

STEERING

Parking Brake (Preparation) - Sienna

PARKING BRAKE

RECOMMENDED TOOLS

RECOMMENDED TOOLS

	09080-1C110	Toyota Electrical Tester Set	
	09080-2C100	Test Lead Set	

EQUIPMENT

EQUIPMENT

Torque wrench	-
Brake drum gauge	-
Ruler	-

SSM

SSM

Toyota Genuine Adhesive 1344, Three Bond 1344 or equivalent	-
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BRAKES

Parking Brake (Service Specifications) - Sienna

PARKING BRAKE

SERVICE DATA

SERVICE DATA

Parking brake pedal travel		3 to 6 notches at 300 N (31 kgf, 67.5 lbf)
Inside diameter of the brake disc	Standard	210 mm (8.27 in.)
	Maximum	211 mm (8.31 in.)
Thickness of the parking brake shoe lining	Standard	3.85 mm (0.152 in.)
	Minimum	1.0 mm (0.0394 in.)

TORQUE SPECIFICATIONS

TORQUE SPECIFICATIONS

Part tightened		N*m	kgf*cm	ft.*lbf
No. 1 parking brake cable assembly x Lock nut		5.4	55	48 in.*lbf
Parking brake control pedal assembly x Body		39	400	29
No. 1 parking brake cable assembly	Bolt A	8.5	87	75 in.*lbf
	Bolt B	5.6	57	50

x Body				in.*lbf
Center body pillar sub- assembly LH x Body	Bolt	80	816	59
	Nut	61	622	45
Parking brake switch assembly x Parking brake pedal		0.9	9	8 in.*lbf
No. 2 parking brake cable assembly x Body		8.0	82	71 in.*lbf
Cable retainer x No. 2 parking brake cable assembly		5.4	55	48 in.*lbf
No. 2 parking brake cable assembly x Backing plate		8.0	82	71 in.*lbf
No. 3 parking brake cable assembly x Body		8.0	82	71 in.*lbf
Cable retainer x No. 3 parking brake cable assembly		5.4	55	48 in.*lbf
No. 3 parking brake cable assembly x Backing plate		8.0	82	71 in.*lbf
Parking brake shoe guide plate set bolt		18	184	13

BRAKES

Parking Brake System (Inspection) - Sienna

PARKING BRAKE SYSTEM

PROBLEM SYMPTOMS TABLE

PROBLEM SYMPTOMS TABLE

HINT:

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

PARKING BRAKE SYSTEM

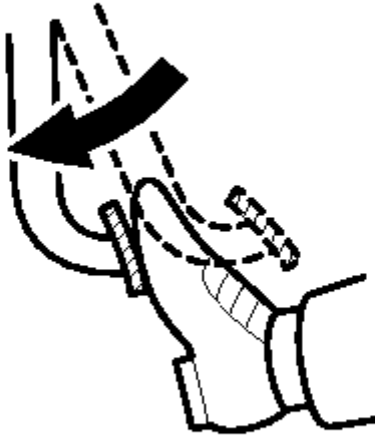
Symptom	Suspected Area	See
Brake drag	Parking brake pedal travel (Out of adjustment)	See step 1
	Parking brake cable (Sticking)	Refer to <u>REMOVAL</u>
	Parking brake shoe clearance (Out of adjustment)	See step 2
	Parking brake shoe lining (Cracked or distorted)	Refer to <u>INSPECTION</u>
	Tension or return spring (Damaged)	Refer to <u>DISASSEMBLY</u>

ADJUSTMENT

ADJUSTMENT

1. INSPECT PARKING BRAKE PEDAL TRAVEL

- Fully depress the parking brake pedal to engage the parking brake.
- Depress the pedal again to disengage the parking brake.
- Slowly depress the parking brake pedal using the specified force, and count the number of clicks.



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Fig. 1: Depressing Brake Pedal

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

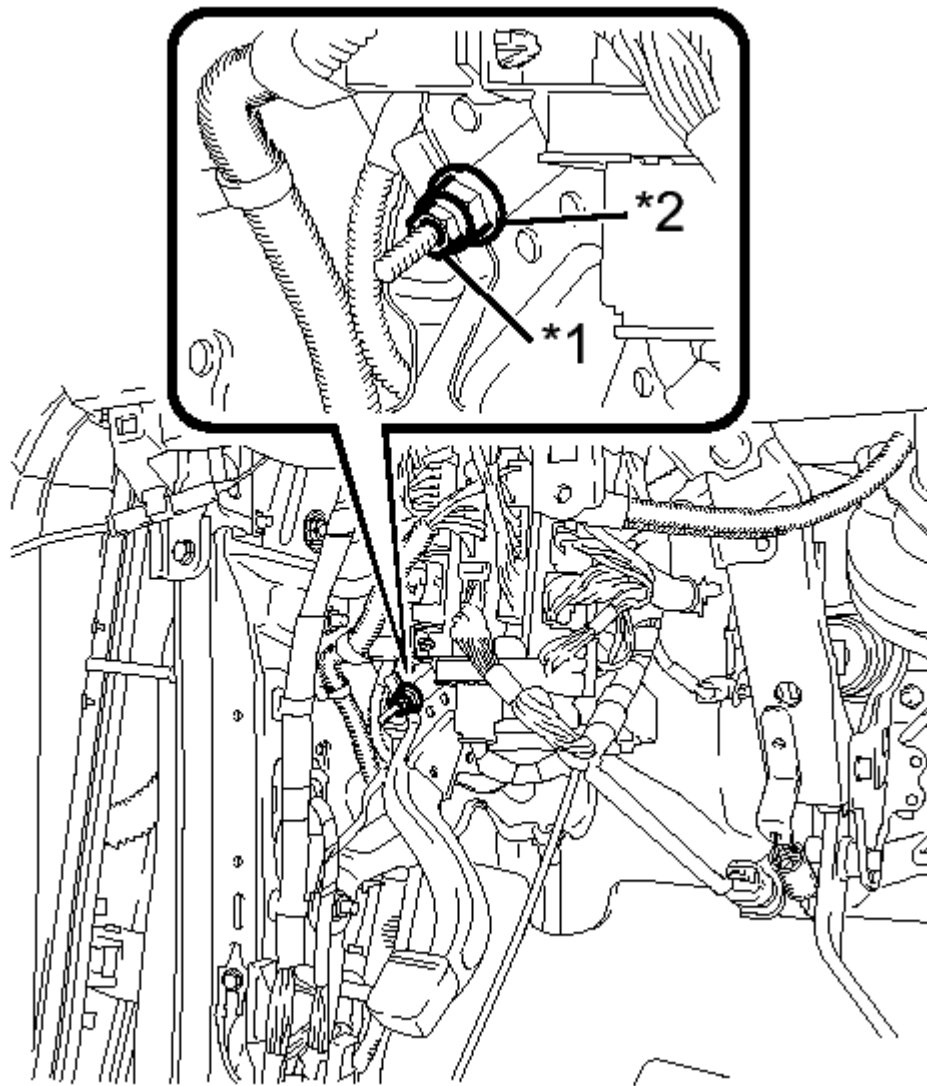
Parking brake pedal travel

3 to 6 notches at 300 N (31 kgf, 67.5 lbf)

If the parking brake pedal travel is not as specified, adjust the parking brake shoe clearance and parking brake pedal travel.

2. ADJUST PARKING BRAKE SHOE CLEARANCE AND PARKING BRAKE PEDAL TRAVEL

- a. Remove the knee airbag assembly. Refer to **REMOVAL** .
- b. Completely release the parking brake pedal.
- c. Loosen the lock nut and the adjusting nut to completely release the parking brake cable.



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Fig. 2: Identifying Parking Brake Pedal Fasteners
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

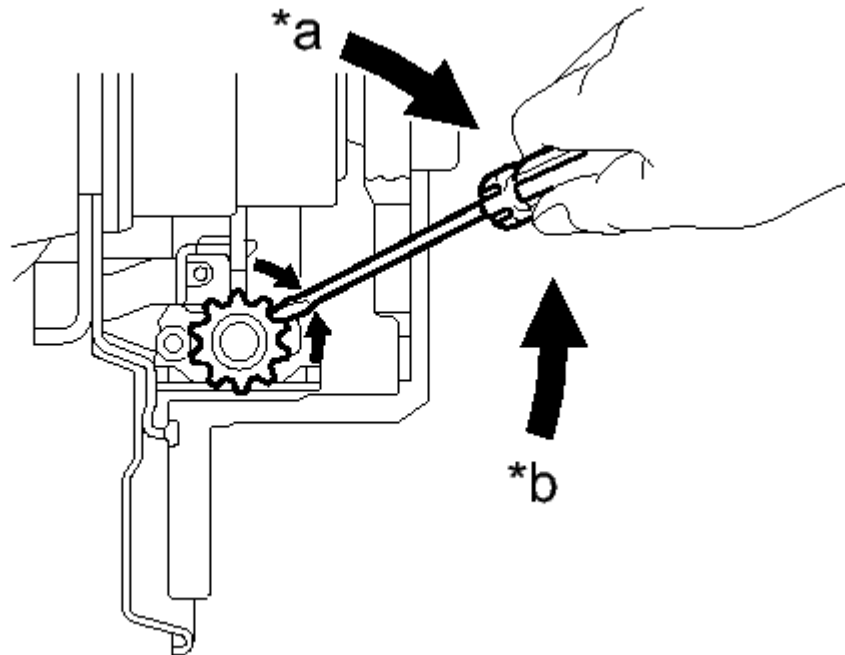
*1	Lock Nut
*2	Adjusting Nut

- d. Remove the rear wheels.
- e. Temporarily install the hub nuts to the hub bolts.

HINT:

Securely install the hub nuts to the rear disc.

- f. Remove the parking brake shoe adjusting hole plug. Refer to **REMOVAL - Step 14** .
- g. Turn the shoe adjuster and expand the shoe until the disc locks.



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Fig. 3: Turning Shoe Adjuster Using A Screwdriver
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*a	Expand
*b	Contract

- h. Turn and contract the shoe adjuster until the disc can rotate smoothly.

Standard

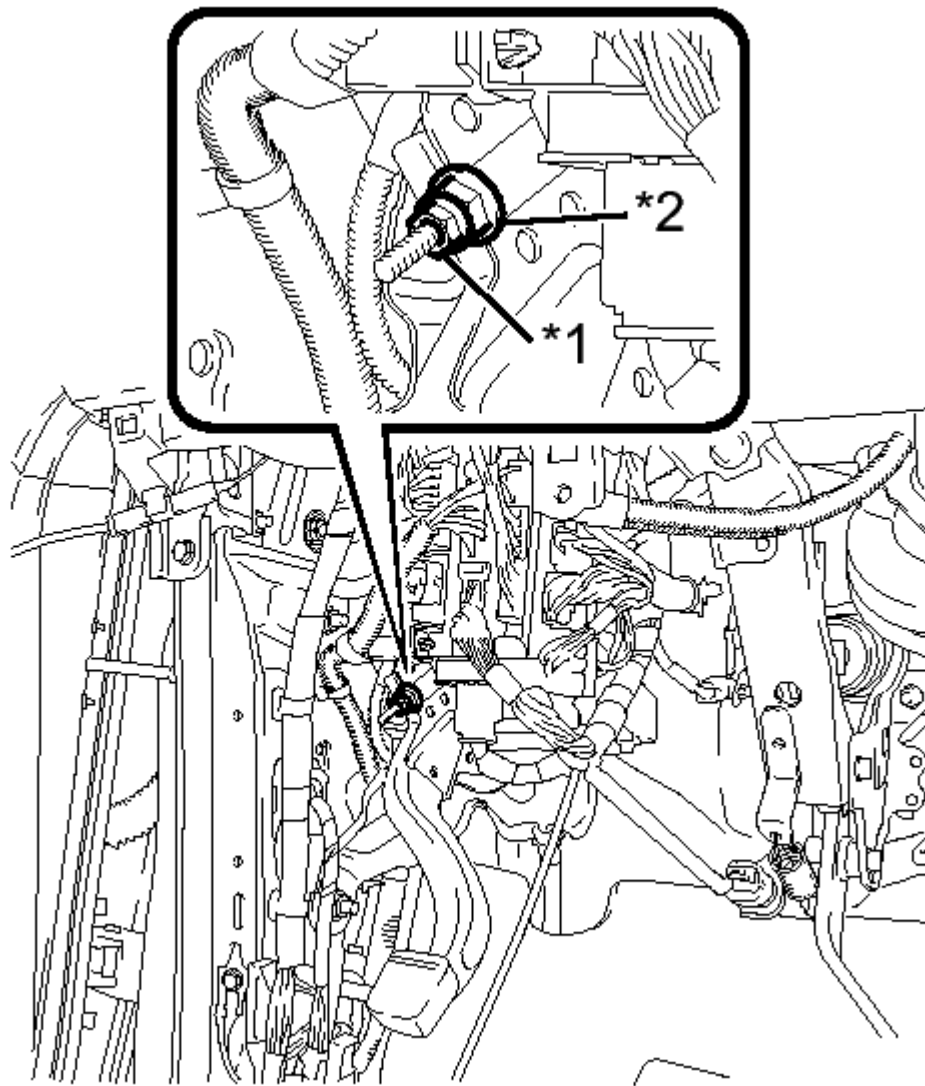
Return 8 notches.

- i. Check that there is no brake drag against the shoe.
- j. Install the parking brake shoe adjusting hole plug. Refer to **INSTALLATION - Step 2** .
- k. Turn the adjusting nut until the parking brake pedal travel is corrected to be within the specified range.

Parking brake pedal travel

3 to 6 notches at 300 N (31 kgf, 67.5 lbf)

- l. Using a wrench or an equivalent tool, hold the adjusting nut and tighten the lock nut.



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Fig. 4: Identifying Parking Brake Pedal Fasteners
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Lock Nut
*2	Adjusting Nut

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

- m. Operate the parking brake pedal 3 to 4 times, and check the parking brake pedal travel.
- n. Check that there is no brake drag against the shoe.
- o. Remove the hub nuts from the hub bolts.
- p. Install the rear wheels.

Torque: 103 N*m (1050 kgf*cm, 76 ft.*lbf)

q. Install the knee airbag assembly. Refer to **INSTALLATION** .

3. INSPECT BRAKE WARNING LIGHT

a. When operating the parking brake pedal, check that the brake warning light illuminates.

OK

The brake warning light always illuminates at the first click.

BRAKES

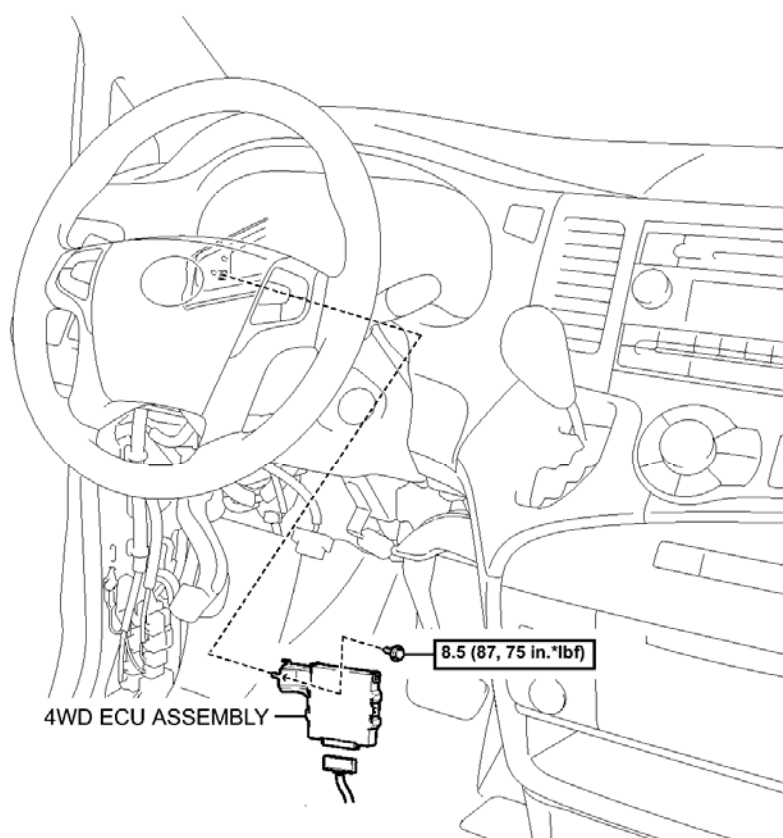
Parking Brake System (Service Information) - Sienna

PARKING BRAKE PEDAL

COMPONENTS

ILLUSTRATION

for AWD:

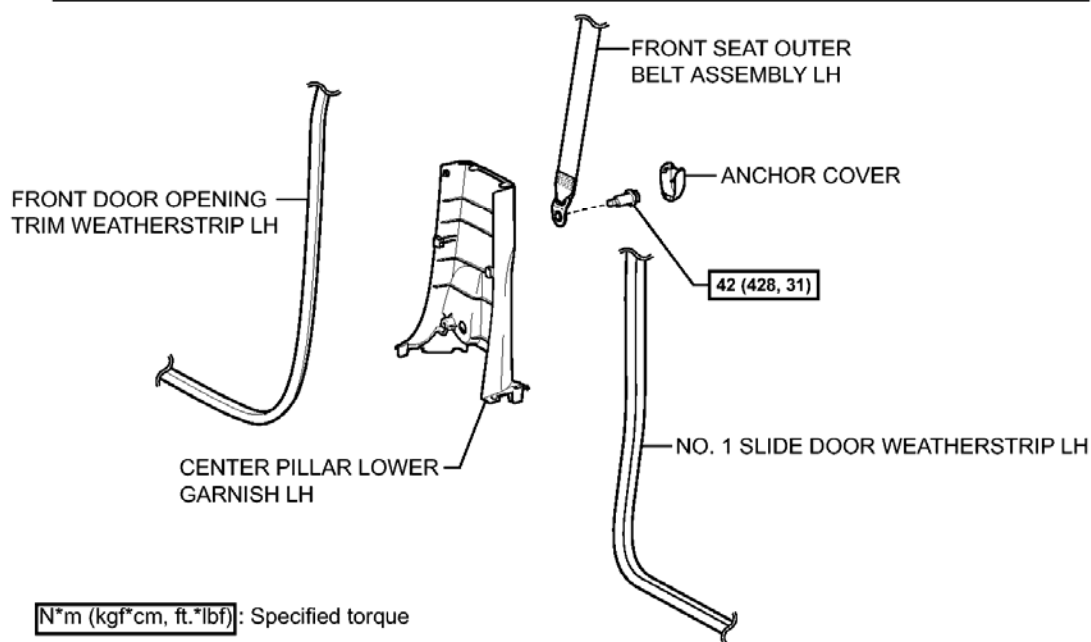
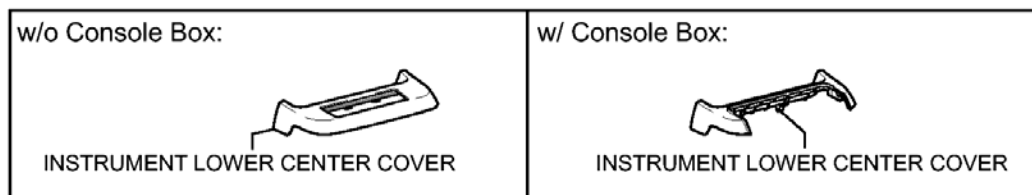
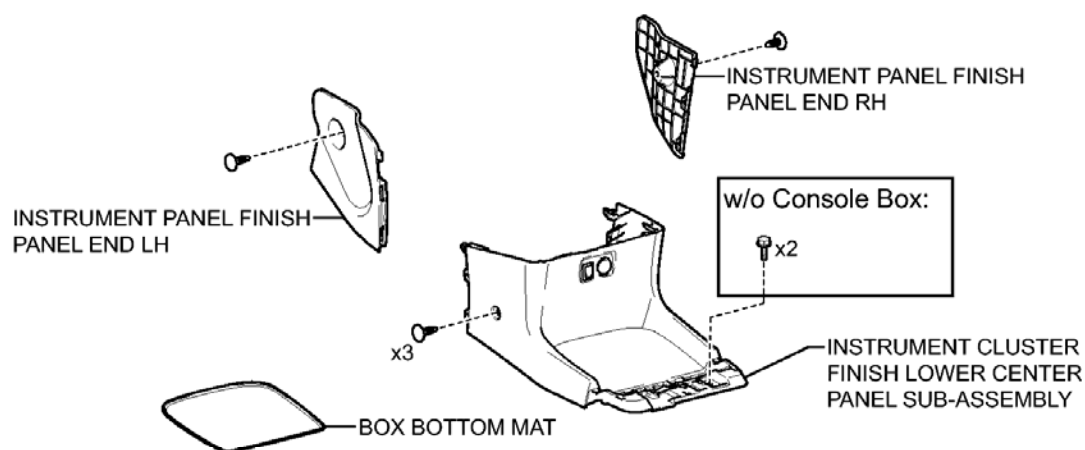


[N*m (kgf*cm, ft.*lbf)]: Specified torque

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Fig. 1: Parking Brake Pedal Replacement Components With Torque Specifications (1 of 5)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ILLUSTRATION

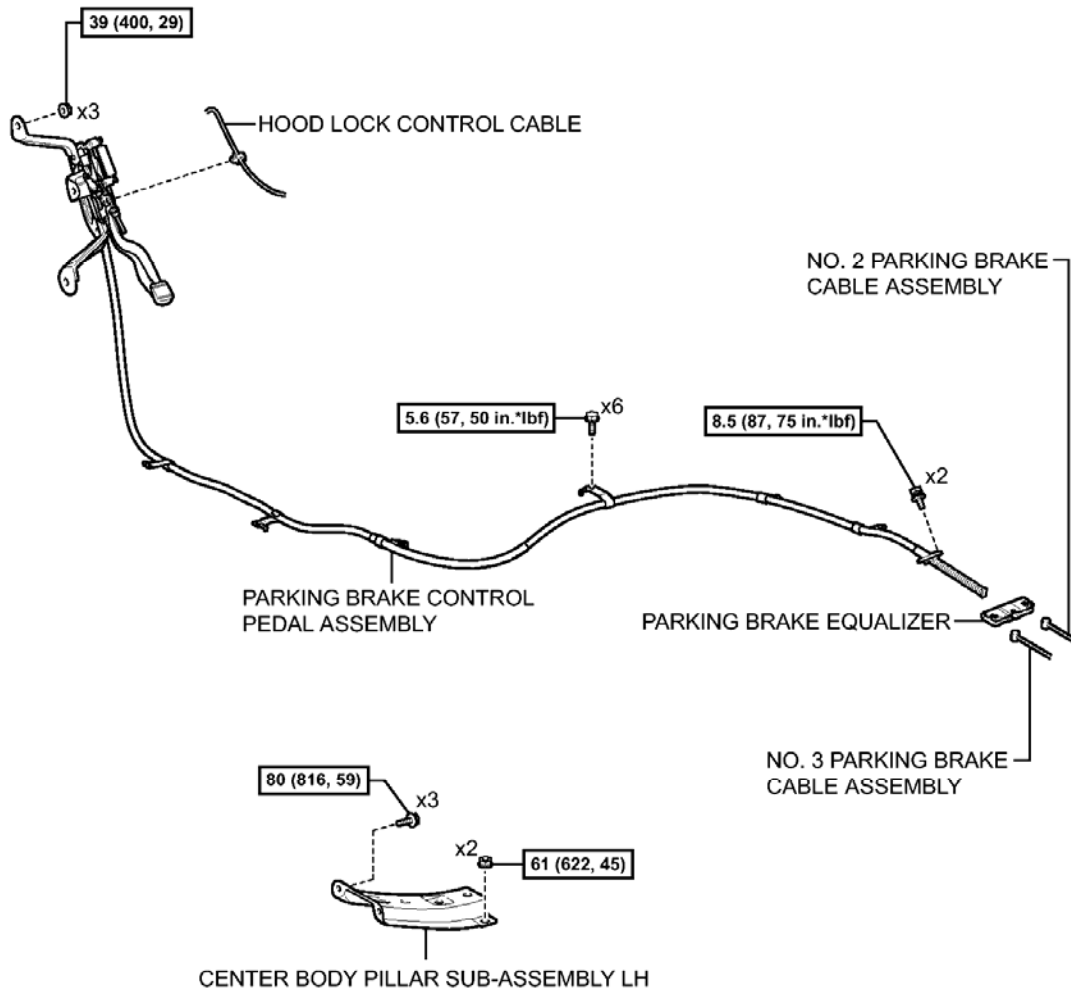


[N*m (kgf*cm, ft.*lbf)]: Specified torque

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Fig. 2: Parking Brake Pedal Replacement Components With Torque Specifications (2 of 5)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ILLUSTRATION

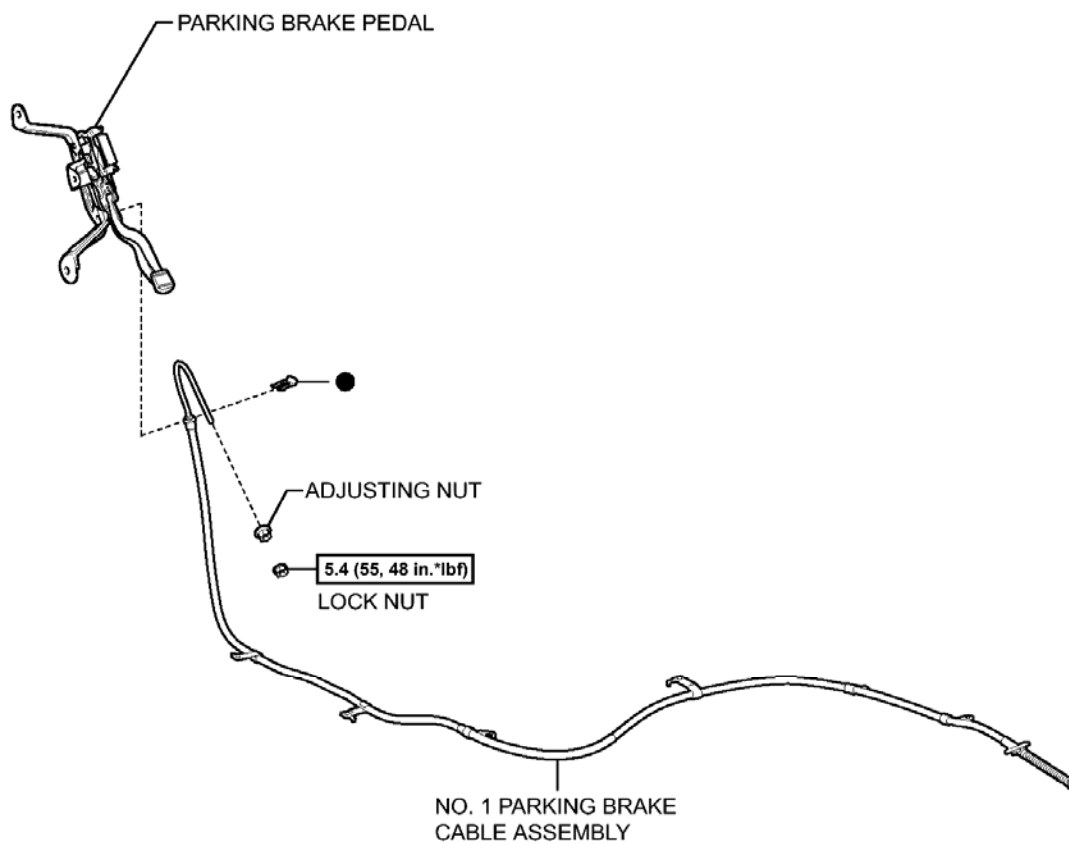


[N*m (kgf*cm, ft.*lbf)]: Specified torque

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Fig. 3: Parking Brake Pedal Replacement Components With Torque Specifications (3 of 5)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ILLUSTRATION



