

2004 Cadillac SRX

2004 BRAKES Park Brake - SRX

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Park Brake - SRX

SPECIFICATIONS

FASTENER TIGHTENING SPECIFICATIONS

Fastener Tightening Specifications

Application	Specification	
	Metric	English
Brake Rotor Mounting Screw	14 N.m	124 lb in
Park Brake Cable Guide Bolt	10 N.m	88 lb in
Park Brake Cable Guide Nut	10 N.m	88 lb in
Park Brake Cable to Knuckle Mounting Bracket Bolt	60 N.m	44 lb ft
Park Brake Pedal Lever Assembly Cross Bar Mounting Bolt - LHD	10 N.m	88 lb in
Park Brake Pedal Lever Assembly Mounting Nuts	25 N.m	18 lb ft
Park Brake Pedal Lever Assembly Upper Mounting Bolt - RHD	10 N.m	88 lb in
Park Brake Pedal Release Handle Mounting Screw	2 N.m	18 lb in
Park Brake Warning Lamp Switch Bolt	2 N.m	18 lb in

DIAGNOSTIC INFORMATION AND PROCEDURES

DIAGNOSTIC STARTING POINT - PARK BRAKE

Begin the system diagnosis by reviewing the system description and operation. Reviewing the description and operation information will help you determine the correct symptom diagnostic procedure when a malfunction exists. Reviewing the description and operation information will also help you determine if the condition described by the customer is normal operation. Refer to **Symptoms - Park Brake** in order to identify the correct procedure for diagnosing the system and where the procedure is located.

SYMPTOMS - PARK BRAKE

IMPORTANT: Review the system operation in order to familiarize yourself with the system functions.

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Refer to **Park Brake System Description and Operation**.

Visual/Physical Inspection

- Inspect for aftermarket devices which could affect the operation of the park brake system.
- Inspect the easily accessible or visible system components for obvious damage or conditions which could cause the symptom.

Symptom List

Refer to a symptom diagnostic procedure from the following list in order to diagnose the symptom:

Park Brake Will Not Hold or Release

PARK BRAKE WILL NOT HOLD OR RELEASE

Park Brake Will Not Hold or Release

Step	Action	Yes	No
1	Were you sent here from the Park Brake Symptom table?	Go to Step 2	Go to <u>Diagnostic Starting Point - Park Brake</u>
2	Inspect the park brake system for proper operation. Refer to <u>Park Brake System Diagnosis</u> . Did you find and correct a condition?	Go to Step 5	Go to Step 3
3	Inspect the disc brake system for proper operation. Refer to <u>Disc Brake System Diagnosis</u> in Hydraulic Brakes. Did you find and correct a condition?	Go to Step 5	Go to Step 4
4	Inspect the hydraulic brake system for proper operation. Refer to <u>Hydraulic Brake System Diagnosis</u> in Hydraulic Brakes. Did you find and correct a condition?	Go to Step 5	Go to <u>Diagnostic Starting Point - Park Brake</u>
5	Road test the vehicle in order to confirm proper operation. Refer to <u>Brake System Vehicle Road Test</u> in Hydraulic Brakes. Is the condition still present?	Go to Step 2	System OK

PARK BRAKE SYSTEM DIAGNOSIS

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Park Brake System Diagnosis

Step	Action	Yes	No
DEFINITION: This diagnostic table is designed to diagnose ONLY the components of the PARK brake system in order to determine if the PARK brake system is operating properly. You will be directed by the appropriate Symptom Table to go to other brake system diagnostic tables as appropriate.			
1	Were you sent here from a Hydraulic Brake Symptom Table?	Go to Step 4	Go to Step 2
2	Were you sent here from a Park Brake Symptom Table?	Go to Step 4	Go to Step 3
3	Is the symptom related to the ability of the park brake system to hold and/or release?	Go to <u>Diagnostic Starting Point - Park Brake</u>	Go to <u>Diagnostic Starting Point - Hydraulic Brakes</u> in Hydraulic Brakes
4	1. Raise and support the vehicle with the rear axle supported by jack stands. Refer to <u>Lifting and Jacking the Vehicle</u> in General Information. 2. Shift the transmission into NEUTRAL. 3. With the park brake RELEASED, attempt to rotate the rear wheels to check the rear brakes for a significant amount of drag. Do the rear brakes have a significant amount of drag?	Go to Step 11	Go to Step 5
5	1. Shift the transmission into NEUTRAL. 2. Apply the park brake. 3. Attempt to rotate the rear wheels to check the rear brakes for a significant amount of drag. Do the rear brakes have a significant amount of drag?	Go to Step 6	Go to Step 7
	1. Release the park brake. 2. Rotate the rear wheels to check the rear brakes for a significant reduction in the		

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6	amount of drag. Did the rear brakes exhibit a significant reduction in the amount of drag?	Go to Step 21	Go to Step 11
7	Visually check the park brake cable connections and the cables that are accessible on the UNDERSIDE of the vehicle for disconnections and/or damage. Were any or the park brake cables disconnected and/or damaged?	Go to Step 8	Go to Step 9
8	Reconnect or replace the park brake cables as necessary. Refer to the following procedures as necessary: • <u>Park Brake Pedal Assembly Replacement</u> (The front park brake cable and the park brake pedal are replaced as an assembly.) • <u>Park Brake Cable Replacement - Intermediate</u> • <u>Park Brake Cable Replacement - Left Rear</u> • <u>Park Brake Cable Replacement - Right Rear</u> Did you complete the repair and/or replacement?	Go to Step 9	-
9	Check the adjustment of the park brake. Refer to <u>Park Brake Adjustment</u>. Was the park brake adjusted properly?	Go to Step 11	Go to Step 10
10	Adjust the park brake. Refer to <u>Park Brake Adjustment</u>. Were you able to attain adjustment of the park brake?	Go to Step 16	Go to Step 11
	NOTE: Do not depress the brake pedal with the brake		

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11	rotors and/or the brake drums removed, or with the brake calipers repositioned away from the brake rotors, or damage to the brake system may result. 1. Remove the rear brake rotors. Refer to <u>Brake Rotor Replacement - Rear</u> in Disc Brakes. 2. Inspect the park brake shoe hardware for looseness, damaged, broken or missing components. 3. Check the park brake actuators for a seized condition. Does the park brake hardware and/or the park brake actuators require replacement?	Go to Step 12	Go to Step 13
12	1. Replace park brake hardware components as necessary. Refer to <u>Park Brake Shoe Replacement</u>. 2. Replace the park brake actuators as necessary. Refer to <u>Park Brake Actuator Replacement</u>. Did you complete the replacement?	Go to Step 13	-
13	Have an assistant apply and release the park brake, while you observe the park brake cables for free movement. Did the park brake cables move freely?	Go to Step 14	Go to Step 17
14	Check the adjustment of the park brake. Refer to <u>Park Brake Adjustment</u>. Was the park brake adjusted properly?	Go to Step 16	Go to Step 15
15	Adjust the park brake. Refer to <u>Park Brake Adjustment</u>. Were you able to attain adjustment of the park brake?	Go to Step 16	Go to Step 26
	1. With the transmission still in NEUTRAL, apply the park brake. 2. Attempt to rotate the rear wheels to check the rear brakes for a significant amount of		

