

2008 Scion xD

2008 BRAKES Parking Brake - xD

2008 BRAKES**Parking Brake - xD****PARKING BRAKE SYSTEM****PROBLEM SYMPTOMS TABLE****HINT:**

Use the table below to help you find the cause of the problem. Check each part.

If necessary, replace the applicable parts.

PARKING BRAKE SYSTEM REFERENCE

Symptom	Suspected Area	Go To
Brake drag	Parking brake lever travel (Out of adjustment)	<u>PARKING BRAKE SYSTEM</u>
	Parking brake wire (Sticking)	<u>PARKING BRAKE CABLE</u>
	Rear drum brake shoe clearance (Out of adjustment)	<u>INSTALLATION</u>
	Parking brake shoe lining (Cracked or distorted)	<u>REMOVAL</u>
	Tension or return spring (Damaged)	<u>REMOVAL</u>

ADJUSTMENT

1. **ADJUST REAR DRUM BRAKE SHOE CLEARANCE** (See **INSTALLATION**)
2. **INSPECT PARKING BRAKE LEVER TRAVEL**
 - a. Slowly pull the parking brake lever to the fully applied position, counting the number of clicks.

Parking brake lever travel:

6 to 9 clicks at 200 N (20 kgf, 45 lbf)
3. **REMOVE SHIFT LEVER KNOB SUB-ASSEMBLY (for Manual Transaxle)** (See **REMOVAL**)
4. **REMOVE UPPER CONSOLE PANEL** (See **REMOVAL**)
5. **REMOVE REAR CONSOLE BOX COVER** (See **REMOVAL**)
6. **REMOVE CONSOLE BOX CARPET** (See **REMOVAL**)
7. **REMOVE REAR CONSOLE BOX SUB-ASSEMBLY** (See **REMOVAL**)
8. **ADJUST PARKING BRAKE LEVER TRAVEL**
 - a. Loosen the lock nut and turn the adjusting nut until the parking brake lever travel is corrected to

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within the specified range.

Parking brake lever travel:

6 to 9 clicks at 200 N (20 kgf 45 lbf)

- b. Tighten the lock nut.

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

- c. Operate the parking brake lever 3 to 4 times, and check the parking brake lever travel.
- d. Check whether the parking brake drags or not.
- e. When operating the parking brake lever, check that the brake warning light illuminates.

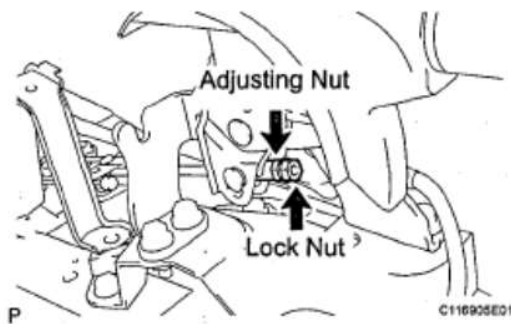


Fig. 1: Locating Adjusting Nut And Lock Nut
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK:

Brake warning light always illuminates at the first click.

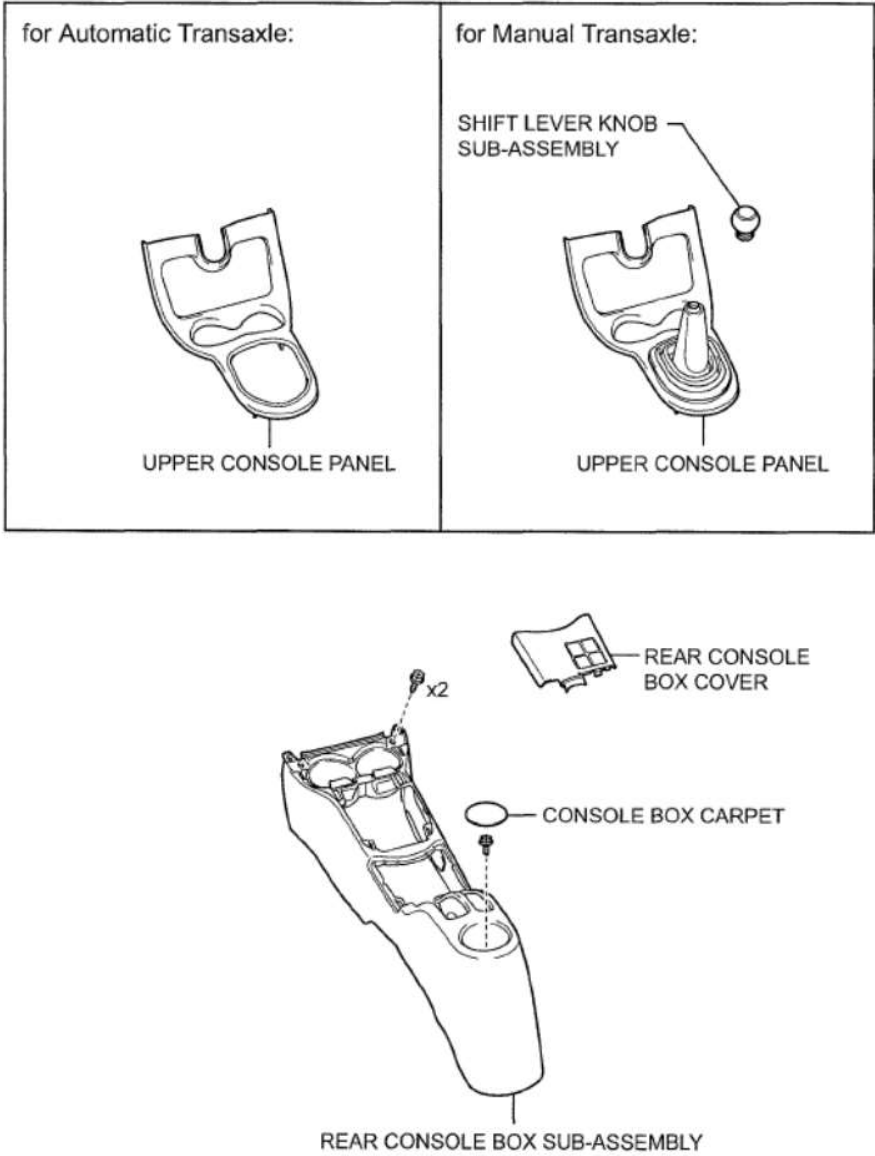
9. **INSTALL REAR CONSOLE BOX SUB-ASSEMBLY** (See INSTALLATION)
10. **INSTALL CONSOLE BOX CARPET** (See INSTALLATION)
11. **INSTALL REAR CONSOLE BOX COVER** (See INSTALLATION)
12. **INSTALL UPPER CONSOLE PANEL** (See INSTALLATION)
13. **INSTALL SHIFT LEVER KNOB SUB-ASSEMBLY (for Manual Transaxle)** (See INSTALLATION)

