

PARKING BRAKE SYSTEM

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.

PARKING BRAKE SYSTEM

Symptom	Suspected area	See page
Brake drag	1.Parking brake or lever travel (Out of adjustment)	PB-3
	2.Parking brake wire (Sticking)	PB-6
	3.Parking brake shoe clearance (Out of adjustment)	PB-15
	4.Parking brake shoe lining (Cracked or distorted)	PB-13
	5.Tension or return spring (Damaged)	PB-12

PB-4**PARKING BRAKE – PARKING BRAKE LEVER**

INSPECTION**1. INSPECT PARKING BRAKE LEVER TRAVEL**

- (a) Pull the parking brake lever all the way up, and count the number of clicks.

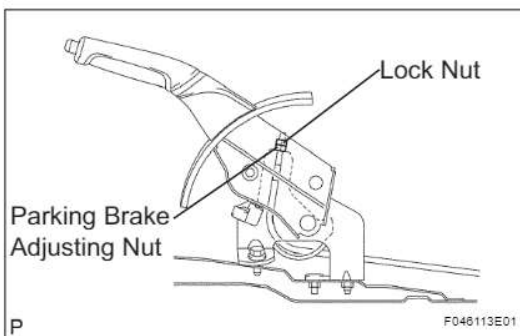
Parking brake lever travel:

6 to 9 clicks at 200 N (20 kgf, 44.1 lbf)

PB

ADJUSTMENT

1. REMOVE REAR WHEEL
2. ADJUST PARKING BRAKE SHOE CLEARANCE
HINT:
See page [PB-15](#)
3. INSTALL REAR WHEEL
Torque: 103 N*m (1,050 kgf*cm, 76 in.*lbf)
4. ADJUST PARKING BRAKE LEVER TRAVEL
 - (a) Remove the shift lever knob sub-assembly (See page [IP-9](#)).
 - (b) Remove the console upper rear panel sub-assembly (See page [IP-9](#)).
 - (c) Remove the air duct rear No.1.
 - (d) Loosen the lock nut and turn the parking brake wire adjusting nut until the lever travel is correct.
 - (e) Using a spanner or equivalent to hold the parking brake adjusting nut, tighten the lock nut.
Torque: 5.0 N*m (51 kgf*cm, 44 in.*lbf)

**PB**

PB-6

PARKING BRAKE – PARKING BRAKE LEVER

INSTALLATION**1. INSTALL PARKING BRAKE SWITCH ASSEMBLY**

- (a) Install the parking brake switch assembly with the screw.

2. INSTALL PARKING BRAKE LEVER SUB-ASSEMBLY

- (a) Connect the parking brake cable assembly No.1 to the lever and install the parking brake adjusting nut and lock nut.

- (b) Install the parking brake lever sub-assembly with the 2 bolts and clip.

Torque: 12.5 N*m (128 kgf*cm, 9 ft.*lbf)

- (c) Connect the parking brake switch connector.

3. INSPECT PARKING BRAKE LEVER TRAVEL

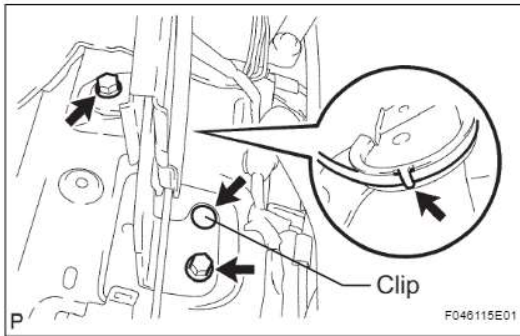
HINT:

See page [PB-3](#)

4. ADJUST PARKING BRAKE LEVER TRAVEL

HINT:

See page [PB-3](#)