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16	drag. - Release the park brake. - Rotate the rear wheels to check the rear brakes for a significant reduction of drag. Did the park brake apply and release properly?	Go to Step 28	Return to Symptom Table
17	Disconnect the park brake cable connections that are accessible on the UNDERSIDE of the vehicle one at a time and check each cable for free movement. Do any of the park brake cables accessible on the underside of the vehicle require replacement?	Go to Step 18	Go to Step 19
18	Replace any of the park brake cables that do not have free movement (not releasing properly). Refer to the following procedures as necessary: <u>Park Brake Pedal Assembly Replacement</u> (The front park brake cable and the park brake pedal are replaced as an assembly.) <u>Park Brake Cable Replacement - Intermediate</u> <u>Park Brake Cable Replacement - Left Rear</u> <u>Park Brake Cable Replacement - Right Rear</u> Did you complete the replacement?	Go to Step 19	-
	- Disconnect the park brake release handle assembly cable connection from the park brake pedal assembly and check for free movement. - Replace the park brake release handle		

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19	assembly if the release cable does not have free movement. Refer to <u>Park Brake Release Handle Assembly Replacement.</u>		
	Did you find and correct a condition?	Go to Step 24	Go to Step 20
20	Replace the park brake pedal assembly (not releasing properly). Refer to <u>Park Brake Pedal Assembly Replacement.</u>		-
	Did you complete the replacement?	Go to Step 25	
21	Check the adjustment of the park brake. Refer to <u>Park Brake Adjustment.</u>		
	Is the park brake adjusted properly?	Go to Step 28	Go to Step 22
22	Adjust the park brake. Refer to <u>Park Brake Adjustment.</u>		
	Were you able to attain adjustment of the park brake system?	Go to Step 27	Go to Step 23
23	1. Remove the rear brake rotors, if they have not yet been removed. Refer to <u>Brake Rotor Replacement - Rear</u> in Disc Brakes. 2. Check the park brake actuators for a seized condition. 3. Replace the park brake actuators as necessary. Refer to <u>Park Brake Actuator Replacement.</u>		
	Did you find and correct a condition?	Go to Step 24	Go to Step 26
24	Adjust the park brake. Refer to <u>Park Brake Adjustment.</u>		
	Were you able to attain adjustment of the park brake system?	Go to Step 27	Go to Step 26
25	Adjust the park brake. Refer to <u>Park Brake Adjustment.</u>		
	Were you able to attain adjustment of the park brake system?	Go to Step 27	Return to Symptom Table
	1. Replace the component that is used to adjust the park brake system. Refer to		

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26	<u>Park Brake Pedal Assembly Replacement.</u> 2. Adjust the park brake. Refer to <u>Park Brake Adjustment.</u> Did you complete the replacement and adjustment?	Go to Step 27	Return to Symptom Table
27	1. With the transmission still in NEUTRAL, apply the park brake. 2. Attempt to rotate the rear wheels to check the rear brakes for a significant amount of drag. 3. Release the park brake. 4. Rotate the rear wheels to check the rear brakes for a significant reduction of drag. Did the park brake apply and release properly?	Go to Step 28	Return to Symptom Table
28	Install or connect any components that were removed or disconnected during diagnosis. Did you complete the operation?	Park Brake System OK Return to Symptom Table	-

PARK BRAKE SHOE INSPECTION

1. Raise and support the vehicle. Refer to **Lifting and Jacking the Vehicle** in General Information.
2. Remove the rear tire and wheel assembly. Refer to **Tire and Wheel Removal and Installation** in Tires and Wheels.
3. Remove the rear brake caliper. Refer to **Brake Caliper Replacement - Rear (JL9, JE5)** in Disc Brakes.
4. Remove the rear brake caliper bracket. Refer to **Brake Caliper Bracket Replacement - Rear** in Disc Brakes.
5. Remove the rear brake rotor. Refer to **Brake Rotor Replacement - Rear** in Disc Brakes.
6. Inspect and replace the park brake shoe and lining if any of the following conditions are found:
 - Excessive wear indicated by the park brake lining being worn down to the shoe
 - Brake lining cracking

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- Oil or fluid contamination of the brake lining
- 7. Adjust the park brake shoe. Refer to **Park Brake Adjustment** in Park Brake.
- 8. Install the rear brake rotor. Refer to **Brake Rotor Replacement - Rear** in Disc Brakes.
- 9. Install the rear brake caliper bracket. Refer to **Brake Caliper Bracket Replacement - Rear** in Disc Brakes.
- 10. Install the rear brake caliper. Refer to **Brake Caliper Replacement - Rear (JL9, JE5)** in Disc Brakes.
- 11. Install the rear tire and wheel assembly. Refer to **Tire and Wheel Removal and Installation** in Tires and Wheels.
- 12. Lower the vehicle.

REPAIR INSTRUCTIONS

PARK BRAKE SHOE REPLACEMENT

Removal Procedure

1. Remove the wheel bearing and hub assembly. Refer to **Wheel Bearing/Hub Replacement - Rear** in Rear Suspension.

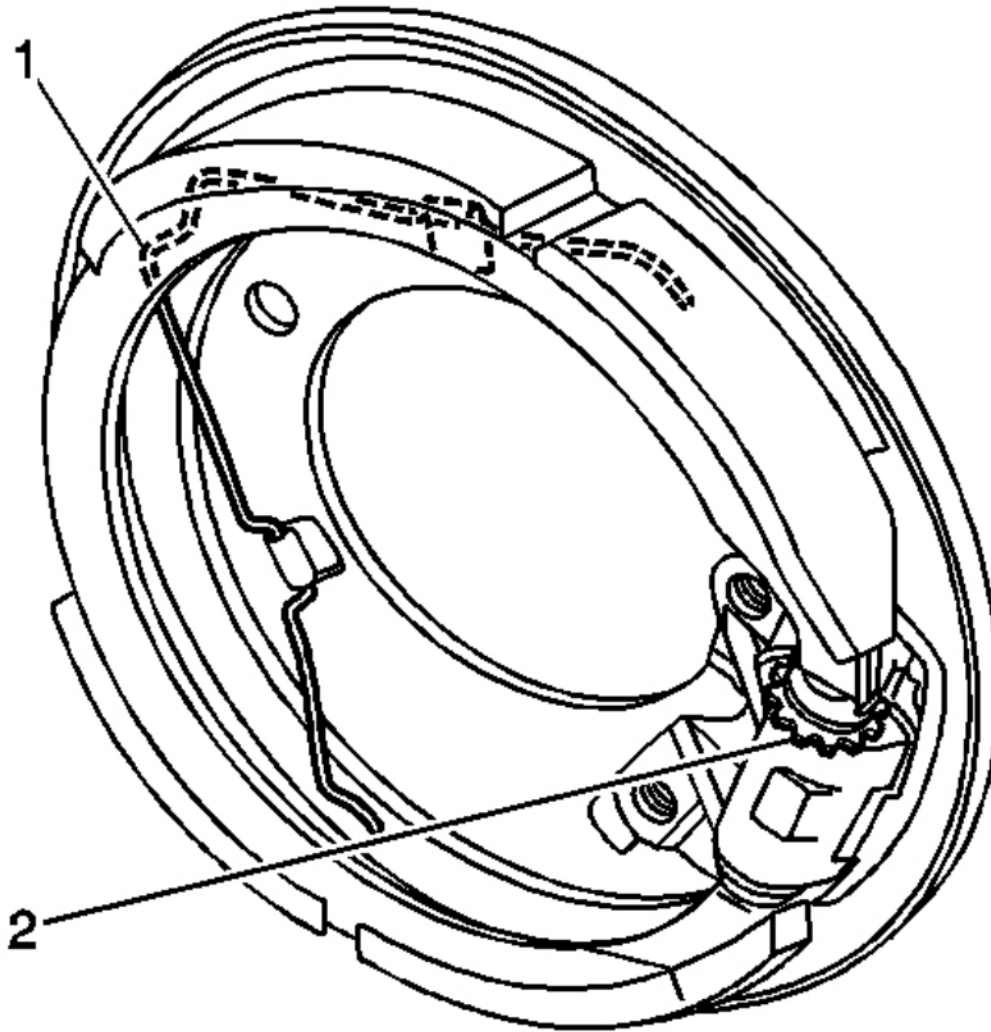


Fig. 1: View Of Park Brake Adjusting Nut & Shoe Retaining Spring
Courtesy of GENERAL MOTORS CORP.