PARKING BRAKE LEVER

COMPONENTS

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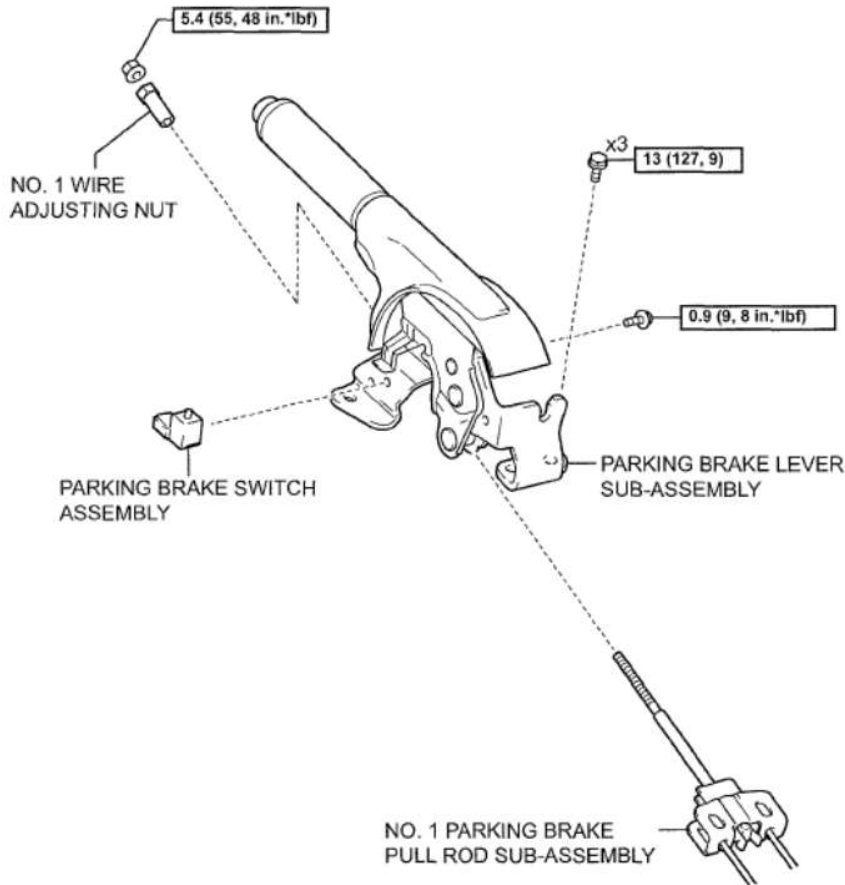
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Fig. 2: Identifying Parking Brake Lever Components (1 Of 2)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

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Fig. 3: Identifying Parking Brake Lever Components (2 Of 2)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

REMOVAL

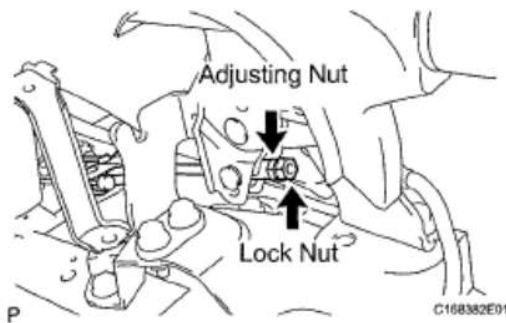
1. **REMOVE SHIFT LEVER KNOB SUB-ASSEMBLY** (for Manual Transaxle) (See **REMOVAL**)
2. **REMOVE UPPER CONSOLE PANEL** (See **REMOVAL**)
3. **REMOVE REAR CONSOLE BOX COVER** (See **REMOVAL**)
4. **REMOVE CONSOLE BOX CARPET** (See **REMOVAL**)
5. **REMOVE REAR CONSOLE BOX SUB-ASSEMBLY** (See **REMOVAL**)

2008 Scion xD**2008 BRAKES Parking Brake - xD****6. SEPARATE NO. 1 PARKING BRAKE PULL ROD SUB-ASSEMBLY**

- a. Remove the lock nut and wire adjusting nut.
- b. Separate the parking brake pull rod from the parking brake lever.

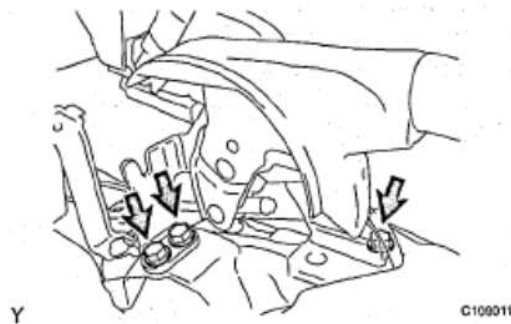
7. REMOVE PARKING BRAKE LEVER SUB-ASSEMBLY

- a. Disconnect the parking brake switch connector.

**Fig. 4: Locating Adjusting Nut And Lock Nut**

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

- b. Remove the 3 bolts and remove the parking brake lever.

**Fig. 5: Locating Parking Brake Lever Bolts**

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

8. REMOVE PARKING BRAKE SWITCH ASSEMBLY

- a. Remove the screw and remove the parking brake switch.

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Fig. 6: Locating Parking Brake Switch Screw
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

- a. Install the parking brake switch with the screw.

