANEL SUB-ASSY CENTER (SEE PAGE 71-10 )

### 5. REMOVE INSTRUMENT PANEL FINISH PANEL LOWER (SEE PAGE 71-10 )

### 6. REMOVE INSTRUMENT CLUSTER FINISH PANEL GARNISH (SEE PAGE 71-10 )

### 7. REMOVE INSTRUMENT CLUSTER FINISH PANEL ASSY (SEE PAGE 71-10 )

### 8. REMOVE COMBINATION METER ASSY (SEE PAGE 71-10 )



### 9. REMOVE BRAKE PEDAL SUPPORT ASSY

- (a) Remove the bolt, the 4 nuts and the brake pedal support assy.

### 10. REMOVE BRAKE PEDAL SUB-ASSY

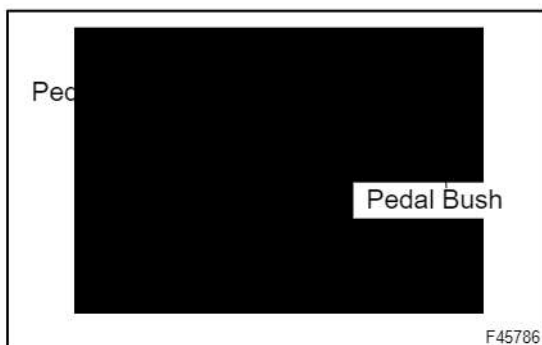
- (a) Remove the nut, the brake pedal shaft and the brake pedal sub-assy from the brake pedal support sub-assy .

### 11. REMOVE BRAKE PEDAL PAD

- (a) Remove the brake pedal pad from the brake pedal sub-assy.

### 12. REMOVE STOP LAMP SWITCH ASSY

- (a) Loosen the stop lamp switch lock nut and remove the stop lamp switch assy.



### 13. REMOVE BRAKE PEDAL BUSH

- (a) Remove the 2 brake pedal bushes from the brake pedal sub-assy .

### 14. REMOVE BRAKE PEDAL SHAFT COLLAR

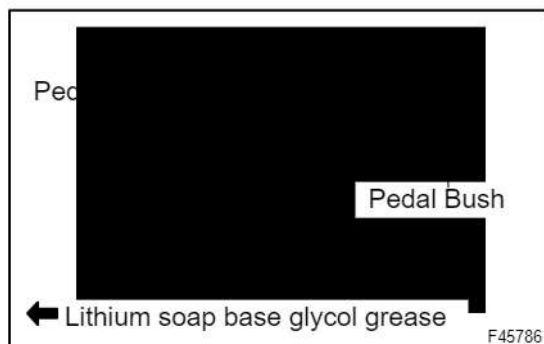
- (a) Remove the brake pedal shaft collar from the brake pedal sub-assy .

**15. REMOVE STOP LAMP SWITCH CUSHION**

- (a) Remove the stop lamp switch cushion from the brake pedal sub-assy.

**16. INSTALL STOP LAMP SWITCH CUSHION**

- (a) Install the stop lamp switch cushion to the brake pedal sub-assy.

**17. INSTALL BRAKE PEDAL SHAFT COLLAR**

- (a) Apply lithium soap base glycol grease to the ends and sides of brake pedal shaft collar.  
(b) Install the brake pedal shaft collar to the brake pedal sub-assy.

**18. INSTALL BRAKE PEDAL BUSH**

- (a) Apply lithium soap base glycol grease to the ends and sides of 2 new brake pedal bushes.  
(b) Install the brake pedal bushes to the brake pedal sub-assy.

**19. INSTALL STOP LAMP SWITCH ASSY**

- (a) Install the stop lamp switch assy with the stop lamp switch lock nut.

**HINT:**

After adjusting the brake pedal height, torque the lock nut.

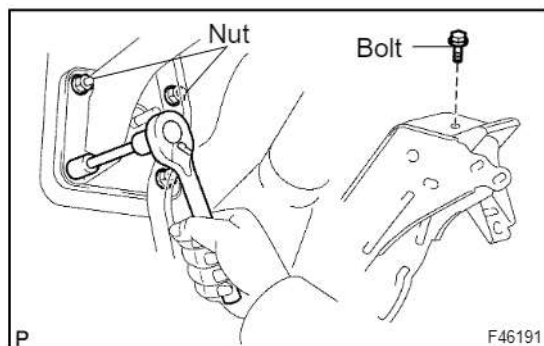
**20. INSTALL BRAKE PEDAL PAD**

- (a) Install the brake pedal pad to the brake pedal sub-assy.

**21. INSTALL BRAKE PEDAL SUB-ASSY**

- (a) Install the brake pedal sub-assy with the brake pedal shaft and the nut.

**Torque: 37 N·m (375 kgf·cm, 27 ft·lbf)**

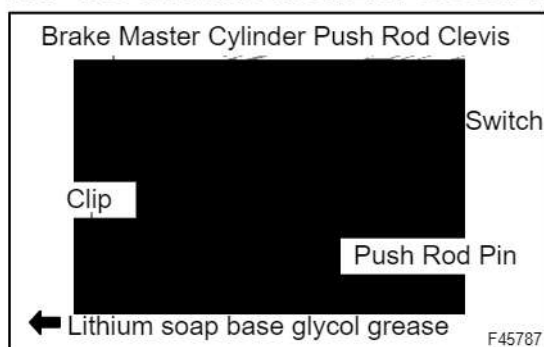
**22. INSTALL BRAKE PEDAL SUPPORT ASSY**

- (a) Install the brake pedal support assy with the bolt and the 4 nuts.

**Torque:**

**Bolt: 20 N·m (204 kgf·cm, 15 ft·lbf)**

**Nut: 13 N·m (130 kgf·cm, 9 ft·lbf)**

**23. INSTALL COMBINATION METER ASSY****24. INSTALL INSTRUMENT CLUSTER FINISH PANEL ASSY****25. INSTALL INSTRUMENT CLUSTER FINISH PANEL GARNISH****26. INSTALL INSTRUMENT PANEL FINISH PANEL LOWER****27. INSTALL INSTRUMENT CLUSTER FINISH PANEL SUB-ASSY CENTER****28. INSTALL PUSH ROD PIN**

- (a) Apply lithium soap base glycol grease to the clevis pin.  
(b) Install the clevis pin and the clip.  
(c) Connect the pedal force switch connector and install the clip of the pedal force switch to the brake pedal support sub-assy .  
(d) Connect the stop lamp switch connector.

**29. INSTALL BRAKE PEDAL RETURN SPRING**

(a) Install the brake pedal return spring.

**30. CHECK AND ADJUST BRAKE PEDAL HEIGHT (SEE PAGE 32-8 )****31. CHECK PEDAL FREE PLAY (SEE PAGE 32-8 )****32. CHECK PEDAL RESERVE DISTANCE (SEE PAGE 32-8 )****33. INSTALL INSTRUMENT PANEL FINISH PANEL SUB-ASSY LOWER**

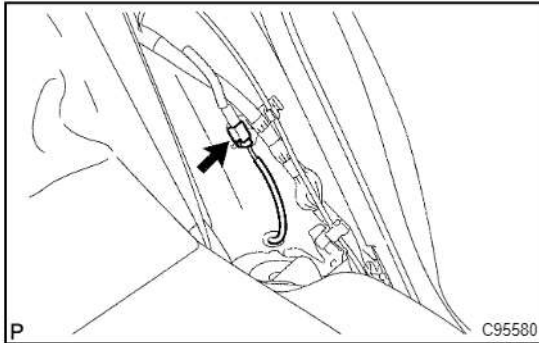
## SPEED SENSOR REAR LH (4WD)

### REPLACEMENT

320WP-03

#### HINT:

- Use the same procedures for the RH side and LH side.
  - The procedures listed below are for the LH side.
1. **REMOVE DECK TRIM SIDE PANEL ASSY LH (SEE PAGE 76-21 )**
  2. **REMOVE REAR WHEEL**

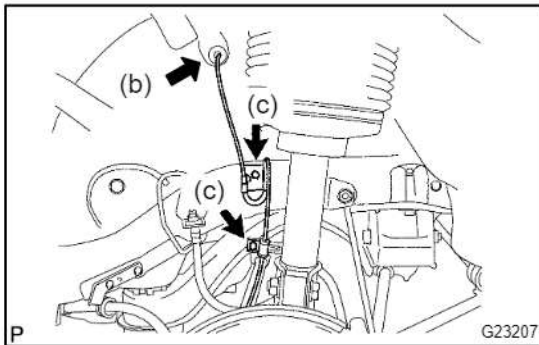


#### 3. REMOVE SPEED SENSOR REAR LH

- (a) Disconnect the speed sensor connector.