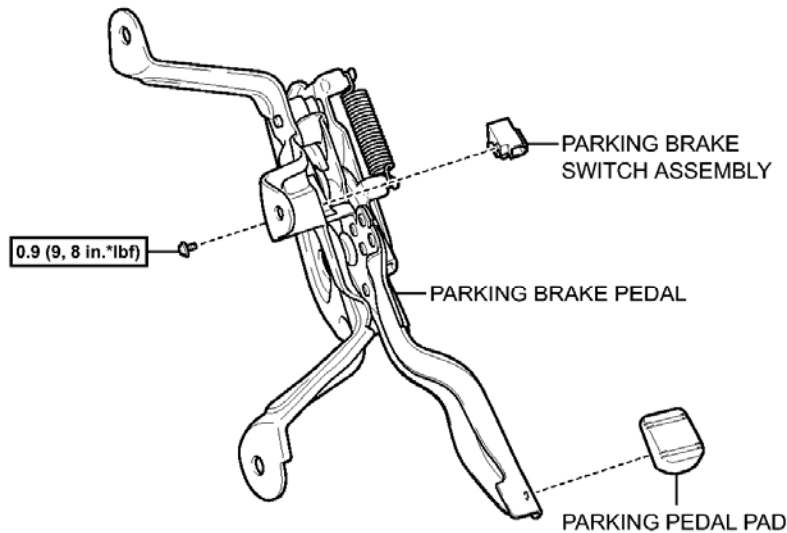
N*m (kgf*cm, ft.*lbf): Specified torque

● Non-reusable part

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Fig. 4: Parking Brake Pedal Replacement Components With Torque Specifications (4 of 5)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ILLUSTRATION



0.9 (9, 8 in.*lbf): Specified torque

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Fig. 5: Parking Brake Pedal Replacement Components With Torque Specifications (5 of 5)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

REMOVAL

REMOVAL

1. REMOVE SEAT RAIL

Refer to **REMOVAL**

2. REMOVE FRONT SEAT ASSEMBLY (for Manual Seat)

Refer to **REMOVAL**

3. REMOVE FRONT SEAT ASSEMBLY (for Power Seat)

Refer to **REMOVAL**

4. REMOVE CONSOLE BOX ASSEMBLY (for Slide Type)

Refer to **REMOVAL**

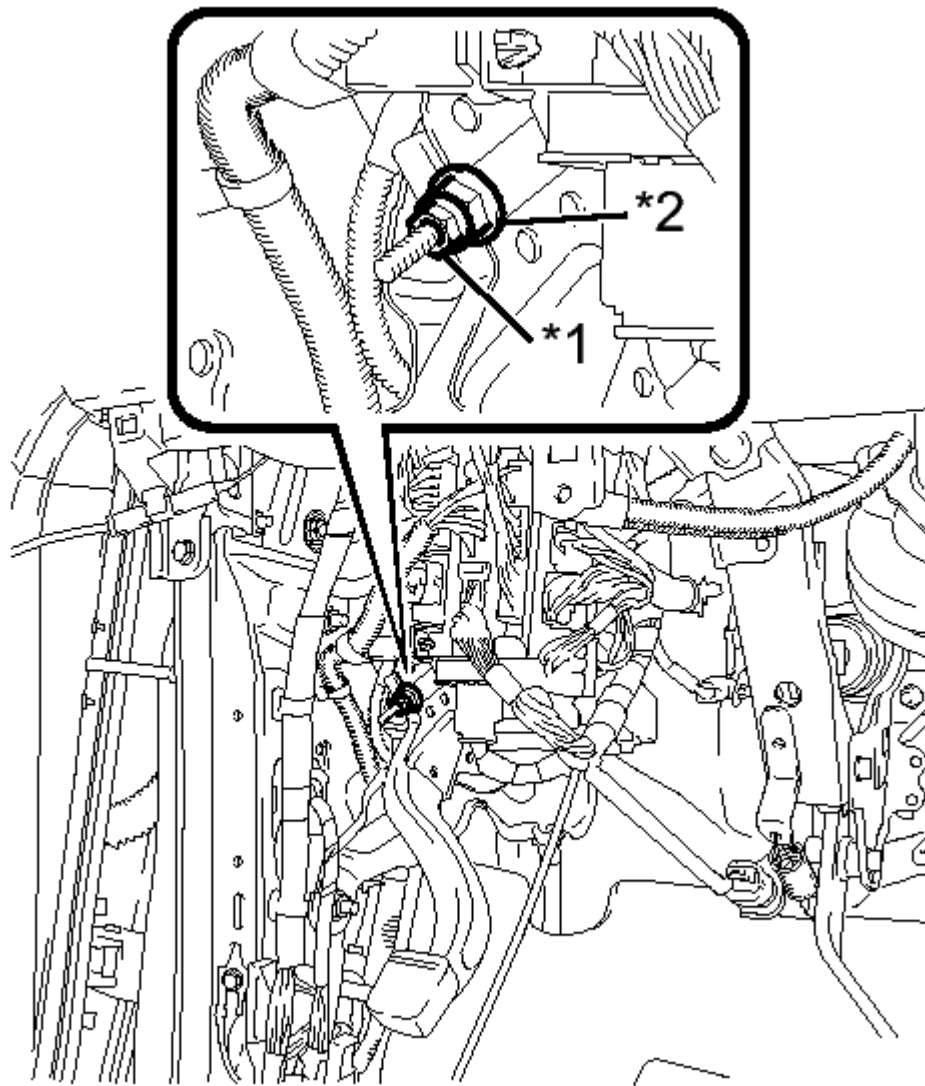
5. REMOVE CONSOLE BOX ASSEMBLY (for Fixed Type)

Refer to **REMOVAL**

6. REMOVE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

Refer to **REMOVAL**

- 7. REMOVE 4WD ECU ASSEMBLY (for AWD) . Refer to REMOVAL - Step 2**
- 8. REMOVE BOX BOTTOM MAT**
- 9. REMOVE INSTRUMENT PANEL FINISH PANEL END RH . Refer to REMOVAL - Step 39**
- 10. REMOVE INSTRUMENT PANEL FINISH PANEL END LH . Refer to REMOVAL - Step 40**
- 11. REMOVE INSTRUMENT LOWER CENTER COVER (w/o Console Box) . Refer to REMOVAL - Step 41**
- 12. REMOVE INSTRUMENT LOWER CENTER COVER (w/ Console Box) . Refer to REMOVAL - Step 42**
- 13. REMOVE INSTRUMENT CLUSTER FINISH LOWER CENTER PANEL SUB-ASSEMBLY . Refer to REMOVAL - Step 43**
- 14. SEPARATE FRONT DOOR OPENING TRIM WEATHERSTRIP LH**
- 15. SEPARATE NO. 1 SLIDE DOOR WEATHERSTRIP LH**
- 16. REMOVE CENTER PILLAR LOWER GARNISH LH . Refer to REMOVAL - Step 21**
- 17. LOOSEN ADJUSTING NUT**
 - a. Loosen the lock nut and adjusting nut.



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Fig. 6: Identifying Parking Brake Pedal Fasteners
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Lock Nut
*2	Adjusting Nut

18. SEPARATE NO. 2 PARKING BRAKE CABLE ASSEMBLY

- a. Separate the No. 2 parking brake cable assembly from the parking brake equalizer.

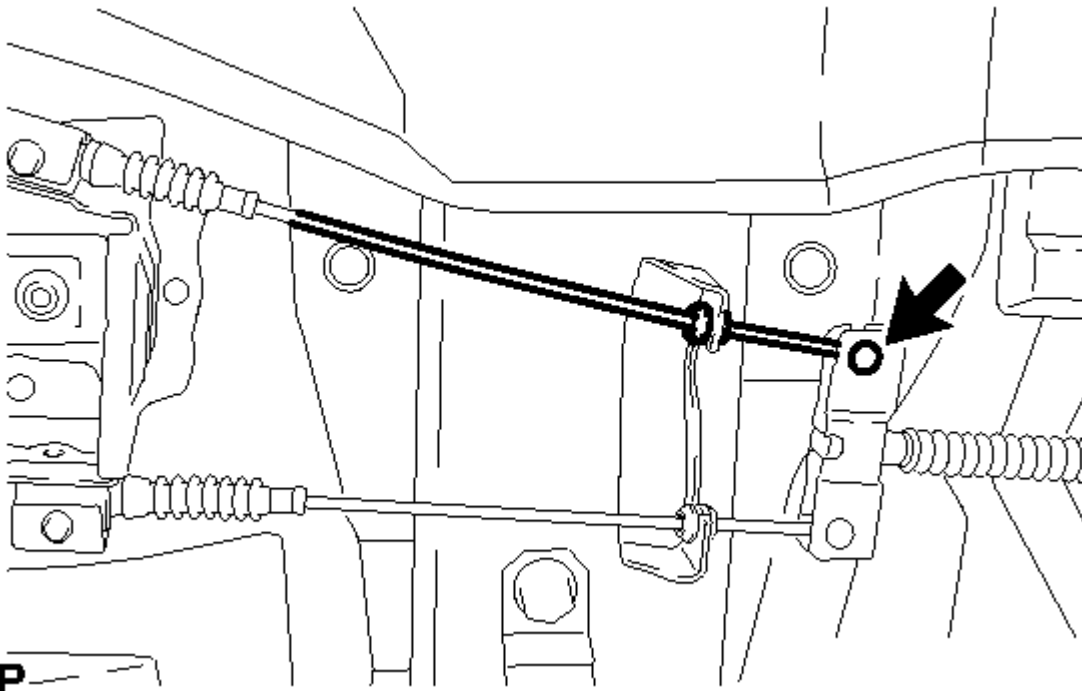


Fig. 7: Removing No. 2 Parking Brake Cable Assembly From Parking Brake Equalizer
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

19. SEPARATE NO. 3 PARKING BRAKE CABLE ASSEMBLY

- a. Separate the No. 3 parking brake cable assembly from the parking brake equalizer.

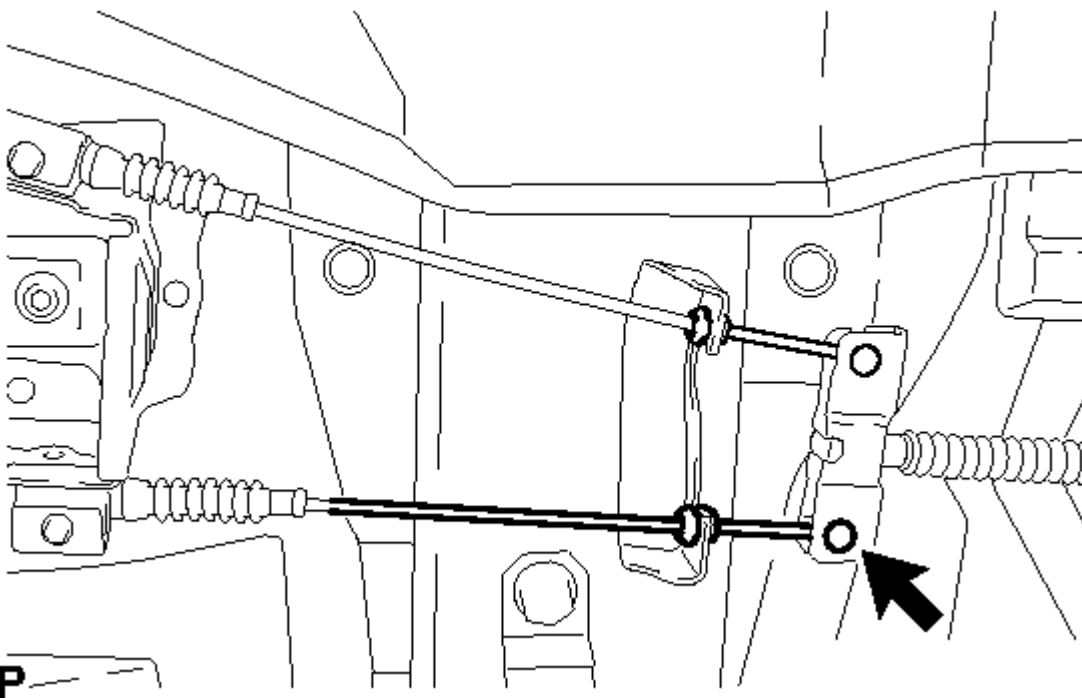


Fig. 8: Removing No. 3 Parking Brake Cable Assembly From Parking Brake Equalizer

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

20. **REMOVE PARKING BRAKE EQUALIZER**

- a. Slide the rubber boot as shown in the illustration.

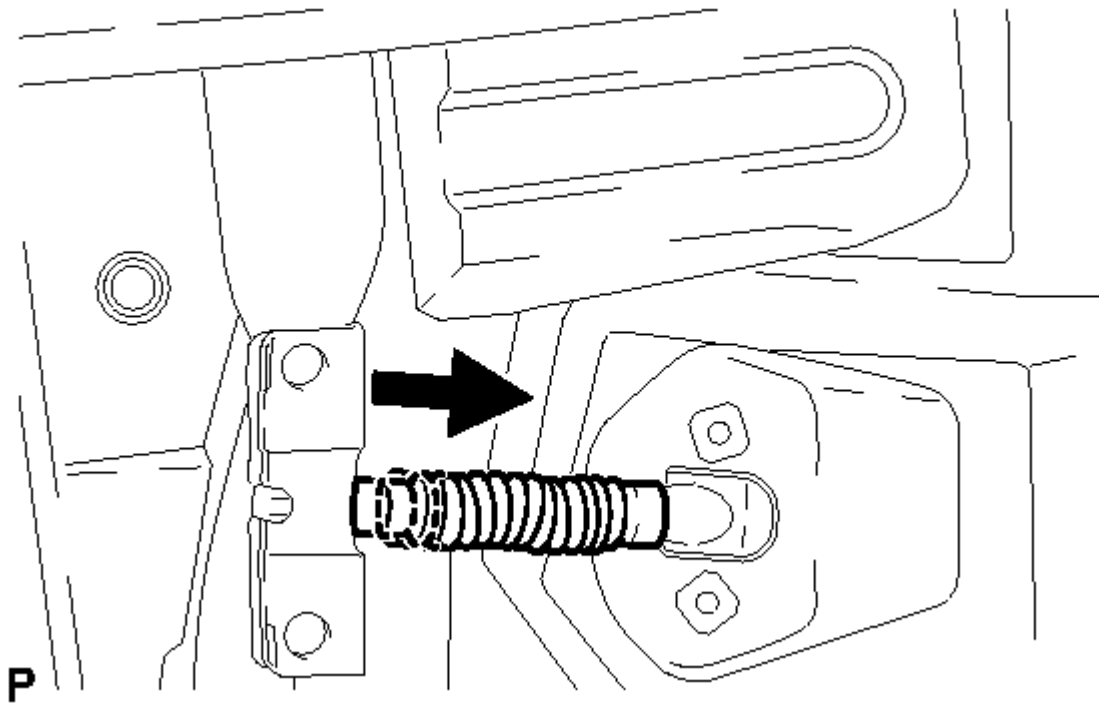
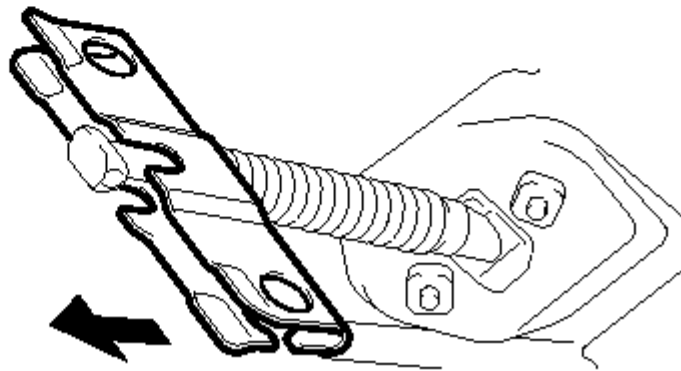
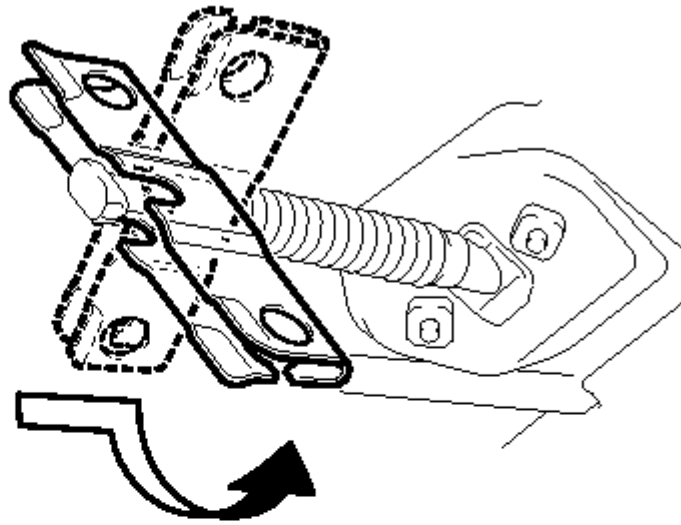


Fig. 9: Removing Parking Brake Equalizer Rubber Boot
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- b. Remove the parking brake equalizer from the No. 1 parking brake cable assembly as shown in the illustration.



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Fig. 10: Removing Brake Equalizer From No. 1 Parking Brake Cable Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

21. REMOVE PARKING BRAKE CONTROL PEDAL ASSEMBLY

- a. Disengage the clips and peel back the floor carpet.

HINT:

Peel back the floor carpet enough to allow separation and connection of the No. 1 parking brake cable assembly.

- b. Remove the 3 bolts and 2 nuts and remove the center body pillar sub-assembly LH.

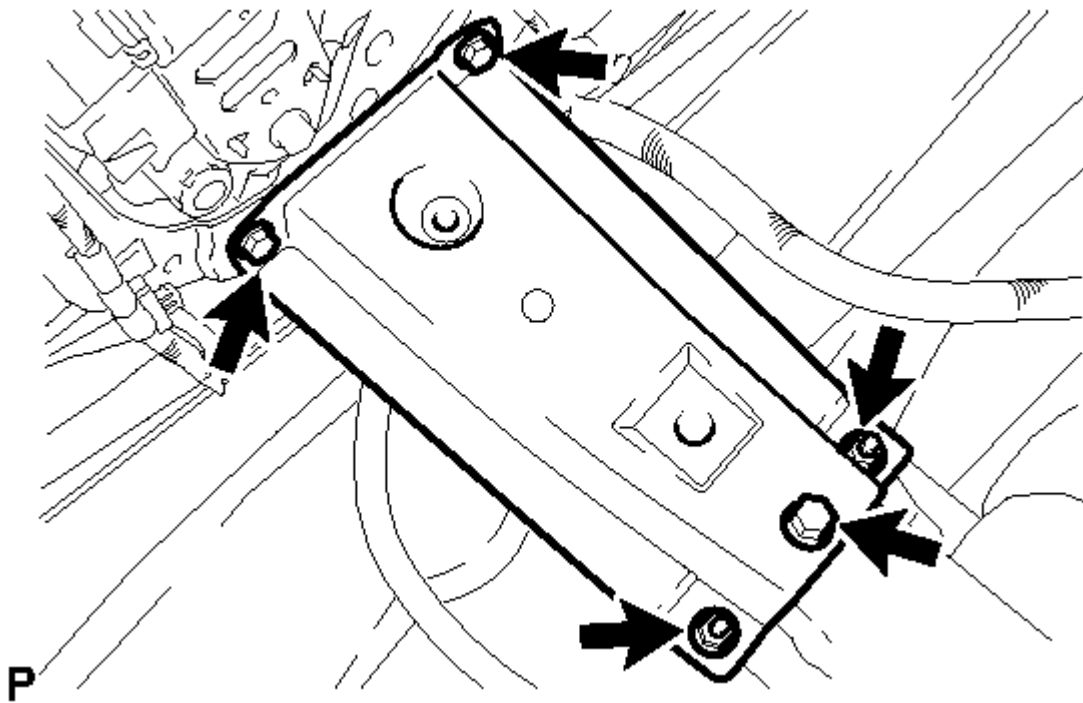
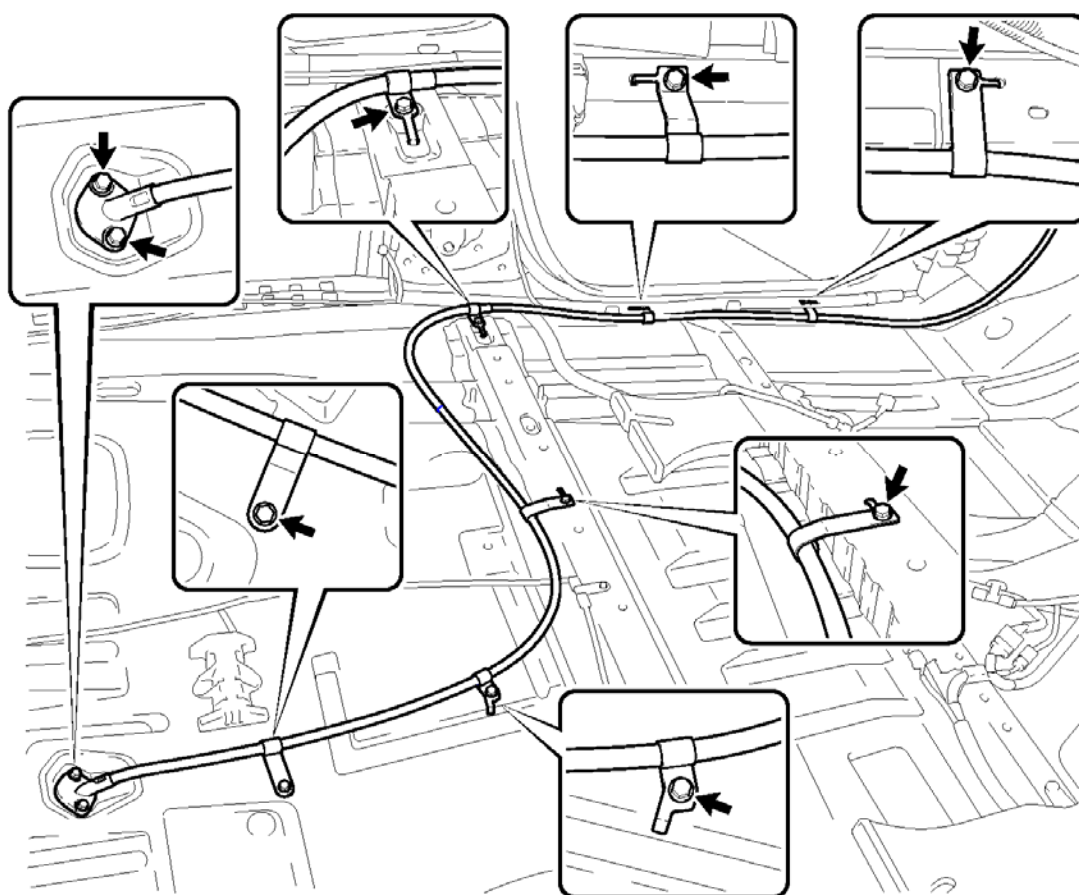


Fig. 11: Removing Center Body Pillar Sub-Assembly LH Fasteners
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

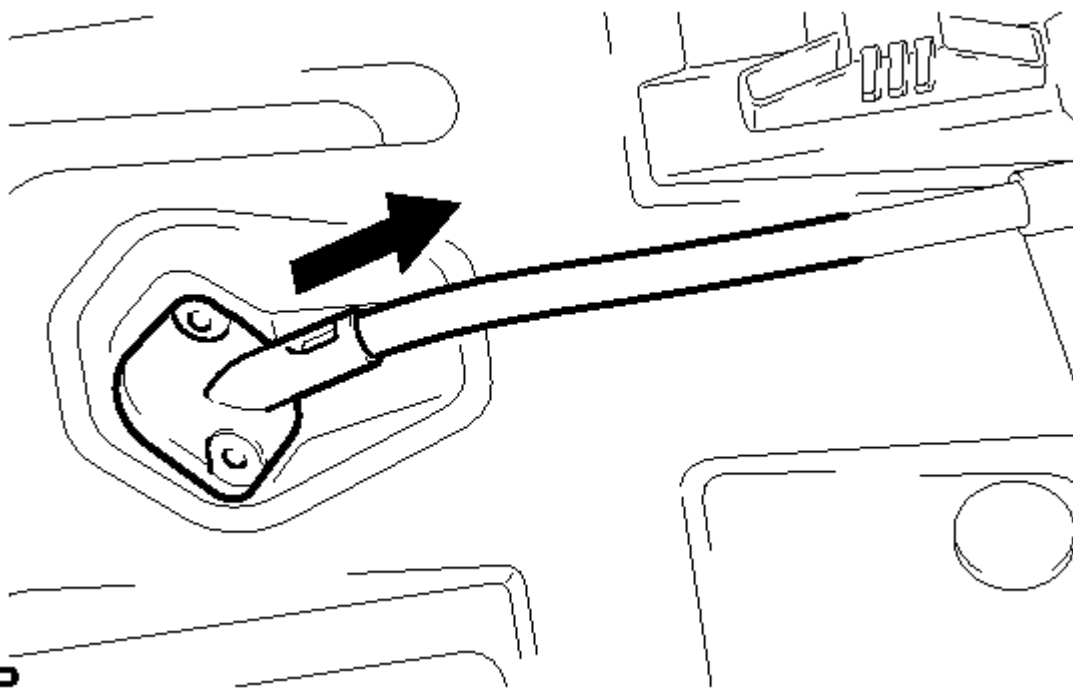
- c. Remove the 8 bolts and separate the No. 1 parking brake cable assembly from the body.