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

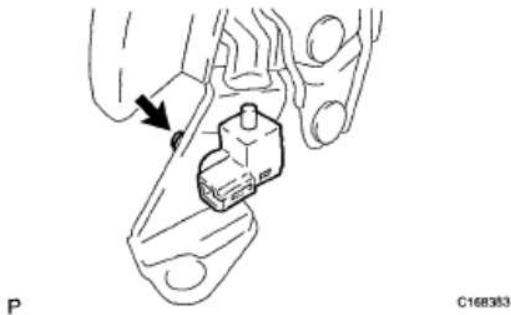


Fig. 7: Locating Parking Brake Switch Screw
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. INSTALL PARKING BRAKE LEVER SUB-ASSEMBLY

- a. Install the parking brake lever with the 3 bolts.

Torque: 13 N*m (127 kgf*cm, 9 ft.*lbf)

- b. Connect the parking brake switch connector.

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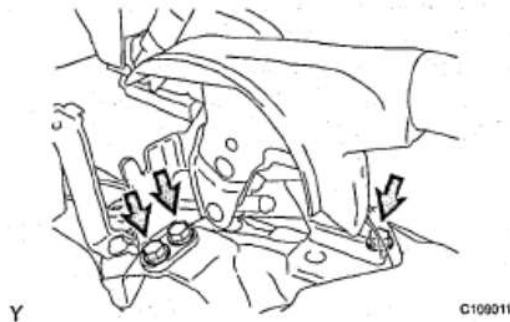


Fig. 8: Locating Parking Brake Lever Bolts
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

3. **INSTALL NO. 1 PARKING BRAKE PULL ROD SUB-ASSEMBLY**
 - a. Install the parking brake pull rod to the parking brake lever.
 - b. Provisionally install the wire adjusting nut and lock nut.
4. **INSPECT PARKING BRAKE LEVER TRAVEL** (See ADJUSTMENT)
5. **ADJUST PARKING BRAKE LEVER TRAVEL** (See ADJUSTMENT)

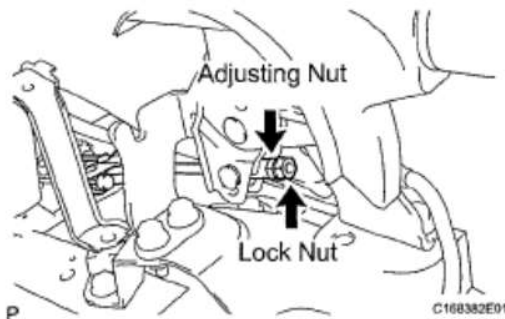


Fig. 9: Locating Adjusting Nut And Lock Nut
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

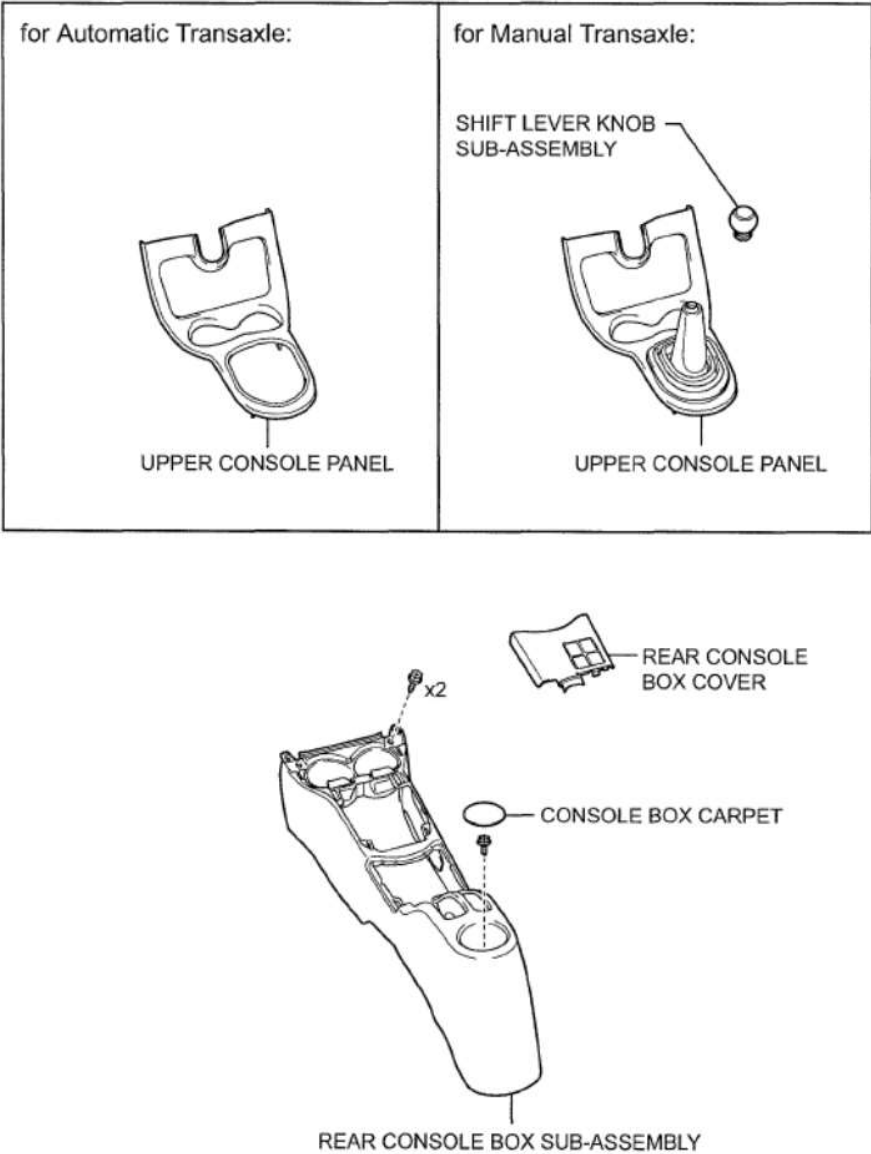
6. **INSTALL REAR CONSOLE BOX SUB-ASSEMBLY** (See INSTALLATION)
7. **INSTALL CONSOLE BOX CARPET** (See INSTALLATION)
8. **INSTALL REAR CONSOLE BOX COVER** (See INSTALLATION)
9. **INSTALL UPPER CONSOLE PANEL** (See INSTALLATION)
10. **INSTALL SHIFT LEVER KNOB SUB-ASSEMBLY** (for Manual Transaxle) (See INSTALLATION)