2. Rotate the parking brake adjusting nut (2) until all park brake shoe adjustment has been removed.
3. Remove the parking brake shoe retaining spring (1).

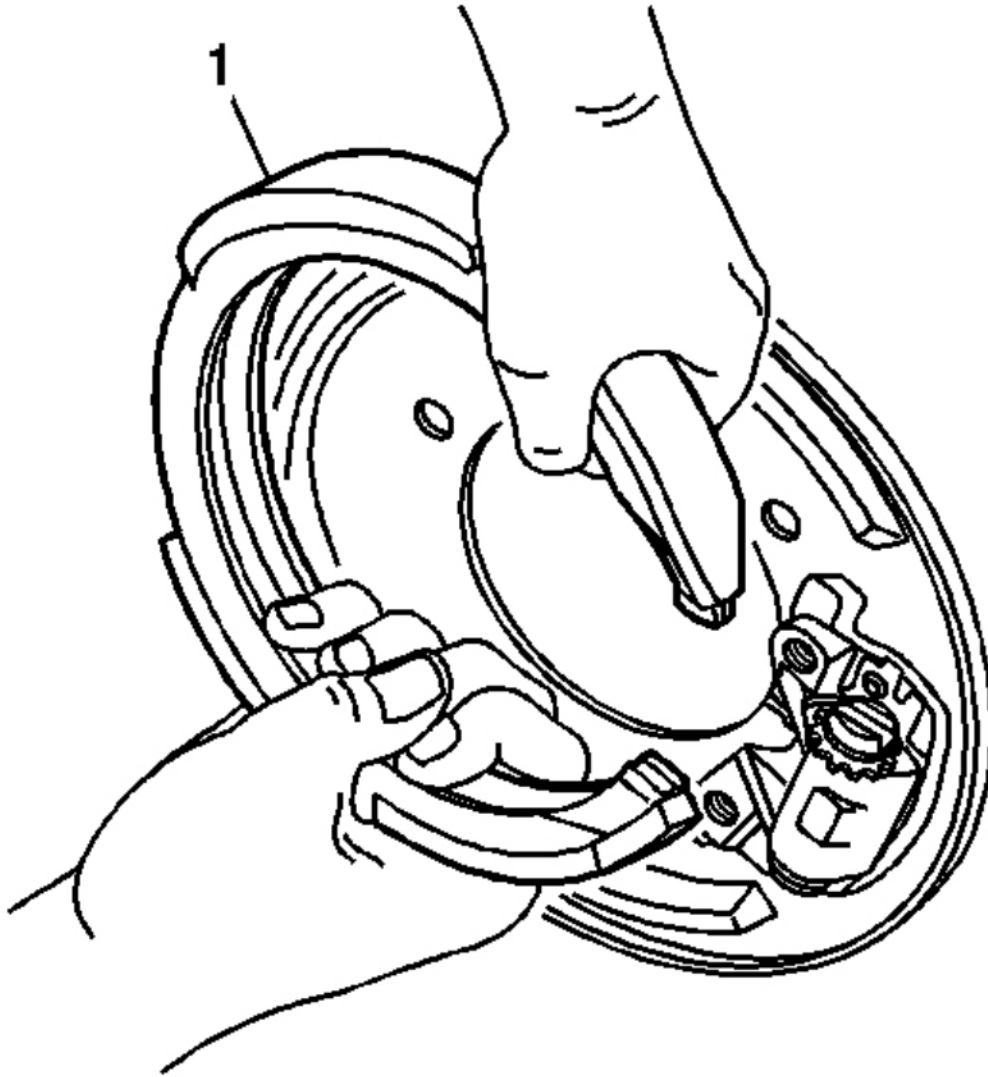


Fig. 2: View Of Park Brake Shoe Assembly
Courtesy of GENERAL MOTORS CORP.

4. Remove the park brake shoe assembly (1) by grasping the shoe and spreading slightly while pulling the shoe from the actuator assembly.

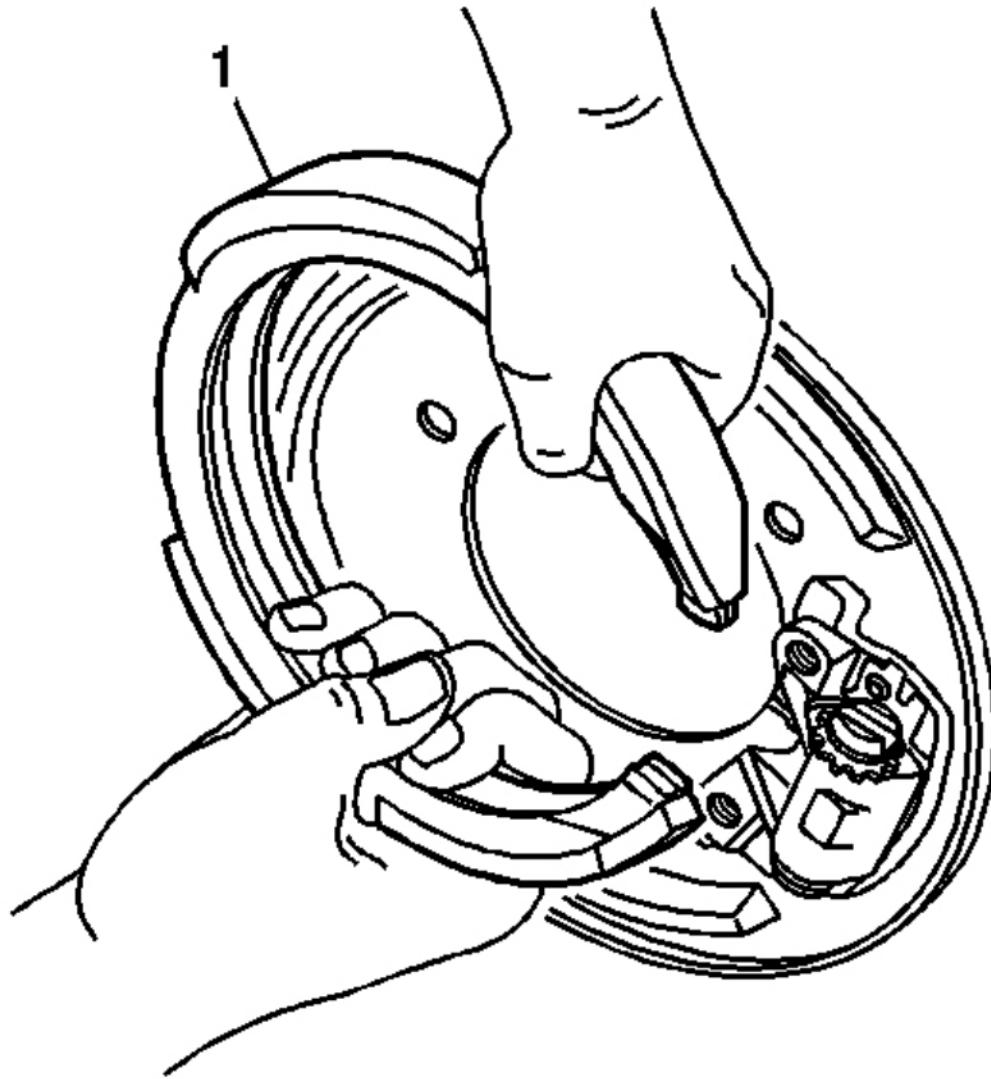


Fig. 3: View Of Park Brake Shoe Assembly
Courtesy of GENERAL MOTORS CORP.