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Fig. 12: Removing No. 1 Parking Brake Cable Assembly Fasteners
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

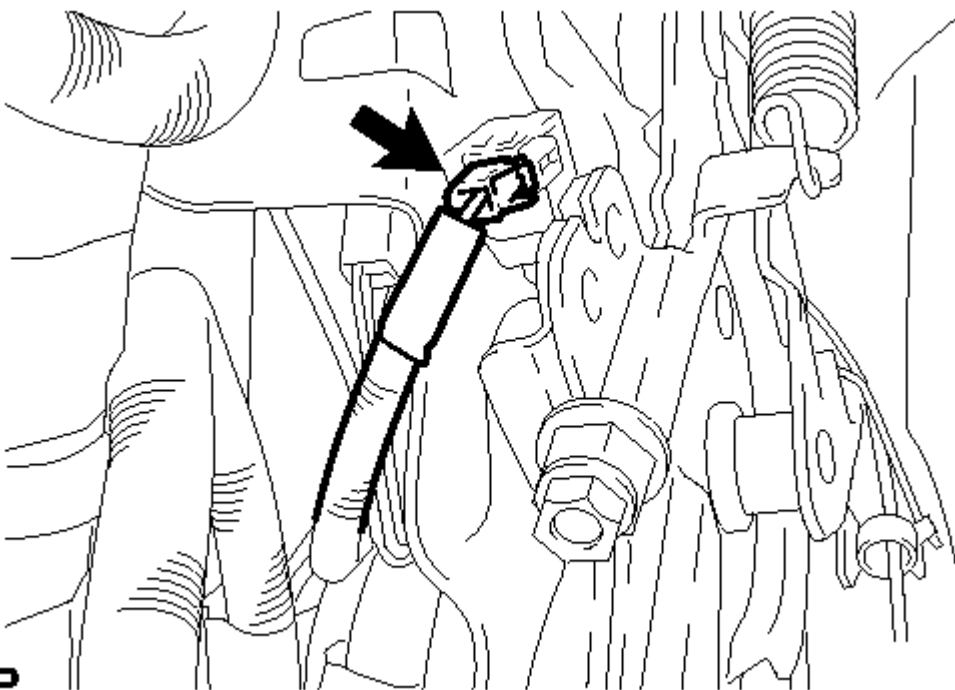
- d. Pull out the No. 1 parking brake cable assembly toward the cabin.



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Fig. 13: Removing No. 1 Parking Brake Cable Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

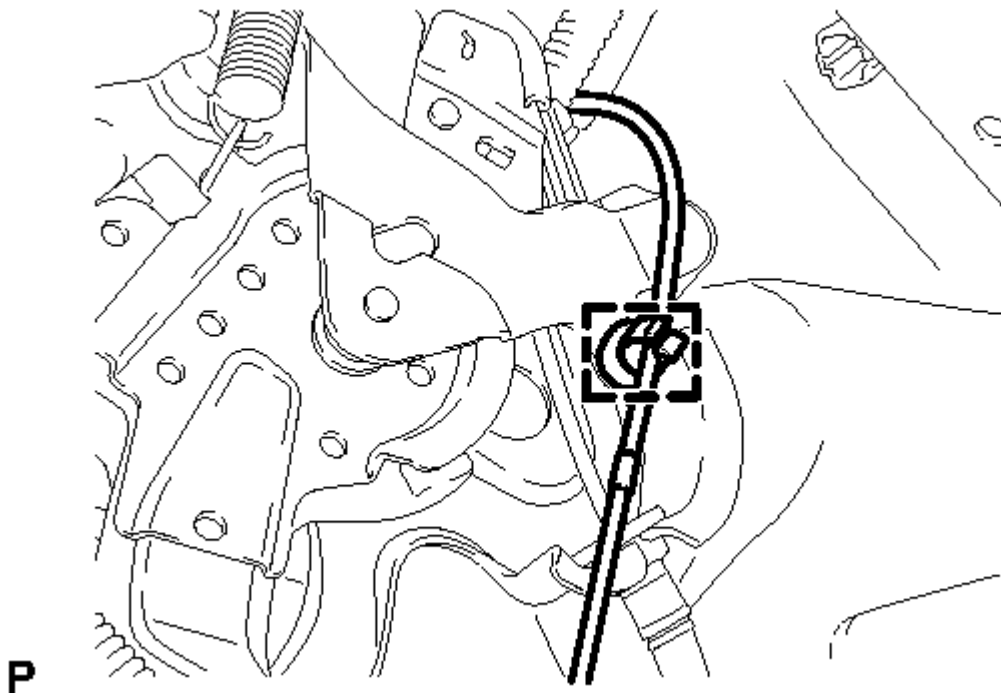
- e. Disconnect the parking brake switch connector.



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Fig. 14: Identifying Parking Brake Switch Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- f. Separate the clip and hood lock control cable from the parking brake control pedal assembly.



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Fig. 15: Identifying Hood Lock Control Cable & Fastener
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- g. Remove the 3 nuts and parking brake control pedal assembly.



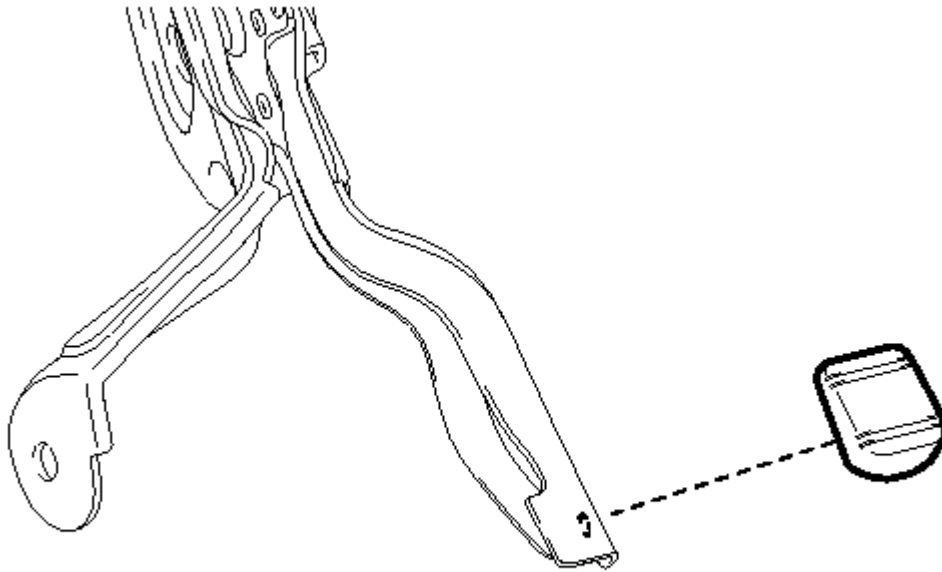
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Fig. 16: Identifying Parking Brake Control Pedal Assembly & Fasteners
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

DISASSEMBLY

DISASSEMBLY

1. **REMOVE NO. 1 PARKING BRAKE CABLE ASSEMBLY** See step 2
2. **REMOVE PARKING BRAKE SWITCH ASSEMBLY** See step 4
3. **REMOVE PARKING PEDAL PAD**
 - a. Remove the parking pedal pad from the parking brake pedal.



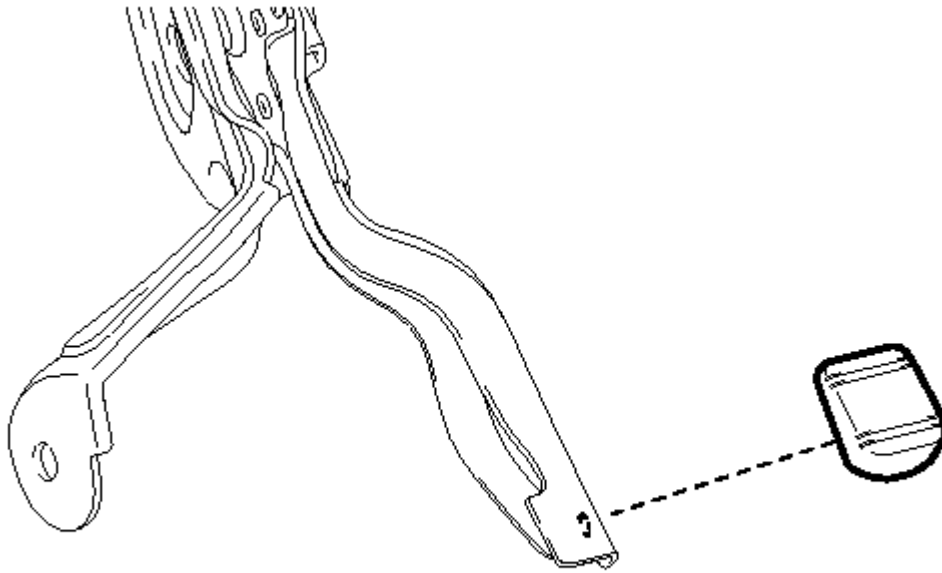
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Fig. 17: Remove/Install Parking Brake Pedal Pad
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

REASSEMBLY

REASSEMBLY

1. **INSTALL PARKING PEDAL PAD**
 - a. Install the parking pedal pad to the parking brake pedal.



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Fig. 18: Remove/Install Parking Brake Pedal Pad

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. **INSTALL PARKING BRAKE SWITCH ASSEMBLY** See step 1
3. **INSTALL NO. 1 PARKING BRAKE CABLE ASSEMBLY** See step 4

INSTALLATION

INSTALLATION

1. INSTALL PARKING BRAKE CONTROL PEDAL ASSEMBLY

- a. Install the parking brake control pedal assembly with the 3 nuts.

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

- b. Connect the clip and hood lock control cable to the parking brake control pedal assembly.
- c. Connect the parking brake switch connector.
- d. Insert the No. 1 parking brake cable assembly toward the outside of the cabin.

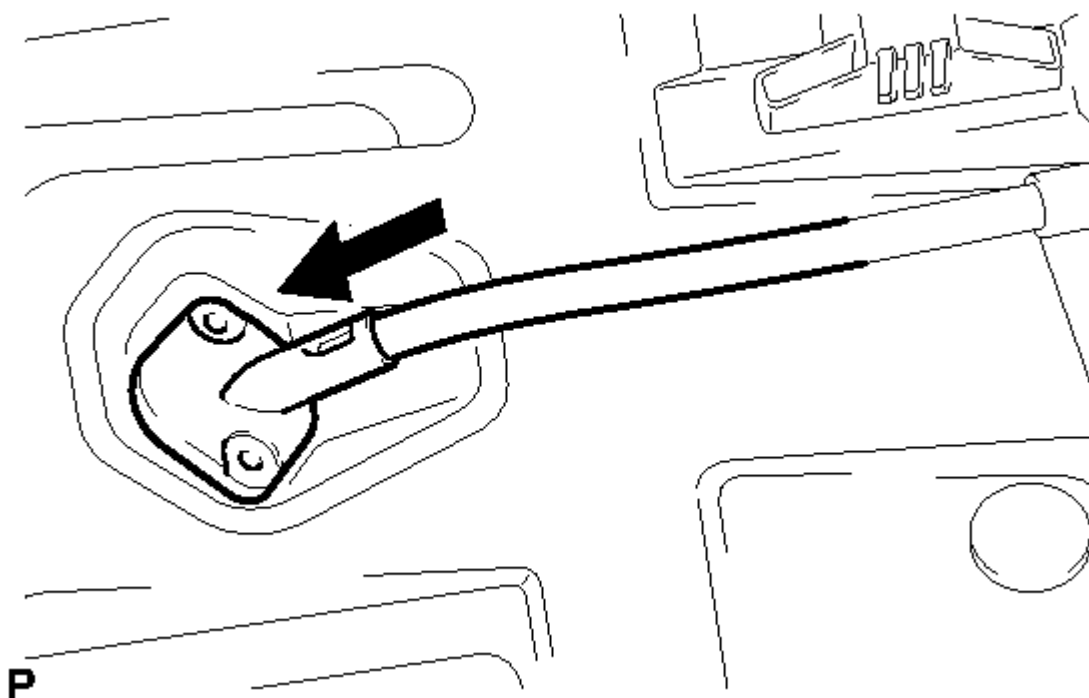
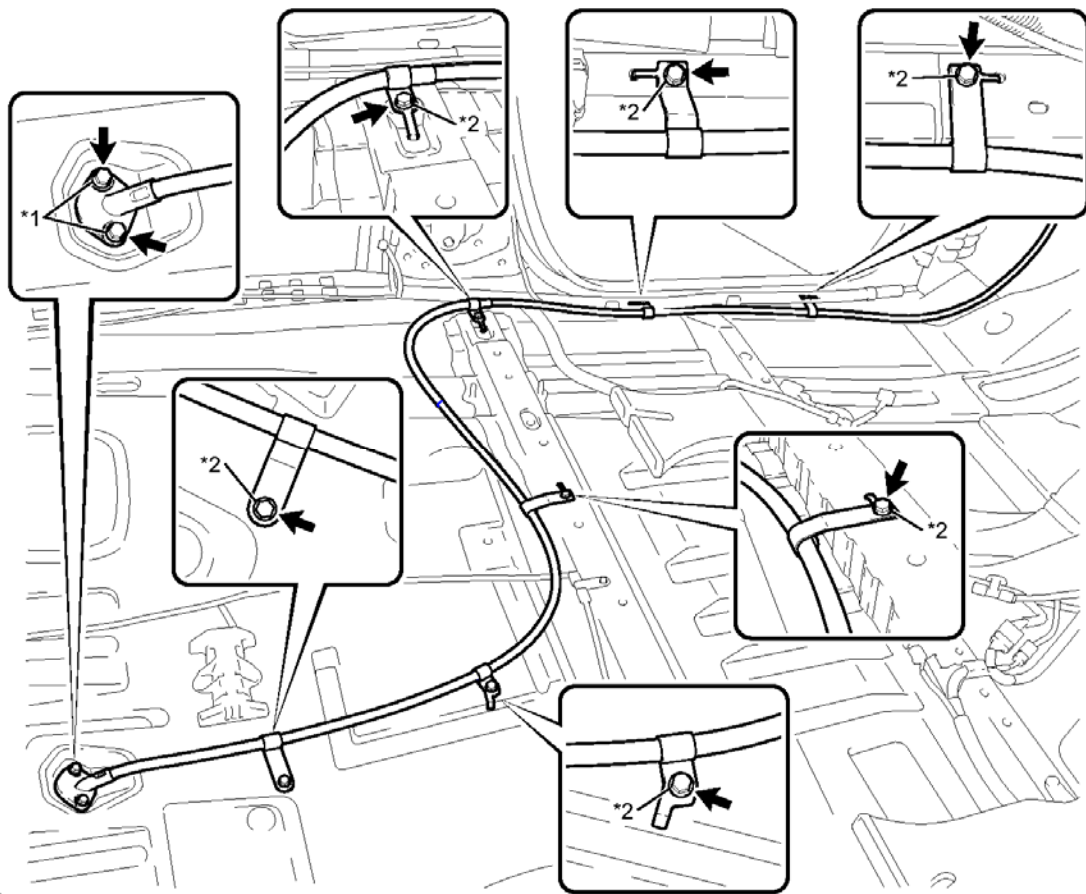


Fig. 19: Installing No. 1 Parking Brake Cable Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- e. Install the No. 1 parking brake cable assembly with the 8 bolts.



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Fig. 20: Installing No. 1 Parking Brake Cable Assembly Fasteners
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Bolt	*2	Bolt
A		B	

Bolt A

Torque: 8.5 N*m (87 kgf*cm, 75 in.*lbf)

Bolt B

Torque: 5.6 N*m (57 kgf*cm, 50 in.*lbf)

- f. Install the 3 bolts and 2 nuts and install the center body pillar sub-assembly LH.

Bolt

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

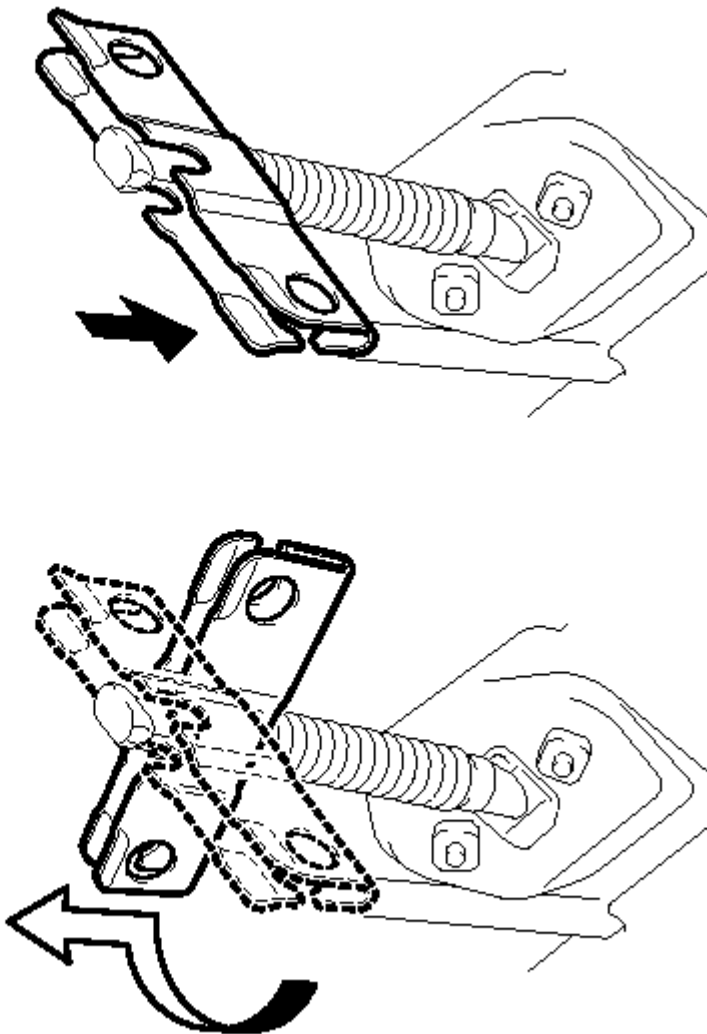
Nut

Torque: 61 N*m (622 kgf*cm, 45 ft.*lbf)

- g. Return the floor carpet and engage the clips.

2. INSTALL PARKING BRAKE EQUALIZER

- a. Install the parking brake equalizer to the No. 1 parking brake cable assembly as shown in the illustration.



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Fig. 21: Installing Parking Brake Equalizer To No. 1 Parking Brake Cable Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- b. Slide the rubber boot back as shown in the illustration.

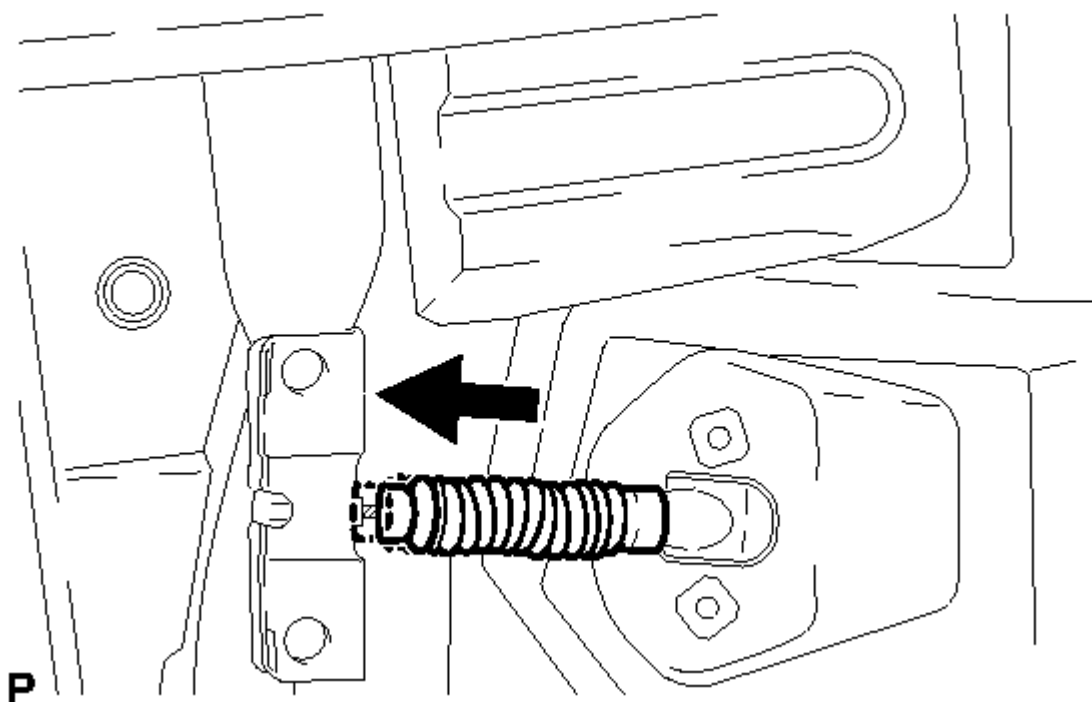


Fig. 22: Installing Parking Brake Equalizer Rubber Boot
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

3. **CONNECT NO. 2 PARKING BRAKE CABLE ASSEMBLY**
 - a. Connect the No. 2 parking brake cable assembly to the parking brake equalizer.
4. **CONNECT NO. 3 PARKING BRAKE CABLE ASSEMBLY**
 - a. Connect the No. 3 parking brake cable assembly to the parking brake equalizer.
5. **INSTALL CENTER PILLAR LOWER GARNISH LH** . Refer to **INSTALLATION - Step 21**
6. **INSTALL FRONT DOOR OPENING TRIM WEATHERSTRIP LH**
7. **INSTALL NO. 1 SLIDE DOOR WEATHERSTRIP LH**
8. **INSTALL INSTRUMENT CLUSTER FINISH LOWER CENTER PANEL SUB-ASSEMBLY** .
 Refer to **INSTALLATION - Step 15**
9. **INSTALL INSTRUMENT LOWER CENTER COVER (w/o Console Box)** . Refer to
INSTALLATION - Step 16
10. **INSTALL INSTRUMENT LOWER CENTER COVER (w/ Console Box)** . Refer to
INSTALLATION - Step 17
11. **INSTALL INSTRUMENT PANEL FINISH PANEL END RH** . Refer to **INSTALLATION - Step 18**
12. **INSTALL INSTRUMENT PANEL FINISH PANEL END LH** . Refer to **INSTALLATION - Step 19**
13. **INSTALL BOX BOTTOM MAT**
14. **INSTALL 4WD ECU ASSEMBLY (for AWD)** . Refer to **INSTALLATION - Step 1**
15. **INSTALL INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY**