#### NOTICE:

Be careful not to damage the wire harness.

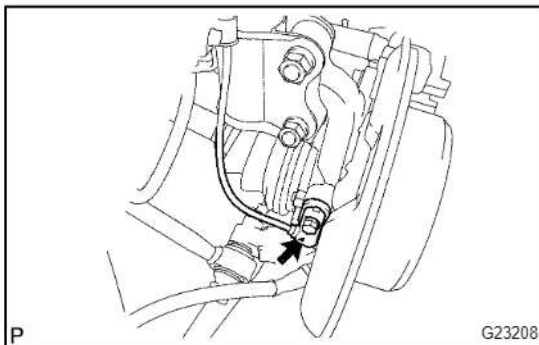


- (b) Pull out the sensor wire harness with the grommet.

#### NOTICE:

Do not pull sensor wire.

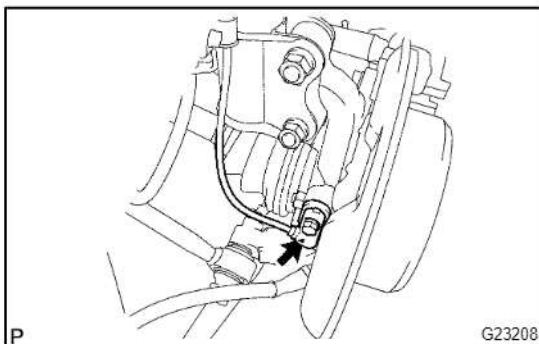
- (c) Remove the 2 bolts holding the sensor harness from the body and the shock absorber assy.



- (d) Remove the bolt and the speed sensor rear.

#### NOTICE:

Prevent foreign matter from attaching to the sensor tip.



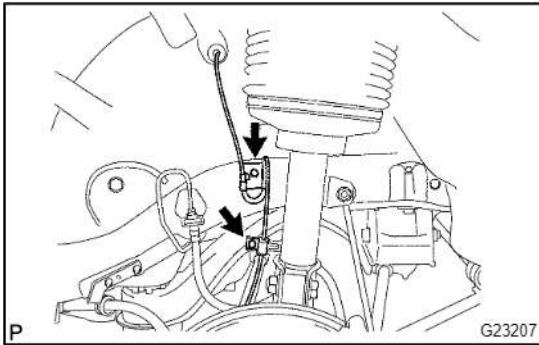
#### 4. INSTALL SPEED SENSOR REAR LH

- (a) Install the speed sensor rear with the bolt.

Torque: 8.0 N·m (82 kgf·cm, 71 in·lbf)

#### NOTICE:

Prevent foreign matter from attaching to the sensor tip.



- (b) Install the sensor harness clamps with the 2 bolts to the body and the shock absorber assy.

**Torque: 5.0 N·m (51 kgf·cm, 44 in·lbf)**

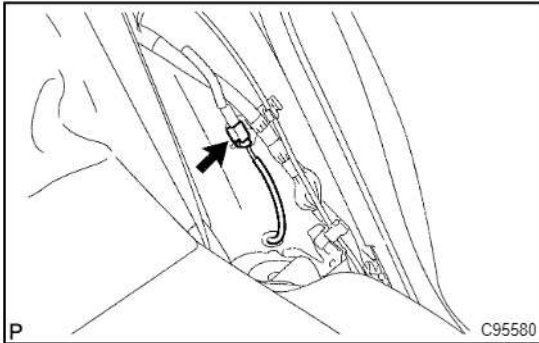
**NOTICE:**

**Do not twist the sensor wire when installing the sensor.**

- (c) Push in the sensor wire harness with grommet.

**NOTICE:**

**When grommet is set to body, pull the grommet. Do not pull sensor wire.**



- (d) Connect the speed sensor connector.

**5. INSTALL REAR WHEEL**

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

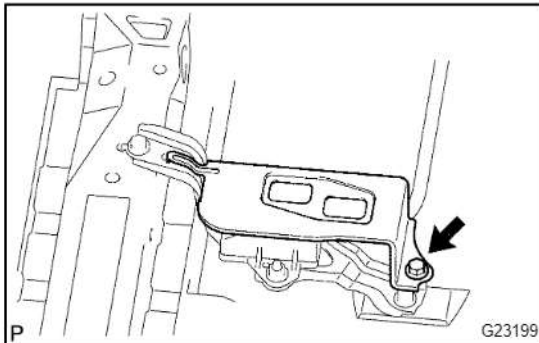
**6. INSTALL DECK TRIM SIDE PANEL ASSY LH**

**7. CHECK ABS SPEED SENSOR SIGNAL (SEE PAGE [05-765](#) )**

# YAWRATE SENSOR REPLACEMENT

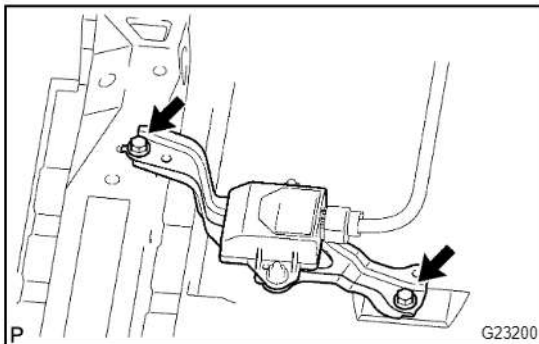
## NOTICE:

- Do not use the yawrate sensor if it is dropped or damaged.
  - Prevent foreign matter from attaching between the yawrate sensor bracket and body.
  - Confirm the sensor direction is correct.
1. REMOVE FRONT SEAT ASSEMBLY RH (SEE PAGE 72-11 or 72-19 )
  2. REMOVE FRONT DOOR SCUFF PLATE RH (SEE PAGE 76-21 )
  3. REMOVE REAR DOOR SCUFF PLATE RH (SEE PAGE 76-21 )
  4. REMOVE FRONT DOOR OPENING TRIM WEATHERSTRIP RH (SEE PAGE 76-21 )
  5. REMOVE REAR DOOR OPENING TRIM WEATHERSTRIP RH (SEE PAGE 76-21 )
  6. REMOVE CENTER PILLAR GARNISH LOWER RH (SEE PAGE 76-21 )



## 7. REMOVE YAWRATE SENSOR PROTECTOR

- (a) Remove the bolt and the sensor protector.

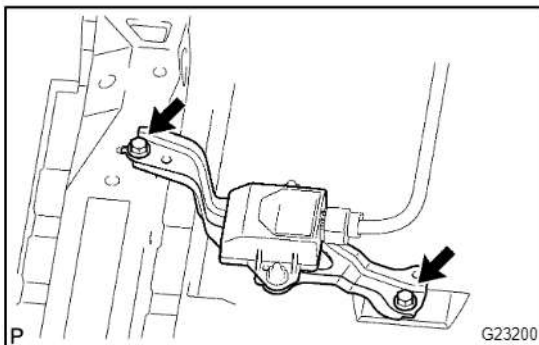


## 8. REMOVE YAWRATE SENSOR

- (a) Disconnect the connector.
- (b) Remove the 2 bolts and the yawrate sensor.

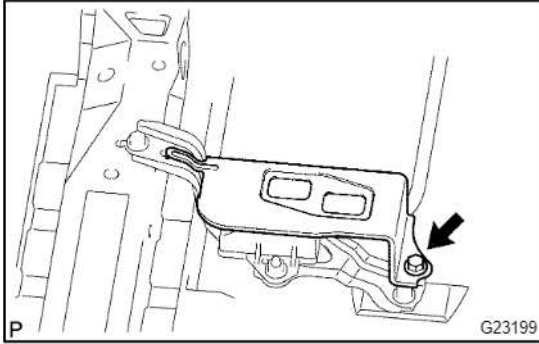
## NOTICE:

Do not remove the yawrate sensor from the yawrate sensor bracket.