1. Install the park brake shoe assembly (1) by grasping the shoe and spreading slightly while pulling the shoe over the actuator assembly.

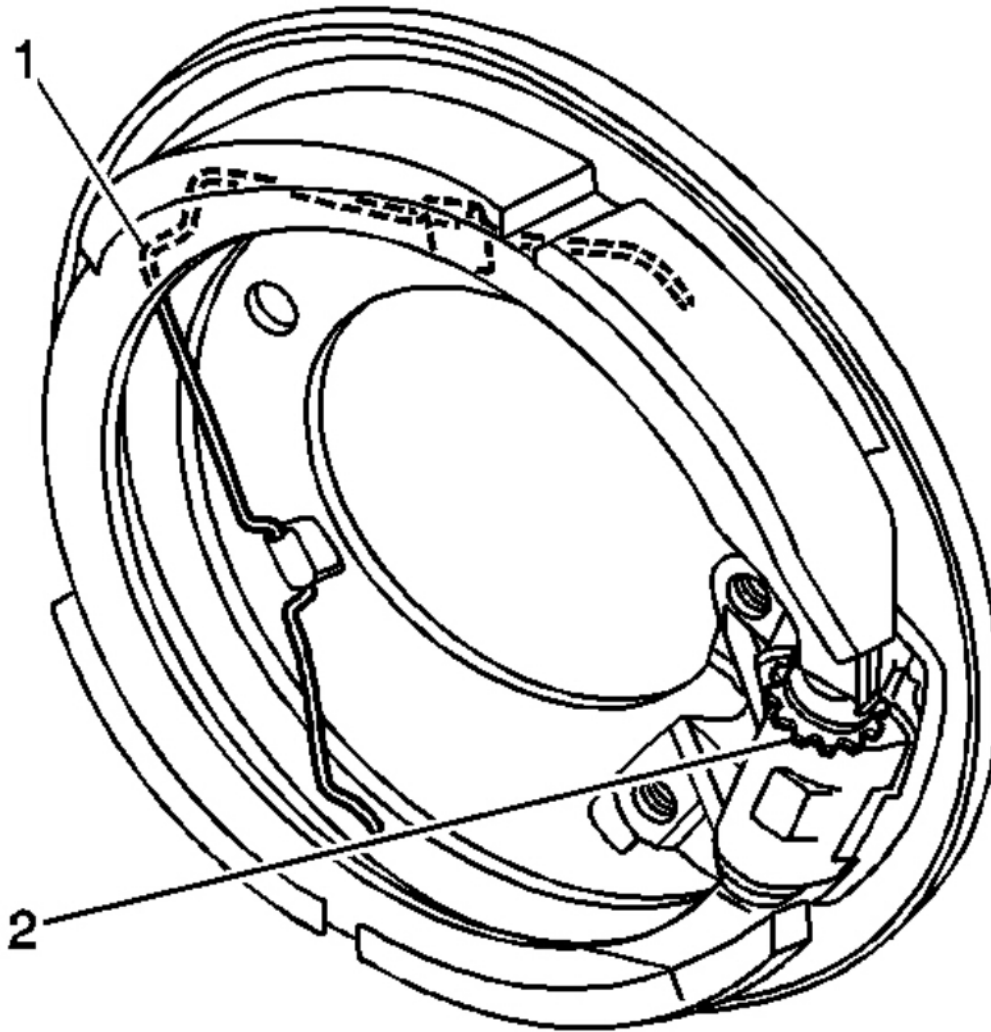


Fig. 4: View Of Park Brake Adjusting Nut & Shoe Retaining Spring
Courtesy of GENERAL MOTORS CORP.

2. Install the parking brake shoe retaining spring (1).
3. Install the wheel bearing and hub assembly. Refer to **Wheel Bearing/Hub Replacement - Rear** in Rear Suspension.
4. Adjust the parking brake shoe-to-drum clearance. Refer to **Park Brake Adjustment**.
5. Lower the vehicle.

PARK BRAKE RELEASE HANDLE ASSEMBLY REPLACEMENT**Removal Procedure**

1. Remove the knee bolster. Refer to **Knee Bolster Replacement** Instrument Panel, Gages, and Console.

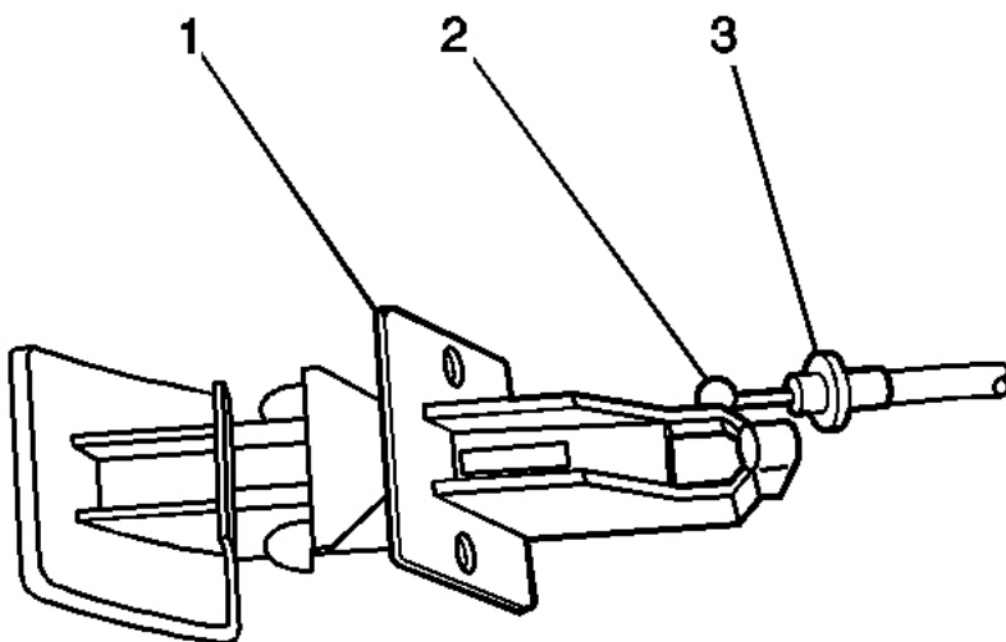


Fig. 5: View Of Park Brake Release Handle Assembly
Courtesy of GENERAL MOTORS CORP.

2. Remove the park brake release handle mounting screws.
3. Remove the park brake release cable housing (3) from the park brake release handle assembly (1).
4. Remove the park brake release handle (2) from the park brake release cable (1).
5. Remove the park brake release handle from the vehicle.