Refer to **INSTALLATION**

16. INSTALL CONSOLE BOX ASSEMBLY (for Slide Type)

Refer to INSTALLATION

17. INSTALL CONSOLE BOX ASSEMBLY (for Fixed Type)

Refer to INSTALLATION

18. INSTALL FRONT SEAT ASSEMBLY (for Manual Seat)

Refer to INSTALLATION

19. INSTALL FRONT SEAT ASSEMBLY (for Power Seat)

Refer to INSTALLATION

20. INSTALL SEAT RAIL

Refer to INSTALLATION

21. ADJUST PARKING BRAKE SHOE CLEARANCE AND PARKING BRAKE PEDAL TRAVEL .

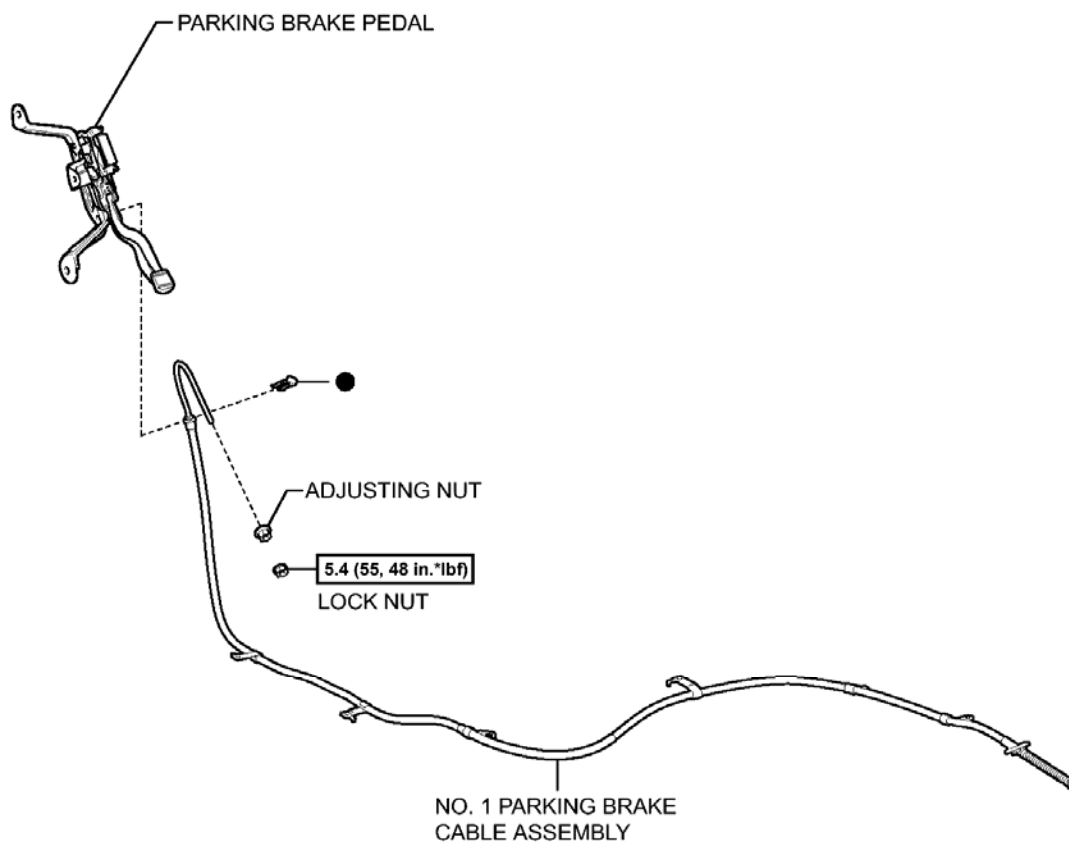
Refer to ADJUSTMENT - Step 2

22. INSPECT BRAKE WARNING LIGHT . Refer to ADJUSTMENT - Step 3

PARKING BRAKE CABLE

COMPONENTS

ILLUSTRATION



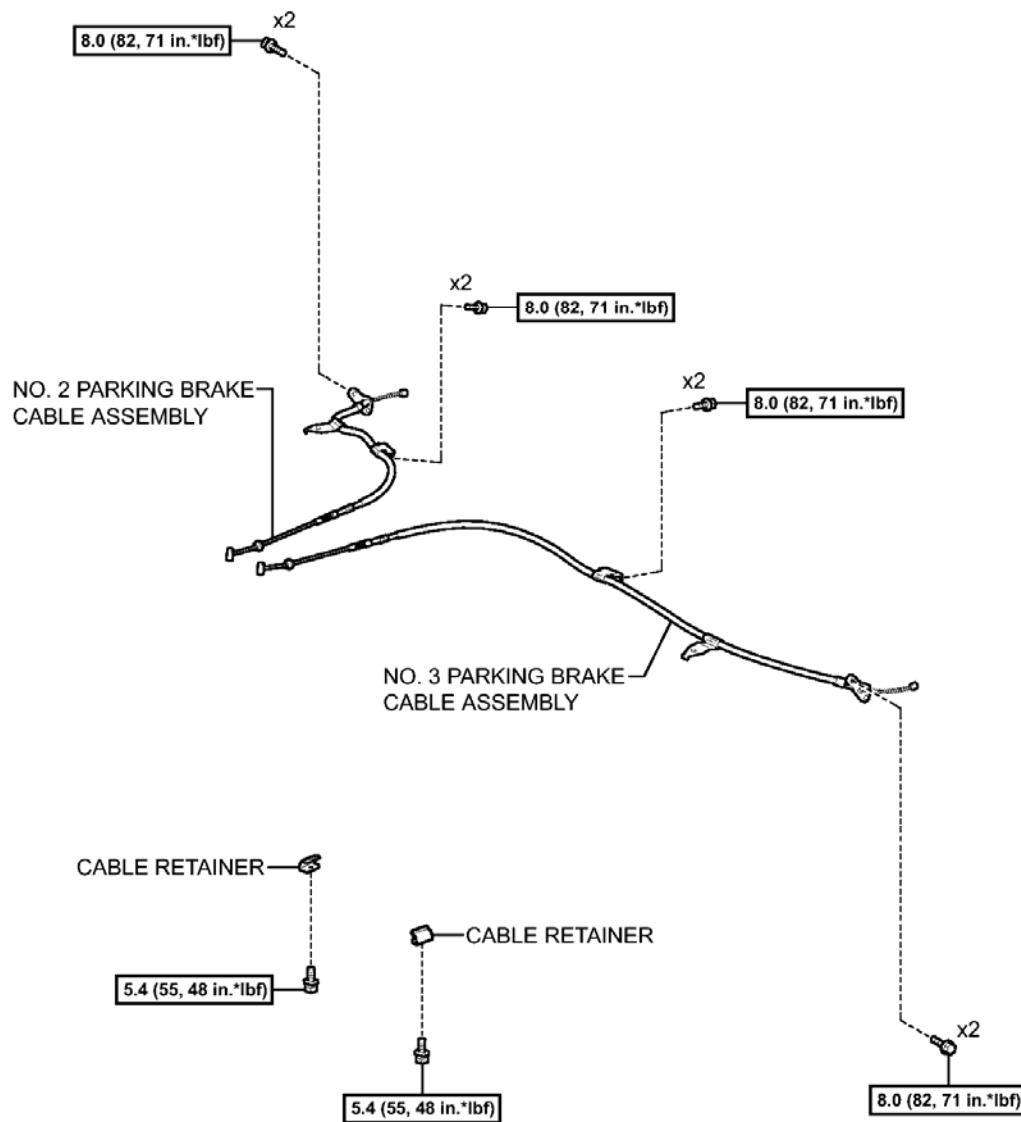
[N*m (kgf*cm, ft.*lbf)]: Specified torque

● Non-reusable part

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Fig. 23: Parking Brake Cable Replacement Components With Torque Specifications (1 of 2)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ILLUSTRATION



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

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Fig. 24: Parking Brake Cable Replacement Components With Torque Specifications (2 of 2)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

REMOVAL

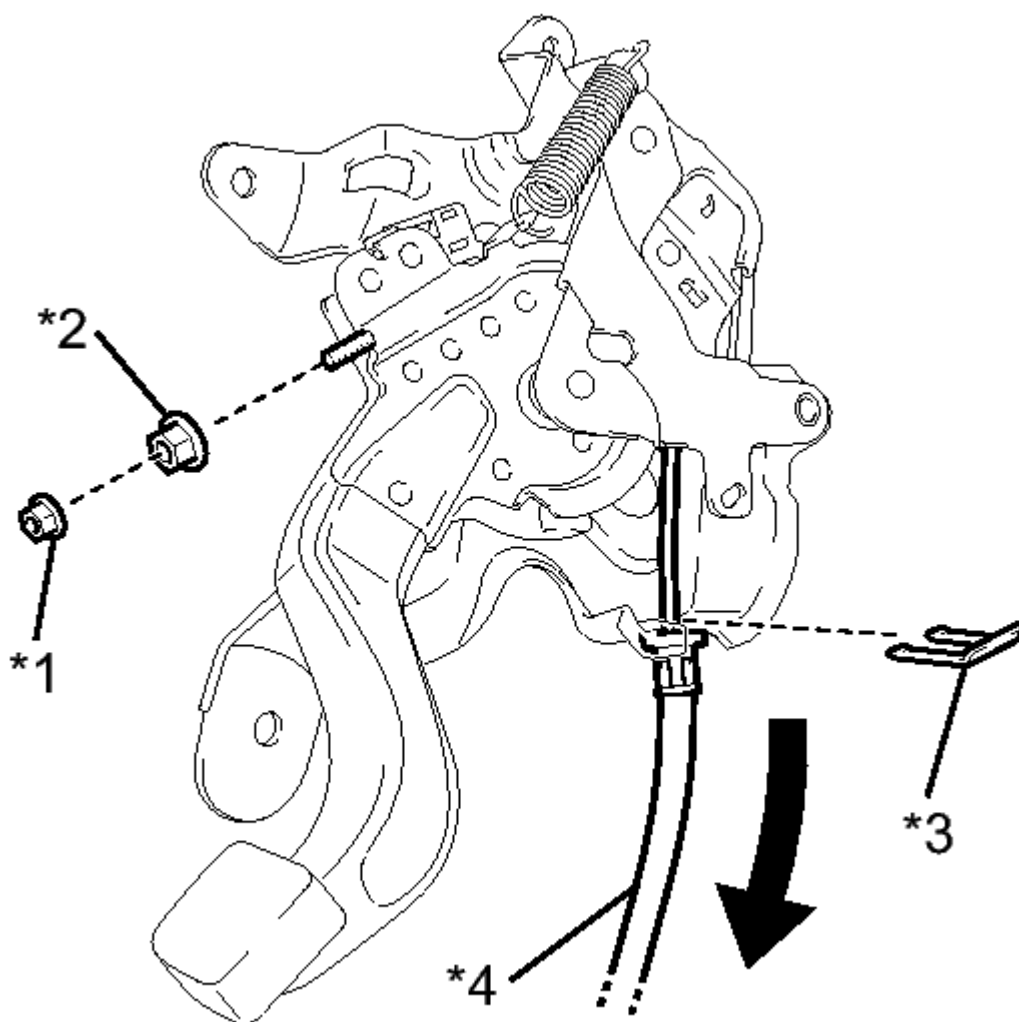
REMOVAL

1. REMOVE PARKING BRAKE CONTROL PEDAL ASSEMBLY

Refer to **REMOVAL**

2. REMOVE NO. 1 PARKING BRAKE CABLE ASSEMBLY

- a. Remove the lock nut and adjusting nut.



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Fig. 25: Removing No. 1 Parking Brake Cable Assembly & Fasteners
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Lock Nut
*2	Adjusting Nut

*3	Clip
	No. 1 Parking
*4	Brake Cable Assembly

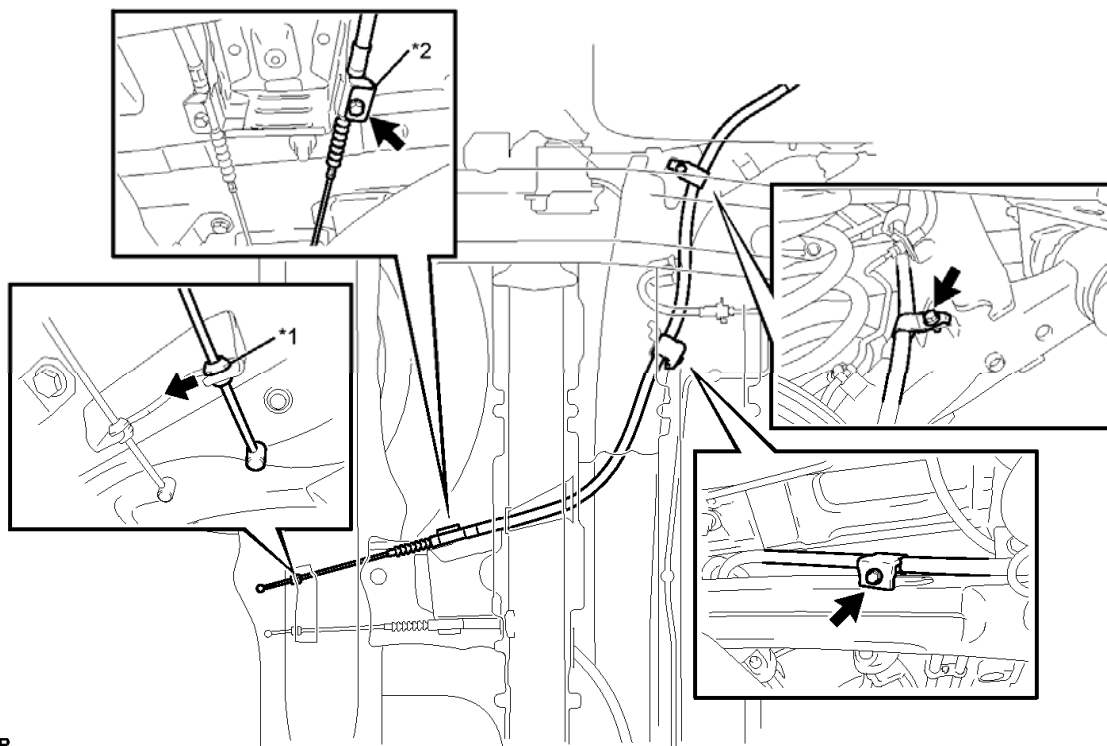
b. Remove the clip and No. 1 parking brake cable assembly from parking brake pedal.

3. REMOVE NO. 2 PARKING BRAKE SHOE ASSEMBLY WITH PARKING BRAKE SHOE LEVER

Refer to **DISASSEMBLY**

4. REMOVE NO. 2 PARKING BRAKE CABLE ASSEMBLY

a. Separate the button from the body.



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Fig. 26: Removing No. 2 Parking Brake Cable Assembly & Fasteners
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

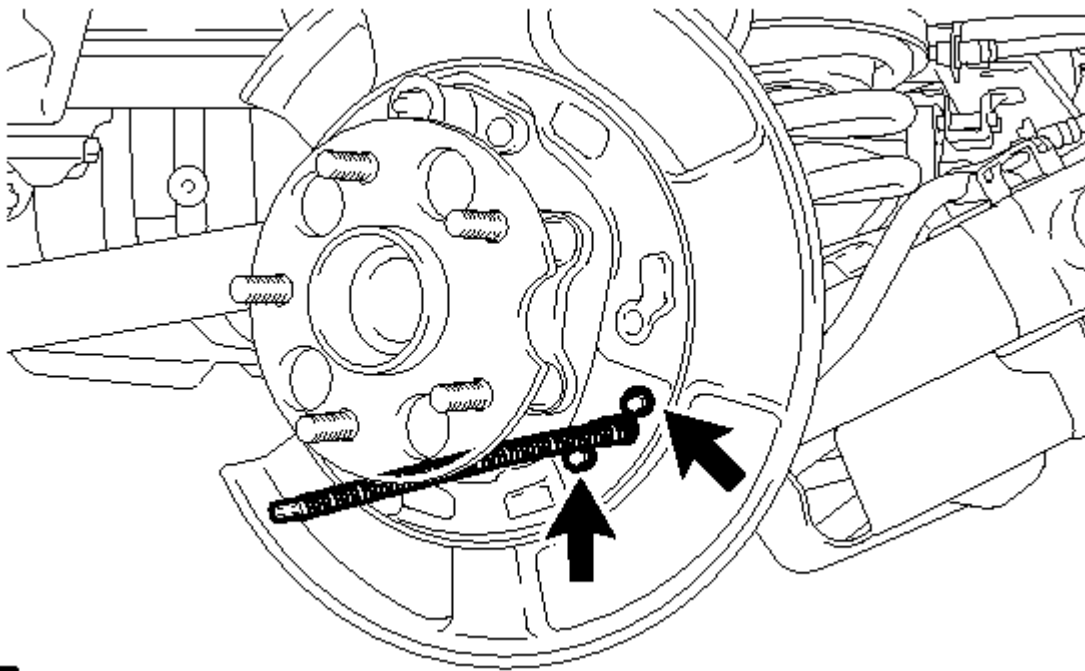
TEXT IN ILLUSTRATION

*1	Button	*2	Cable Retainer
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b. Remove the bolt and cable retainer.

c. Remove the 2 bolts and separate the No. 2 parking brake cable assembly from axle beam.

- d. Remove the 2 bolts and No. 2 parking brake cable assembly from the backing plate.

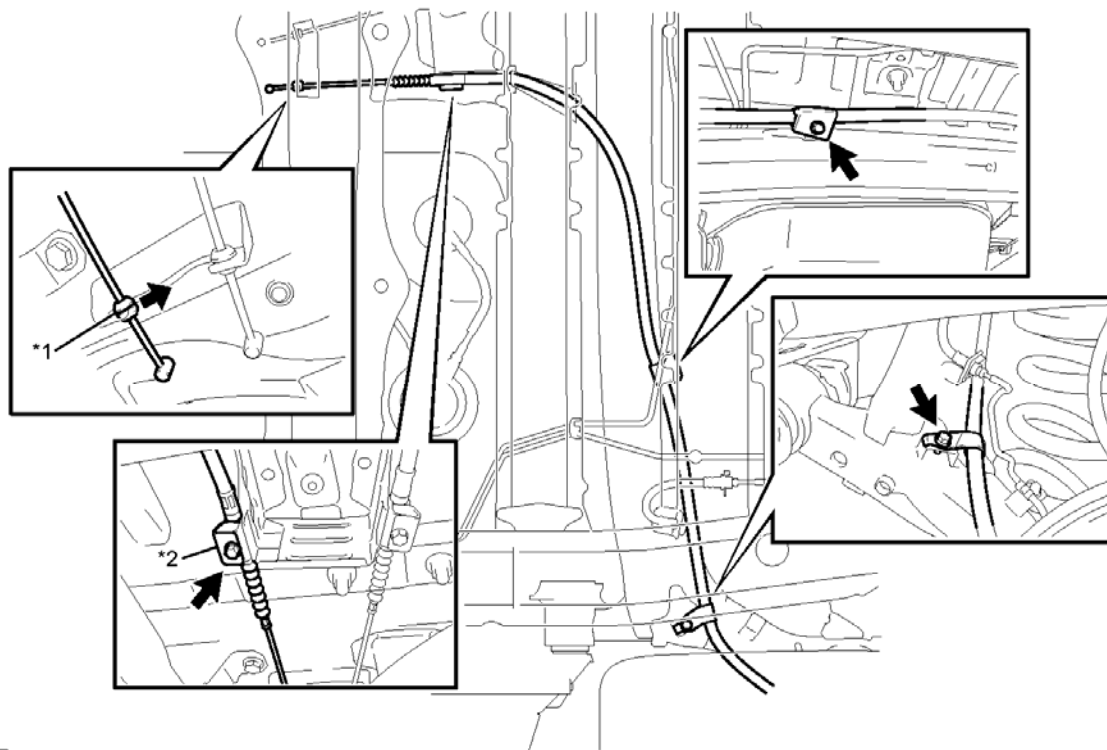


P

Fig. 27: Removing No. 2 Parking Brake Cable Fasteners From Backing Plate
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

5. REMOVE NO. 3 PARKING BRAKE CABLE ASSEMBLY

- a. Separate the button from the body.



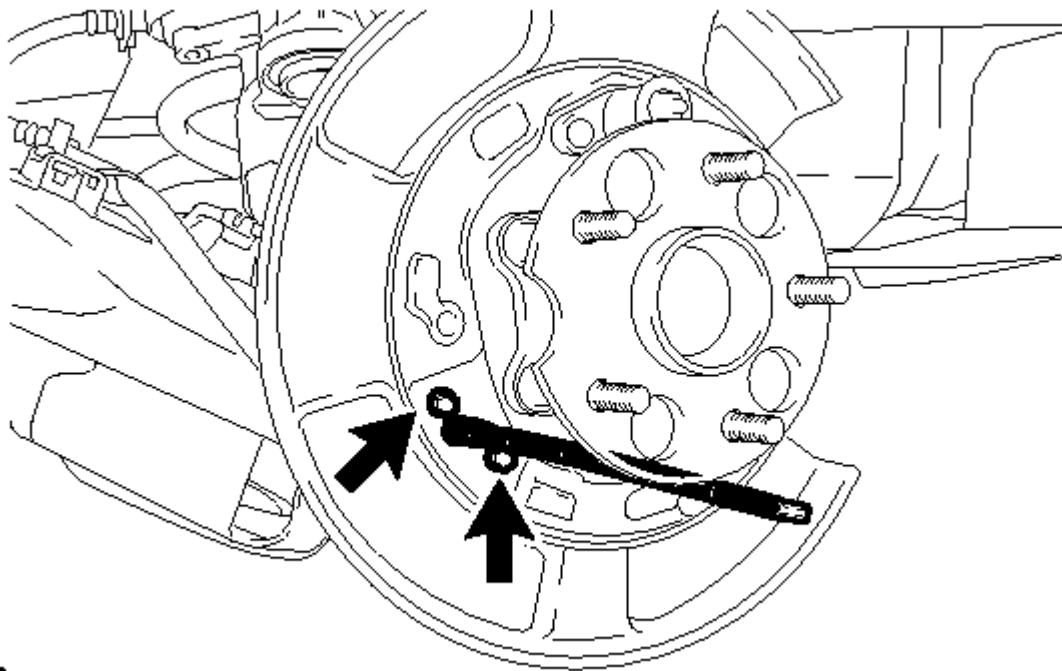
P

Fig. 28: Removing No. 3 Parking Brake Cable Assembly & Fasteners
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Button	*2	Cable Retainer
----	--------	----	-------------------

- b. Remove the bolt and cable retainer.
- c. Remove the 2 bolts and separate the No. 3 parking brake cable assembly from axle beam.
- d. Remove the 2 bolts and No. 3 parking brake cable assembly from the backing plate.



P

Fig. 29: Removing No. 3 Parking Brake Cable Fasteners From Backing Plate
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSTALLATION

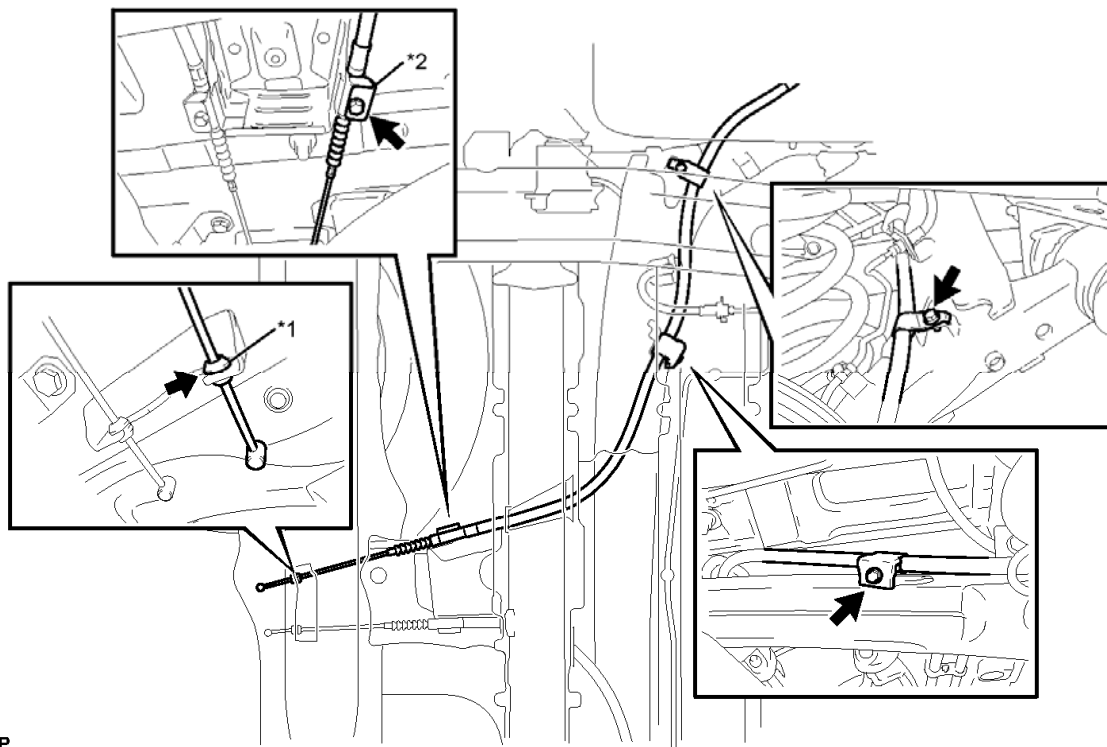
INSTALLATION

1. INSTALL NO. 2 PARKING BRAKE CABLE ASSEMBLY

- a. Install the No. 2 parking brake cable assembly to the backing plate with the 2 bolts.

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

- b. Install the No. 2 parking brake cable assembly to the axle beam with the 2 bolts.



P

Fig. 30: Installing No. 2 Parking Brake Cable Assembly & Fasteners
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Button	*2	Cable Retainer
----	--------	----	----------------

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

- c. Install the cable retainer with the bolt.

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

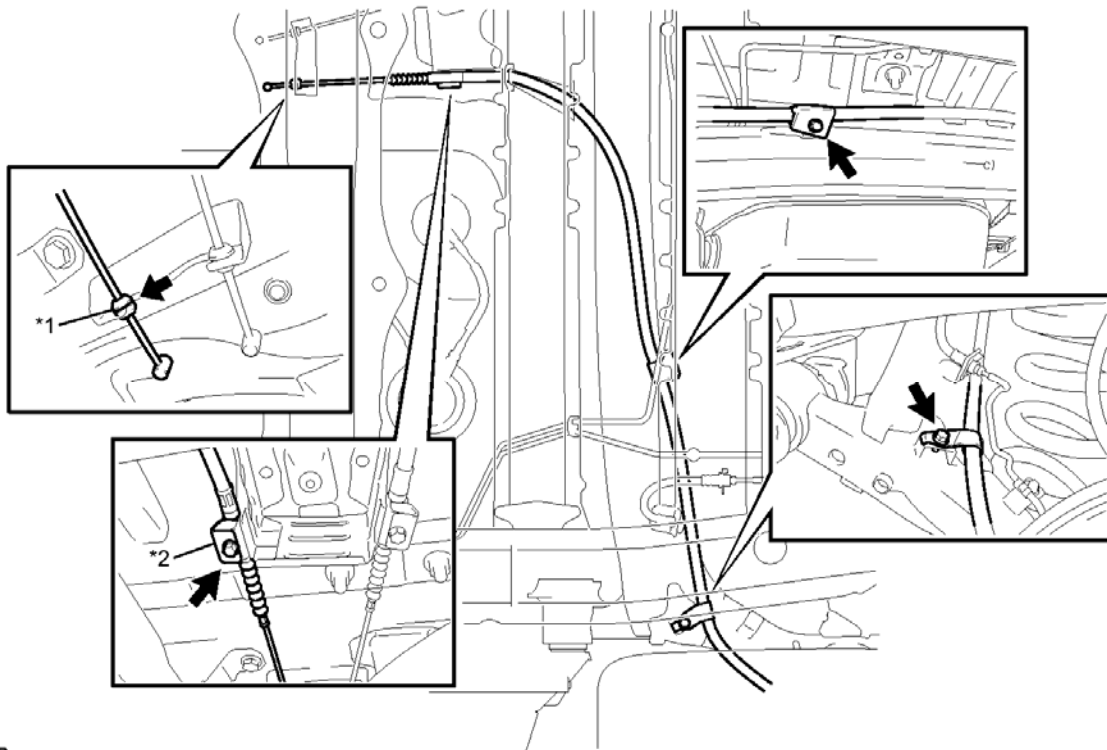
- d. Install the button to the body.

2. INSTALL NO. 3 PARKING BRAKE CABLE ASSEMBLY

- a. Install the No. 3 parking brake cable assembly to the backing plate with the 2 bolts.

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

- b. Install the No. 3 parking brake cable assembly to the axle beam with the 2 bolts.



P

Fig. 31: Installing No. 3 Parking Brake Cable Assembly & Fasteners
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Button	*2	Cable Retainer
----	--------	----	----------------

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

- c. Install the cable retainer with the bolt.