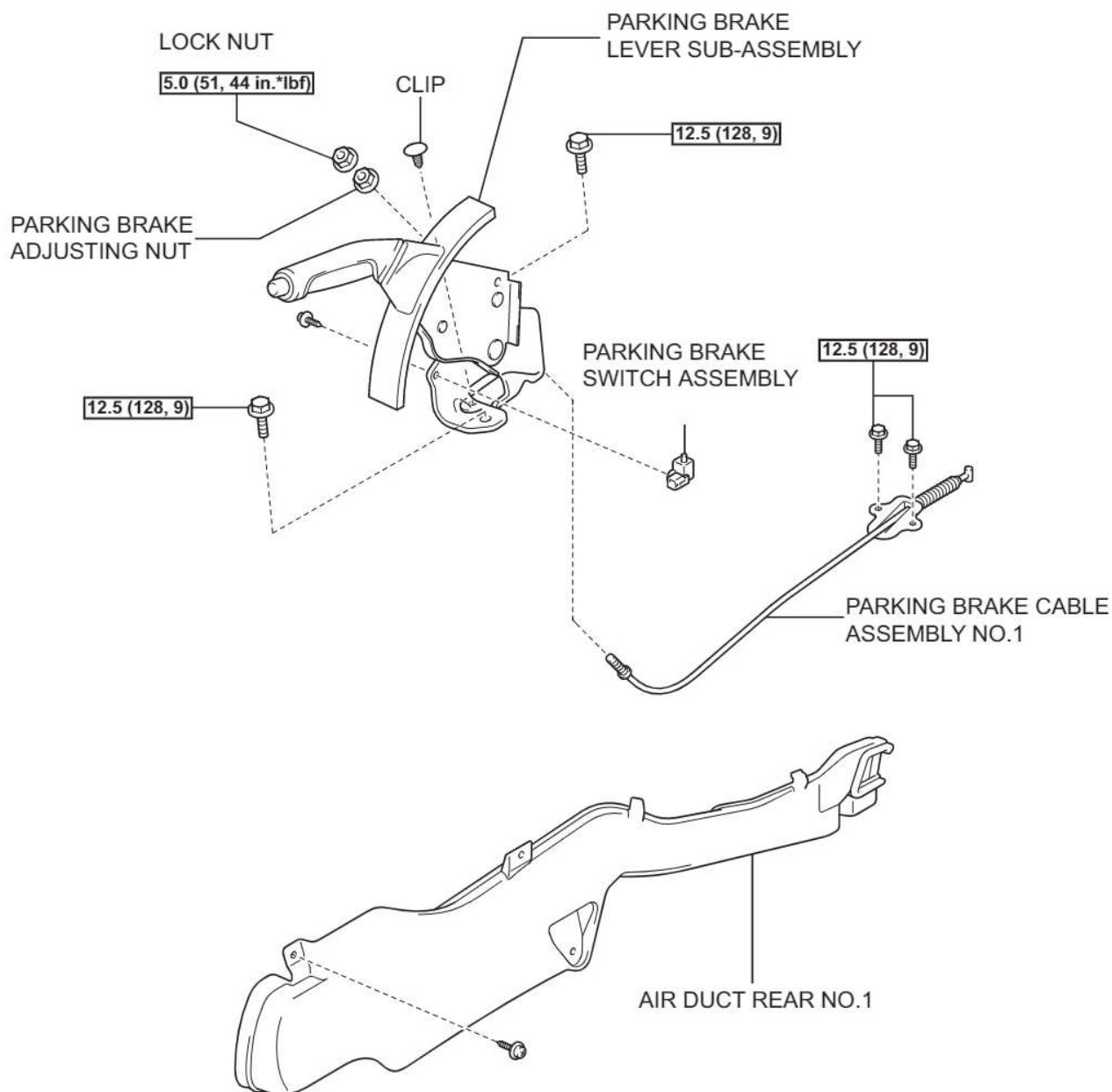
**PB**

PB-2

PARKING BRAKE – PARKING BRAKE LEVER

PARKING BRAKE LEVER

COMPONENTS



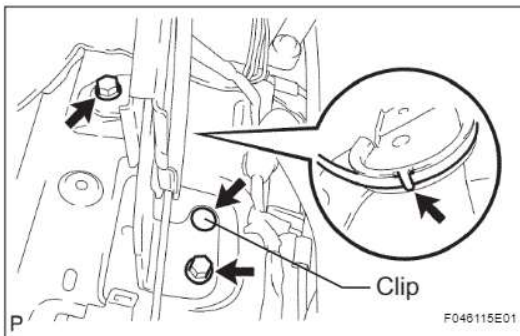
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REMOVAL

HINT:

COMPONENTS: See page [PB-2](#).

1. **REMOVE SHIFT LEVER KNOB SUB-ASSEMBLY**
2. **REMOVE CONSOLE UPPER REAR PANEL SUB-ASSEMBLY** (See page [IP-9](#))
3. **REMOVE CONSOLE BOX ASSEMBLY** (See page [IP-10](#))
4. **REMOVE AIR DUCT REAR NO.1**
5. **REMOVE PARKING BRAKE LEVER SUB-ASSEMBLY**
 - (a) Disconnect the parking brake switch assembly connector.
 - (b) Remove the lock nut and parking brake adjusting nut.
 - (c) Remove the 2 bolts and clip.
 - (d) Using a screwdriver, disconnect the parking brake cable assembly No.1 and remove the parking brake lever sub-assembly.
6. **REMOVE PARKING BRAKE SWITCH ASSEMBLY**
 - (a) Remove the screw and parking brake switch assembly.


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PARKING BRAKE – PARKING BRAKE CABLE**PB-7****REMOVAL**

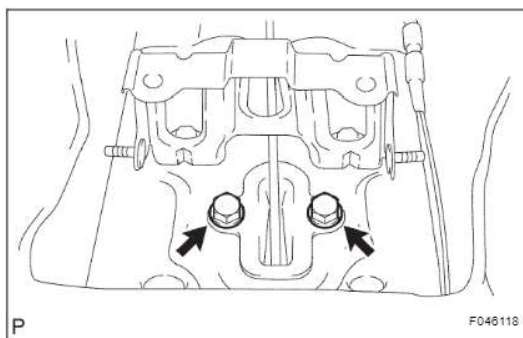
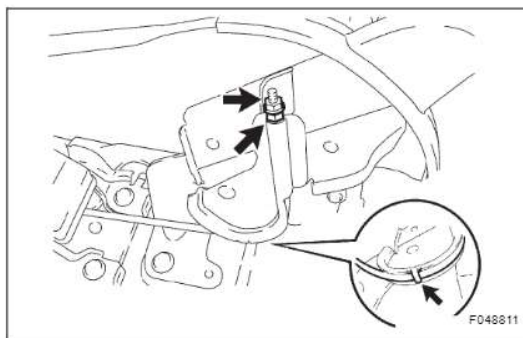
HINT:

COMPONENTS: See page [PB-5](#)

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

1. **REMOVE SHIFT LEVER KNOB SUB-ASSEMBLY**
2. **REMOVE CONSOLE UPPER REAR PANEL SUB-ASSEMBLY** (See page [IP-9](#))
3. **REMOVE CONSOLE BOX ASSEMBLY** (See page [IP-10](#))
4. **REMOVE AIR DUCT REAR NO.1**
5. **REMOVE AIR DUCT REAR NO.2**
6. **REMOVE YAW RATE SENSOR ASSEMBLY (w/ VSC)** (See page [BC-191](#))
7. **REMOVE NO.1 PARKING BRAKE CABLE ASSEMBLY**

- (a) Release the parking brake lever.
- (b) Remove the lock nut and parking brake adjusting nut from the parking brake cable assembly No.1.
- (c) Using a screwdriver, raise the pick on the parking brake lever, and remove the parking brake cable assembly No.1 from the parking brake lever.
- (d) Remove the 2 bolts and console box mounting bracket No.2.
- (e) Remove the 2 bolts and separate the parking brake cable No.1 from the parking brake equalizer.