Installation Procedure

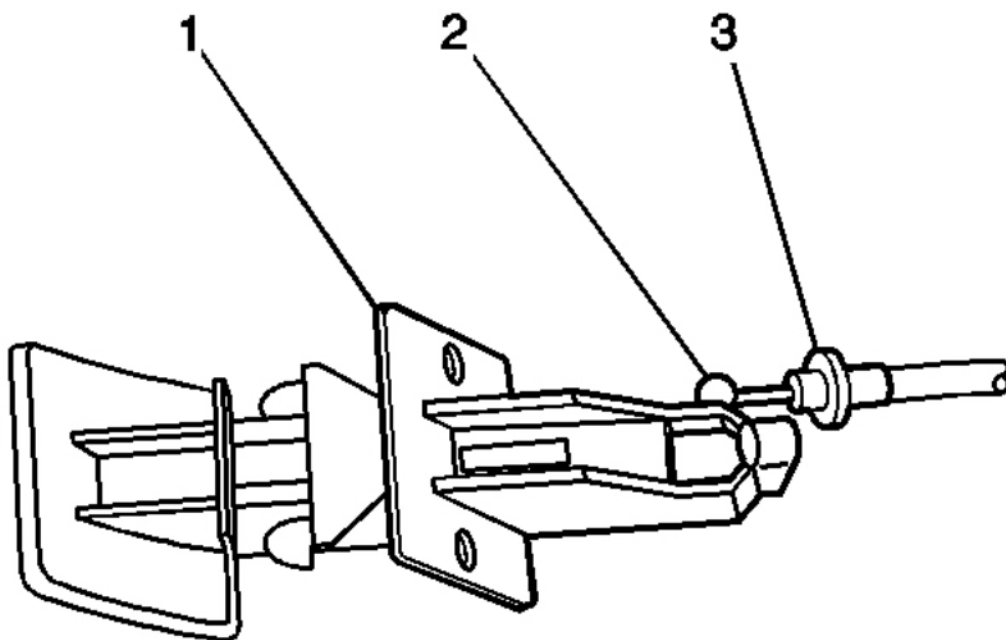


Fig. 6: View Of Park Brake Release Handle Assembly
Courtesy of GENERAL MOTORS CORP.

1. Install the park brake release handle (2) to the park brake release cable (1).
2. Install the park brake release cable housing (3) to the park brake release handle assembly (1).
3. Install the park brake release handle assembly (1) to the knee bolster.

NOTE: Refer to Fastener Notice in Cautions and Notices.

4. Install the park brake release handle mounting screws.

Tighten: Tighten the park brake release handle mounting screws to 2 N.m (18 lb in).

5. Install the knee bolster. Refer to Knee Bolster Replacement in Instrument Panel, Gages, and Console.

PARK BRAKE RELEASE CABLE REPLACEMENT

Removal Procedure

1. Remove the knee bolster. Refer to **Knee Bolster Replacement** in Instrument Panel, Gages, and Console.

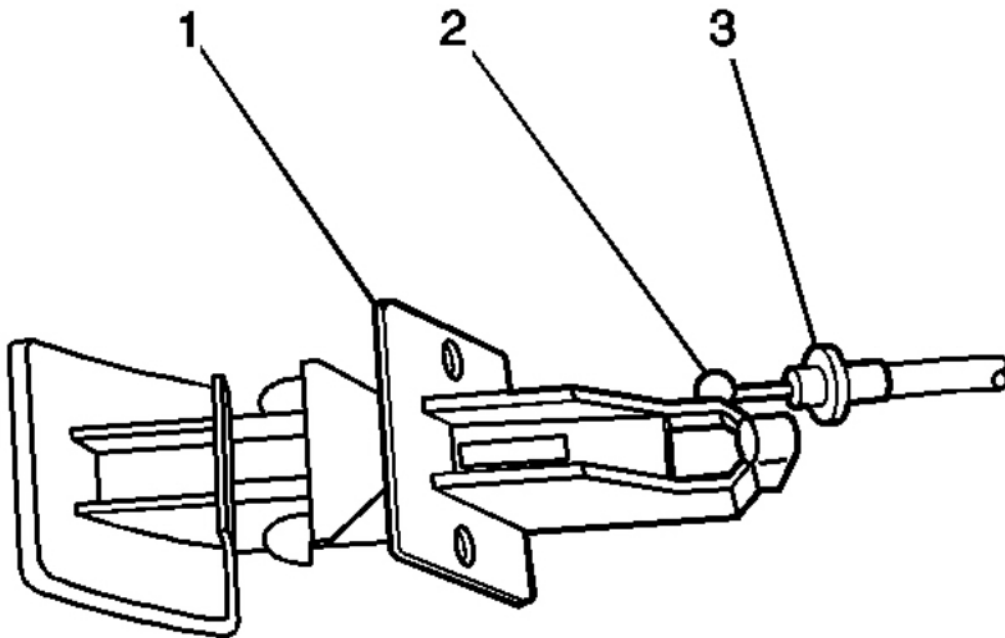


Fig. 7: View Of Park Brake Release Handle Assembly
Courtesy of GENERAL MOTORS CORP.

2. Remove the park brake release handle mounting screws.
3. Remove the park brake release cable housing (3) from the park brake release handle assembly (1).
4. Remove the park brake release cable (2) from the park brake release handle assembly (1).

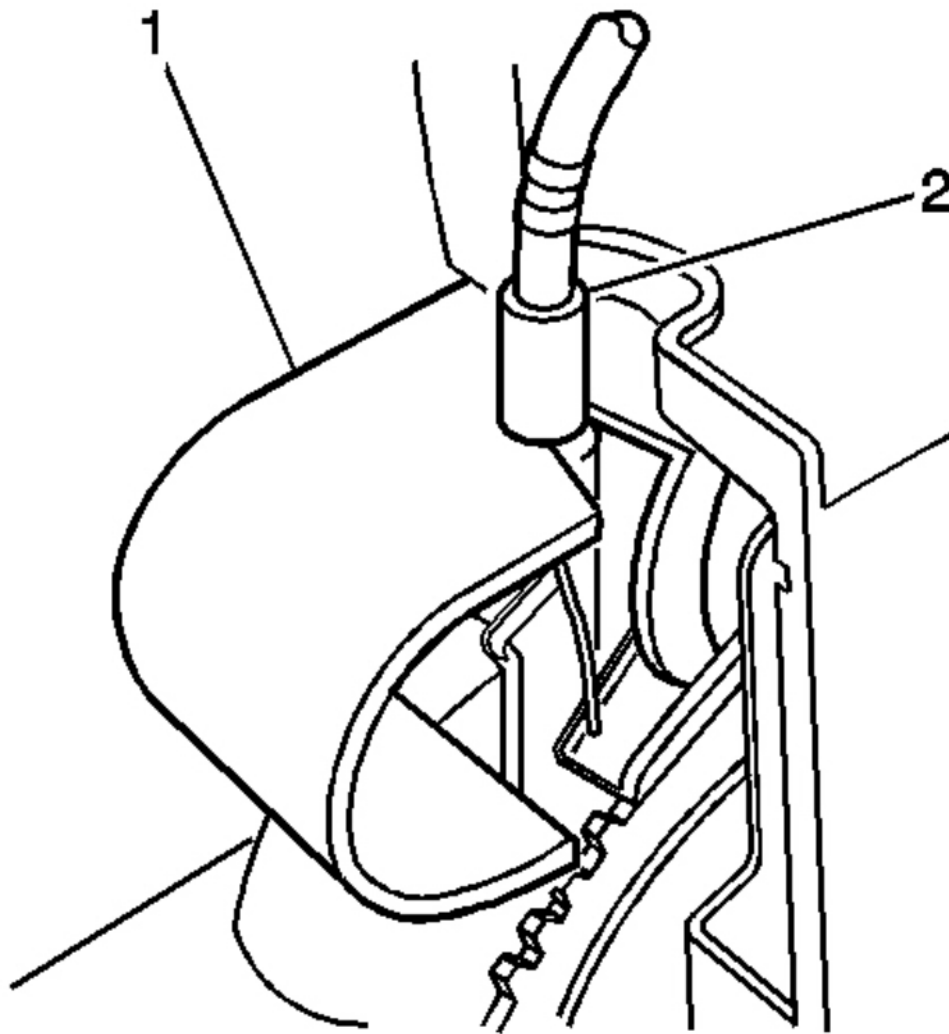


Fig. 8: View Of Park Brake Pedal Assembly & Release Cable Housing
Courtesy of GENERAL MOTORS CORP.