## 9. INSTALL YAWRATE SENSOR

- (a) Install the yawrate sensor with the 2 bolts.  
**Torque: 14 N·m (143 kgf·cm, 10 ft·lbf)**
- (b) Connect the connector.

**10. INSTALL YAWRATE SENSOR PROTECTOR**

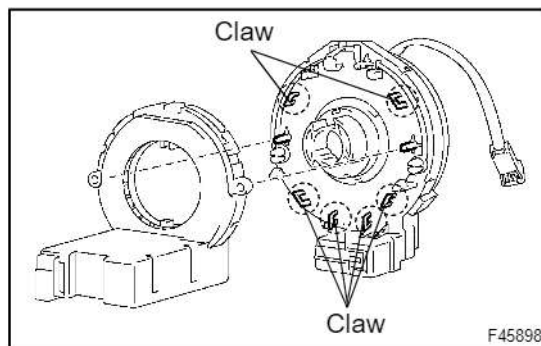
- (a) Install the sensor protector with the bolt.  
Torque: 14 N·m (143 kgf·cm, 10 ft·lbf)

11. INSTALL CENTER PILLAR GARNISH LOWER RH
12. INSTALL REAR DOOR OPENING TRIM WEATHERSTRIP RH
13. INSTALL FRONT DOOR OPENING TRIM WEATHERSTRIP RH
14. INSTALL REAR DOOR SCUFF PLATE RH
15. INSTALL FRONT DOOR SCUFF PLATE RH
16. INSTALL FRONT SEAT ASSEMBLY RH (SEE PAGE [72-11](#) or [72-19](#) )
17. PERFORM YAWRATE SENSOR ZERO POINT CALIBRATION (SEE PAGE [05-765](#) )
18. CHECK IN THE TEST MODE (SEE PAGE [05-765](#) )

# STEERING SENSOR REPLACEMENT

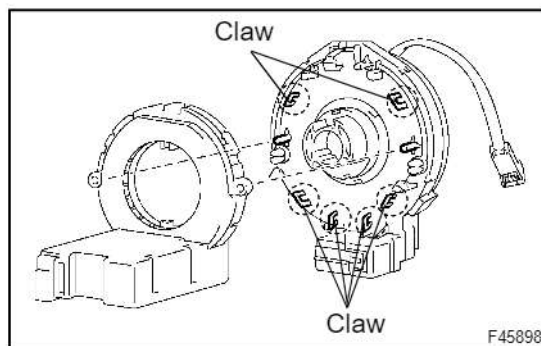
320WR-05

1. PRECAUTION (SEE PAGE 60-1 )
2. DISCONNECT BATTERY NEGATIVE TERMINAL
3. PLACE FRONT WHEELS FACING STRAIGHT AHEAD
4. REMOVE HORN BUTTON ASSY (SEE PAGE 60-17 )
5. REMOVE STEERING WHEEL ASSY (SEE PAGE 50-8 )  
SST 09950-50013 (09951-05010, 09952-05010, 09953-05020, 09954-05021)
6. REMOVE STEERING COLUMN COVER UPR (SEE PAGE 50-8 )
7. REMOVE SPIRAL CABLE SUB-ASSY (SEE PAGE 60-26 )



## 8. REMOVE STEERING SENSOR

- (a) Release 6 claw fittings and remove the steering sensor from the spiral cable.



## 9. INSTALL STEERING SENSOR

- (a) Install the steering sensor to the spiral cable.

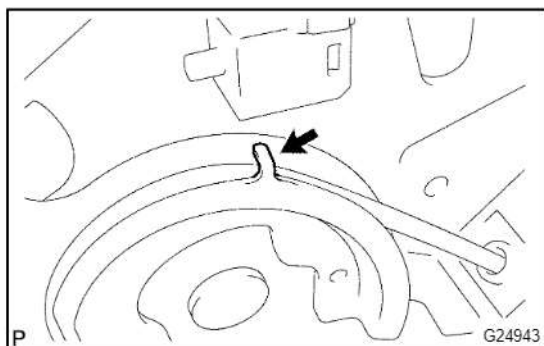
### NOTICE:

- Install the claw securely.
- Do not damage the claw.

10. ADJUST CENTER FRONT WHEEL
11. INSTALL SPIRAL CABLE SUB-ASSY (SEE PAGE 60-26 )
12. CENTER SPIRAL CABLE (SEE PAGE 60-26 )
13. INSTALL STEERING WHEEL ASSY (SEE PAGE 50-8 )
14. INSTALL HORN BUTTON ASSY (SEE PAGE 60-17 )
15. INSPECT STEERING WHEEL CENTER POINT
16. INSPECT HORN BUTTON ASSY (SEE PAGE 60-1 1)
17. CONNECT BATTERY NEGATIVE TERMINAL
18. INSPECT SRS WARNING LIGHT (SEE PAGE 05-1207 )

## REPLACEMENT

1. PRECAUTION (W/ SIDE AIRBAG) (SEE PAGE 60-1 )
2. DISCONNECT BATTERY NEGATIVE TERMINAL (SEE PAGE 60-1 )
3. REMOVE INSTRUMENT PANEL FINISH PANEL SUB-ASSY LOWER (SEE PAGE 71-10 )
4. REMOVE INSTRUMENT PNL INSERT SUB-ASSY LWR LH (SEE PAGE 71-10 )
5. REMOVE INSTRUMENT CLUSTER FINISH PANEL ASSY CENTER (SEE PAGE 71-10 )
6. REMOVE FLOOR CARPET COVER CENTER RH (SEE PAGE 71-10 )
7. REMOVE FLOOR CARPET COVER CENTER LH (SEE PAGE 71-10 )
8. REMOVE FRONT SEAT ASSEMBLY RH
9. REMOVE FRONT SEAT ASSEMBLY LH (SEE PAGE 72-1 1, 72-19 )
10. REMOVE CONSOLE BOX ASSY (SEE PAGE 71-10 )
11. REMOVE FR FLOOR FOOTREST (SEE PAGE 33-5 )
12. REMOVE PARKING BRAKE CONTROL PEDAL ASSY (SEE PAGE 33-5 )

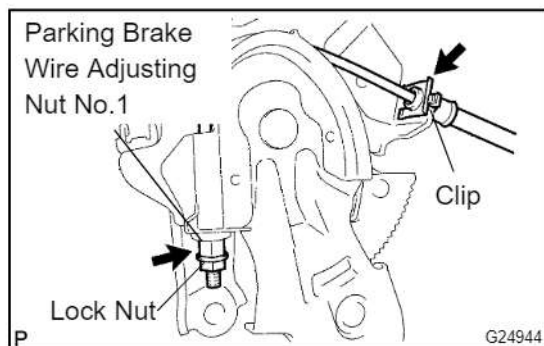


### 13. REMOVE PARKING BRAKE CABLE ASSY NO.1

- (a) Using a screwdriver, disengage the claw.

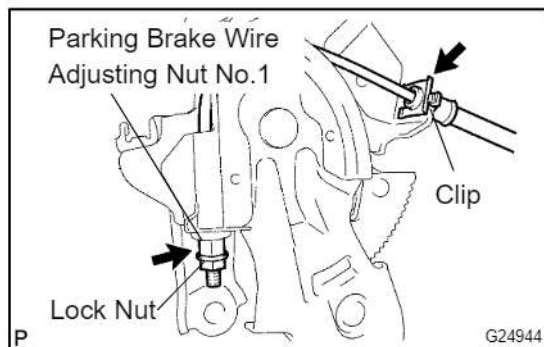
#### NOTICE:

Be careful not to damage the parking brake cable assy No.1.



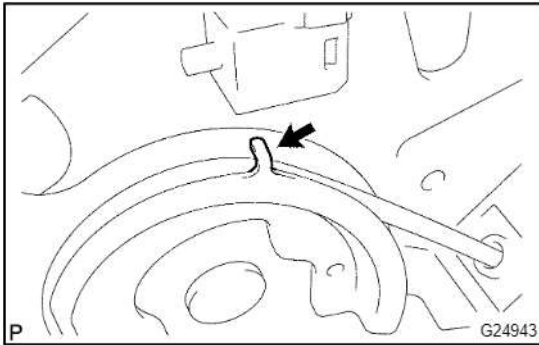
- (b) Remove the clip from the parking brake pedal assy.