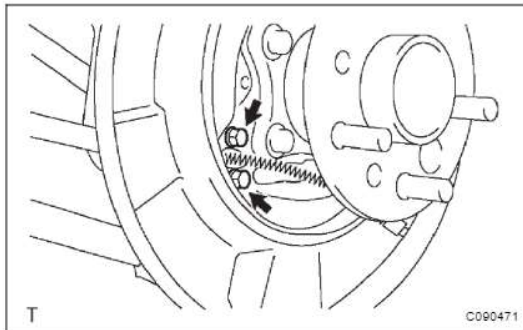


8. **REMOVE REAR WHEEL**
 9. **SEPARATE REAR DISC BRAKE CALIPER ASSEMBLY LH**
 - (a) Remove the 2 bolts and separate the rear disc brake caliper assembly LH.
- HINT:
Do not disconnect the flexible hose from the brake caliper assembly LH.
10. **REMOVE REAR DISC** (See page [PB-12](#))
 11. **REMOVE PARKING BRAKE SHOE RETURN TENSION SPRING** (See page [PB-12](#))
 12. **REMOVE PARKING BRAKE SHOE STRUT COMPRESSION SPRING**
 13. **REMOVE PARKING BRAKE SHOE STRUT LH** (See page [PB-12](#))
 14. **REMOVE PARKING BRAKE SHOE** (See page [PB-13](#))

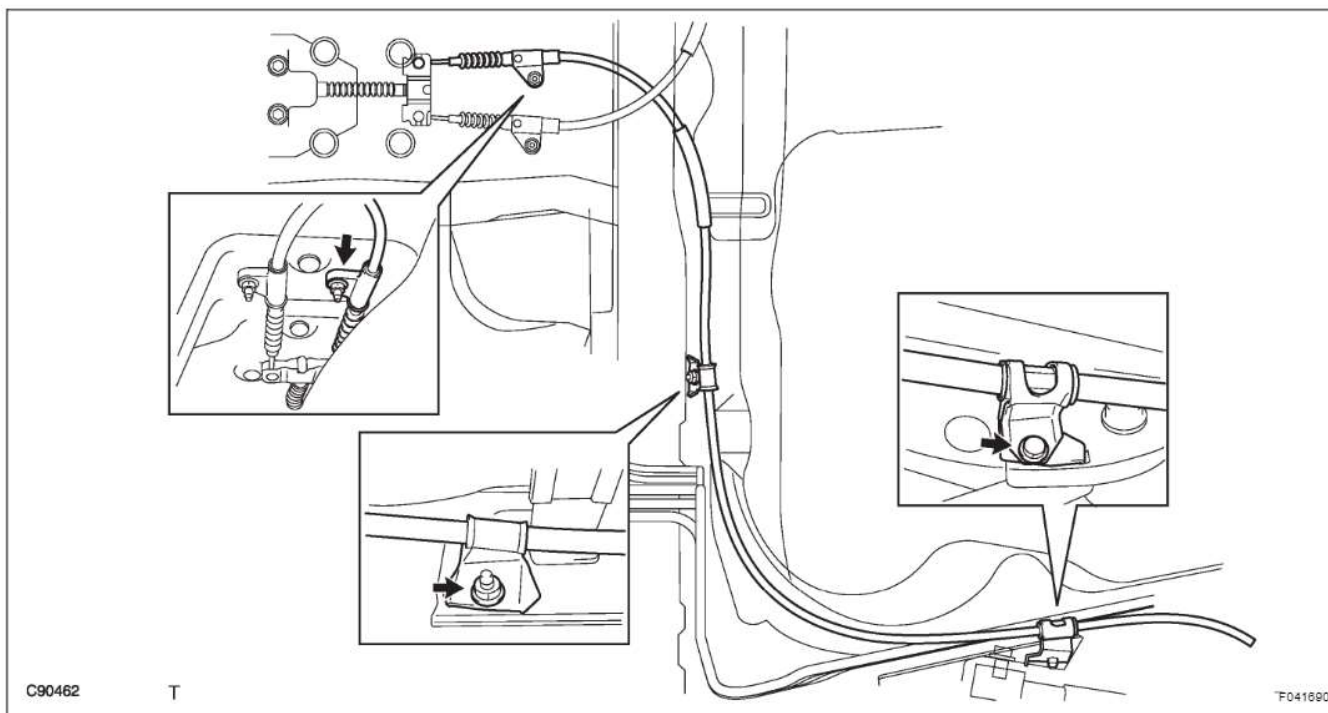
PB

PB-8**PARKING BRAKE – PARKING BRAKE CABLE****15. REMOVE PARKING BRAKE CABLE HEAT INSULATOR**

- (a) Remove the 3 nuts and parking brake cable heat insulator.

**16. REMOVE NO.3 PARKING BRAKE CABLE ASSEMBLY**

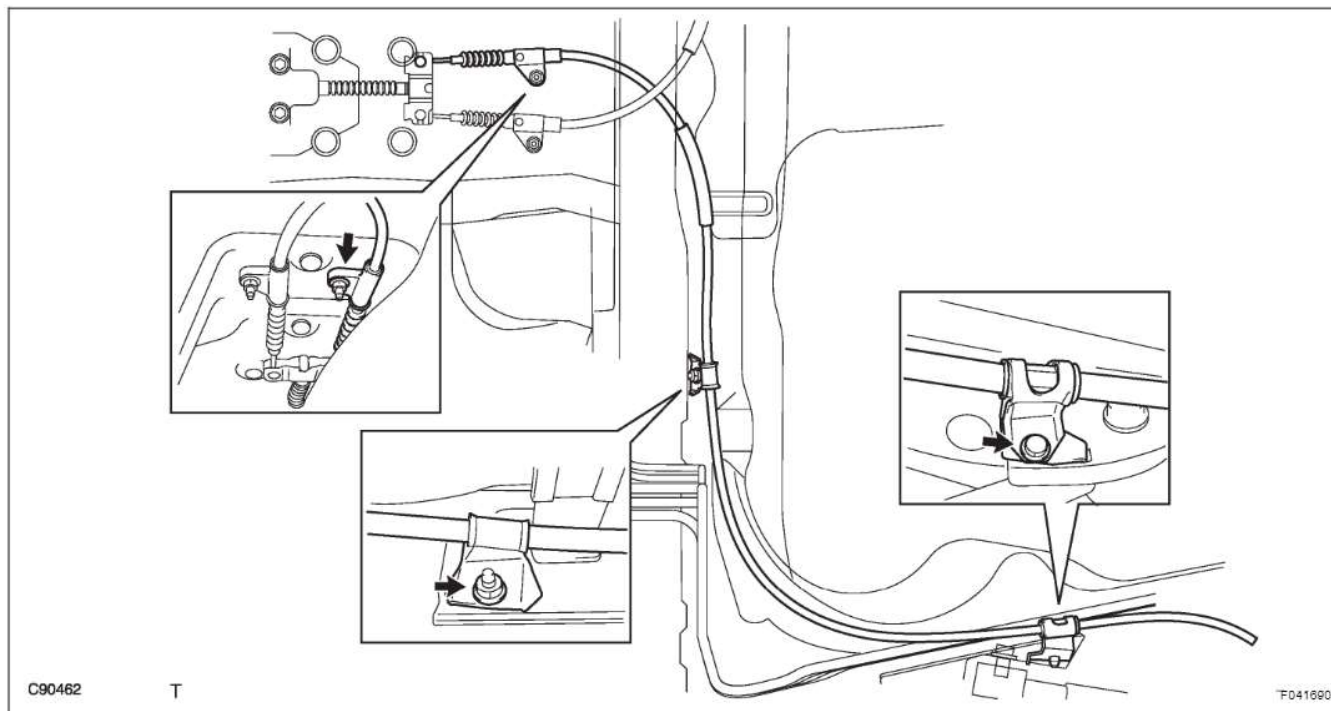
- (a) Remove the 2 bolts and separate the parking brake cable assembly No.3 from the backing plate.
- (b) Remove the 2 nuts and bolt, and separate the parking brake cable assembly No.3 from the body.