5. Remove the park brake release cable housing (2) from the park brake pedal assembly (1).

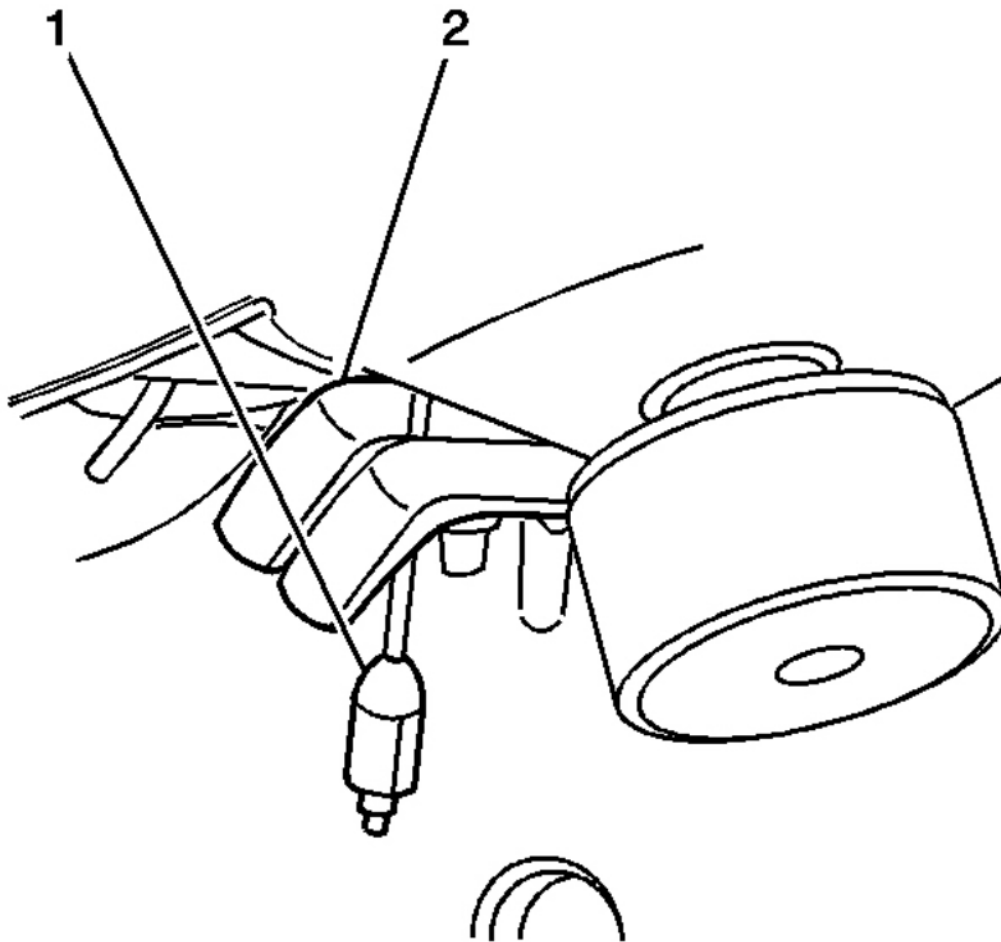


Fig. 9: View Of Park Brake Cable & Pedal Release Lever
Courtesy of GENERAL MOTORS CORP.

6. Remove the park brake cable (1) from the park brake pedal release lever (2).
7. Remove the park brake release cable from the vehicle.

Installation Procedure

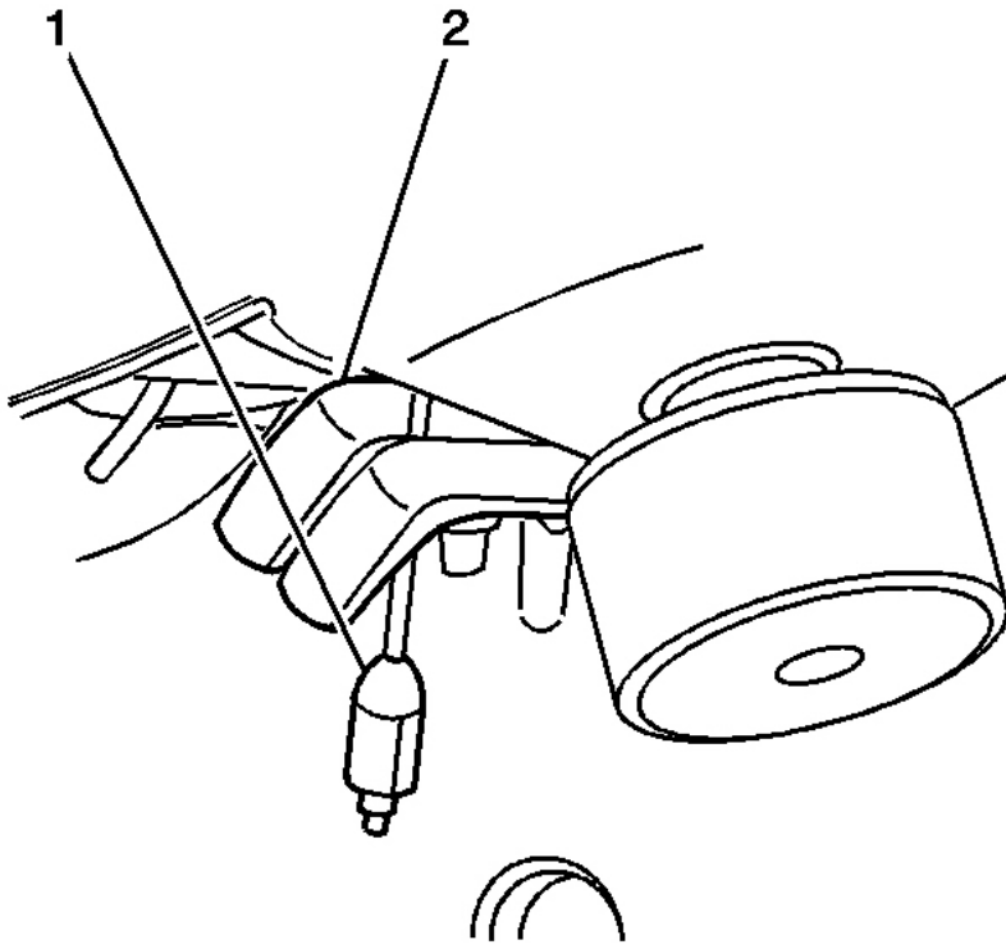


Fig. 10: View Of Park Brake Cable & Pedal Release Lever
Courtesy of GENERAL MOTORS CORP.