- (c) Remove the lock nut and parking brake wire adjusting nut No.1.



### 14. INSTALL PARKING BRAKE CABLE ASSY NO.1

- (a) Install the parking brake cable assy No.1 with the clip.
- (b) Temporarily install the parking brake wire adjusting nut No.1 and lock nut.



(c) Bend the claw.

**NOTICE:**

Bend the claw fully.

15. INSTALL PARKING BRAKE CONTROL PEDAL ASSY (SEE PAGE 33-5 )
16. INSTALL FR FLOOR FOOTREST (SEE PAGE 33-5 )
17. INSTALL FRONT SEAT ASSEMBLY RH
18. INSTALL FRONT SEAT ASSEMBLY LH (SEE PAGE 72-11, 72-19 )
19. REMOVE REAR WHEEL
20. ADJUST PARKING BRAKE SHOE CLEARANCE (SEE PAGE 33-19 )
21. INSTALL REAR WHEEL  
Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)
22. INSPECT PARKING BRAKE PEDAL TRAVEL (SEE PAGE 33-2 )
23. ADJUST PARKING BRAKE PEDAL TRAVEL (SEE PAGE 33-2 )
24. CONNECT BATTERY NEGATIVE TERMINAL
25. INSPECT SRS WARNING LIGHT (W/ SIDE AIRBAG) (SEE PAGE 05-1207 )

## REPLACEMENT

### HINT:

For parking brake cable No.2, employ the same procedure to the No.3 side.

#### 1. REMOVE REAR WHEEL

#### 2. SEPARATE REAR DISC BRAKE CALIPER ASSY LH

- (a) Remove the 2 bolts and separate the rear disc brake caliper assy LH.

### HINT:

Do not disconnect the flexible hose from the rear brake caliper assy LH.

#### 3. REMOVE REAR DISC (SEE PAGE 33-19 )

#### 4. REMOVE PARKING BRAKE SHOE RETURN TENSION SPRING (SEE PAGE 33-19 )

#### 5. REMOVE PARKING BRAKE SHOE STRUT LH (SEE PAGE 33-19 )

#### 6. REMOVE PARKING BRAKE SHOE ASSY LH NO.1 (SEE PAGE 33-19 )

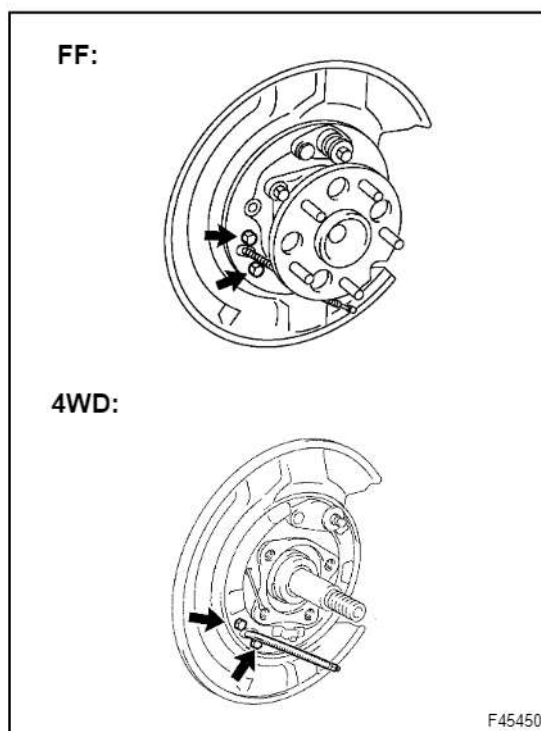
#### 7. REMOVE PARKING BRAKE SHOE ADJUSTING SCREW SET (SEE PAGE 33-19 )

#### 8. REMOVE PARKING BRAKE SHOE ASSY LH NO.2 (SEE PAGE 33-19 )

#### 9. SEPARATE SPEED SENSOR REAR LH (4WD DRIVE TYPE) (SEE PAGE 30-60 )

#### 10. REMOVE REAR AXLE SHAFT LH NUT (4WD DRIVE TYPE) (SEE PAGE 30-60 )

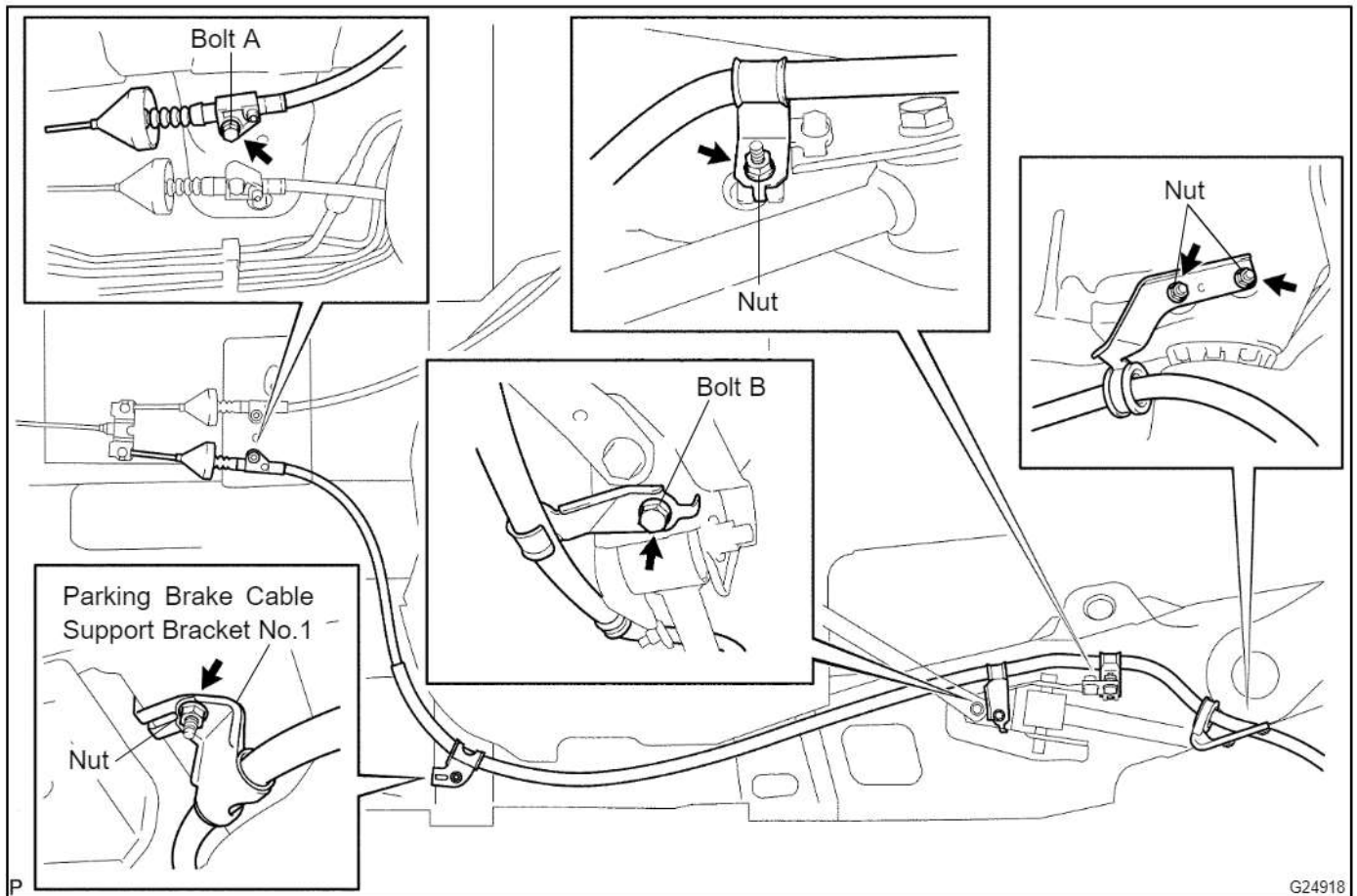
#### 11. REMOVE REAR AXLE HUB & BEARING ASSY LH (4WD DRIVE TYPE) (SEE PAGE 30-60 )



#### 12. REMOVE PARKING BRAKE CABLE ASSY NO.3

- (a) Remove the 2 bolts and separate the parking brake cable assy No.3 from the backing plate.