PARKING BRAKE CABLE

COMPONENTS

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Fig. 10: Identifying Parking Brake Cable Replacement Components With Torque Specification (1 Of 3)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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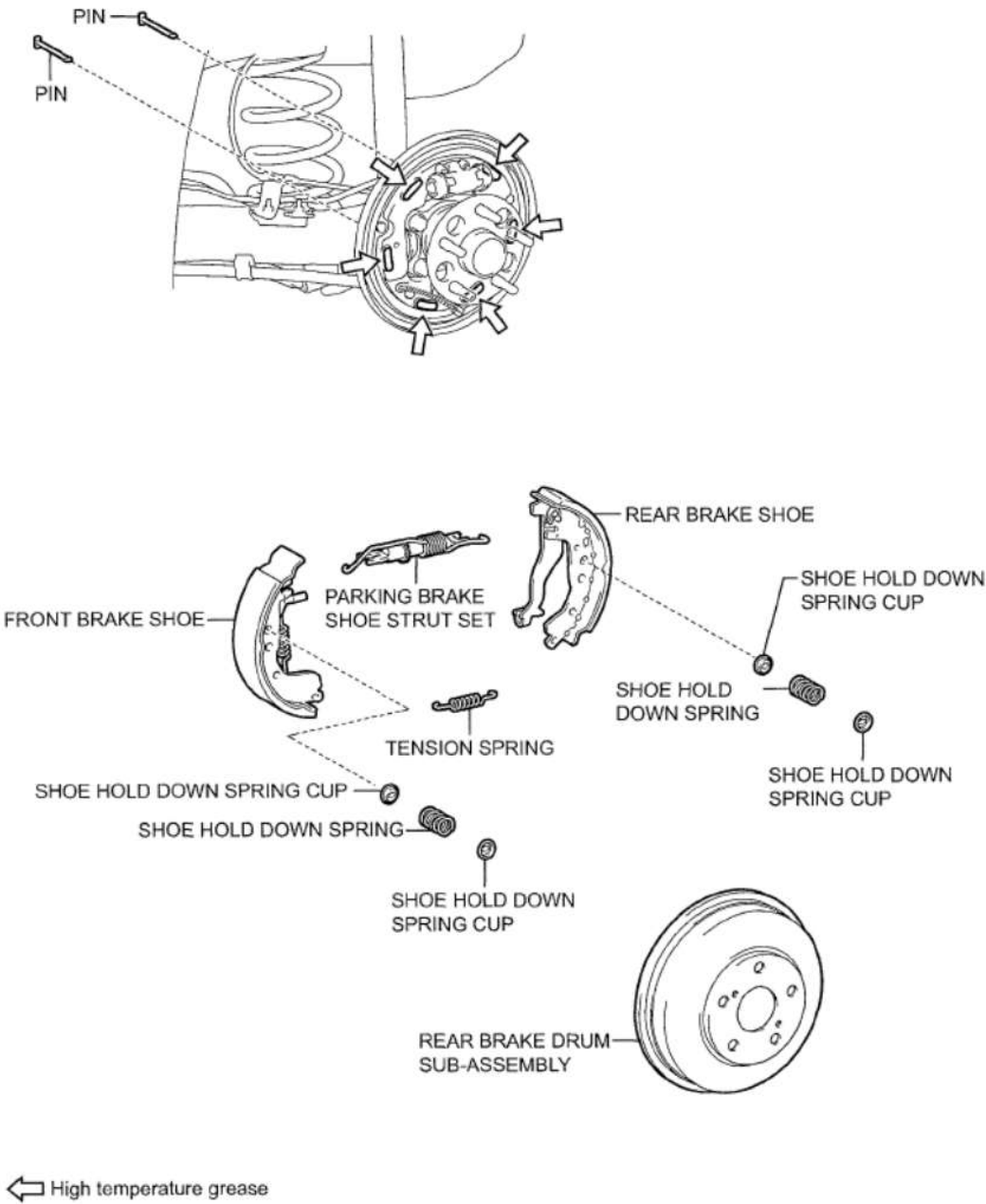


Fig. 11: Identifying Parking Brake Cable Replacement Components With Torque Specification (2 Of 3)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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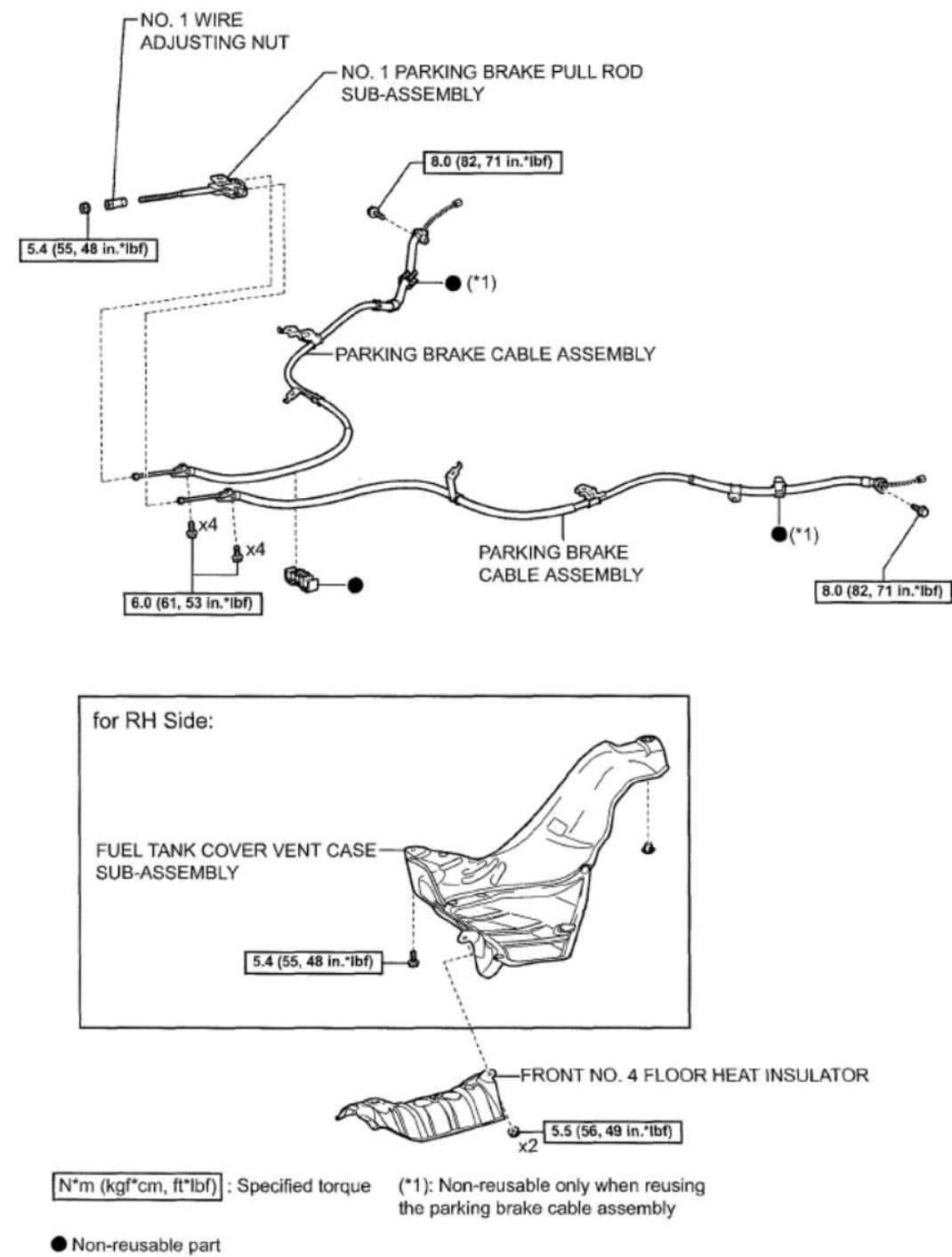