1. Install the park brake cable (1) to the park brake pedal release lever (2).

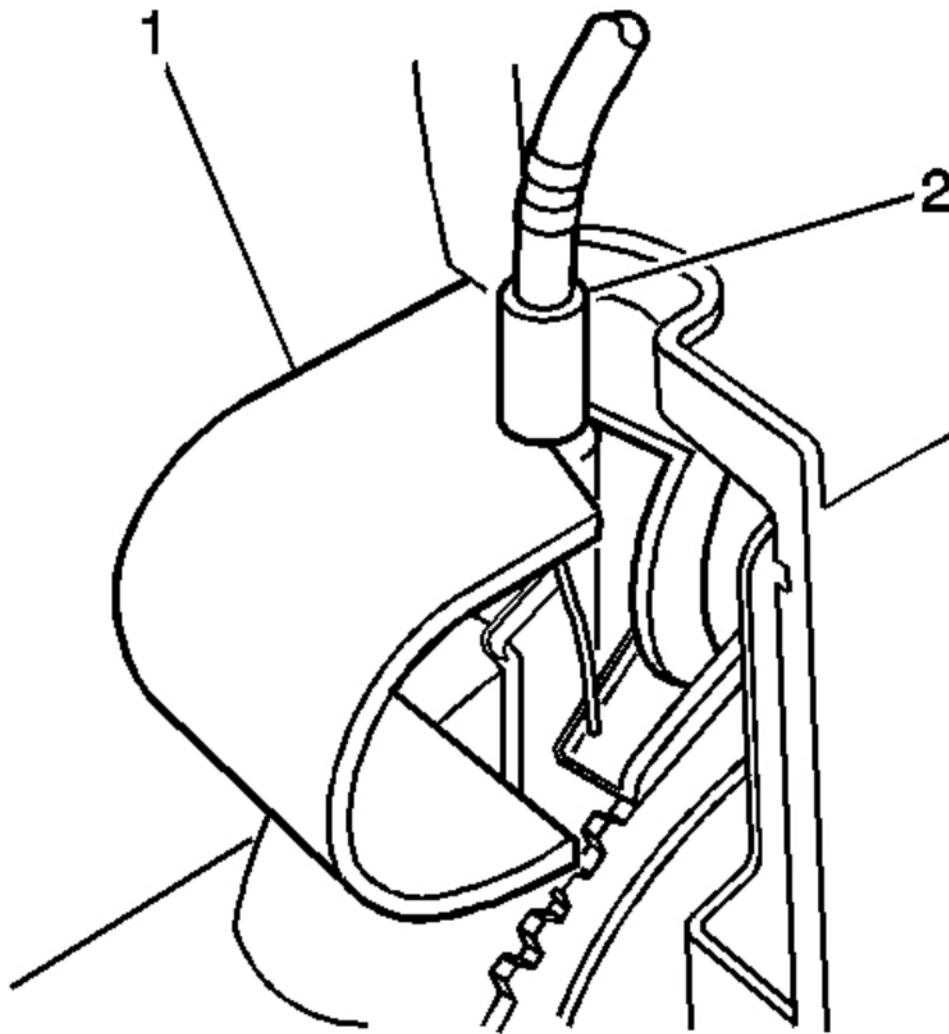


Fig. 11: View Of Park Brake Pedal Assembly & Release Cable Housing
Courtesy of GENERAL MOTORS CORP.

2. Install the park brake release cable housing (2) to the park brake pedal assembly (1).

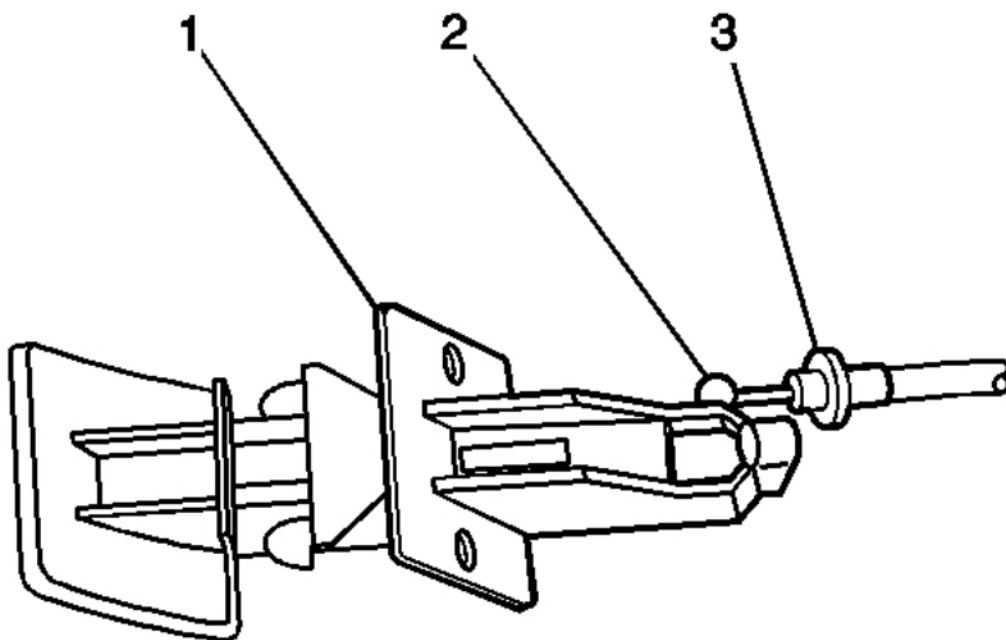


Fig. 12: View Of Park Brake Release Handle Assembly
Courtesy of GENERAL MOTORS CORP.

3. Install the park brake release cable (2) to the park brake release handle assembly (1).
4. Install the park brake release cable housing (3) to the park brake release handle assembly (1).
5. Install the park brake release handle assembly (1) to the knee bolster.

NOTE: Refer to Fastener Notice in Cautions and Notices.

6. Install the park brake release handle mounting screws.

Tighten: Tighten the park brake release handle mounting screws to 2 N.m (18 lb in).

7. Install the knee bolster. Refer to Knee Bolster Replacement in Instrument Panel, Gages, and Console.

PARK BRAKE PEDAL ASSEMBLY REPLACEMENT

Removal Procedure

The automatic adjustment park brake pedal assembly and the front park brake cable are serviced as a unit. The front park brake cable has no threads and is not adjustable.

1. Raise and suitably support the vehicle. Refer to **Lifting and Jacking the Vehicle** in General Information.

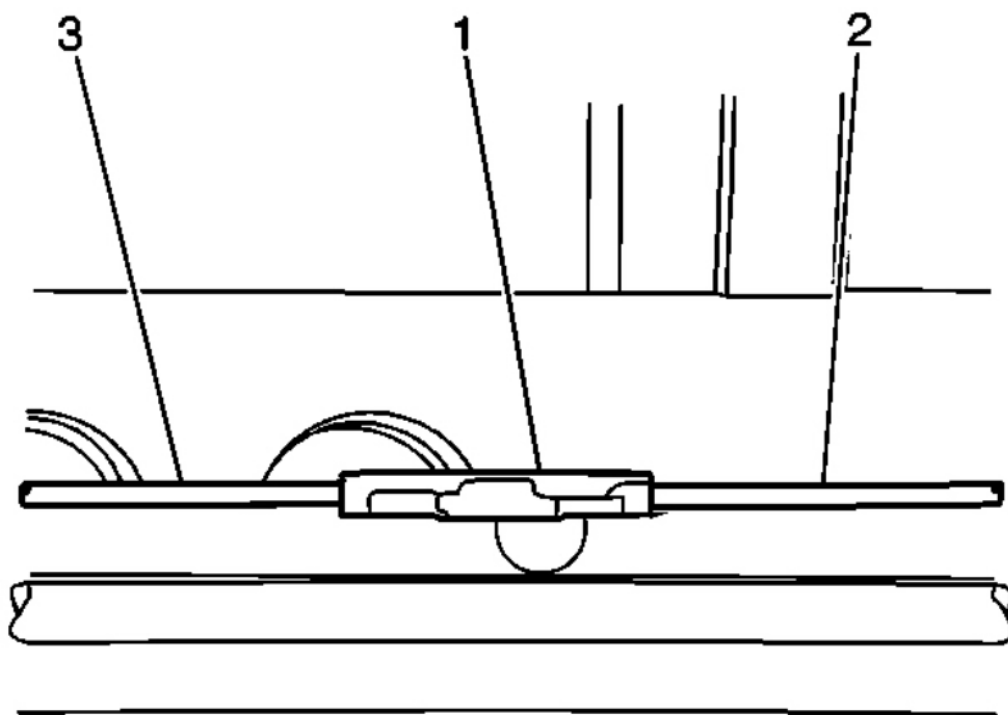


Fig. 13: View Of Park Brake Cable
Courtesy of GENERAL MOTORS CORP.