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

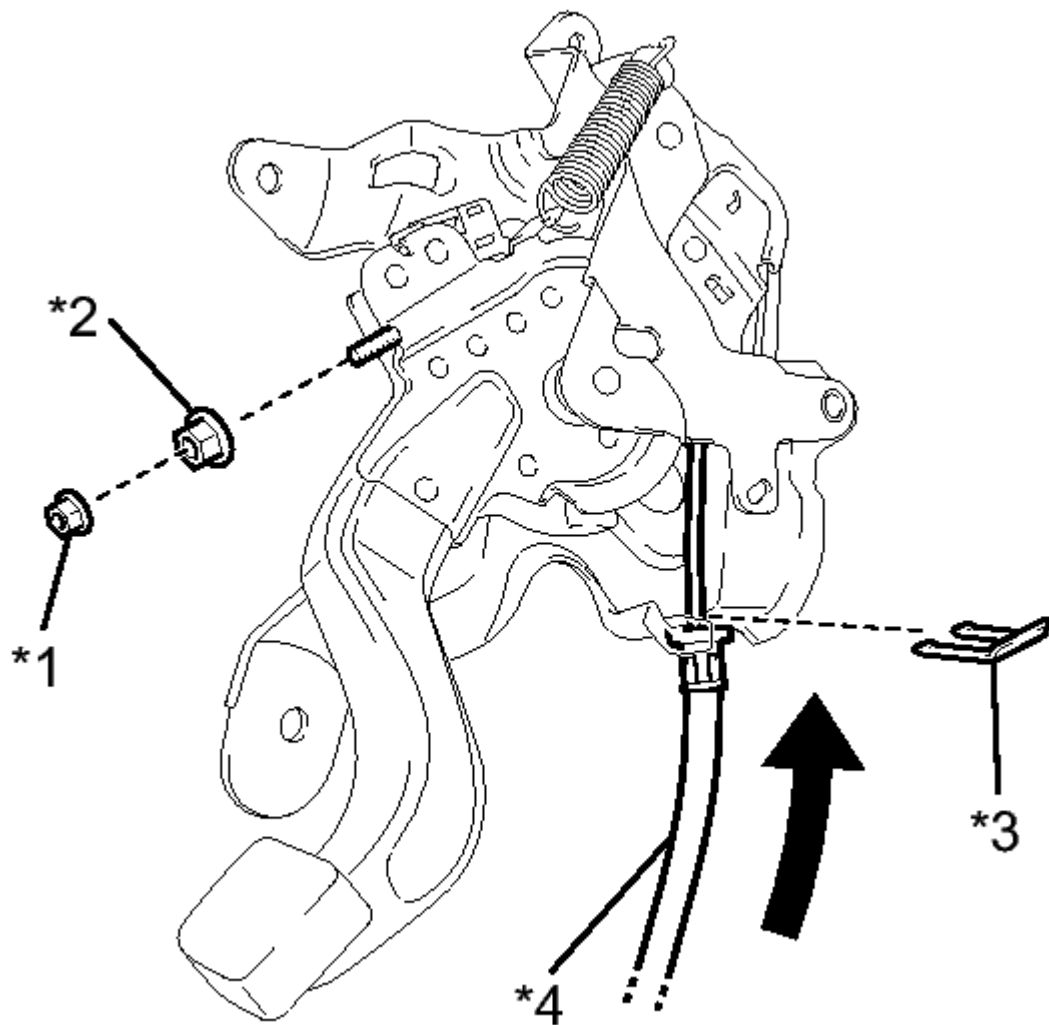
- d. Install the button to the body.

3. INSTALL NO. 2 PARKING BRAKE SHOE ASSEMBLY WITH PARKING BRAKE SHOE LEVER

Refer to **REASSEMBLY**

4. INSTALL NO. 1 PARKING BRAKE CABLE ASSEMBLY

- a. Pass the No. 1 parking brake cable assembly through the parking brake pedal.



P

Fig. 32: Installing No. 1 Parking Brake Cable Assembly & Fasteners
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Lock Nut
*2	Adjusting Nut
*3	Clip
*4	No. 1 Parking Brake Cable Assembly

- b. Install the new clip to the No. 1 parking brake cable assembly.

- c. Temporarily install the adjusting nut and lock nut.

HINT:

After adjusting parking brake pedal travel, tighten the lock nut.

5. INSTALL PARKING BRAKE CONTROL PEDAL ASSEMBLY

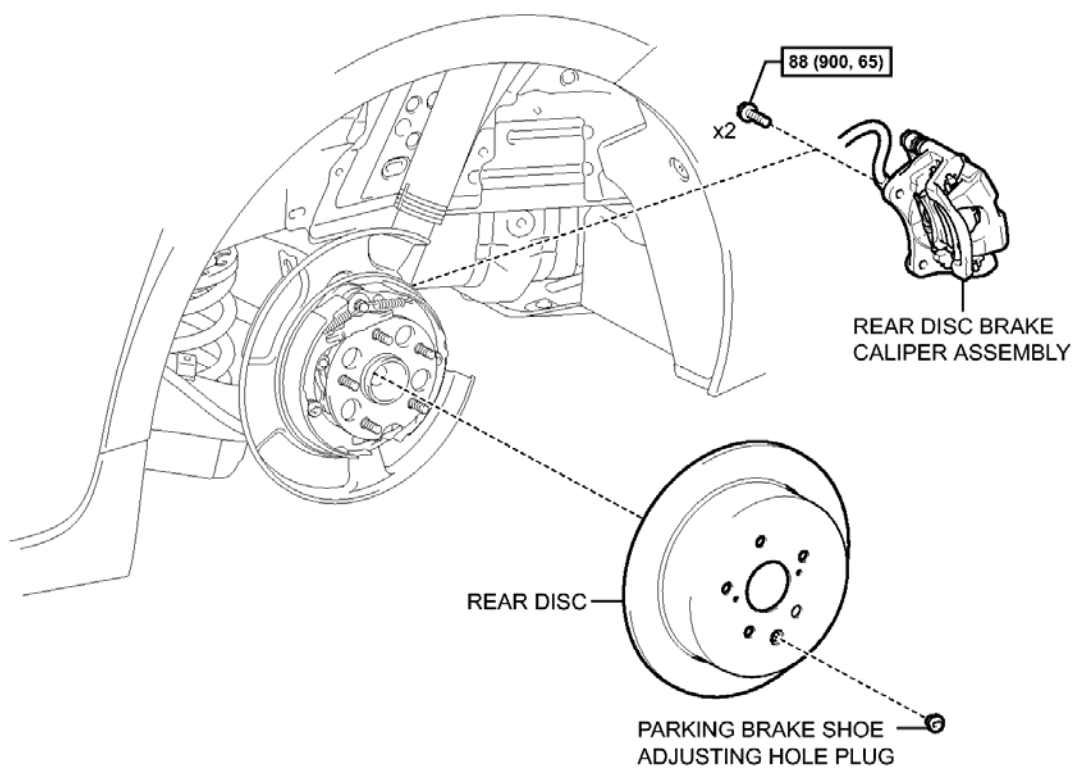
Refer to **INSTALLATION**

6. INSPECT BRAKE WARNING LIGHT . Refer to **ADJUSTMENT - Step 3**

PARKING BRAKE ASSEMBLY

COMPONENTS

ILLUSTRATION

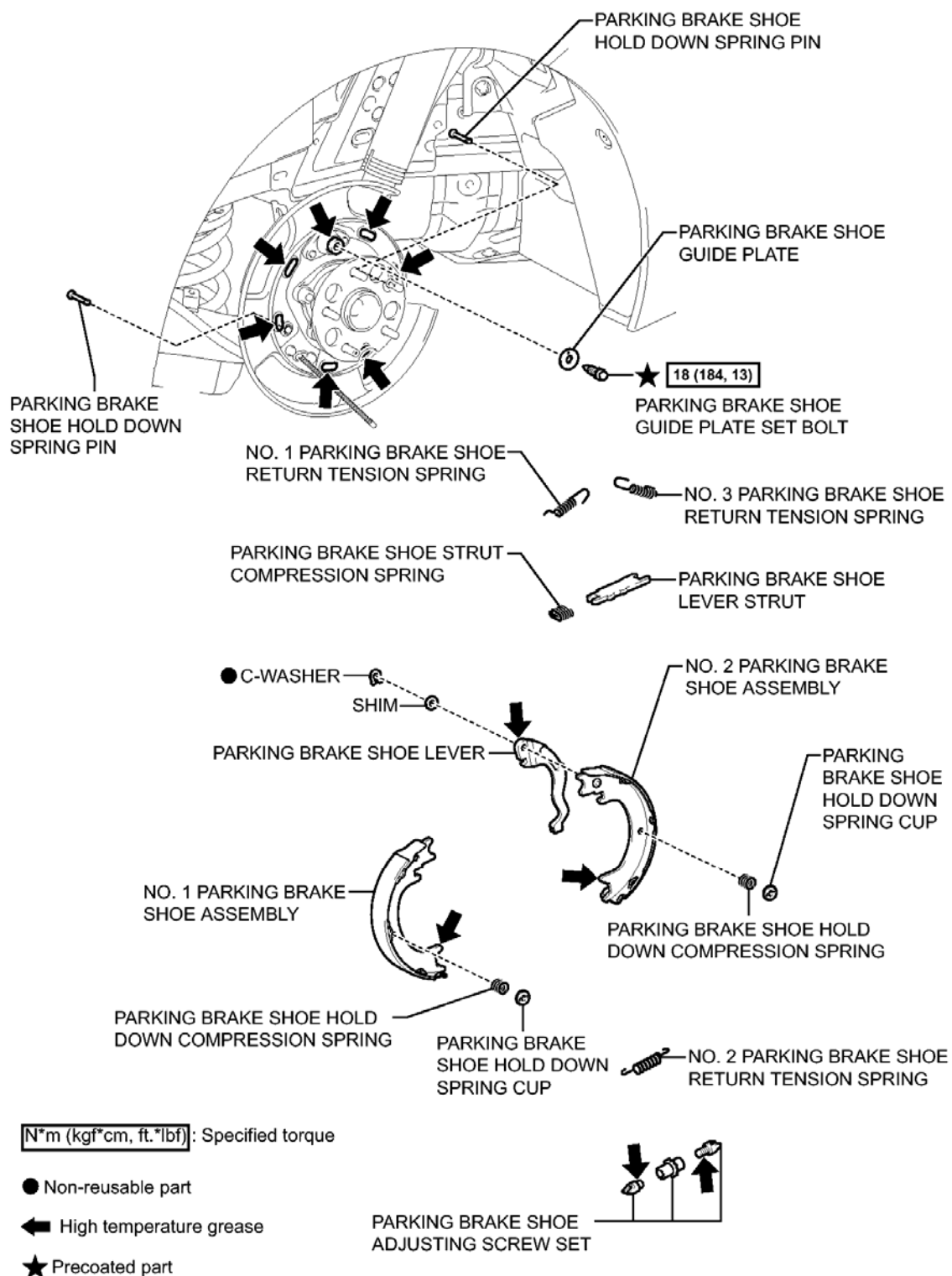


88 (900, 65) N*m (kgf*cm, ft.*lbf): Specified torque

P

Fig. 33: Parking Brake Assembly Replacement Components With Torque Specifications
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ILLUSTRATION



P

Fig. 34: Exploded View Of Parking Brake Assembly Replacement Components With Torque Specifications

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

DISASSEMBLY

DISASSEMBLY

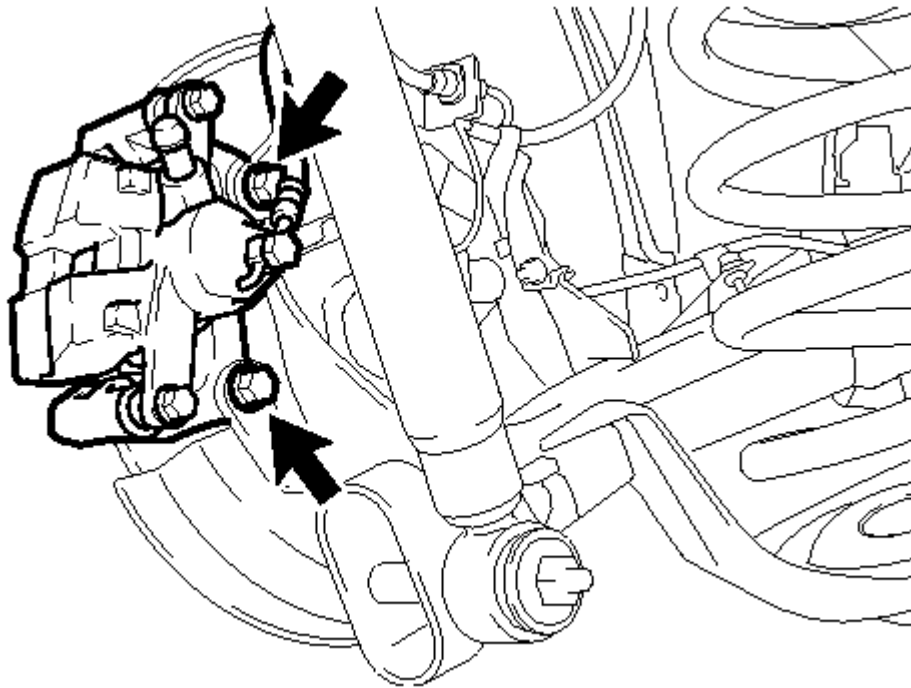
HINT:

- Use the same procedure for the RH side and LH side.
- The procedure listed below is for the LH side.

1. REMOVE REAR WHEEL

2. SEPARATE REAR DISC BRAKE CALIPER ASSEMBLY

- a. Remove the 2 bolts, and separate the rear disc brake caliper assembly.

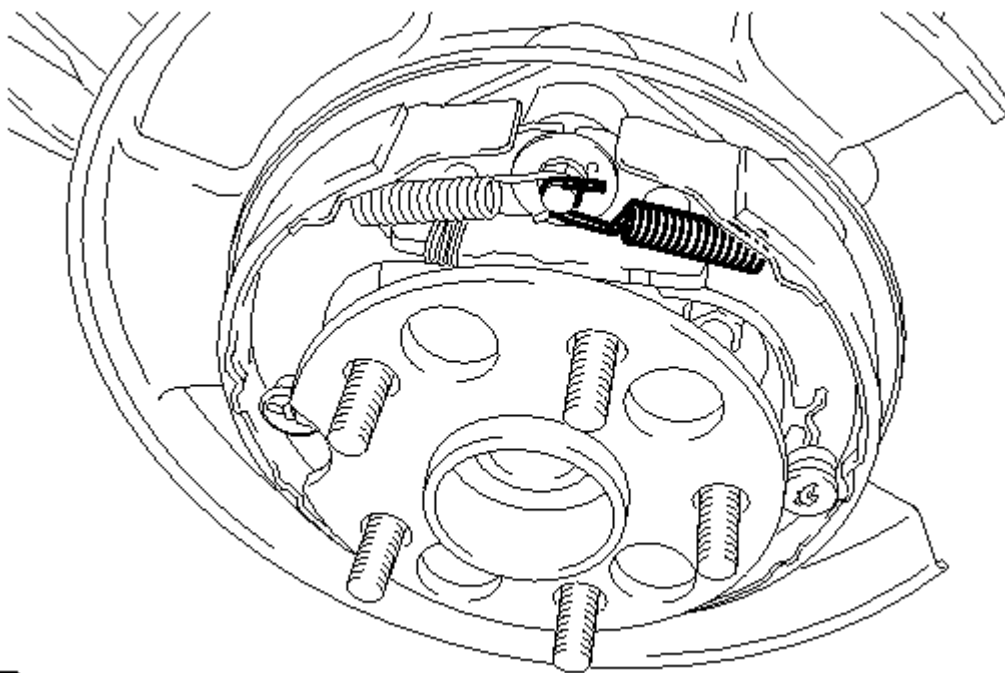


P

Fig. 35: Remove/Install Rear Disc Brake Caliper Assembly & Fasteners
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

NOTE: Use wire or an equivalent tool to keep the brake caliper from hanging down by the flexible hose.

3. REMOVE PARKING BRAKE SHOE ADJUSTING HOLE PLUG . Refer to REMOVAL - Step 14
4. REMOVE REAR DISC . Refer to REMOVAL - Step 15
5. REMOVE NO. 3 PARKING BRAKE SHOE RETURN TENSION SPRING
 - a. Remove the No. 3 parking brake shoe return tension spring.

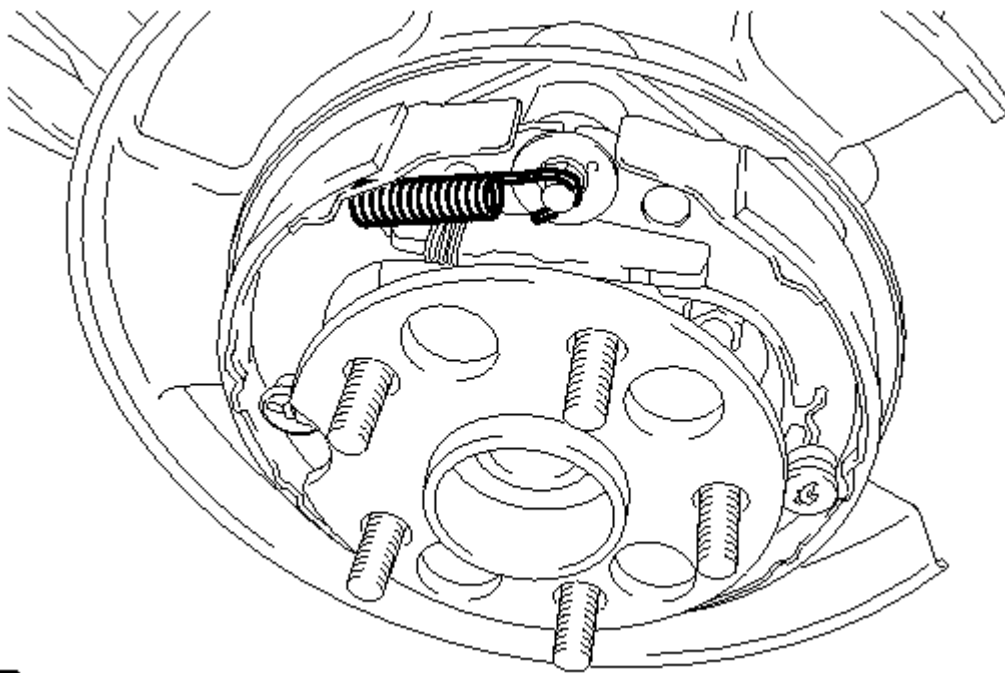


P

Fig. 36: Remove/Install No. 3 Parking Brake Shoe Return Tension Spring
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

6. REMOVE NO. 1 PARKING BRAKE SHOE RETURN TENSION SPRING

- a. Remove the No. 1 parking brake shoe return tension spring.



P

Fig. 37: Remove/Install No. 1 Parking Brake Shoe Return Tension Spring

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

7. SEPARATE NO. 1 PARKING BRAKE SHOE ASSEMBLY

- a. Remove the parking brake shoe hold down spring cup and parking brake shoe hold down spring to separate the No. 1 parking brake shoe assembly from the backing plate.

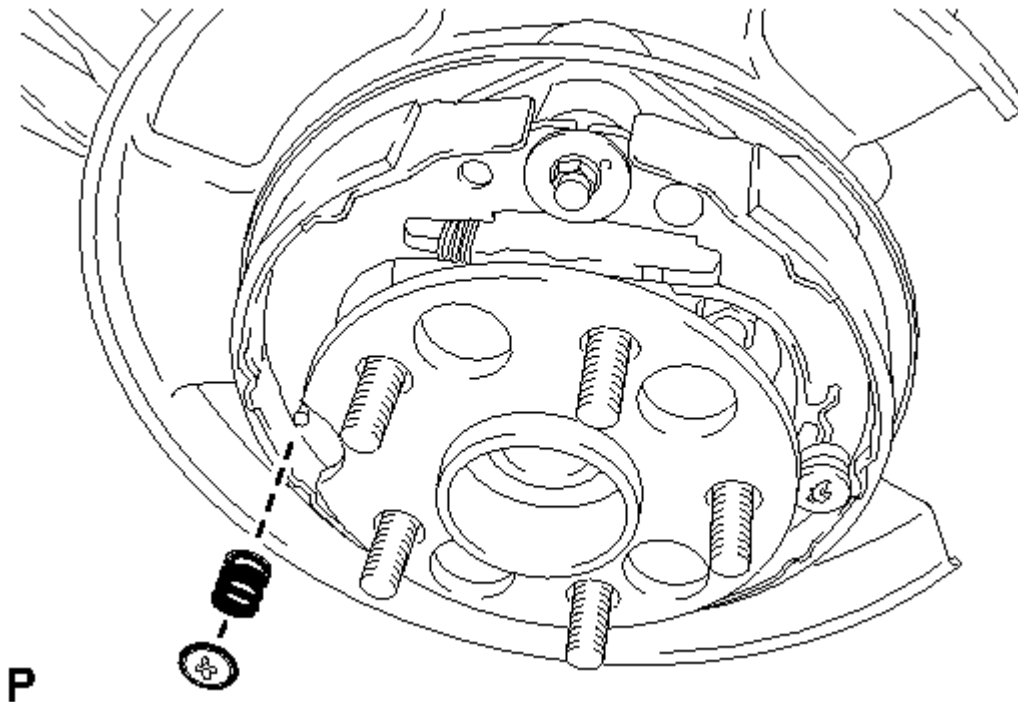


Fig. 38: Remove/Install No. 1 Parking Brake Shoe Hold Down Spring Cup
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

8. REMOVE PARKING BRAKE SHOE LEVER STRUT

- a. Remove the parking brake shoe lever strut and parking brake shoe strut compression spring.

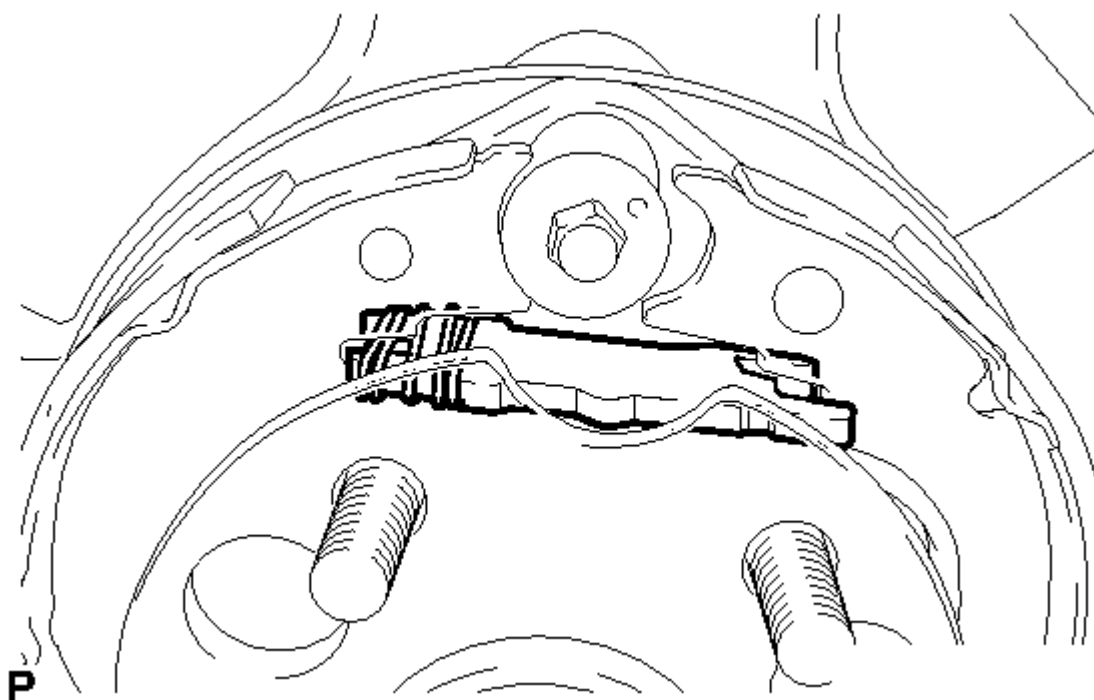
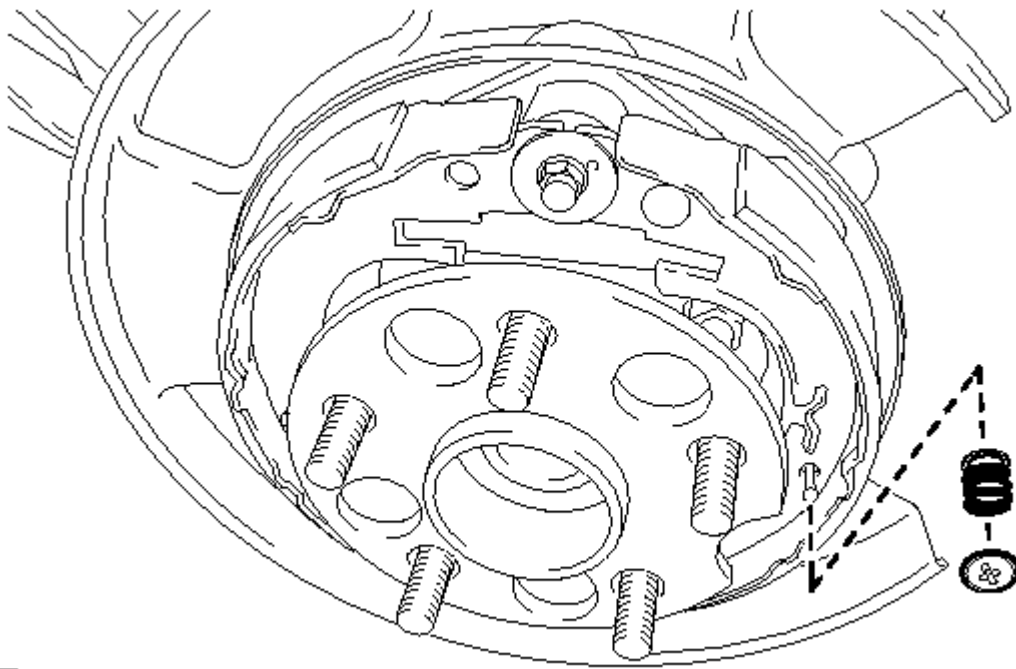


Fig. 39: Remove/Install Parking Brake Shoe Lever Strut & Parking Brake Shoe Strut Compression Spring
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

9. SEPARATE NO. 2 PARKING BRAKE SHOE ASSEMBLY

- a. Remove the parking brake shoe hold down spring cup and parking brake shoe hold down spring to separate the No. 2 parking brake shoe assembly from the backing plate.

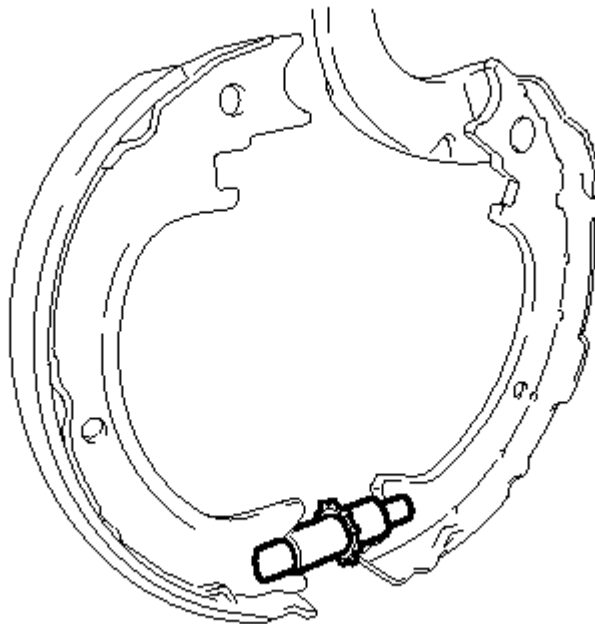


P

Fig. 40: Remove/Install No. 2 Parking Brake Shoe Hold Down Spring Cup
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

10. REMOVE PARKING BRAKE SHOE ADJUSTING SCREW SET

- a. Remove the parking brake shoe adjusting screw set.