PB

- (c) Separate the parking brake cable assembly No.3 from the equalizer and remove the parking brake cable assembly No.3.

PARKING BRAKE – PARKING BRAKE CABLE**PB-9****INSTALLATION****1. INSTALL NO.3 PARKING BRAKE CABLE ASSEMBLY**

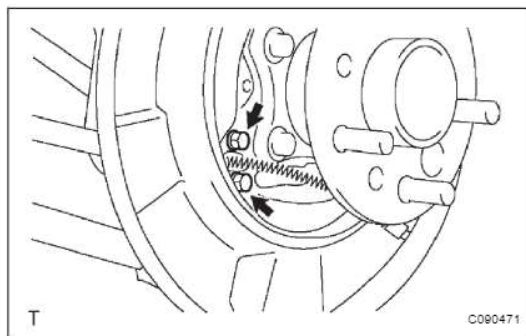
- (a) Connect the parking brake cable assembly No.3 to the parking brake equalizer.
- (b) Install the 2 nuts, bolt and parking brake cable assembly No.3 to the body.



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

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

Torque: 7.8 N*m (80 kgf*cm, 69 in.*lbf)

**2. INSTALL PARKING BRAKE CABLE HEAT INSULATOR**

- (a) Install the parking brake heat insulator with the 3 nuts.

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

3. APPLY HIGH TEMPERATURE GREASE (See page PB-14)**4. INSTALL PARKING BRAKE SHOE (See page PB-14)****5. INSTALL PARKING BRAKE SHOE STRUT LH (See page PB-14)****6. INSTALL PARKING BRAKE SHOE STRUT COMPRESSION SPRING****7. INSTALL PARKING BRAKE SHOE RETURN TENSION SPRING (See page PB-14)****8. CHECK PARKING BRAKE INSTALLATION (See page PB-15)****9. INSTALL REAR DISC (See page PB-15)**

PB-10

PARKING BRAKE – PARKING BRAKE CABLE

10. ADJUST PARKING BRAKE SHOE CLEARANCE (See page PB-15)**11. INSTALL REAR DISC BRAKE CALIPER ASSEMBLY LH**

- (a) Install the rear disc brake caliper assembly LH with the 2 bolts.

Torque: 47 N*m (480 kgf*cm, 35 ft.*lbf)

12. INSTALL REAR WHEEL

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

13. INSTALL NO.1 PARKING BRAKE CABLE ASSEMBLY

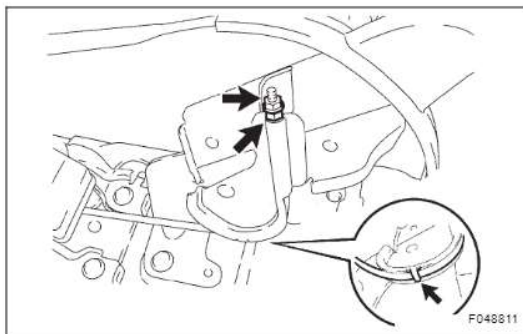
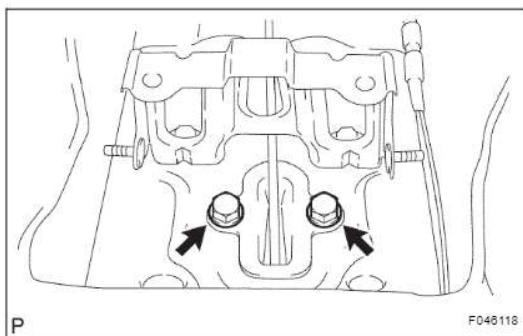
- (a) Connect the parking brake cable assembly No.1 to the parking brake equalizer.

- (b) Install the parking brake cable assembly No.1 with the 2 bolts.

Torque: 12.5 N*m (128 kgf*cm, 9 ft.*lbf)

- (c) Install the console box mounting bracket No.2 with the 2 bolts.

Torque: 12.5 N*m (128 kgf*cm, 9 ft.*lbf)



- (d) Install the parking brake cable assembly No.1 with the parking brake adjusting nut and lock nut to the parking brake lever assembly.

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

- (e) Using a screwdriver, fix the parking brake cable No.1 to the pick.