- (b) Remove the 4 nuts and 2 bolts and separate the parking brake cable assy No.3 from the body.
- (c) Separate the parking brake cable assy No.3 from the equalizer and remove the parking brake cable assy No.3.
- (d) Remove the parking brake cable support bracket No.1 from the parking brake cable assy No.3.



### 13. INSTALL PARKING BRAKE CABLE ASSY NO.3

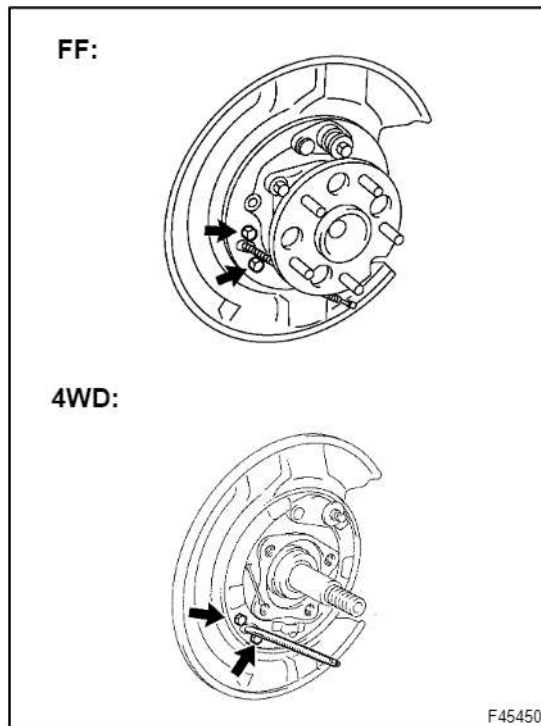
- (a) Attach the parking brake cable support bracket No.1 to the parking brake cable assy No.3.
- (b) Connect the parking brake cable assy No.3 to the equalizer and slide boot stopper of No.1 cable should be inserted into groove of T-Metal fitting.
- (c) Install the 4 nuts, 2 bolts and parking brake cable assy No.3 to the body.

#### Torque:

**Bolt A: 8.5 N·m (87 kgf·cm, 75 in.·lbf)**

**Bolt B: 39 N·m (400 kgf·cm, 29 ft.·lbf)**

**Nut: 6.0 N·m (61 kgf·cm, 53 in.·lbf)**



- (d) Connect the parking brake cable assy No.3 to the backing plate with the 2 bolts.

**Torque: 8.0 N·m (82 kgf·cm, 71 in·lbf)**

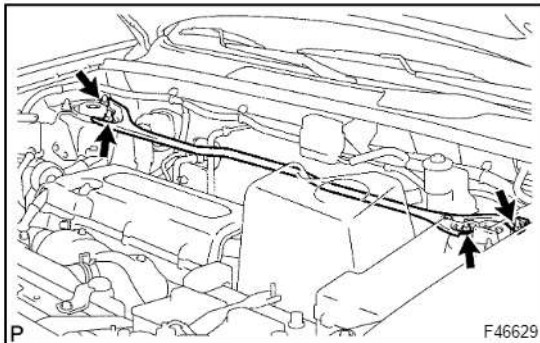
14. APPLY HIGH TEMPERATURE GREASE (SEE PAGE 33-19 )
15. INSTALL REAR AXLE HUB & BEARING ASSY LH (4WD DRIVE TYPE) (SEE PAGE 30-60 )
16. INSTALL REAR AXLE SHAFT LH NUT (4WD DRIVE TYPE) (SEE PAGE 30-60 )
17. INSTALL SPEED SENSOR REAR LH (4WD DRIVE TYPE) (SEE PAGE 30-60 )
18. INSTALL PARKING BRAKE SHOE ASSY LH NO.2 (SEE PAGE 33-19 )
19. INSTALL PARKING BRAKE SHOE ADJUSTING SCREW SET (SEE PAGE 33-19 )
20. INSTALL PARKING BRAKE SHOE ASSY LH NO.1 (SEE PAGE 33-19 )
21. INSTALL PARKING BRAKE SHOE STRUT LH (SEE PAGE 33-19 )
22. INSTALL PARKING BRAKE SHOE RETURN TENSION SPRING (SEE PAGE 33-19 )
23. CHECK PARKING BRAKE INSTALLATION (SEE PAGE 33-19 )
24. INSPECT BEARING BACKLASH (4WD DRIVE TYPE) (SEE PAGE 30-3 )
25. INSPECT AXLE HUB DEVIATION (4WD DRIVE TYPE) (SEE PAGE 30-3 )
26. INSTALL REAR DISC
  - (a) Aligning the matchmarks, install the rear disc.
27. ADJUST PARKING BRAKE SHOE CLEARANCE (SEE PAGE 33-19 )
28. CONNECT REAR DISC BRAKE CALIPER ASSY LH
  - (a) Install the rear disc brake caliper assy LH with the 2 bolts.  
**Torque: 78 N·m (800 kgf·cm, 58 ft·lbf)**
29. INSTALL REAR WHEEL
  - Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)**
30. INSPECT PARKING BRAKE PEDAL TRAVEL (SEE PAGE 33-2 )
31. ADJUST PARKING BRAKE PEDAL TRAVEL (SEE PAGE 33-2 )
32. CHECK ABS SPEED SENSOR SIGNAL (4WD DRIVE TYPE) (SEE PAGE 05-765 )

# BRAKE MASTER W/PLATE CYLINDER SUB-ASSY REPLACEMENT

320WF-05

HINT:

COMPONENTS: See page 32-18 .



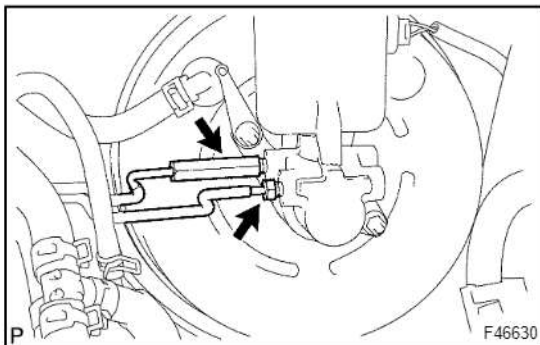
## 1. REMOVE FRONT SUSPENSION BRACE SUB-ASSY UPPER CENTER

- (a) Remove the 4 nuts and the front suspension brace sub-assy upper center.

2. REMOVE AIR CLEANER ASSY (2AZ-FE ENGINE TYPE) (SEE PAGE 14-24 )
3. REMOVE AIR CLEANER CAP SUB-ASSY (3MZ-FE ENGINE TYPE) (SEE PAGE 14-149 )
4. REMOVE AIR CLEANER FILTER ELEMENT SUB-ASSY (3MZ-FE ENGINE TYPE) (SEE PAGE 14-149 )
5. REMOVE AIR CLEANER CASE (3MZ-FE ENGINE TYPE) (SEE PAGE 14-149 )
6. DRAIN BRAKE FLUID

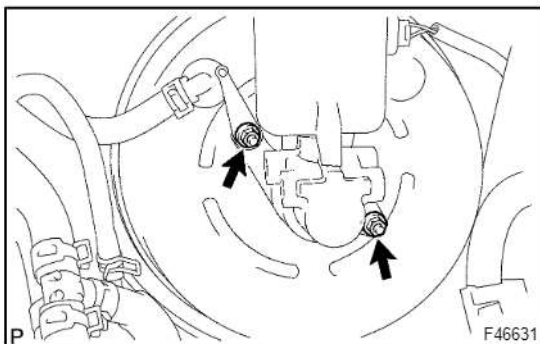
NOTICE:

Wash brake fluid off immediately if it adheres to any painted surface.



## 7. REMOVE BRAKE MASTER W/PLATE CYLINDER SUB-ASSY

- (a) Using SST, disconnect the 2 brake tubes from the brake master w/plate cylinder sub-assy.  
SST 09023-00101
- (b) Disconnect the brake fluid level warning switch connector.