Fig. 12: Identifying Parking Brake Cable Replacement Components With Torque Specification (3 Of 3)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

REMOVAL

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1. **REMOVE SHIFT LEVER KNOB SUB-ASSEMBLY (for Manual Transaxle) (See REMOVAL)**
2. **REMOVE UPPER CONSOLE PANEL (See REMOVAL)**
3. **REMOVE REAR CONSOLE BOX COVER (See REMOVAL)**
4. **REMOVE CONSOLE BOX CARPET (See REMOVAL)**
5. **REMOVE REAR CONSOLE BOX SUB-ASSEMBLY (See REMOVAL)**
6. **REMOVE REAR WHEEL**
7. **REMOVE REAR BRAKE DRUM SUB-ASSEMBLY (See REMOVAL)**
8. **REMOVE REAR BRAKE SHOE KIT (See REMOVAL)**
9. **REMOVE FRONT NO. 4 FLOOR HEAT INSULATOR (See REMOVAL)**
10. **REMOVE FUEL TANK COVER VENT CASE SUB-ASSEMBLY (for RH Side) (See REMOVAL)**
11. **LOOSEN NO. 1 WIRE ADJUSTING NUT**
 - a. Loosen the lock nut and wire adjusting nut.

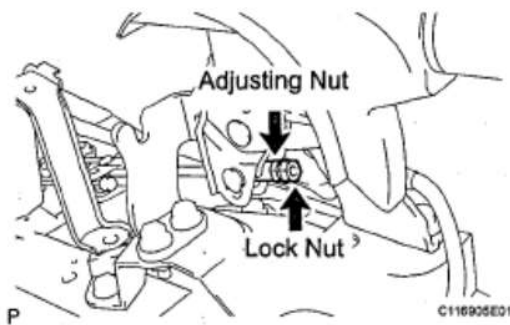


Fig. 13: Locating Adjusting Nut And Lock Nut
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

12. **REMOVE PARKING BRAKE CABLE ASSEMBLY**
 - a. Disconnect the cable ends of the parking brake cable from the parking brake pull rod.
 - b. Remove cable clamp A from the stud bolt.
 - c. Remove the 4 bolts.

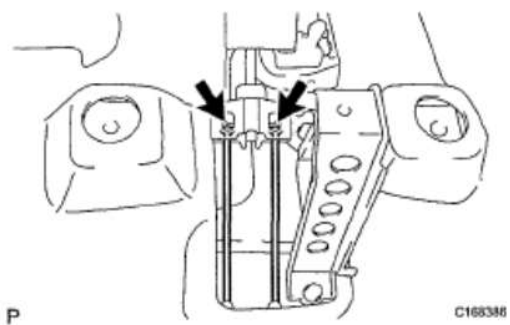
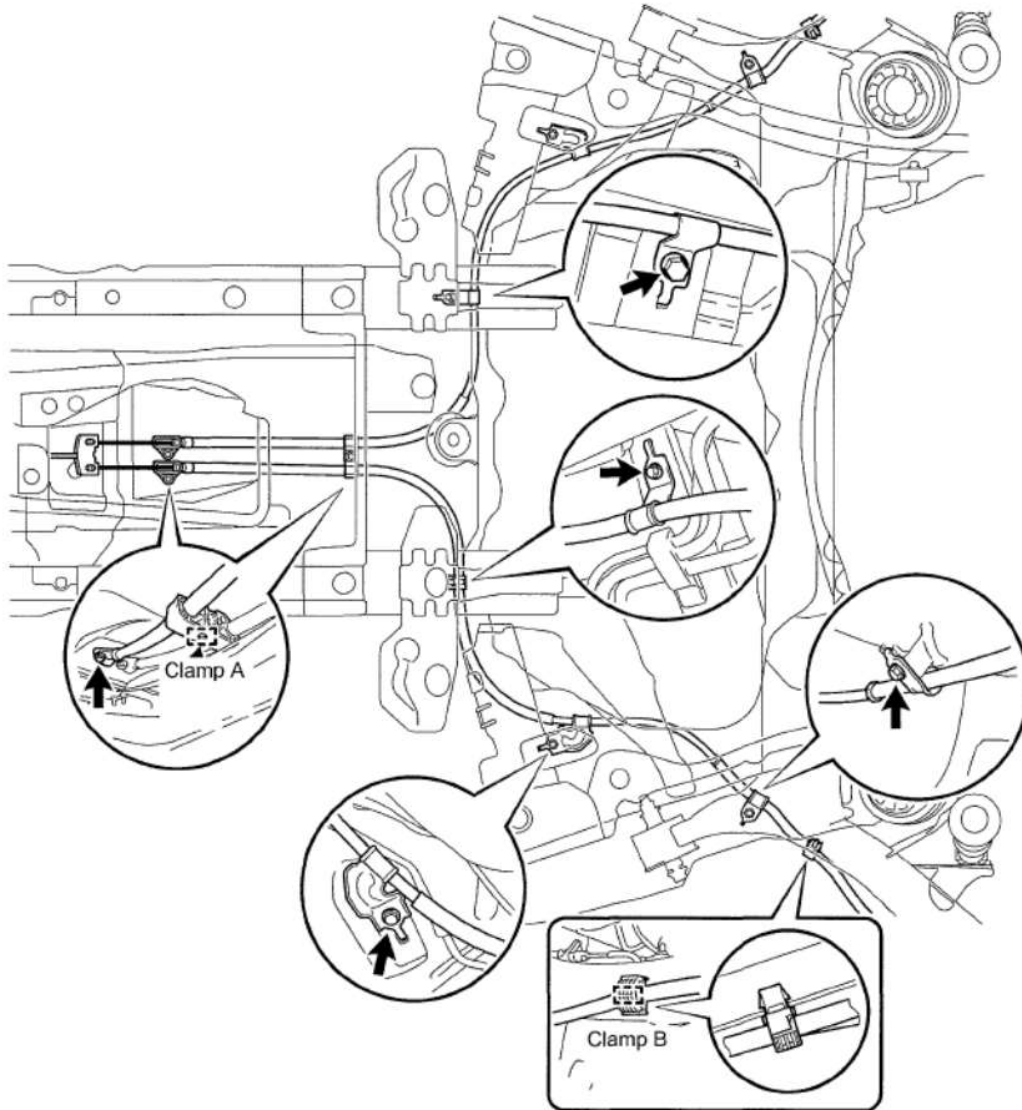