14. INSTALL YAW RATE SENSOR ASSEMBLY (w/ VSC)**15. INSPECT PARKING BRAKE LEVER TRAVEL**

HINT:

See page PB-3

16. ADJUST PARKING BRAKE LEVER TRAVEL

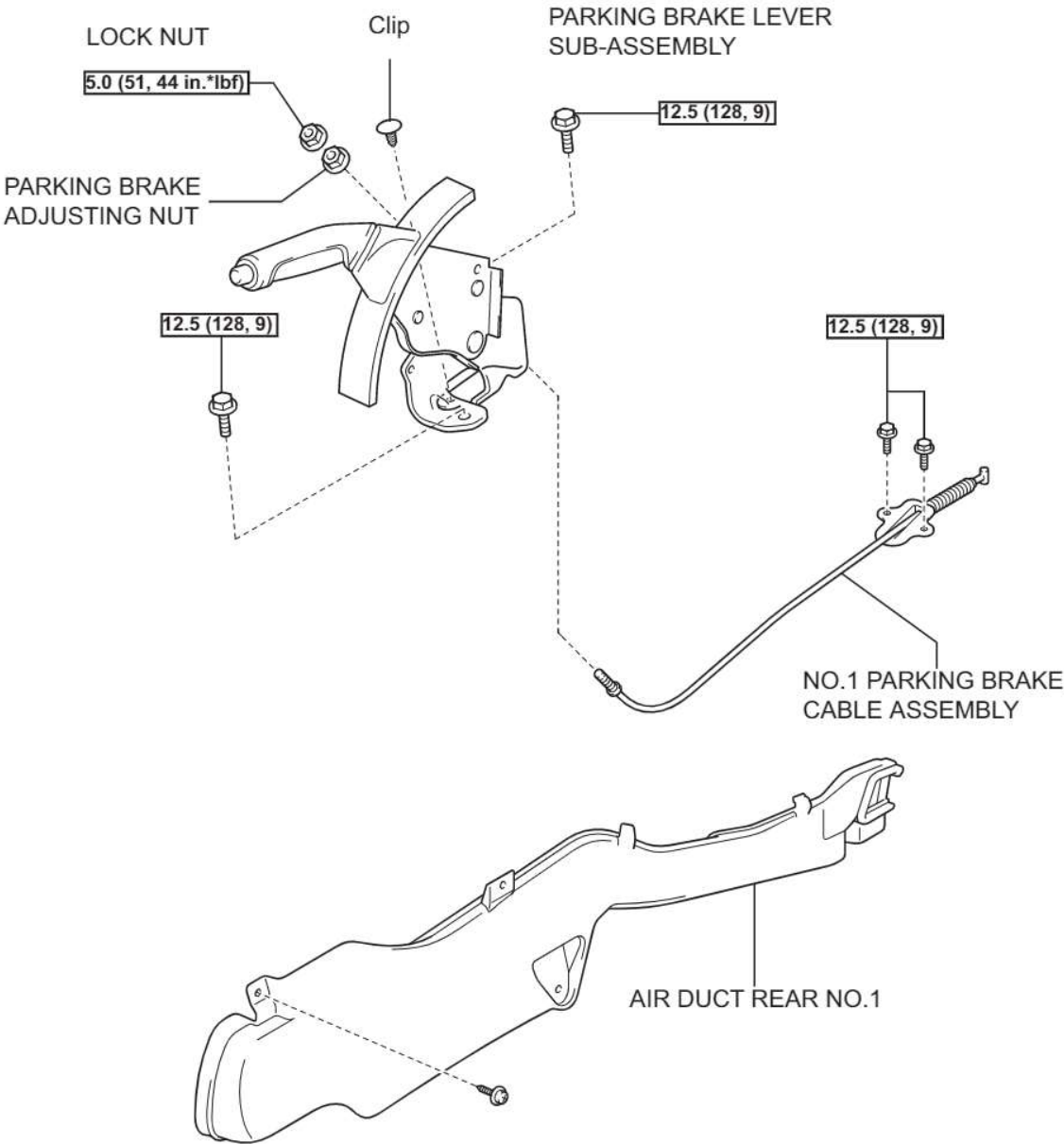
HINT:

See page PB-3

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PARKING BRAKE CABLE

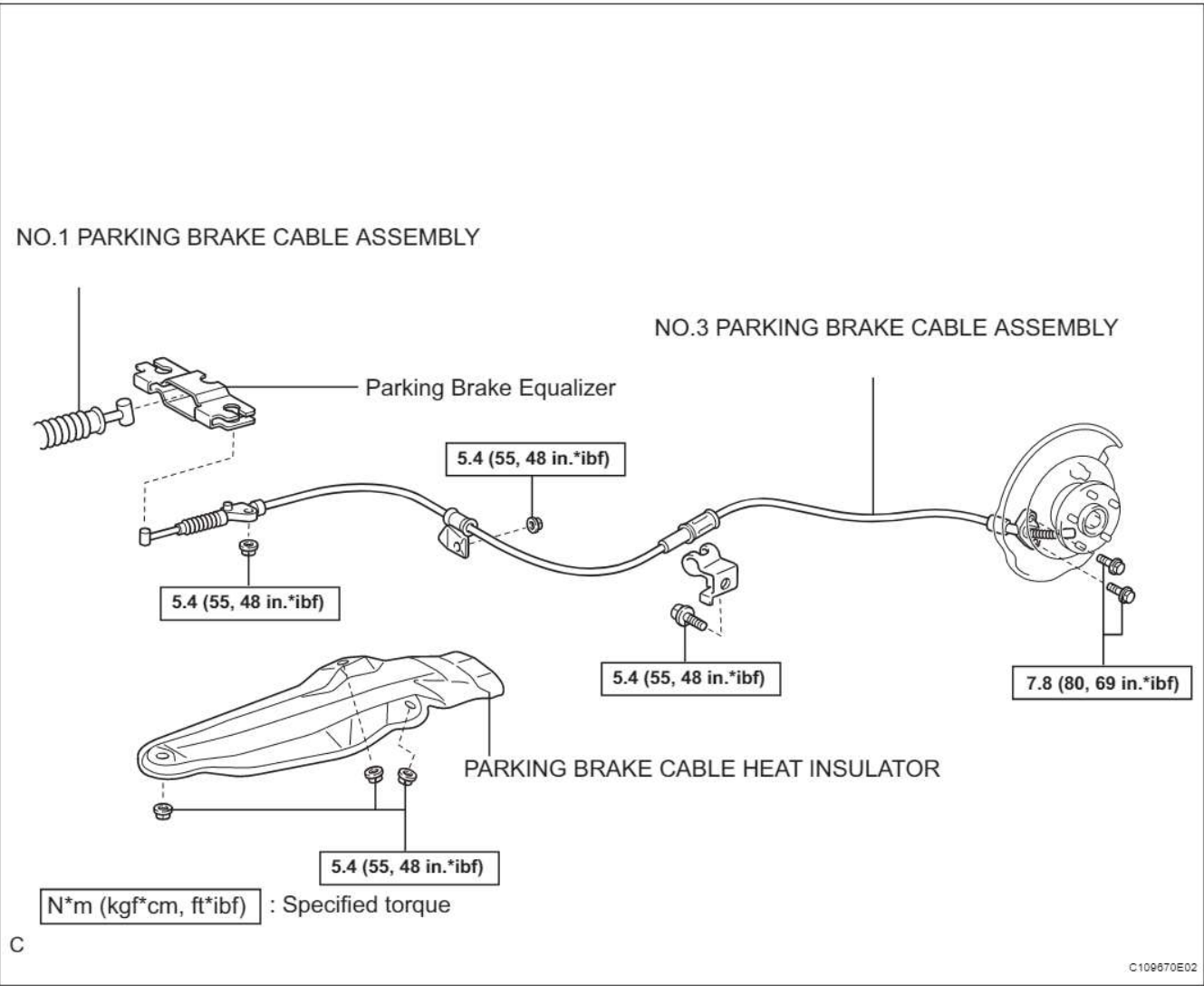
COMPONENTS

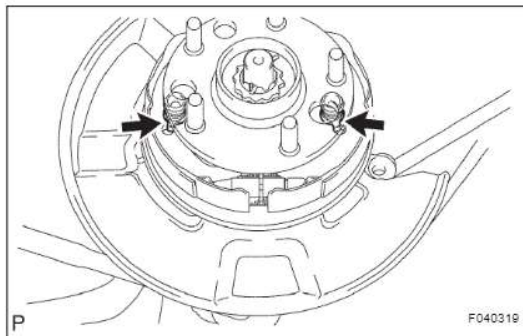


N*m (kgf*cm, ft.*lbf) : Specified torque

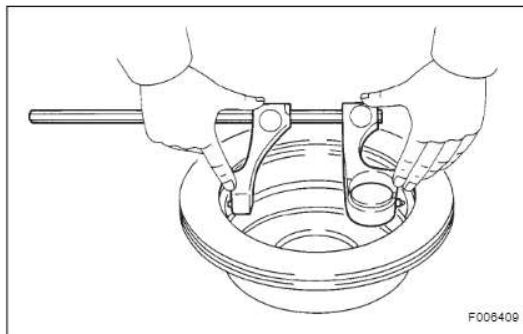
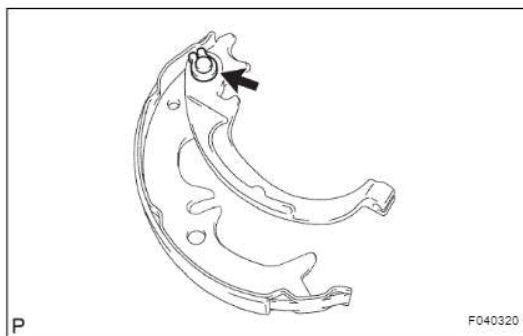
PB-6

PARKING BRAKE – PARKING BRAKE CABLE



PARKING BRAKE – PARKING BRAKE ASSEMBLY**PB-13****6. REMOVE PARKING BRAKE SHOE**

- (a) Release the cup claw and remove the parking brake shoe assembly LH No.2 and parking brake shoe assembly LH No.1.
- (b) Disconnect the parking brake cable No.3 from the shoe lever.
- (c) Remove the tension spring and shoe adjuster screw set from the parking brake shoe assembly LH No.2 and parking brake shoe assembly LH No.1.
- (d) Remove the 2 shoe hold-down springs, 4 cups and 2 pins.
- (e) Using a screwdriver, remove the C-washer.
- (f) Remove the shim and shoe lever from the parking brake shoe assembly LH No.2.

**PB****INSPECTION****1. 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:**170 mm (6.69 in.)****Maximum inside diameter:****171 mm (6.73 in.)**

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

2. INSPECT PARKING BRAKE SHOE LINING THICKNESS

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

Standard thickness:**2.0 mm (0.079 in.)****Minimum thickness:****1.0 mm (0.039 in.)**

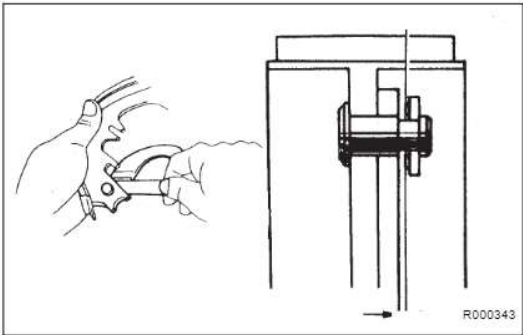
If the lining thickness is less than or equal to the minimum, or if there is severe or uneven wear, replace the brake shoe.

3. 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 the 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.

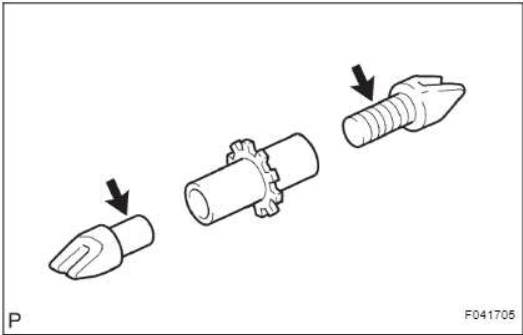
REASSEMBLY

- 1. **APPLY HIGH TEMPERATURE GREASE**
 - (a) Apply high temperature grease to the backing plate which makes contact with the shoe.
- 2. **INSTALL PARKING BRAKE SHOE**
 - (a) Install the shoe lever and shim to the rear shoe with a new C-washer.
 - (b) Using a feeler gauge, measure the clearance.
Standard clearance:
Less than 0.35 mm (0.0138 in.)
If the clearance is not within the specification, replace the shim with one of the correct size.