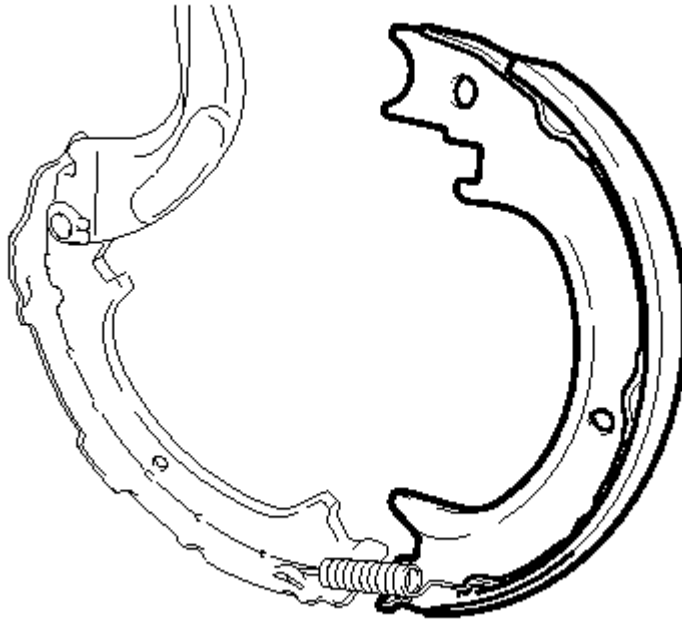
C

Fig. 41: Remove/Install Parking Brake Shoe Adjusting Screw Set

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

11. REMOVE NO. 1 PARKING BRAKE SHOE ASSEMBLY

- a. Separate the No. 2 parking brake shoe return tension spring to remove the No. 1 parking brake shoe assembly.

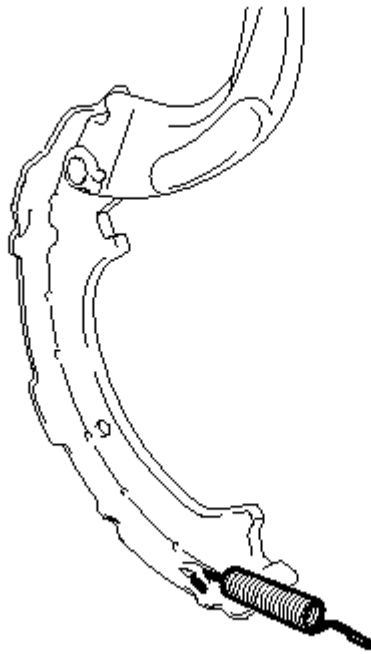


C

Fig. 42: Remove/Install No. 2 Parking Brake Shoe & Return Tension Spring
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

12. REMOVE NO. 2 PARKING BRAKE SHOE RETURN TENSION SPRING

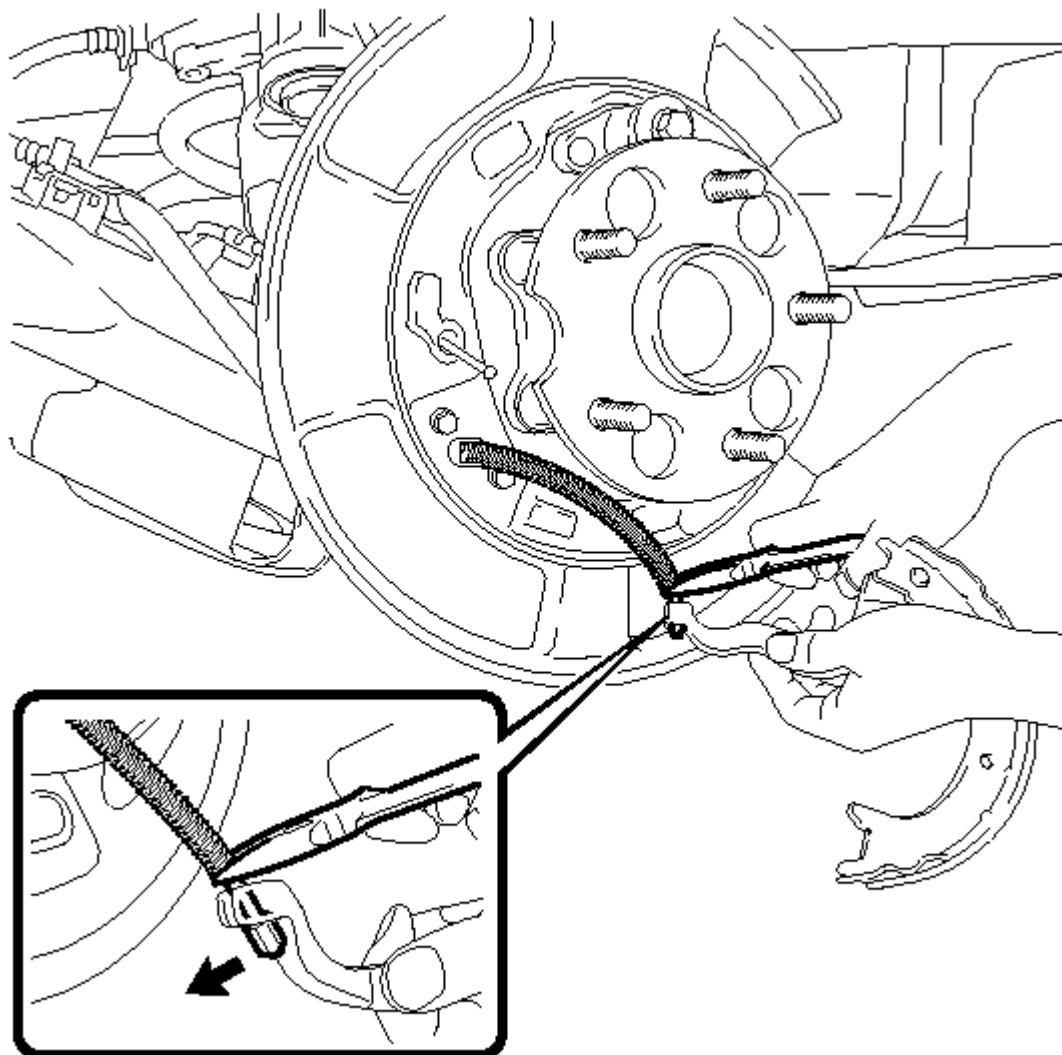
- a. Remove the No. 2 parking brake shoe return tension spring from the No. 2 parking brake shoe assembly.



C

Fig. 43: Remove/Install No. 2 Parking Brake Shoe Return Tension Spring
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

13. **REMOVE NO. 2 PARKING BRAKE SHOE ASSEMBLY WITH PARKING BRAKE SHOE LEVER**
 - a. Using needle-nose pliers, separate the No. 3 parking brake cable assembly from the parking brake shoe lever as shown in the illustration.



P

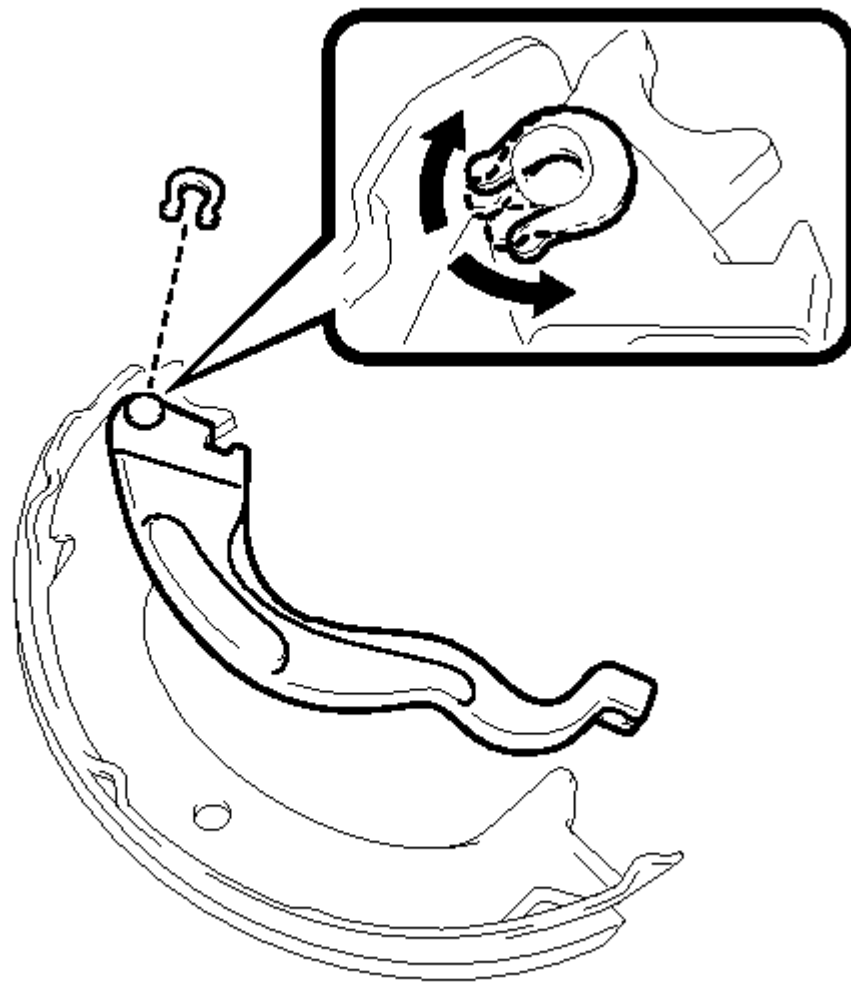
Fig. 44: Removing No. 3 Parking Brake Cable Assembly From Parking Brake Shoe Lever With Needle-Nose Pliers

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

14. REMOVE PARKING BRAKE SHOE LEVER

- a. Remove the C-washer, shim and parking brake shoe lever from the No. 2 parking brake shoe assembly as shown in the illustration.



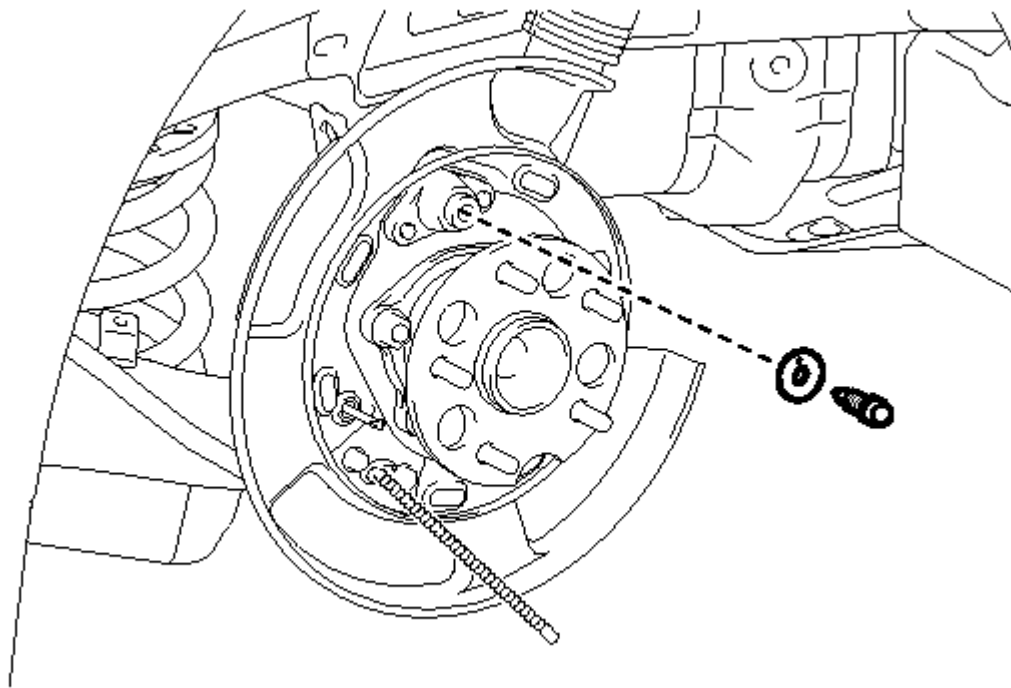
C

Fig. 45: Removing C-Washer, Shim & Parking Brake Shoe Lever From No. 2 Parking Brake Shoe Assembly

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

15. REMOVE PARKING BRAKE SHOE GUIDE PLATE SET BOLT

- a. Remove the parking brake shoe guide plate set bolt and parking brake shoe guide plate.



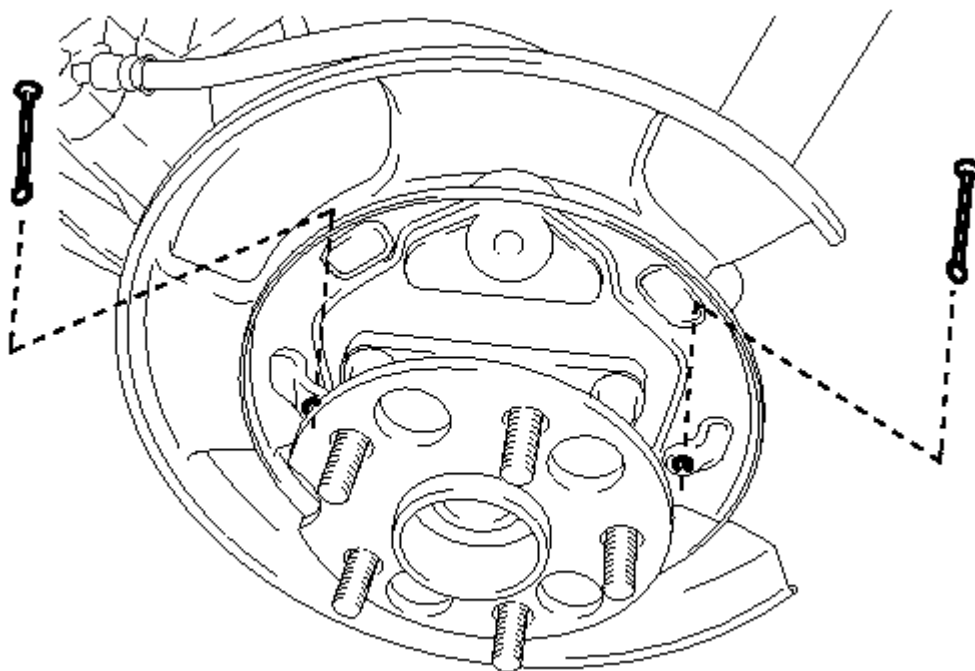
P

Fig. 46: Remove/Install Parking Brake Shoe Guide Plate Set Bolt & Parking Brake Shoe Guide Plate

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

16. REMOVE PARKING BRAKE SHOE HOLD DOWN SPRING PIN

- a. Remove the 2 parking brake shoe hold down spring pins.



P

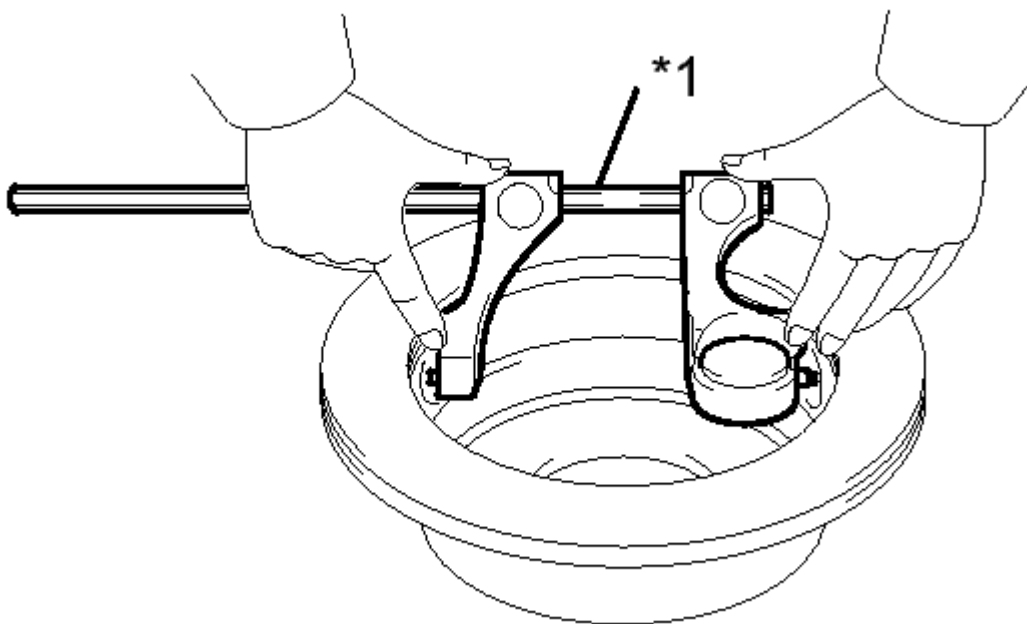
Fig. 47: Remove/Install Parking Brake Shoe Hold Down Spring Pins
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION

INSPECTION

1. INSPECT BRAKE DISC INSIDE DIAMETER

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



P

Fig. 48: Measuring Inside Disc Diameter With Brake Drum Gauge
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

	Brake
*1	Drum
	Gauge

Standard inside diameter

210 mm (8.27 in.)

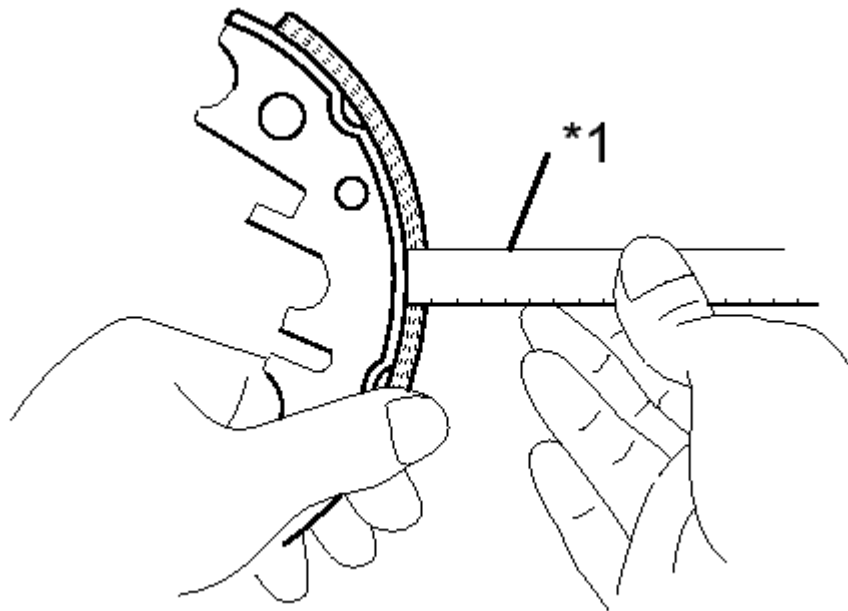
Maximum inside diameter

211 mm (8.31 in.)

If the inside diameter is more than the maximum, replace the rear disc.

2. INSPECT PARKING BRAKE SHOE LINING THICKNESS

- a. Using a ruler, measure the thickness of the parking brake shoe lining.



C

Fig. 49: Measuring Parking Brake Shoe Lining Thickness With A Ruler
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

***1** Ruler

Standard thickness

3.85 mm (0.152 in.)

Minimum thickness

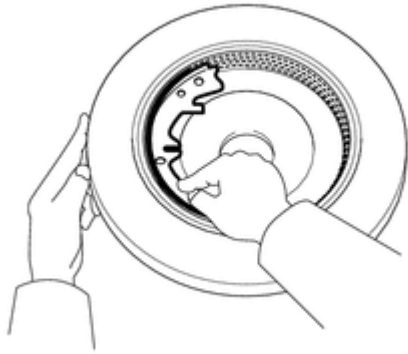
1.0 mm (0.0394 in.)

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

NOTE: Always replace both right and left parking brake shoes together.

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.



C

Fig. 50: Applying Chalk To Inside Surface Of Disc
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

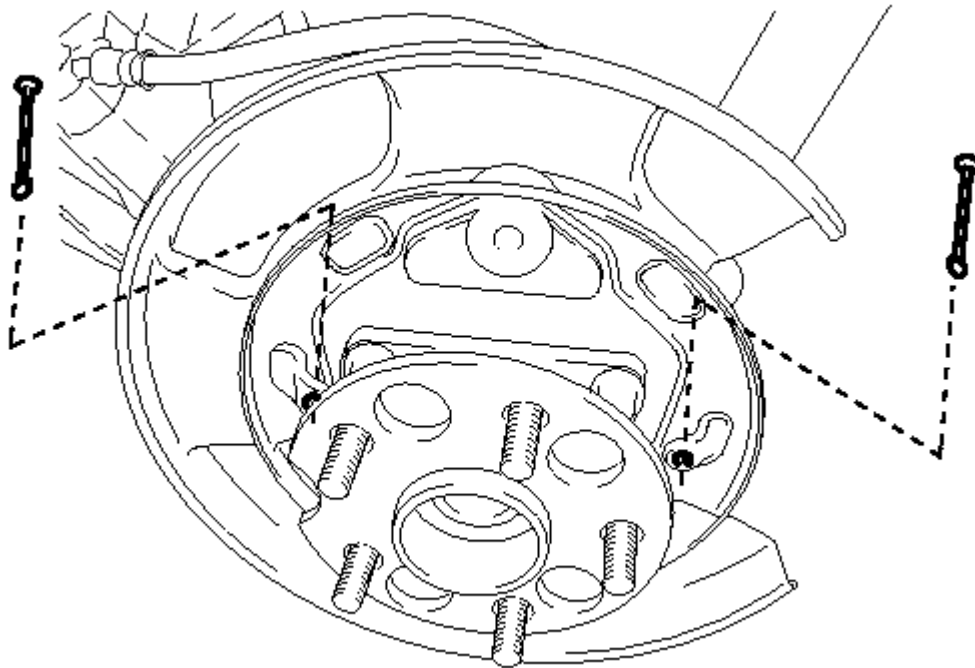
NOTE: Always replace both right and left parking brake shoes together.

REASSEMBLY

REASSEMBLY

NOTE: Before installation, apply high temperature grease to the parts indicated by arrows. Refer to COMPONENTS.

1. **INSTALL PARKING BRAKE SHOE HOLD DOWN SPRING PIN**
 - a. Install the 2 parking brake shoe hold down spring pins.

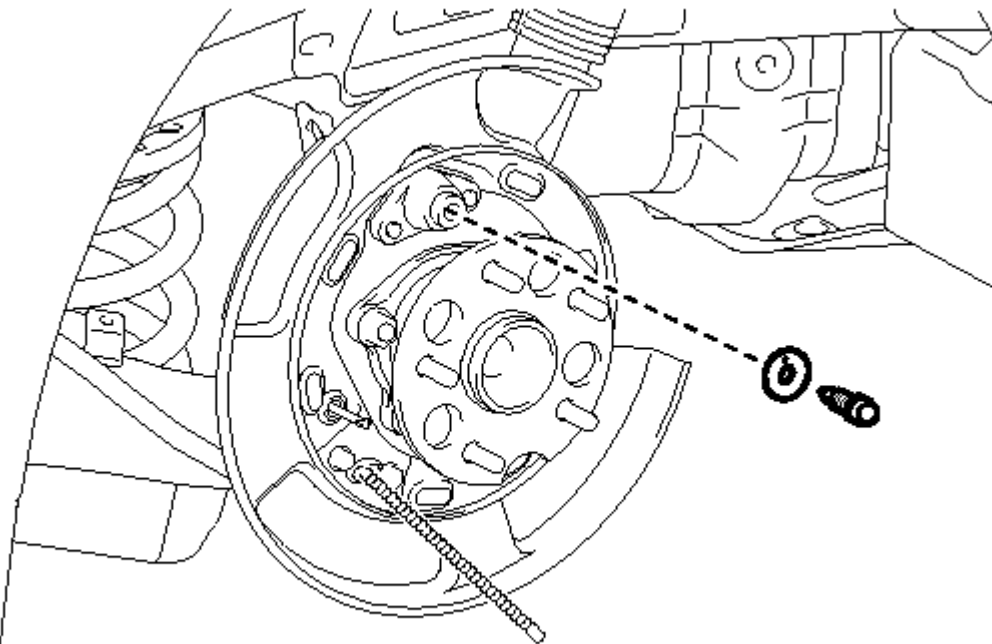


P

Fig. 51: Remove/Install Parking Brake Shoe Hold Down Spring Pins
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. INSTALL PARKING BRAKE SHOE GUIDE PLATE SET BOLT

- a. Apply adhesive to the threads of the parking brake shoe guide plate set bolt.