- (c) Remove the 2 nuts, then pull at the check valve bracket and the brake master w/plate cylinder assy.

## 8. INSPECT AND ADJUST BRAKE BOOSTER PUSH ROD

### NOTICE:

Make an adjustment with the brake booster assy having no vacuum. (Depress the brake pedal several times with the engine stopped.)

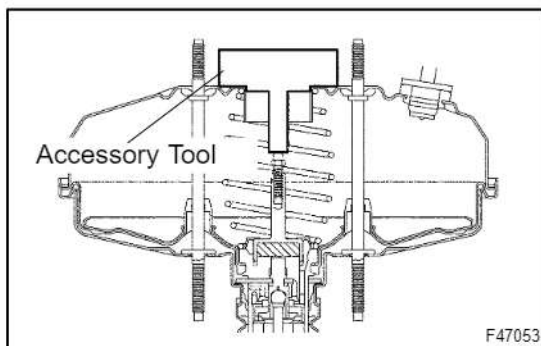
### HINT:

Adjustment of the brake booster push rod is performed when the brake master cylinder sub-assy is replaced with a new one. The adjustment is not necessary when the brake master cylinder sub-assy is reinstalled and the brake booster assy is replaced with a new one.

(a) Apply the chalk to the tip of an accessory tool.

### HINT:

An accessory tool is enclosed with a new brake master cylinder sub-assy.



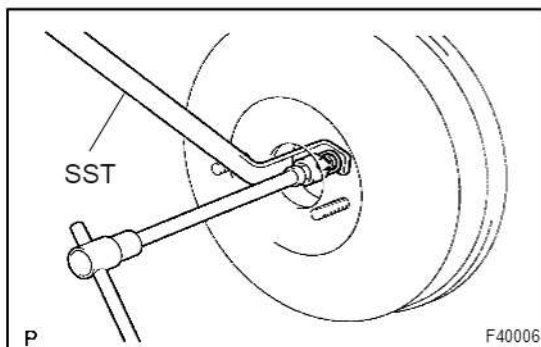
- (b) Place the accessory tool to the brake booster assy.  
 (c) Measure the clearance between the brake booster push rod and accessory tool.

**Clearance: 0 mm (0 in.)**

### HINT:

Adjust the clearance in following cases:

- If there is a clearance between the accessory tool and the shell of the brake booster (floating accessory tool), the push rod is protruding too far.
- If the chalk does not stick on the tip of the brake booster push rod, the push rod protrusion is insufficient.

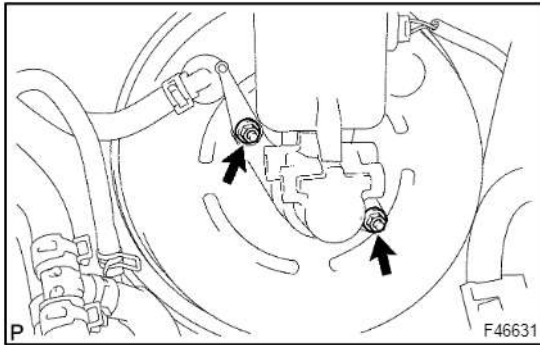


- (d) If clearance is outside the specified range, fix the push rod using SST and adjust the length of the protruding adjusting bolt.

SST 09737-00020

### HINT:

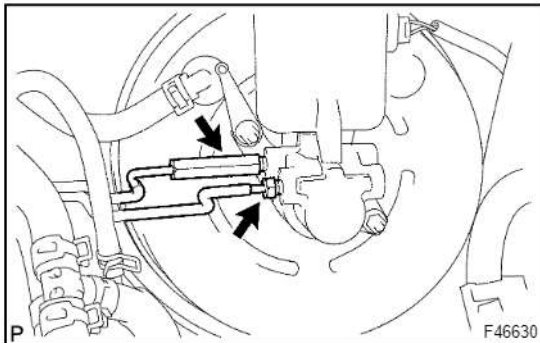
When adjusting the push rod, depress the brake pedal sufficiently so that the push rod sticks out.



### 9. INSTALL BRAKE MASTER W/PLATE CYLINDER SUB-ASSY

- (a) Install the brake master w/ plate cylinder sub-assy and the check valve bracket with the 2 nuts.

**Torque: 13 N·m (130 kgf·cm, 9 ft·lbf)**



- (b) Using SST, connect the 2 brake tubes to the brake master w/ plate cylinder assy.

SST 09023-00101

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

- (c) Connect the brake fluid level warning switch connector.

### 10. FILL RESERVOIR WITH BRAKE FLUID (SEE PAGE 32-4 )

### 11. BLEED MASTER CYLINDER (SEE PAGE 32-4 )

SST 09023-00101

### 12. BLEED BRAKE LINE (SEE PAGE 32-4 )

### 13. BLEED BRAKE ACTUATOR ASSY (SEE PAGE 32-4 )

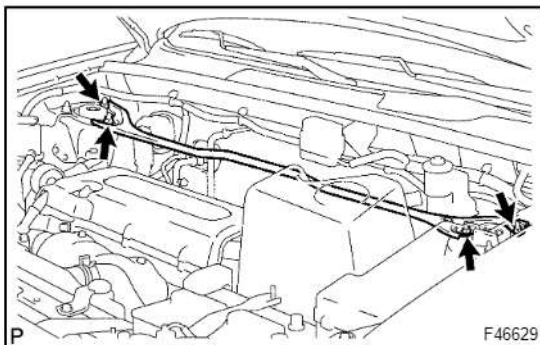
### 14. CHECK FLUID LEVEL IN RESERVOIR (SEE PAGE 32-4 )

### 15. INSTALL AIR CLEANER ASSY (2AZ-FE ENGINE TYPE) (SEE PAGE 14-24 )

### 16. INSTALL AIR CLEANER CASE (3MZ-FE ENGINE TYPE) (SEE PAGE 14-149 )

### 17. INSTALL AIR CLEANER FILTER ELEMENT SUB-ASSY (3MZ-FE ENGINE TYPE) (SEE PAGE 14-149 )

### 18. INSTALL AIR CLEANER CAP SUB-ASSY (3MZ-FE ENGINE TYPE) (SEE PAGE 14-149 )



### 19. INSTALL FRONT SUSPENSION BRACE SUB-ASSY UPPER CENTER

- (a) Install the front suspension brace sub-assy upper center with the 4 nuts.

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

### 20. CHECK BRAKE FLUID LEAKAGE

### 21. CHECK FLUID LEVEL IN RESERVOIR (SEE PAGE 32-4 )

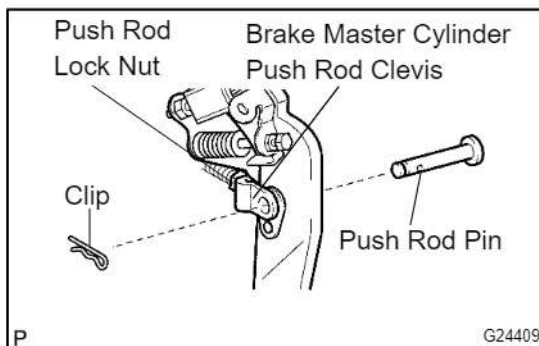
## REPLACEMENT

1. REMOVE FRONT SUSPENSION BRACE SUB-ASSY UPPER CENTER (SEE PAGE 32-14 )
2. REMOVE AIR CLEANER ASSY (2AZ-FE ENGINE TYPE) (SEE PAGE 14-24 )
3. REMOVE AIR CLEANER CAP SUB-ASSY (3MZ-FE ENGINE TYPE) (SEE PAGE 14-149 )
4. REMOVE AIR CLEANER FILTER ELEMENT SUB-ASSY (3MZ-FE ENGINE TYPE)  
(SEE PAGE 14-149 )
5. REMOVE AIR CLEANER CASE (3MZ-FE ENGINE TYPE) (SEE PAGE 14-149 )
6. DRAIN BRAKE FLUID

### NOTICE:

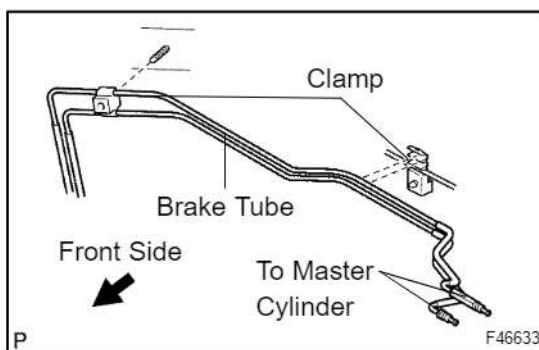
Wash brake fluid off immediately if it adheres to any painted surface.