Fig. 14: Locating Parking Brake Cable Of Parking Brake Pull Rod
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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- d. Break the cable clamp B to remove it.



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Fig. 15: Locating Break Cable Clamp

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

- e. Remove the bolt and remove the parking brake cable from the backing plate.

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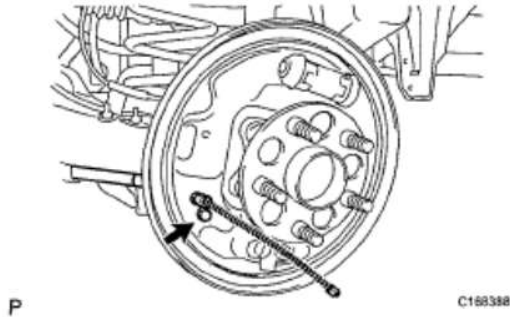


Fig. 16: Locating Parking Brake Cable Of Backing Plate
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSTALLATION

1. INSTALL PARKING BRAKE CABLE ASSEMBLY

- a. Install the parking brake cable onto the backing plate with the bolt.

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

- b. Install cable clamp B onto the rear axle beam.

NOTE: Securely install the clamp.

HINT:

When reusing the parking brake cable assembly, replace cable clamp B with a new part.

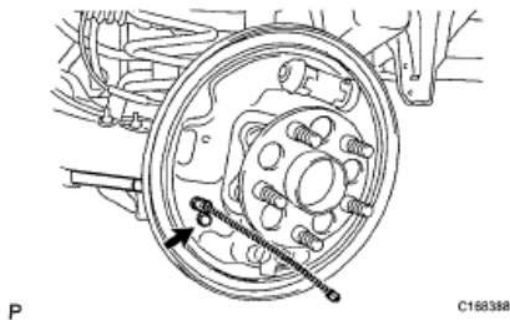


Fig. 17: Locating Parking Brake Cable Of Backing Plate
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- c. Tighten the 4 bolts.

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

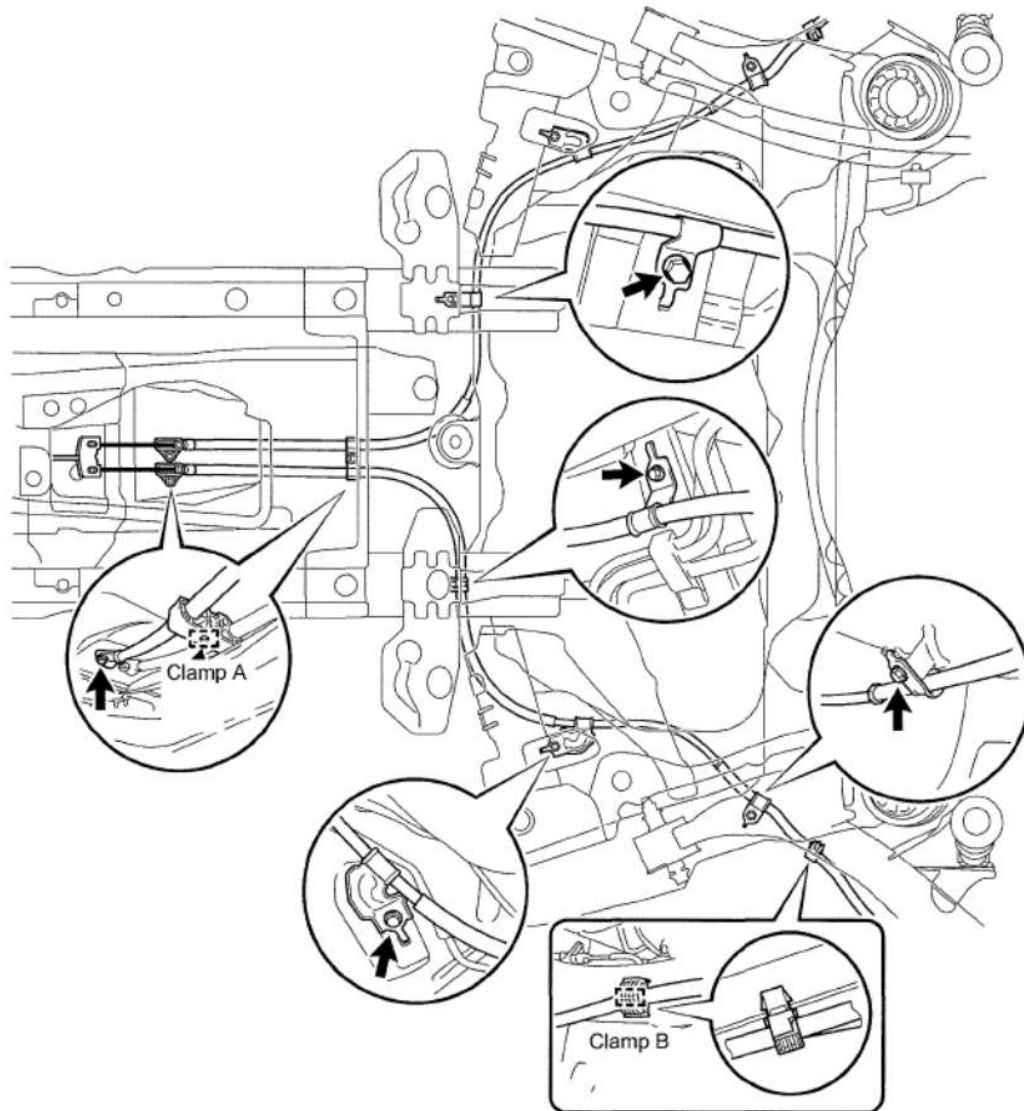
- d. Pass the parking brake cable through a new cable clamp A, and then install cable clamp A onto the