P

Fig. 52: Remove/Install Parking Brake Shoe Guide Plate Set Bolt & Parking Brake Shoe

Guide Plate

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Adhesive

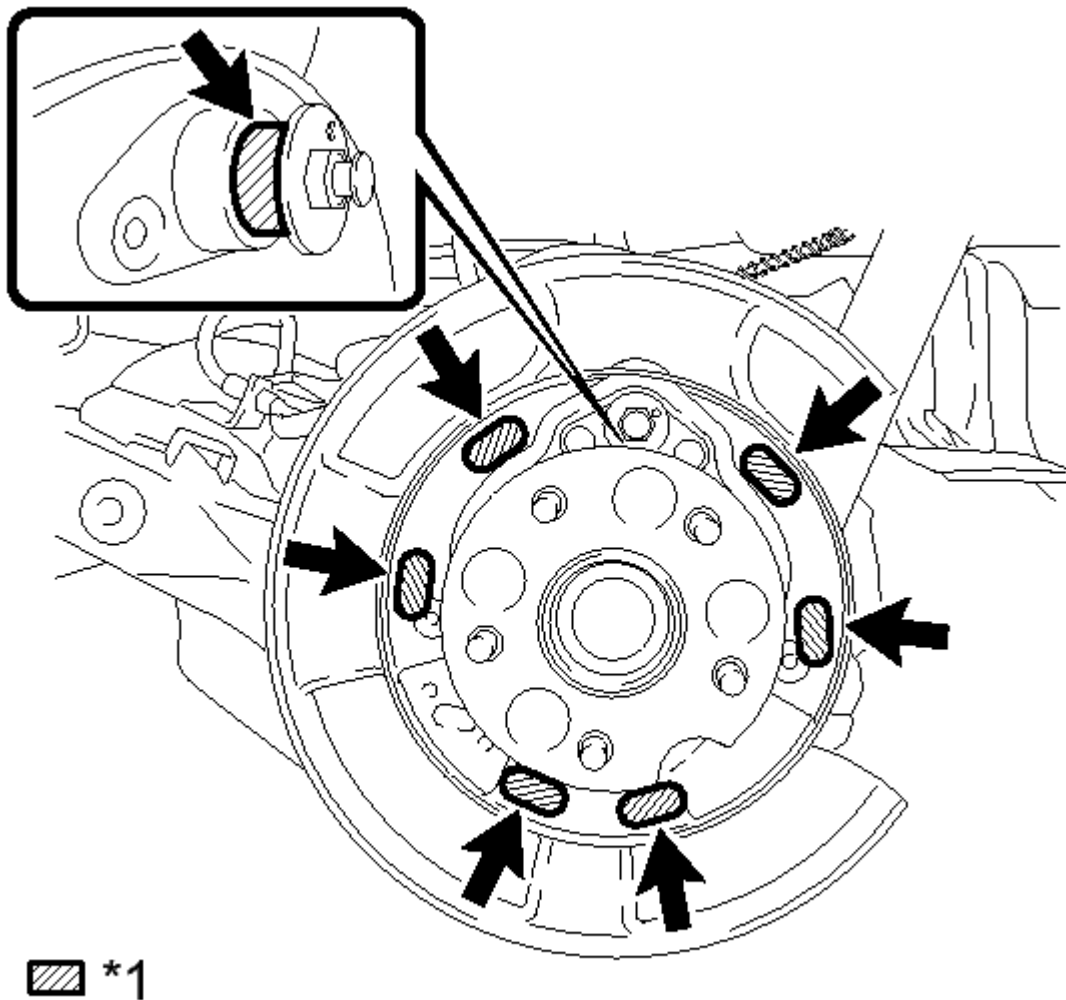
Toyota Genuine Adhesive 1344, Three Bond 1344 or equivalent

- b. Install the parking brake shoe guide plate and parking brake shoe guide plate set bolt.

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

3. APPLY HIGH TEMPERATURE GREASE

- a. Apply high temperature grease to the areas of the backing plate which make contact with the shoe as shown in the illustration.



P

Fig. 53: Identifying Backing Plate Greasing Areas

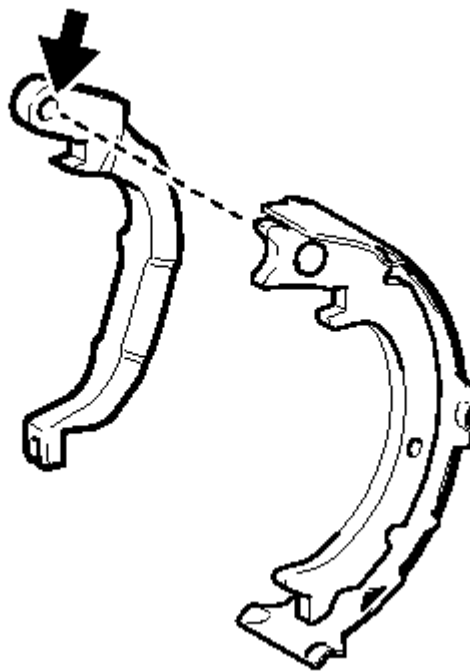
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

	High
*1	temperature
	grease

4. INSTALL PARKING BRAKE SHOE LEVER

- a. Apply high temperature grease to the areas of the parking brake shoe lever which make contact with the No. 2 parking brake shoe assembly.

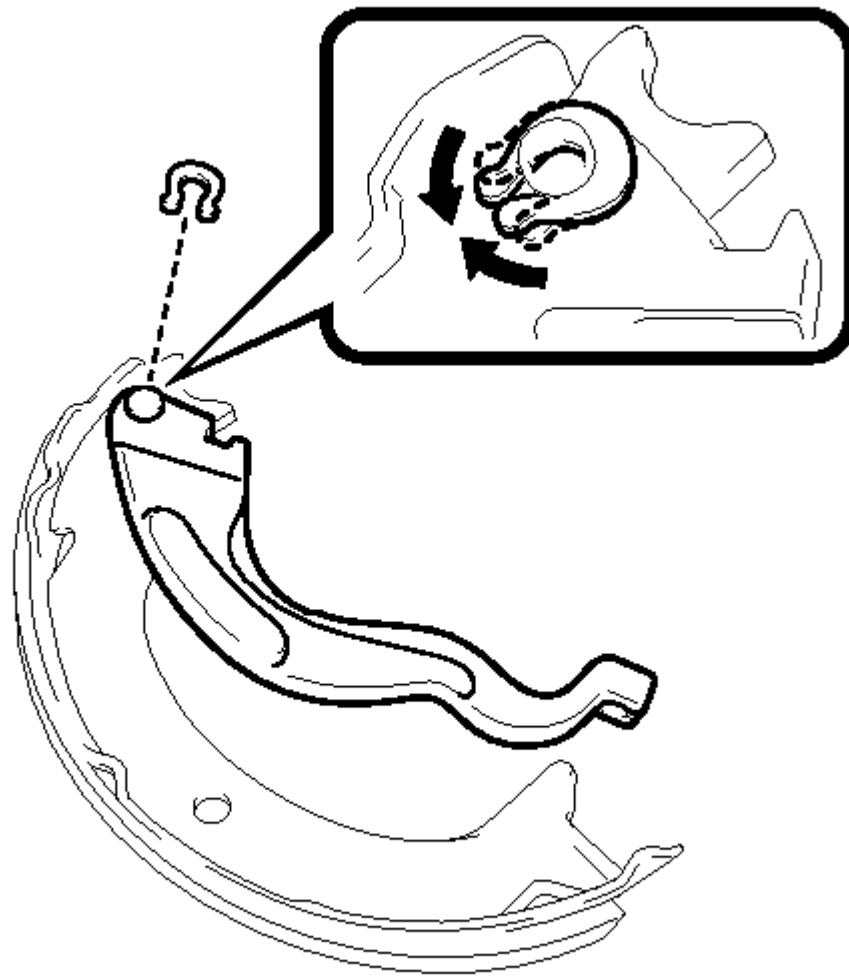


C

Fig. 54: Identifying Parking Brake Shoe Lever & No. 2 Parking Brake Shoe Assembly Greasing Areas

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- b. Install the parking brake shoe lever and shim to the No. 2 parking brake shoe assembly with a new C-washer as shown in the illustration.

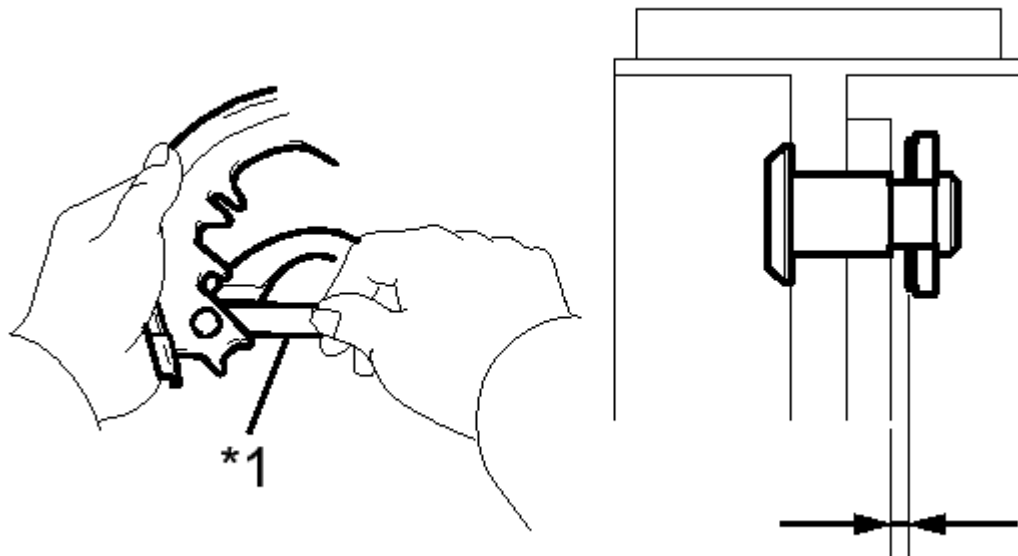


C

Fig. 55: Installing Parking Brake Shoe Lever & Shim To No. 2 Parking Brake Shoe Assembly With New C-Washer

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- c. Using a feeler gauge, measure the clearance between the No. 2 parking brake shoe assembly and parking brake shoe lever.



P

Fig. 56: Measuring No. 2 Parking Brake Shoe Assembly & Parking Brake Shoe Lever Clearance With Feeler Gauge

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Feeler Gauge
----	-----------------

Standard clearance

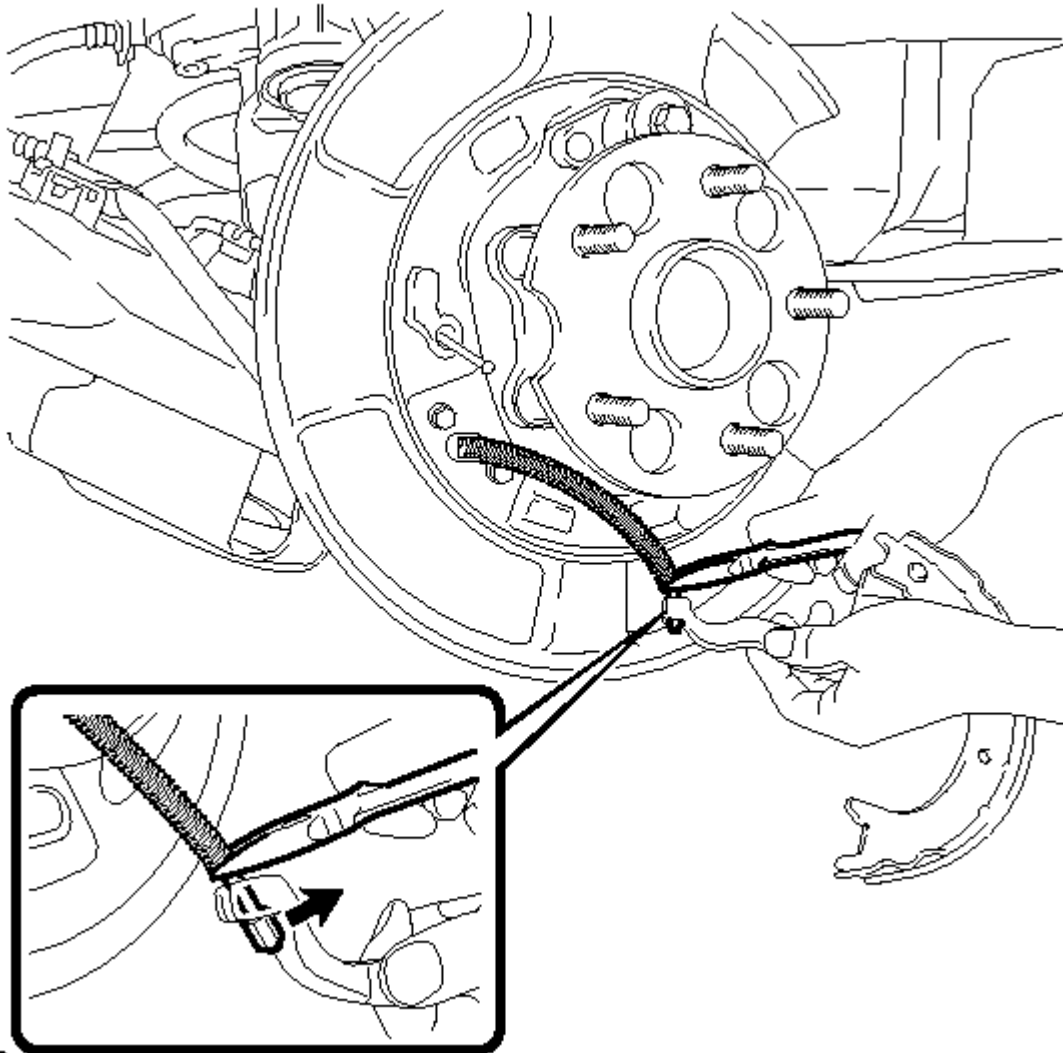
Less than 0.35 mm (0.0138 in.)

If the clearance is not as specified, replace the shim with one of the appropriate size.

Part No.	Shim Thickness
90564- 09184	0.3 mm (0.0118 in.)
90564- 09185	0.6 mm (0.0236 in.)
90564- 09186	0.9 mm (0.0354 in.)

5. INSTALL NO. 2 PARKING BRAKE SHOE ASSEMBLY WITH PARKING BRAKE SHOE LEVER

- a. Using needle-nose pliers, connect the No. 3 parking brake cable assembly to the parking brake shoe lever as shown in the illustration.



P

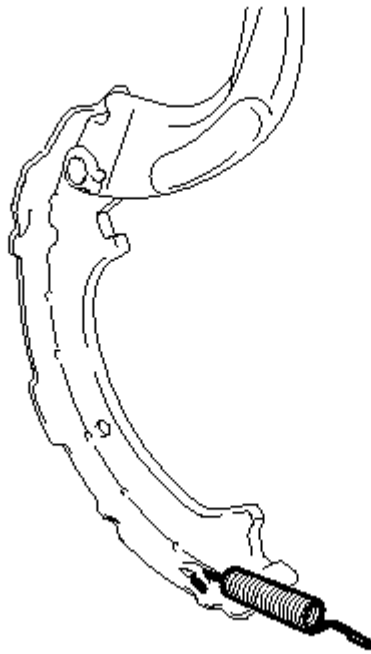
Fig. 57: Installing No. 3 Parking Brake Cable Assembly To Parking Brake Shoe Lever With Needle-Nose Pliers

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

6. INSTALL NO. 2 PARKING BRAKE SHOE RETURN TENSION SPRING

- a. Install the No. 2 parking brake shoe return tension spring to the No. 2 parking brake shoe assembly.

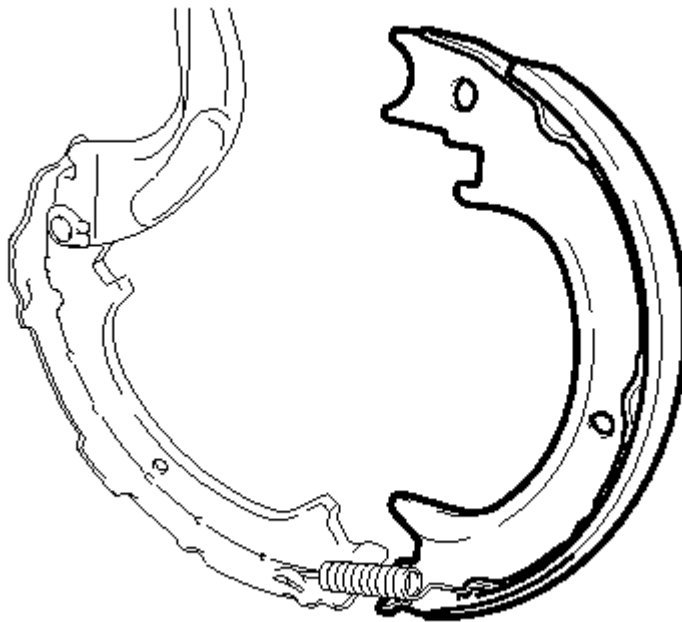


C

Fig. 58: Remove/Install No. 2 Parking Brake Shoe Return Tension Spring
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

7. INSTALL NO. 1 PARKING BRAKE SHOE ASSEMBLY

- a. Connect the No. 2 parking brake shoe return tension spring to install the No. 1 parking brake shoe assembly.

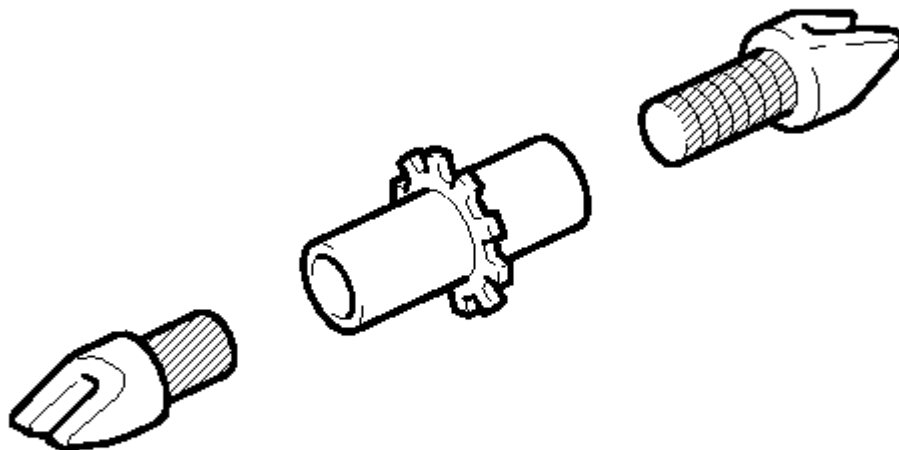


C

Fig. 59: Remove/Install No. 2 Parking Brake Shoe & Return Tension Spring
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

8. INSTALL PARKING BRAKE SHOE ADJUSTING SCREW SET

- a. Apply high temperature grease to the parking brake shoe adjusting screw set as shown in the illustration.



 *1

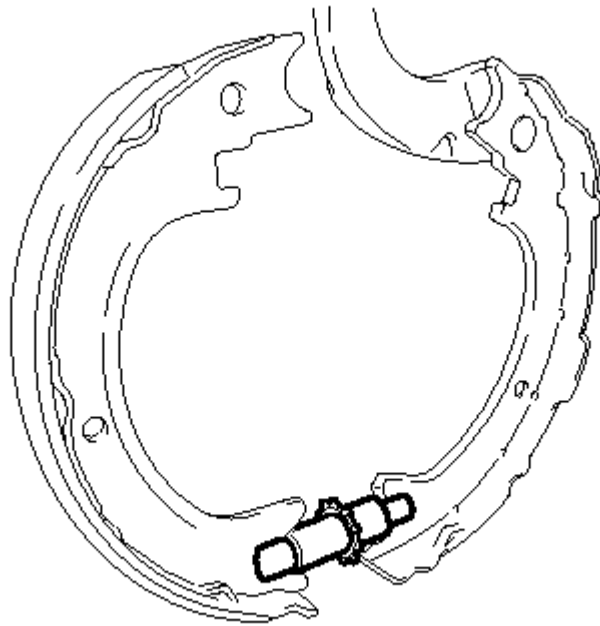
P

Fig. 60: Identifying Parking Brake Shoe Adjusting Screw Set Greasing Areas
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	High
	temperature grease

- b. Install the parking brake shoe adjusting screw set.

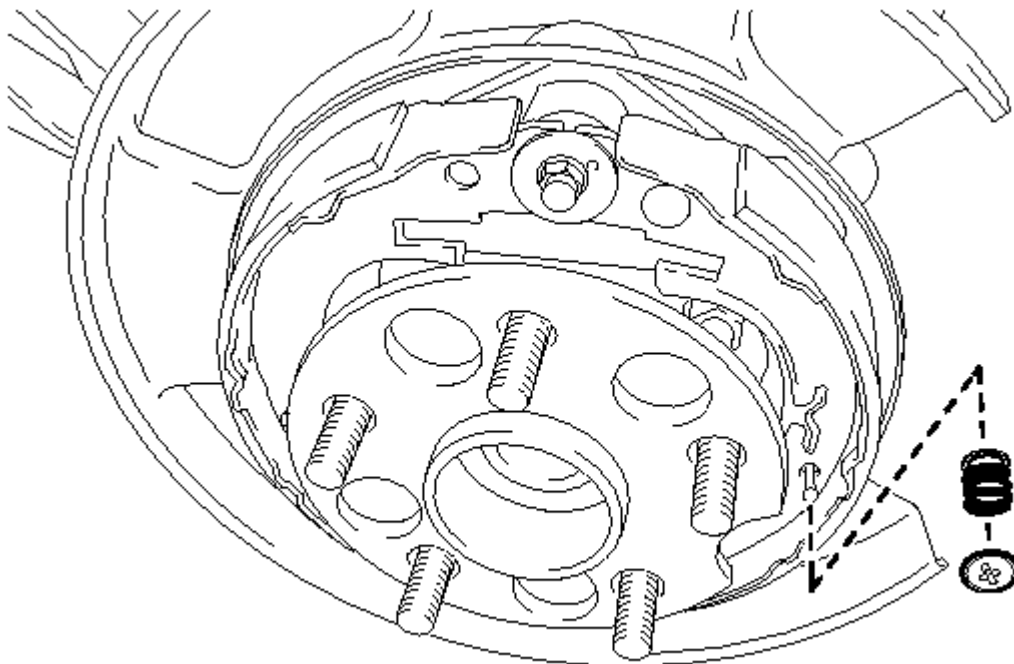


C

Fig. 61: Remove/Install Parking Brake Shoe Adjusting Screw Set
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

9. INSTALL NO. 2 PARKING BRAKE SHOE ASSEMBLY

- a. Install the No. 2 parking brake shoe assembly to the backing plate with the parking brake shoe hold down spring cup and parking brake shoe hold down spring.



P

Fig. 62: Remove/Install No. 2 Parking Brake Shoe Hold Down Spring Cup
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

10. INSTALL PARKING BRAKE SHOE LEVER STRUT

- a. Install the parking brake shoe lever strut and parking brake shoe strut compression spring.

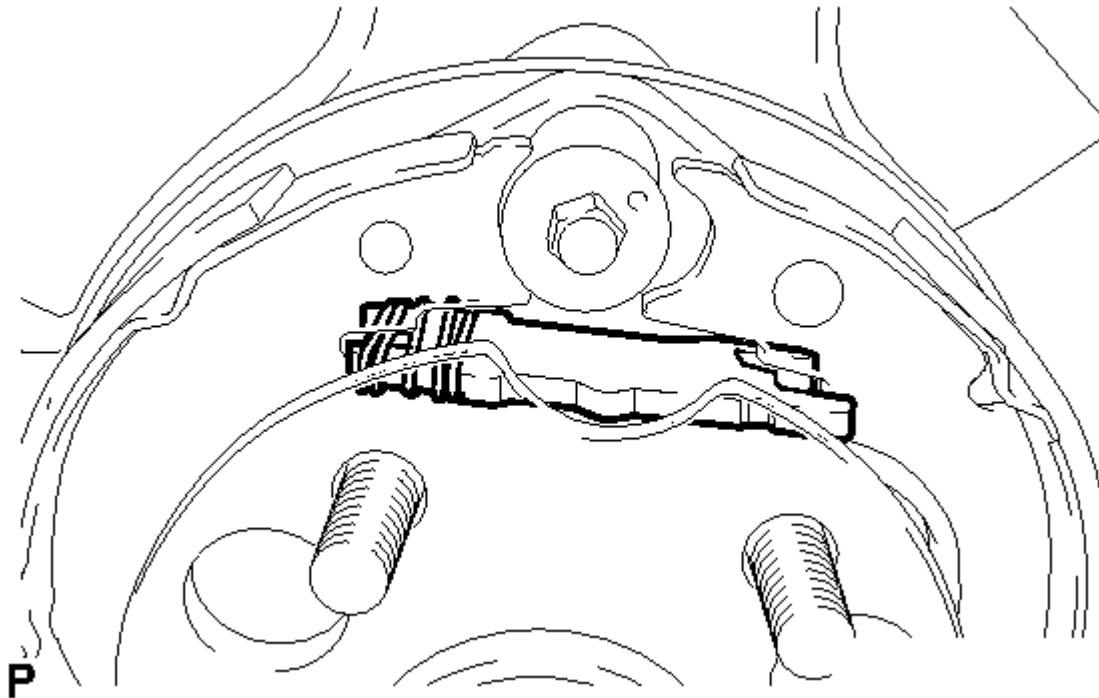
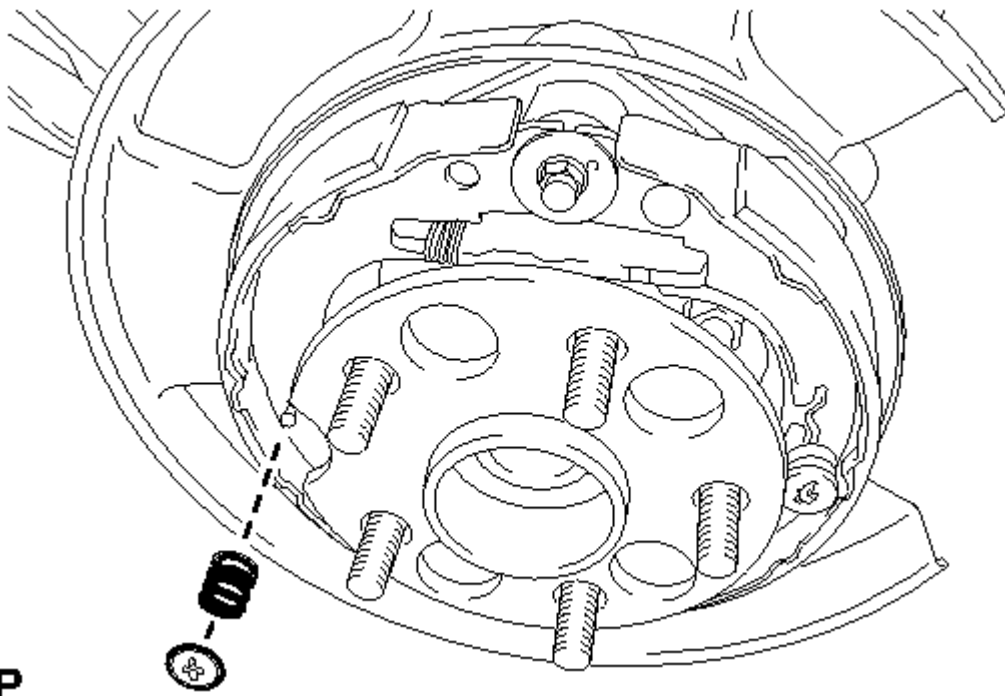


Fig. 63: Remove/Install Parking Brake Shoe Lever Strut & Parking Brake Shoe Strut Compression Spring
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

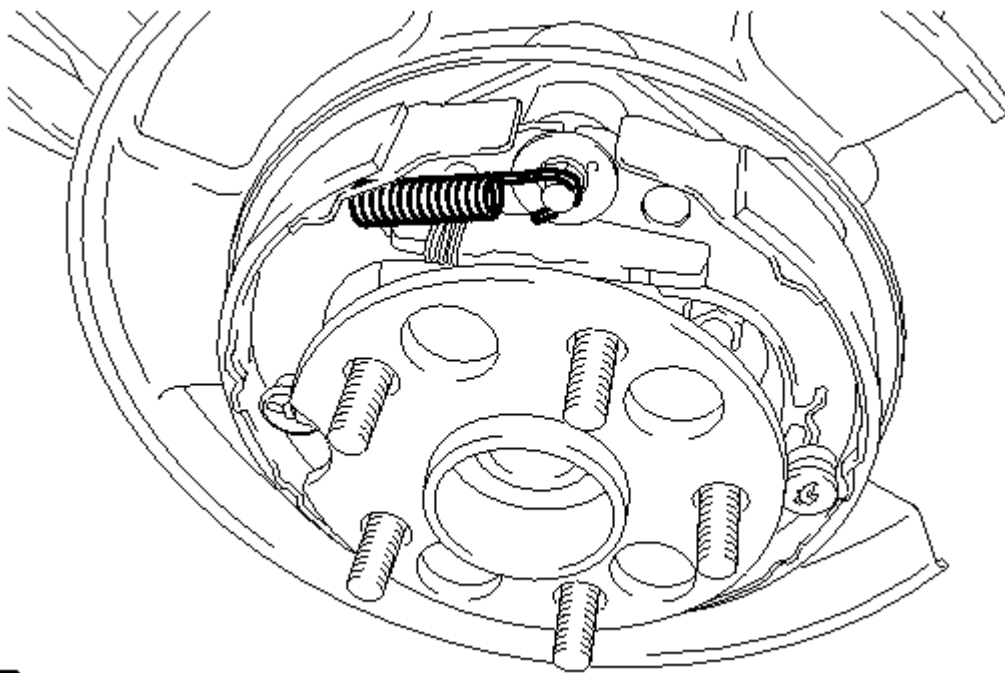
11. INSTALL NO. 1 PARKING BRAKE SHOE ASSEMBLY

- a. Install the parking brake shoe assembly to the backing plate with the parking brake shoe hold down spring cup and parking brake shoe hold down spring.