7. REMOVE BRAKE MASTER W/PLATE CYLINDER SUB-ASSY (SEE PAGE 32-14 )  
SST 09023-00101
8. REMOVE INSTRUMENT PANEL FINISH PANEL SUB-ASSY LOWER (SEE PAGE 71-10 )
9. REMOVE BRAKE PEDAL RETURN SPRING
  - (a) Remove the brake pedal return spring.



### 10. REMOVE BRAKE MASTER CYLINDER PUSH ROD CLEVIS

- (a) Remove the clip and the push rod pin.
- (b) Loosen the push rod lock nut and remove the push rod clevis.

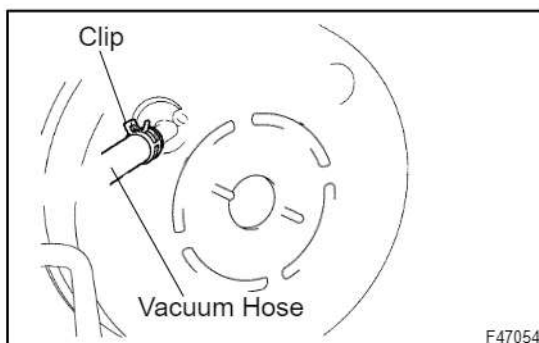


### 11. SEPARATE BRAKE TUBE

- (a) Release the 2 claw fittings of the clamp and separate the 2 brake tubes from the body.  
SST 09023-00101

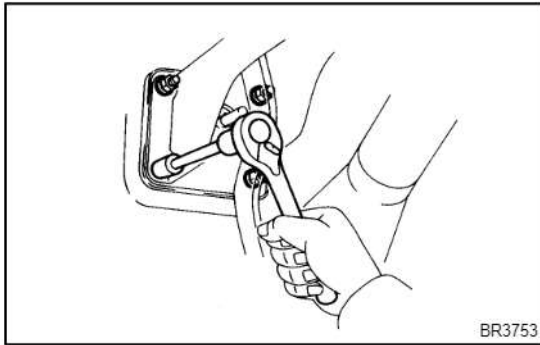
### NOTICE:

Be careful not to damage the brake tubes.



### 12. REMOVE BRAKE BOOSTER ASSY

- (a) Slide the clip and disconnect the vacuum hose from the check valve assy.



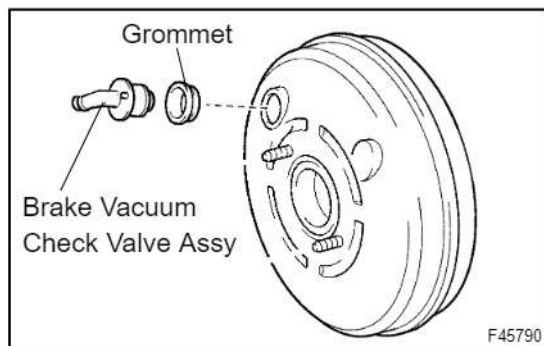
(b) Remove the 4 nuts and pull out the brake booster assy.

**NOTICE:**

**Be careful not to damage the brake tubes and the wire harness.**

### 13. REMOVE BRAKE BOOSTER GASKET

(a) Remove the brake booster gasket from the brake booster assy.



### 14. REMOVE BRAKE VACUUM CHECK VALVE ASSY

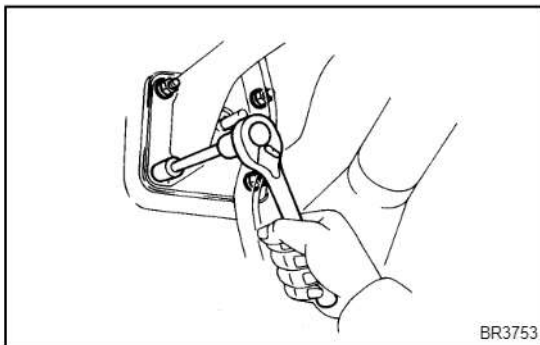
(a) Remove the check valve assy and the grommet from the brake booster assy.

### 15. INSTALL BRAKE VACUUM CHECK VALVE ASSY

(a) Install the grommet and the check valve assy to the brake booster assy.

### 16. INSTALL BRAKE BOOSTER GASKET

(a) Install a new brake booster gasket to the brake booster assy.



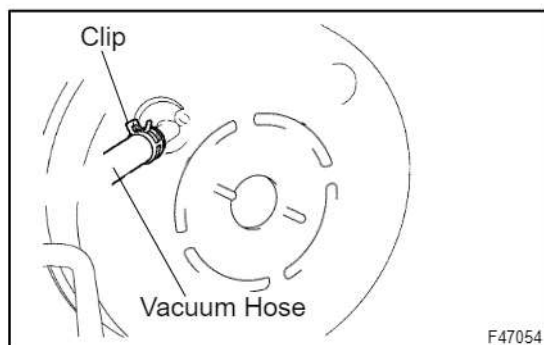
### 17. INSTALL BRAKE BOOSTER ASSY

(a) Install the brake booster assy with the 4 nuts.

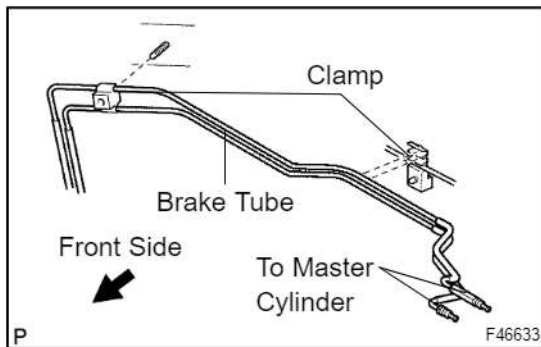
**Torque: 13 N·m (130 kgf·cm, 9 ft·lbf)**

**NOTICE:**

**Be careful not to damage the brake tubes and the wire harness.**



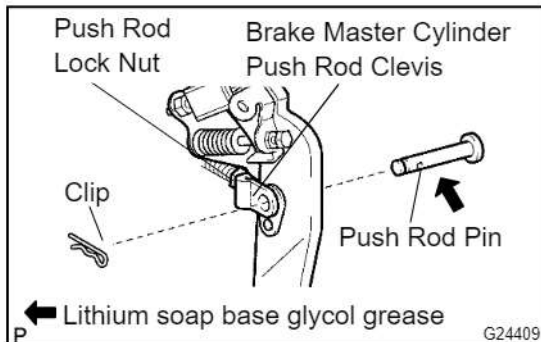
(b) Connect the vacuum hose to the brake booster assy and slide the clip.

**18. INSTALL BRAKE TUBE**

- (a) Install the 2 clamps of the brake tube to the body.  
SST 09023-00101

**NOTICE:**

Be careful not to damage the brake tubes.

**19. INSTALL BRAKE MASTER CYLINDER PUSH ROD CLEVIS**

- (a) Install the push rod clevis and the push rod lock nut.

**HINT:**

After adjusting the brake pedal height, torque the lock nut.

- (b) Apply lithium soap base glycol grease to the clevis pin.  
(c) Install the push rod pin and the clip.

**20. INSTALL BRAKE PEDAL RETURN SPRING**

- (a) Install the brake pedal return spring.