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stud bolt.

NOTE: Securely install the clamp.



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Fig. 18: Locating Parking Brake Cable Clamp

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

- e. Connect the cable ends of the parking brake cable to the parking brake pull rod.
2. **INSTALL FUEL TANK COVER VENT CASE SUB-ASSEMBLY (for RH Side) (See INSTALLATION)**
3. **INSTALL FRONT NO. 4 FLOOR HEAT INSULATOR (See INSTALLATION)**
4. **INSTALL REAR BRAKE SHOE KIT (See REASSEMBLY)**

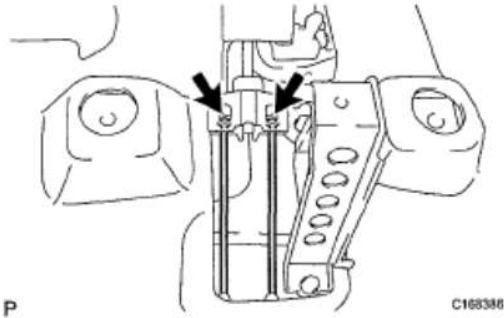
2008 Scion xD**2008 BRAKES Parking Brake - xD****5. CHECK REAR DRUM BRAKE INSTALLATION (See INSTALLATION)**

Fig. 19: Locating Parking Brake Cable Of Parking Brake Pull Rod
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- 6. INSTALL REAR BRAKE DRUM SUB-ASSEMBLY**
- 7. ADJUST REAR DRUM BRAKE SHOE CLEARANCE (See INSTALLATION)**
- 8. INSTALL REAR WHEEL**

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

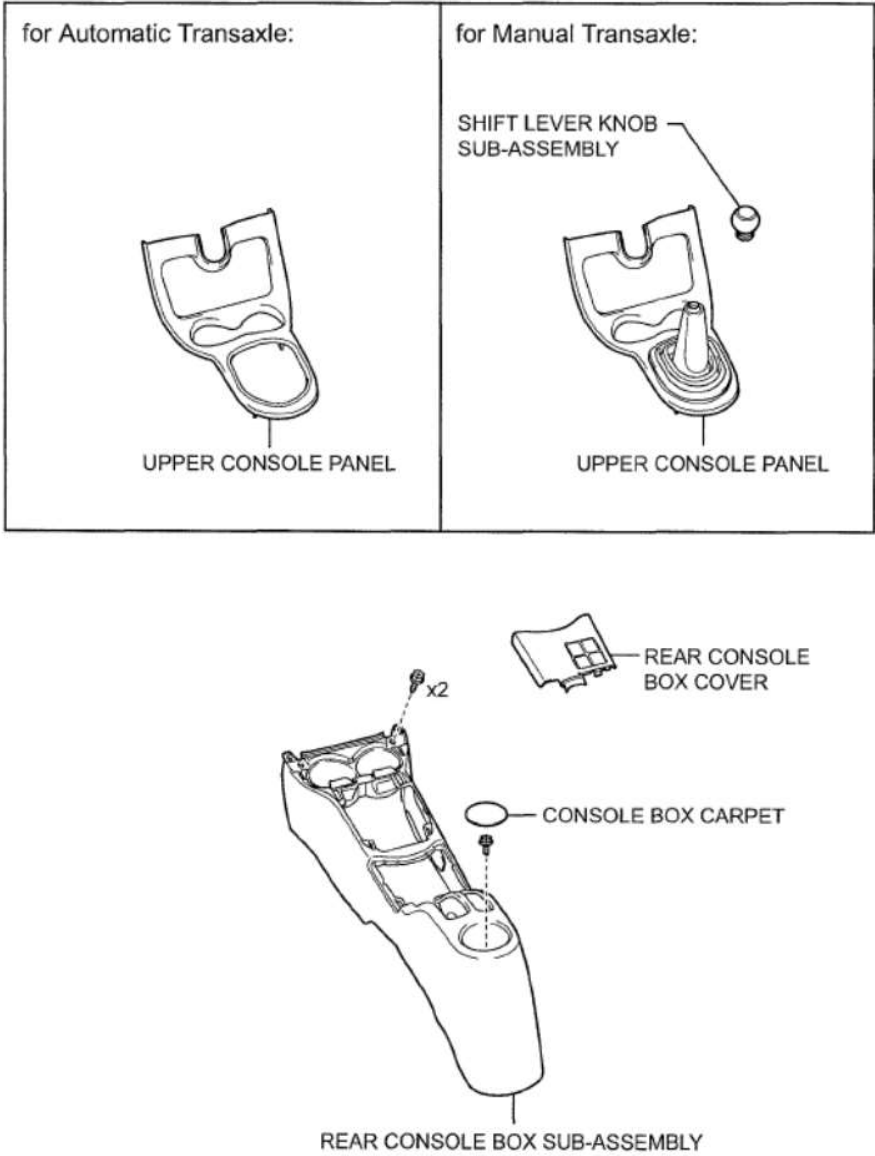
- 9. INSPECT PARKING BRAKE LEVER TRAVEL (See ADJUSTMENT)**
- 10. ADJUST PARKING BRAKE LEVER TRAVEL (See ADJUSTMENT)**
- 11. INSTALL REAR CONSOLE BOX SUB-ASSEMBLY (See INSTALLATION)**
- 12. INSTALL CONSOLE BOX CARPET (See INSTALLATION)**
- 13. INSTALL REAR CONSOLE BOX COVER (See INSTALLATION)**
- 14. INSTALL UPPER CONSOLE PANEL (See INSTALLATION)**
- 15. INSTALL SHIFT LEVER KNOB SUB-ASSEMBLY (for Manual Transaxle) (See INSTALLATION)**