P
Fig. 64: Remove/Install No. 1 Parking Brake Shoe Hold Down Spring Cup
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

12. **INSTALL NO. 1 PARKING BRAKE SHOE RETURN TENSION SPRING**
 - a. Install the No. 1 parking brake shoe return tension spring.



P
Fig. 65: Remove/Install No. 1 Parking Brake Shoe Return Tension Spring

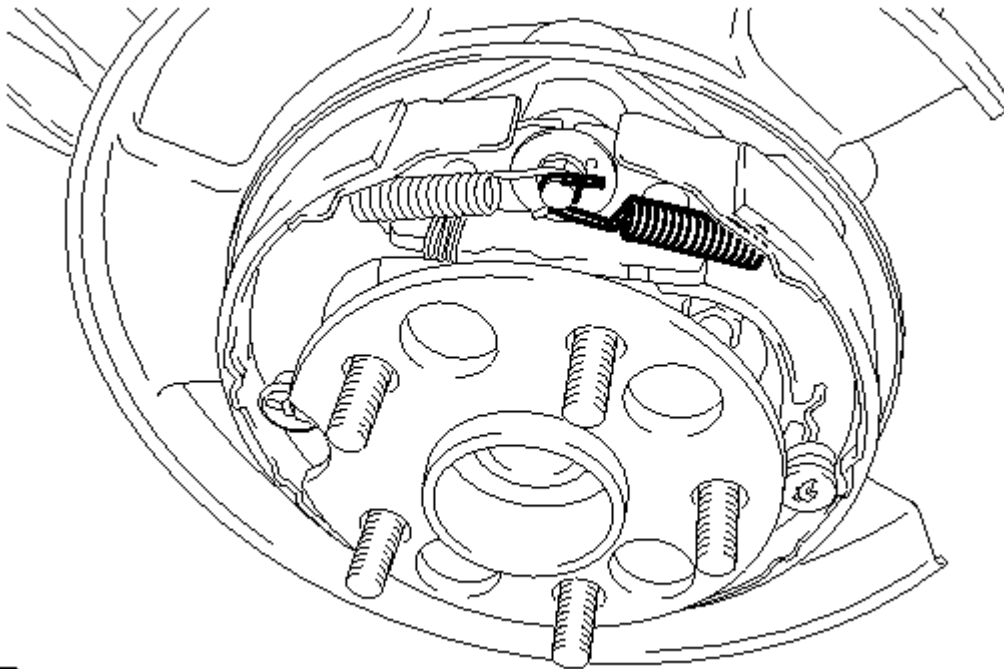
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

HINT:

First install the No. 1 parking brake shoe return tension spring and then the No. 3 parking brake shoe return tension spring.

13. INSTALL NO. 3 PARKING BRAKE SHOE RETURN TENSION SPRING

- a. Install the No. 3 parking brake shoe return tension spring.

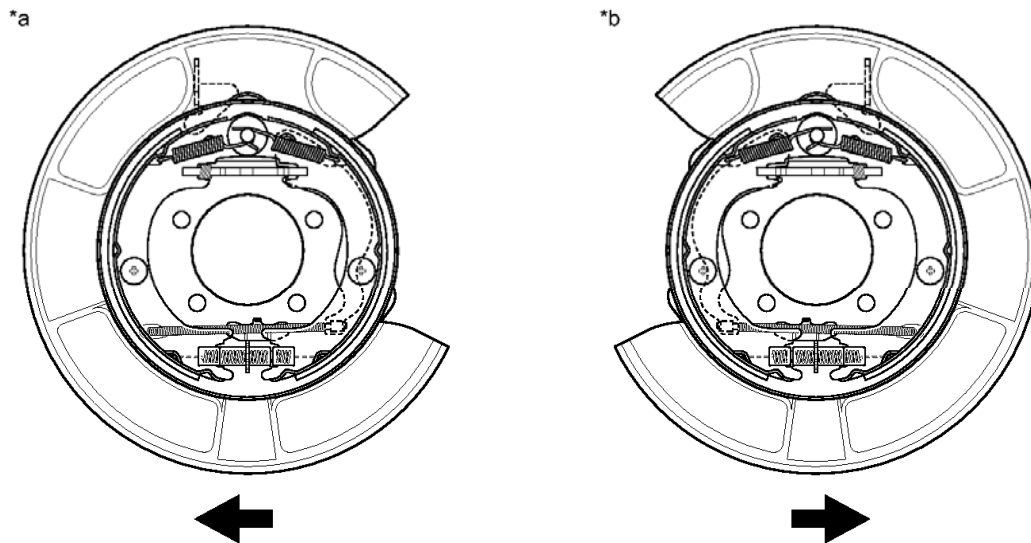


P

Fig. 66: Remove/Install No. 3 Parking Brake Shoe Return Tension Spring
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

14. CHECK PARKING BRAKE INSTALLATION

- a. Check that each part is installed properly.



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Fig. 67: Inspecting Parking Brake Installation

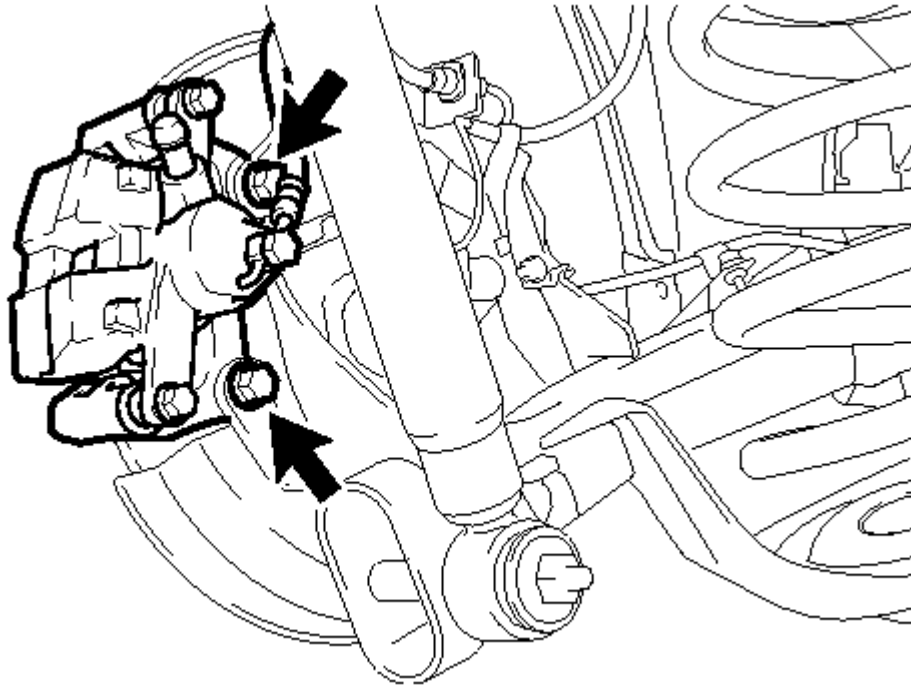
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*a	LH Side	*b	RH Side
	Front of the Vehicle	-	-

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

15. **INSTALL REAR DISC** . Refer to **INSTALLATION - Step 1**
16. **INSTALL PARKING BRAKE SHOE ADJUSTING HOLE PLUG** . Refer to **INSTALLATION - Step 2**
17. **INSTALL REAR DISC BRAKE CALIPER ASSEMBLY**
 - a. Install the rear disc brake caliper assembly with the 2 bolts.



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Fig. 68: Remove/Install Rear Disc Brake Caliper Assembly & Fasteners
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Torque: 88 N*m (900 kgf*cm, 65 ft.*lbf)

18. INSTALL REAR WHEEL

Torque: 103 N*m (1050 kgf*cm, 76 ft.*lbf)

19. BED IN PARKING BRAKE SHOES TO DISCS

- Drive the vehicle at about 50 km/h (31 mph) on a safe, level and dry road.
- Depress the parking brake pedal with 150 N (15 kgf, 33.7 lbf) of force.
- Drive the vehicle for about 400 m (0.25 mile) in this condition.
- Repeat this procedure 3 times.

NOTE: **Set a 5-minute interval between each procedure to prevent the brake assembly from overheating.**

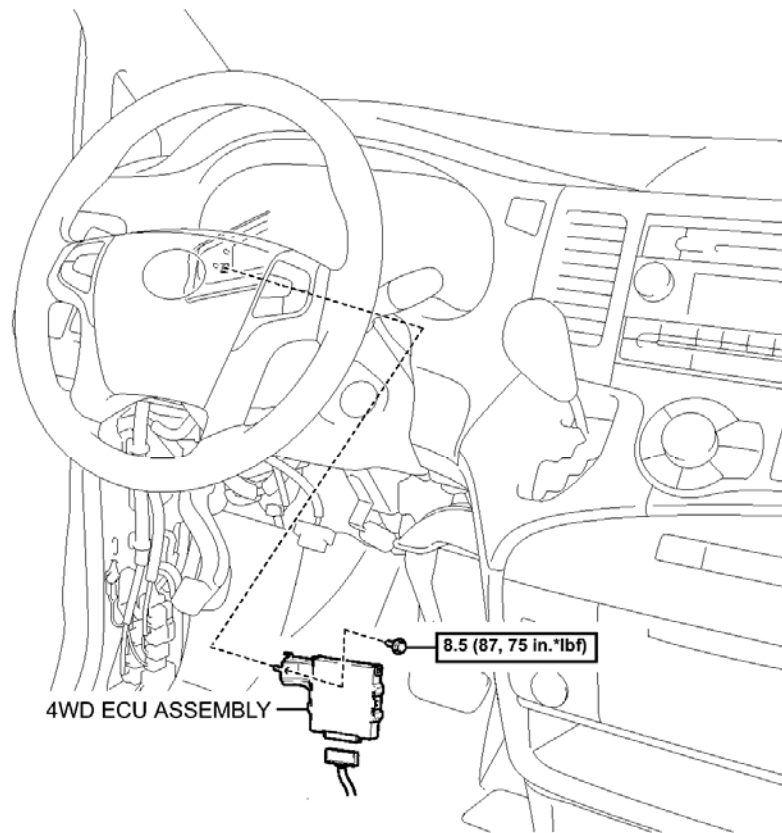
20. ADJUST PARKING BRAKE SHOE CLEARANCE AND PARKING BRAKE PEDAL TRAVEL . Refer to **ADJUSTMENT - Step 2**

PARKING BRAKE SWITCH

COMPONENTS

ILLUSTRATION

for AWD:

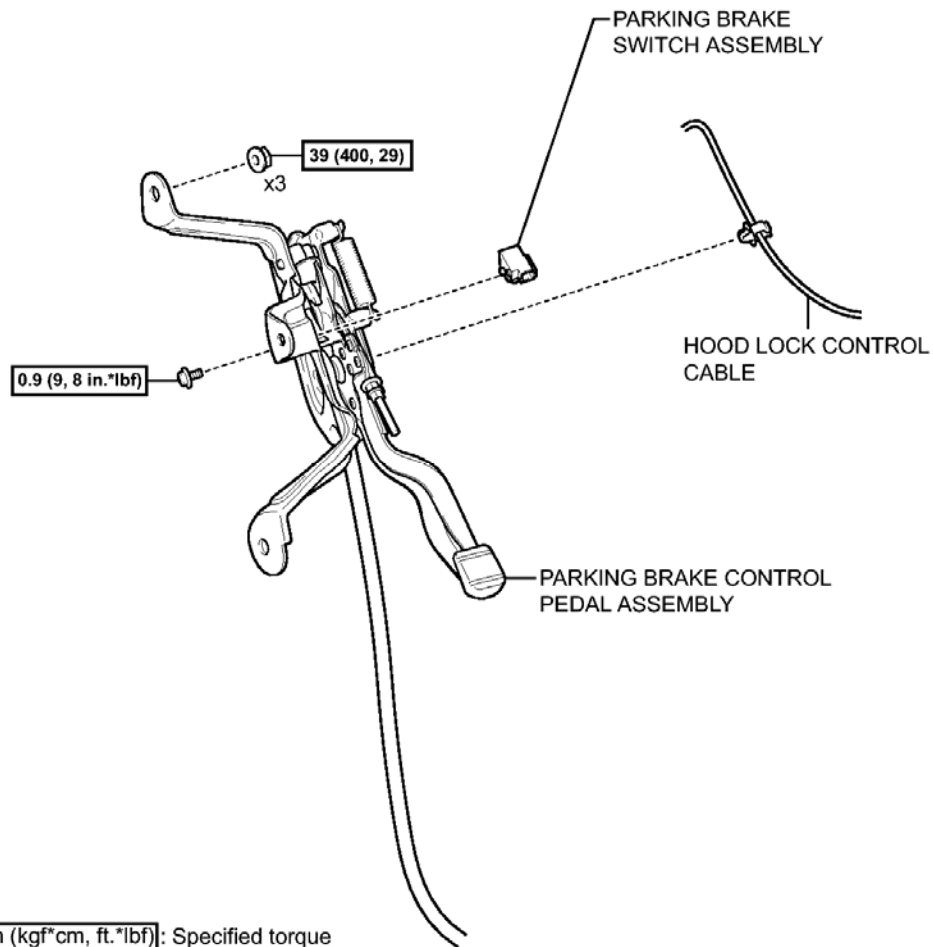


$\text{N}\cdot\text{m}$ ($\text{kgf}\cdot\text{cm}$, $\text{ft}\cdot\text{lbf}$): Specified torque

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Fig. 69: Parking Brake Switch Replacement Components With Torque Specifications (1 of 2)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ILLUSTRATION



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Fig. 70: Parking Brake Switch Replacement Components With Torque Specifications (2 of 2)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

REMOVAL

REMOVAL

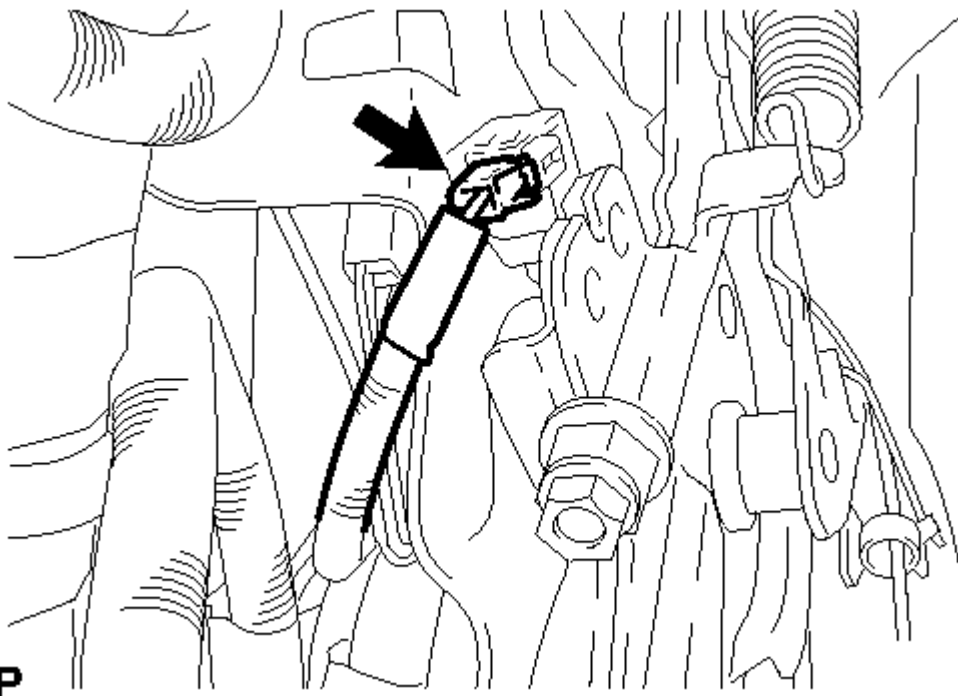
1. REMOVE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

Refer to **REMOVAL**

2. REMOVE 4WD ECU ASSEMBLY (for AWD) . Refer to **REMOVAL - Step 2**

3. SEPARATE PARKING BRAKE CONTROL PEDAL ASSEMBLY

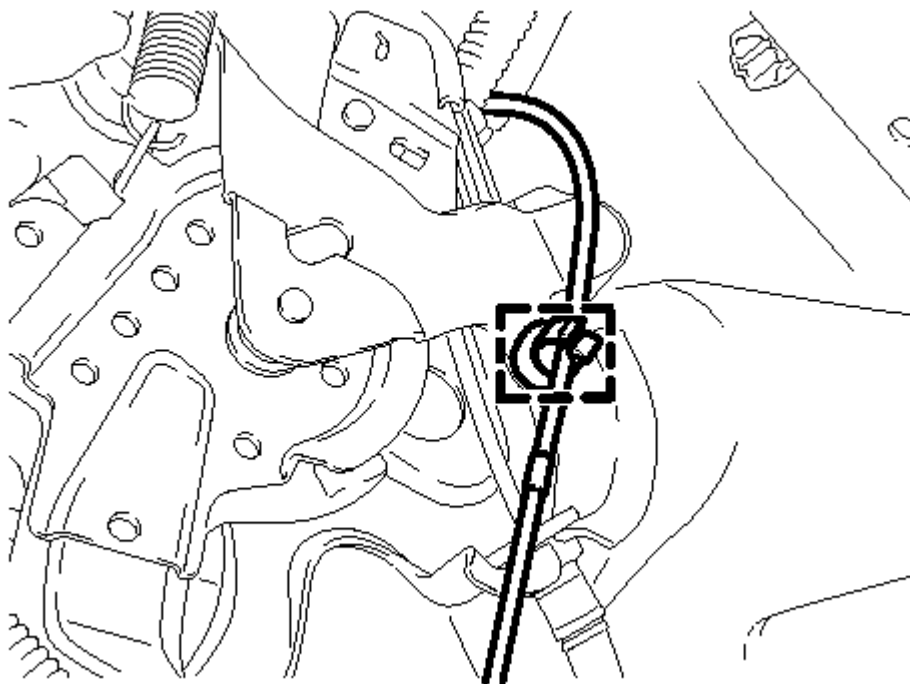
- Disconnect the parking brake switch connector.



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Fig. 71: Identifying Parking Brake Switch Connector
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- b. Separate the clip and hood lock control cable from the parking brake control pedal assembly.



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Fig. 72: Identifying Hood Lock Control Cable & Fastener
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- c. Remove the 3 nuts and separate the parking brake pedal assembly from the body.



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Fig. 73: Identifying Parking Brake Control Pedal Assembly & Fasteners
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

4. REMOVE PARKING BRAKE SWITCH ASSEMBLY

- a. Remove the screw and parking brake switch assembly from the parking brake control pedal assembly.

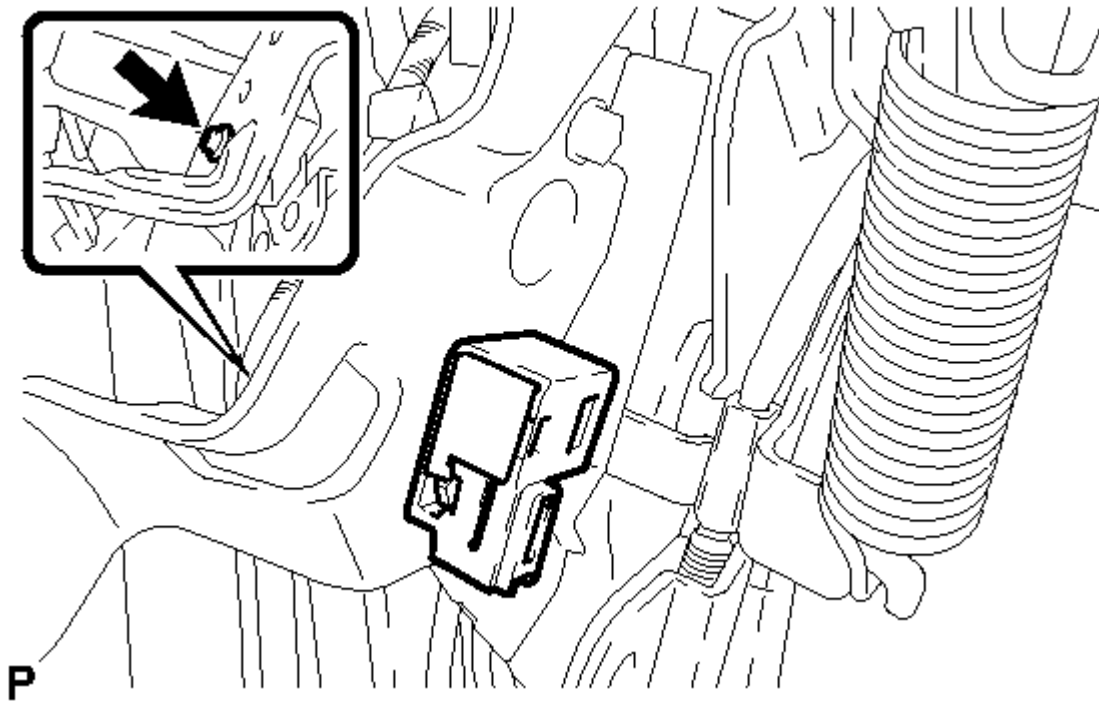


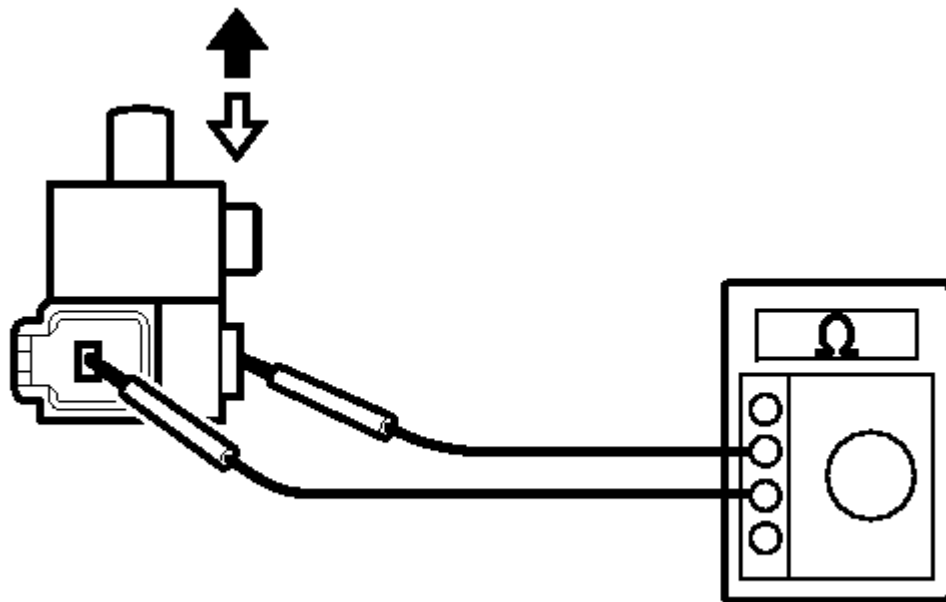
Fig. 74: Removing Parking Brake Switch Assembly & Fastener
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION

INSPECTION

1. INSPECT PARKING BRAKE SWITCH ASSEMBLY

- a. Measure the resistance according to the value(s) in the table below.



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Fig. 75: Inspecting Parking Brake Switch Assembly
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

On
Off

Standard Resistance

Tester Connection	Switch Condition	Specified Condition
Switch connector terminal - Switch body	On (Shaft not pressed)	Below 1 ohms
	Off (Shaft pressed)	10 kohms or higher

If the result is not as specified, replace the parking brake switch assembly.

INSTALLATION

INSTALLATION

1. INSTALL PARKING BRAKE SWITCH ASSEMBLY

- a. Install the parking brake switch assembly to the parking brake control pedal assembly with the screw.

Torque: 0.9 N*m (9 kgf*cm, 8 in.*lbf)

2. INSTALL PARKING BRAKE CONTROL PEDAL ASSEMBLY

- a. Install the parking brake pedal assembly with the 3 nuts.

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

- b. Connect the clip and hood lock control cable from the parking brake control pedal assembly.
- c. Connect the parking brake switch connector.

3. INSTALL 4WD ECU ASSEMBLY (for AWD) . Refer to INSTALLATION - Step 1

4. INSTALL INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

Refer to INSTALLATION

**5. ADJUST PARKING BRAKE SHOE CLEARANCE AND PARKING BRAKE PEDAL TRAVEL .
Refer to ADJUSTMENT - Step 2**

6. INSPECT BRAKE WARNING LIGHT . Refer to ADJUSTMENT - Step 3