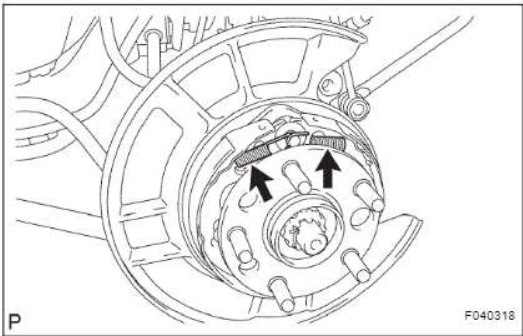


Shim Thickness	Shim Thickness
0.3 mm (0.012 in.)	0.9 mm (0.035 in.)
0.6 mm (0.024 in.)	-

PB



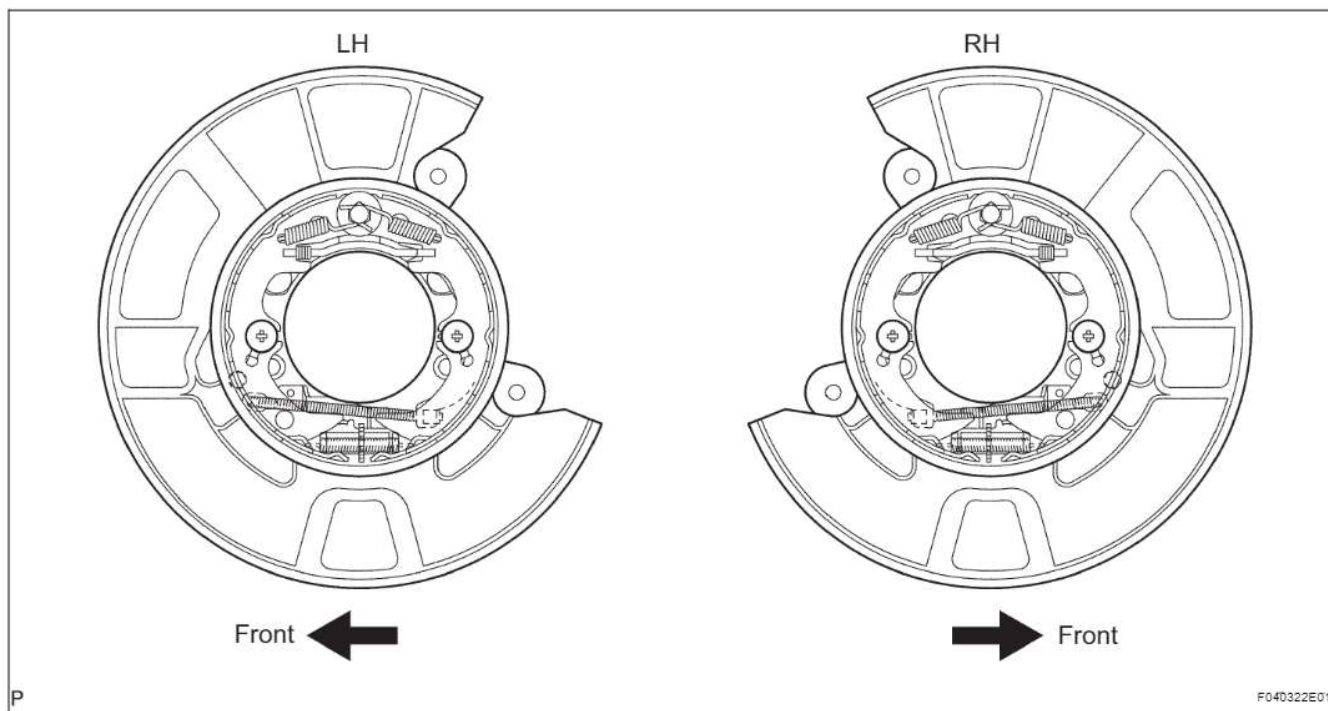
- (c) Apply high temperature grease to the adjusting bolt.
 - (d) Install the shoe adjusting screw set and tension spring to the front and rear shoe.
 - (e) Install the 2 pins, 4 cups and 2 shoe hold-down springs.
 - (f) Connect the parking brake cable No.3 to the shoe lever.
 - (g) Install the front and rear parking brake shoe.
- 3. **INSTALL PARKING BRAKE SHOE STRUT LH**
 - (a) Attach the parking brake shoe strut LH and the parking brake shoe strut compression spring to the parking brake shoe assembly LH No.2 and parking brake shoe assembly LH No.1.



- 4. **INSTALL PARKING BRAKE SHOE RETURN TENSION SPRING**
 - (a) Using needle-nose pliers, install the 2 return tension springs No.1.
HINT:
First install the front side spring then the rear side spring.

PARKING BRAKE – PARKING BRAKE ASSEMBLY**PB-15****5. CHECK PARKING BRAKE INSTALLATION**

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

**NOTICE:**

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

6. INSTALL REAR DISC

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

7. 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.

8. INSTALL REAR DISC BRAKE CALIPER ASSEMBLY LH

- (a) Install the rear disc brake caliper assembly LH with the 2 bolts.

Torque: 62 N*m (630 kgf*cm, 46 ft.*lbf)

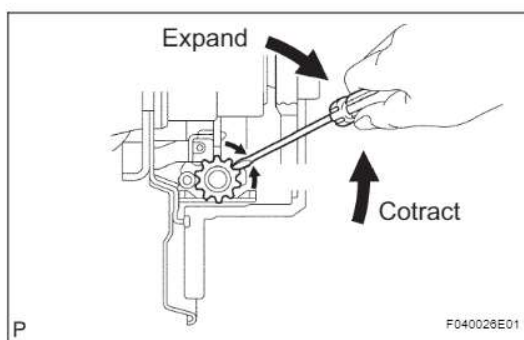
9. INSTALL REAR WHEEL

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

10. INSPECT PARKING BRAKE LEVER TRAVEL

HINT:

See page [PB-3](#)