**21. INSPECT AND ADJUST BRAKE BOOSTER PUSH ROD (SEE PAGE 32-14 )**

SST 09737-00020

**22. INSTALL BRAKE MASTER W/PLATE CYLINDER SUB-ASSY (SEE PAGE 32-14 )**

SST 09023-00101

**23. FILL RESERVOIR WITH BRAKE FLUID (SEE PAGE 32-4 )****24. BLEED MASTER CYLINDER (SEE PAGE 32-4 )**

SST 09023-00101

**25. BLEED BRAKE LINE (SEE PAGE 32-4 )****26. BLEED BRAKE ACTUATOR ASSY (SEE PAGE 32-4 )****27. CHECK BRAKE FLUID LEAKAGE****28. CHECK FLUID LEVEL IN RESERVOIR (SEE PAGE 32-4 )****29. CHECK AND ADJUST BRAKE PEDAL HEIGHT (SEE PAGE 32-8 )****30. INSTALL INSTRUMENT PANEL FINISH PANEL SUB-ASSY LOWER****31. INSTALL AIR CLEANER ASSY (2AZ-FE ENGINE TYPE) (SEE PAGE 14-24 )****32. INSTALL AIR CLEANER CASE (3MZ-FE ENGINE TYPE) (SEE PAGE 14-149 )****33. INSTALL AIR CLEANER FILTER ELEMENT SUB-ASSY (3MZ-FE ENGINE TYPE) (SEE PAGE 14-149 )****34. INSTALL AIR CLEANER CAP SUB-ASSY (3MZ-FE ENGINE TYPE) (SEE PAGE 14-149 )****35. INSTALL FRONT SUSPENSION BRACE SUB-ASSY UPPER CENTER (SEE PAGE 32-14 )**

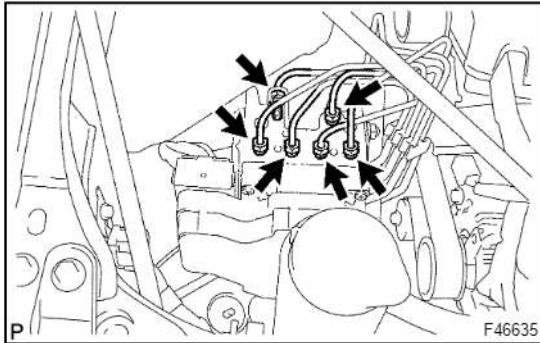
## REPLACEMENT

1. DISCONNECT BATTERY NEGATIVE TERMINAL

2. DRAIN BRAKE FLUID

### NOTICE:

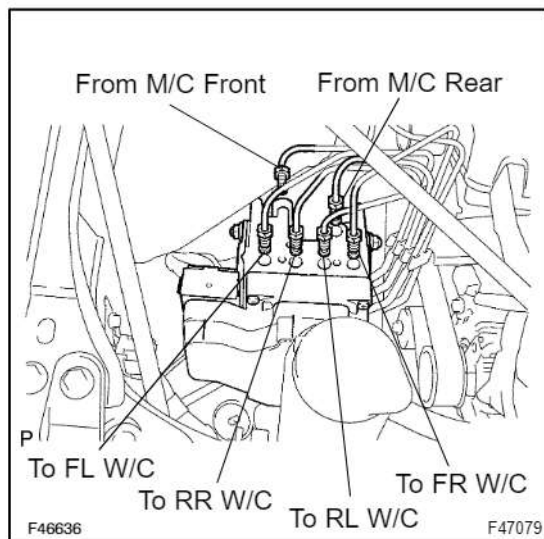
Wash brake fluid off immediately if it adheres to any painted surface.



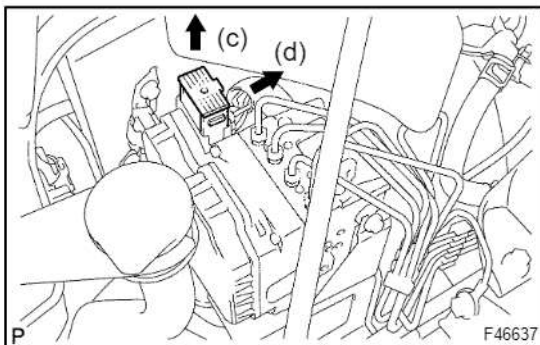
### 3. REMOVE BRAKE ACTUATOR WITH BRACKET

- (a) Using SST, disconnect the 6 brake tubes from the actuator with bracket.

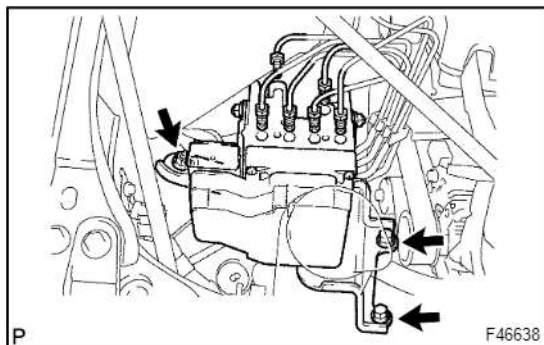
SST 09023-00101



- (b) Use tags or make a memo to identify the places to reconnect.



- (c) Pull the lock lever upward.  
(d) Disconnect the actuator connector.



(e) Remove the 2 bolts, the nut and the actuator with bracket.

**NOTICE:**

Be careful not to damage the brake tubes and wire harness.

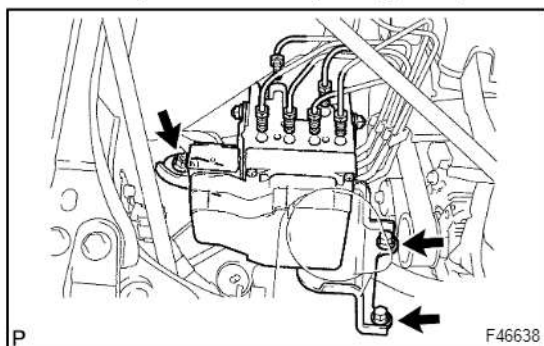
#### 4. REMOVE BRAKE ACTUATOR ASSY

(a) Remove the 2 nuts and the brake actuator assy from the brake actuator bracket.

#### 5. INSTALL BRAKE ACTUATOR ASSY

(a) Install the brake actuator assy with the 2 nuts.

**Torque: 5.4 N·m (55 kgf·cm, 48 in·lbf)**



#### 6. INSTALL BRAKE ACTUATOR WITH BRACKET

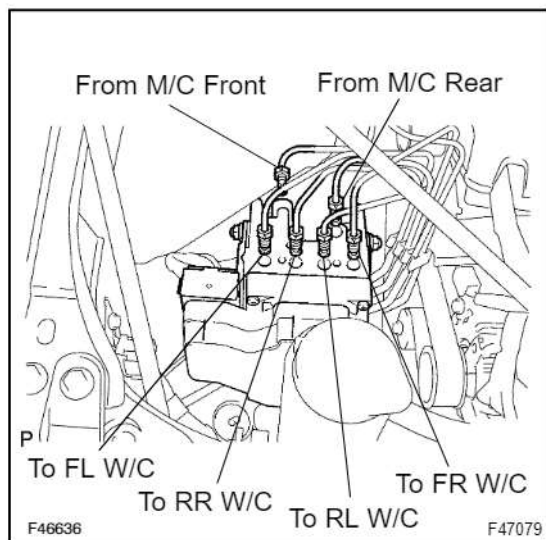
(a) Install the actuator with bracket and the 2 bolts and the nut.

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

**NOTICE:**

Be careful not to damage the brake tubes and wire harness.

(b) Connect the actuator connector.



(c) Using SST, connect each brake tube to correct positions of the actuator with bracket, as shown in the illustration.  
SST 09023-00101

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

7. FILL RESERVOIR WITH BRAKE FLUID (SEE PAGE 32-4 )

8. BLEED MASTER CYLINDER (SEE PAGE 32-4 )

SST 09023-00101

9. BLEED BRAKE LINE (SEE PAGE 32-4 )

10. BLEED BRAKE ACTUATOR ASSY (SEE PAGE 32-4 )

11. CHECK BRAKE FLUID LEAKAGE

12. CHECK FLUID LEVEL IN RESERVOIR (SEE PAGE 32-4 )

13. CONNECT BATTERY NEGATIVE TERMINAL

14. PERFORM YAWRATE SENSOR ZERO POINT CALIBRATION (SEE PAGE 05-765 )

**15. CHECK BRAKE ACTUATOR WITH HAND-HELD TESTER (SEE PAGE [32-36](#) )**