PARKING BRAKE SWITCH

COMPONENTS

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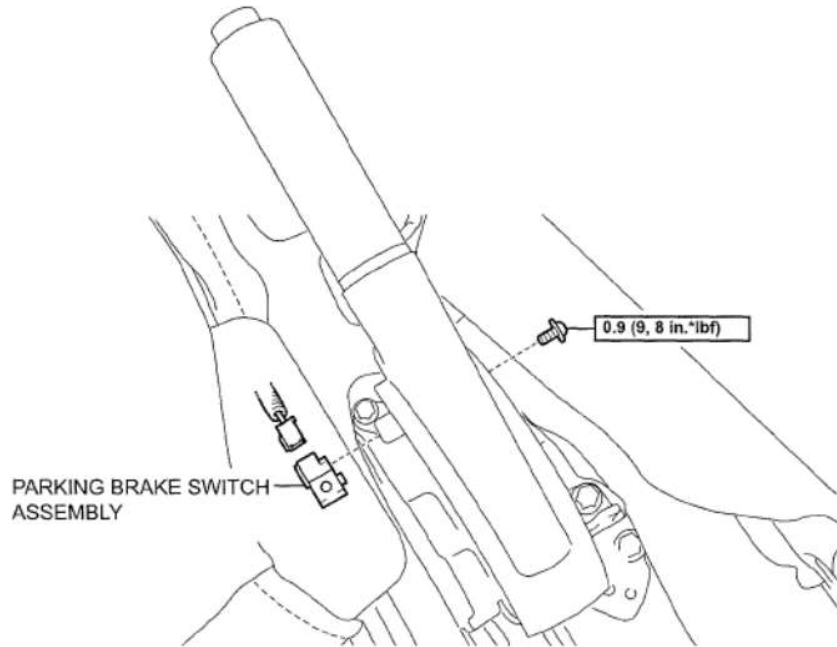


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Fig. 20: Identifying Parking Brake Switch Components (1 Of 2)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

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Fig. 21: Identifying Parking Brake Switch Components (2 Of 2)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

REMOVAL

1. **REMOVE SHIFT LEVER KNOB SUB-ASSEMBLY** (for Manual Transaxle) (See **REMOVAL**)
2. **REMOVE UPPER CONSOLE PANEL** (See **REMOVAL**)
3. **REMOVE REAR CONSOLE BOX COVER** (See **REMOVAL**)
4. **REMOVE CONSOLE BOX CARPET** (See **REMOVAL**)
5. **REMOVE REAR CONSOLE BOX SUB-ASSEMBLY** (See **REMOVAL**)
6. **REMOVE PARKING BRAKE SWITCH ASSEMBLY**
 - a. Disconnect the parking brake switch connector.
 - b. Remove the screw and remove the parking brake switch.

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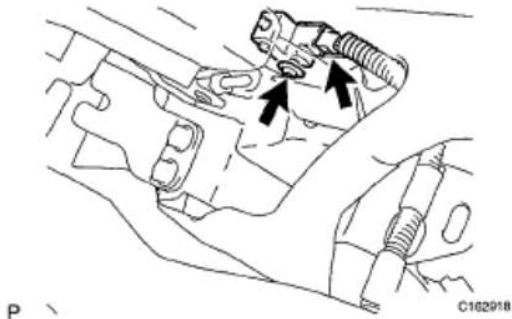


Fig. 22: Locating Parking Brake Switch Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION

1. INSPECT PARKING BRAKE SWITCH ASSEMBLY

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

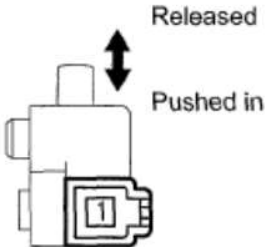
Standard resistance

RESISTANCE REFERENCE

Tester Connection	Switch Condition	Specified Condition
1 - Ground	Released	Below 1 ohms
1 - Ground	Pushed in	10 kohms or higher

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

Component without harness connected:
(Parking Brake Switch Assembly)



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Fig. 23: Inspecting Parking Brake Switch Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2008 Scion xD**2008 BRAKES Parking Brake - xD****INSTALLATION****1. INSTALL PARKING BRAKE SWITCH ASSEMBLY**

- a. Install the parking brake switch with the screw.

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

- b. Connect the parking brake switch connector.

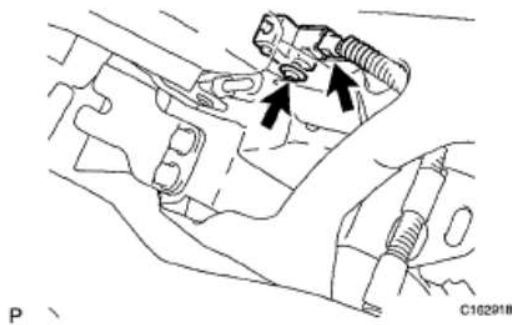
2. INSTALL REAR CONSOLE BOX SUB-ASSEMBLY (See INSTALLATION)**3. INSTALL CONSOLE BOX CARPET (See INSTALLATION)**

Fig. 24: Locating Parking Brake Switch Connector

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

4. INSTALL REAR CONSOLE BOX COVER (See INSTALLATION)**5. INSTALL UPPER CONSOLE PANEL (See INSTALLATION)****6. INSTALL SHIFT LEVER KNOB SUB-ASSEMBLY (for Manual Transaxle) (See INSTALLATION)**