PB-16**PARKING BRAKE – PARKING BRAKE ASSEMBLY**

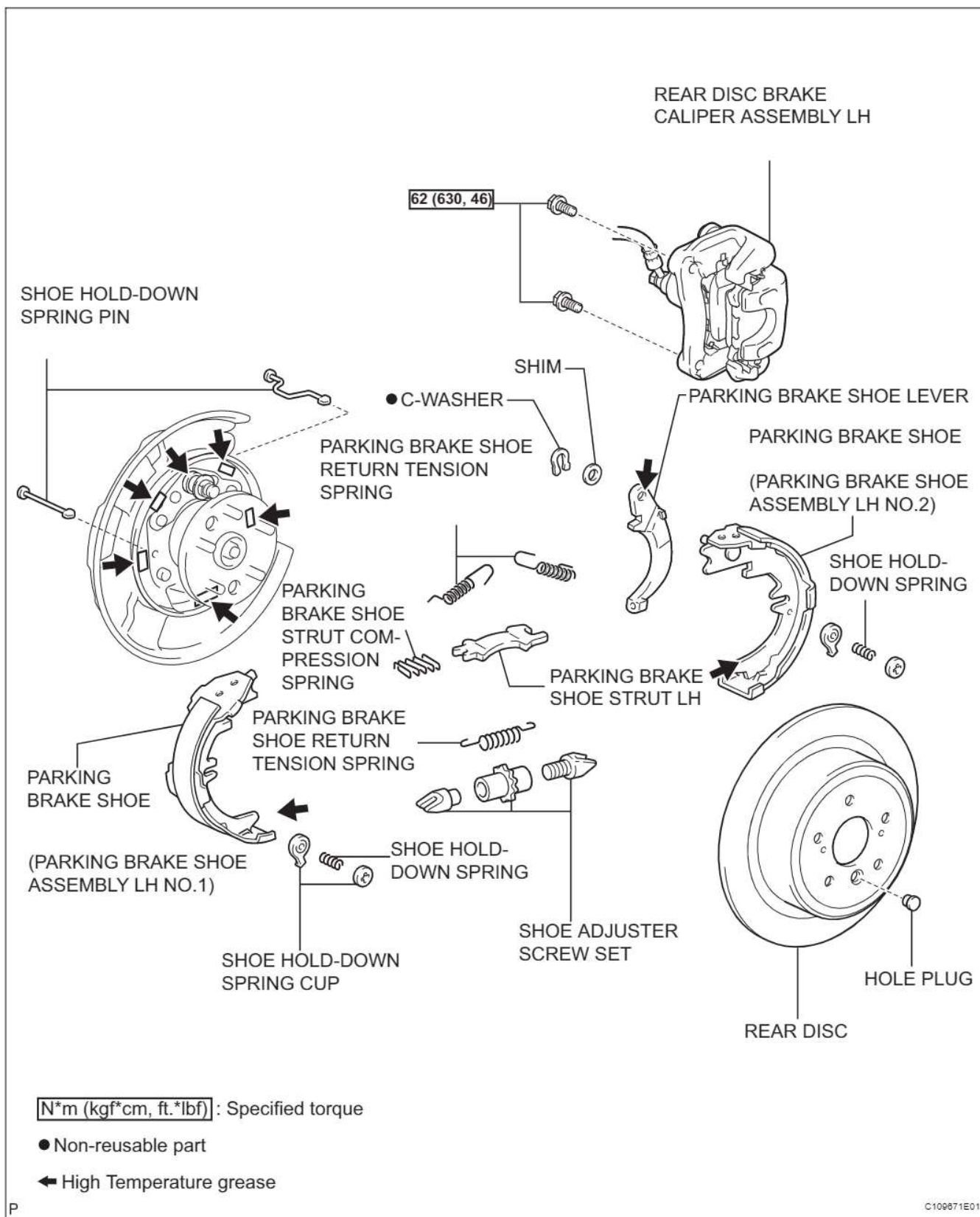
11. ADJUST PARKING BRAKE LEVER TRAVEL

HINT:

See page [PB-3](#)**PB**

PARKING BRAKE ASSEMBLY

COMPONENTS



PB

PB-12

PARKING BRAKE – PARKING BRAKE ASSEMBLY

DISASSEMBLY**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 ASSEMBLY LH**

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

HINT:

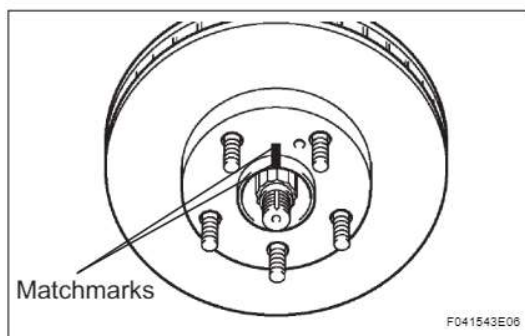
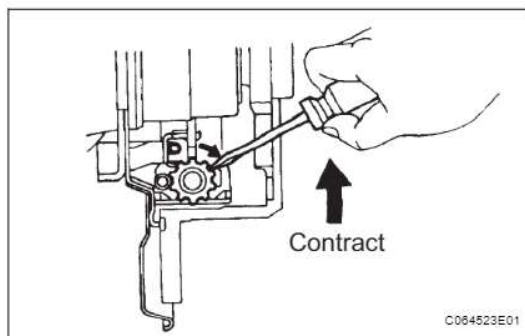
Do not disconnect the flexible hose from the disc brake caliper assembly LH.

3. REMOVE REAR DISC

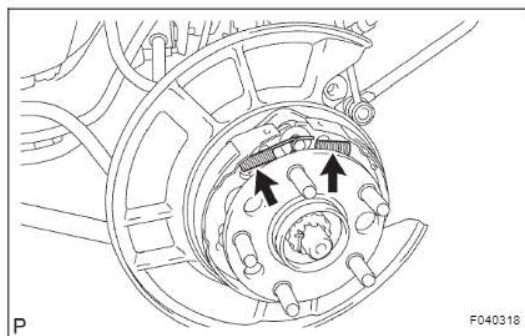
- (a) Release the parking brake, and remove the rear disc.

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. REMOVE PARKING BRAKE SHOE RETURN TENSION SPRING**

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

5. REMOVE PARKING BRAKE SHOE STRUT LH

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

PB