2. Pull down on the intermediate park brake cable near the park brake connector (2).
3. Remove the front park brake cable (3) from the park brake cable connector (1).

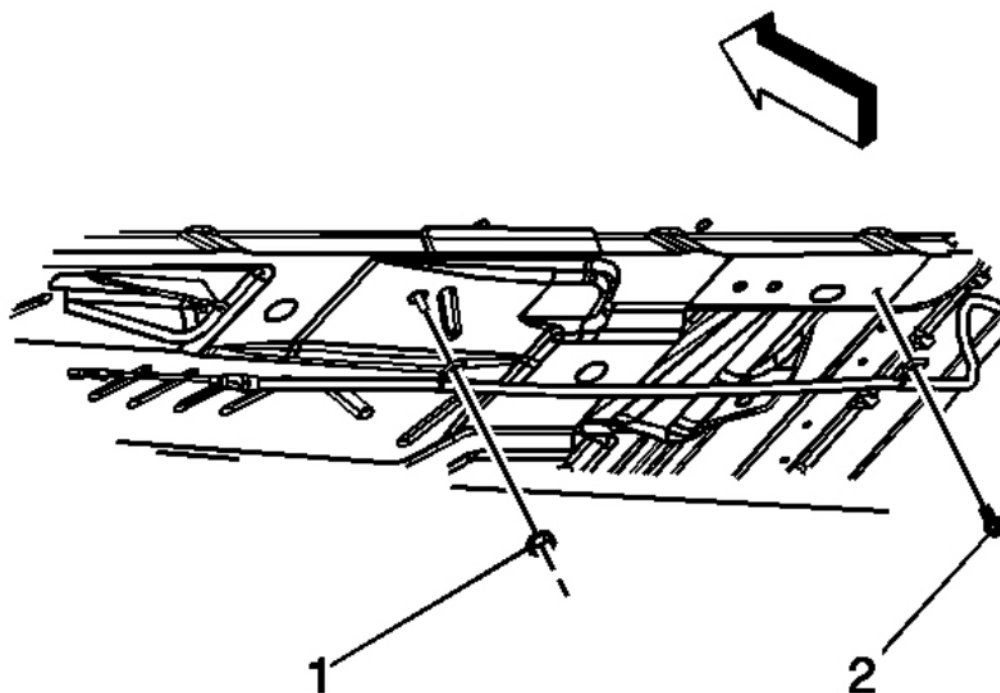


Fig. 14: View Of Park Brake Cable Guide Nut & Bolt
Courtesy of GENERAL MOTORS CORP.

4. Remove the park brake cable guide bolt (2).
5. Remove the park brake cable guide nut (1).
6. Disconnect the park brake cable retainer from the floor pan by compressing the retaining tabs.
7. Lower the vehicle.
8. Remove the left closeout/insulator panel to access the park brake lever assembly. Refer to **Closeout/Insulator Panel Replacement - Left** in Instrument Panel, Gages and Console.
9. Remove the left knee bolster. Refer to **Knee Bolster Replacement** in Instrument Panel, Gages and Console.
10. Remove the left instrument panel end cap. Refer to **Instrument Panel (I/P) Outer Trim Cover Replacement - Left** in Instrument Panel, Gages and Console.
11. Remove the park brake release cable from the handle. Refer to **Park Brake Release Cable Replacement** in Park Brake.

12. Remove the left front carpet retainer. Refer to **Carpet Retainer Replacement - Front** in Interior Trim.
13. Pull the carpet back in order to expose park brake cable.

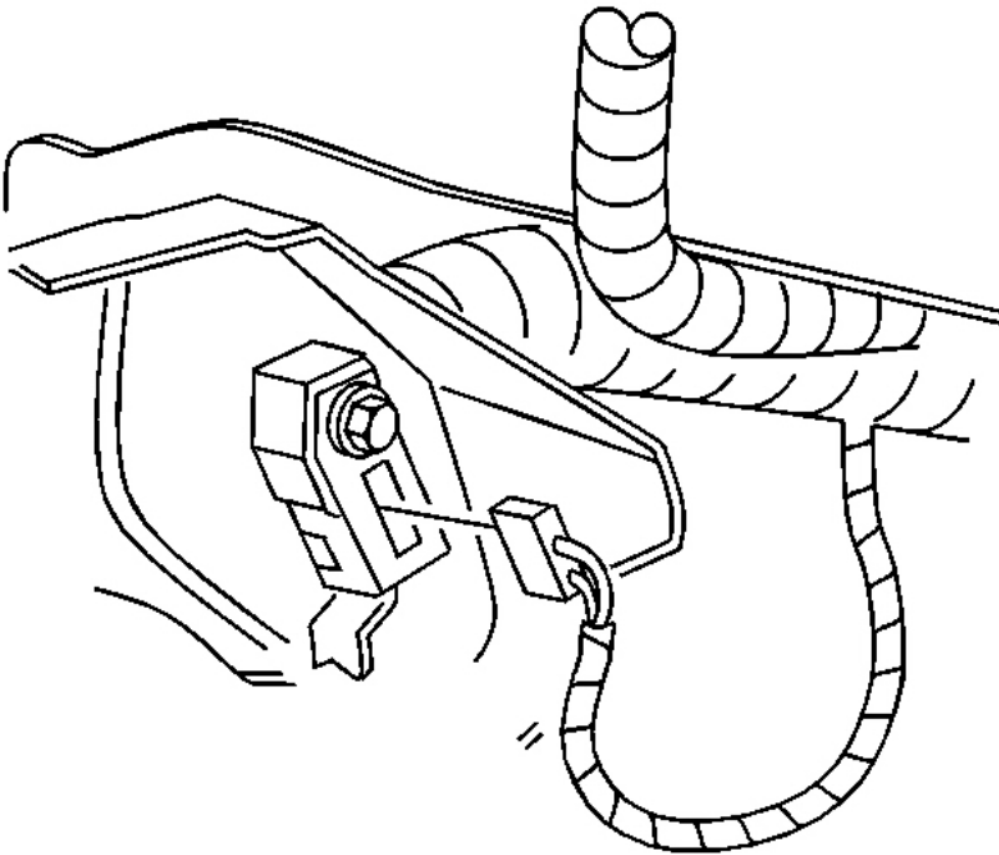


Fig. 15: Identifying Park Brake Warning Switch & Connector
Courtesy of GENERAL MOTORS CORP.

14. Disconnect the electrical connector from the park brake warning lamp switch.
15. Remove the park brake warning lamp switch wiring harness retainer from the park brake pedal assembly and position the harness out of the way.

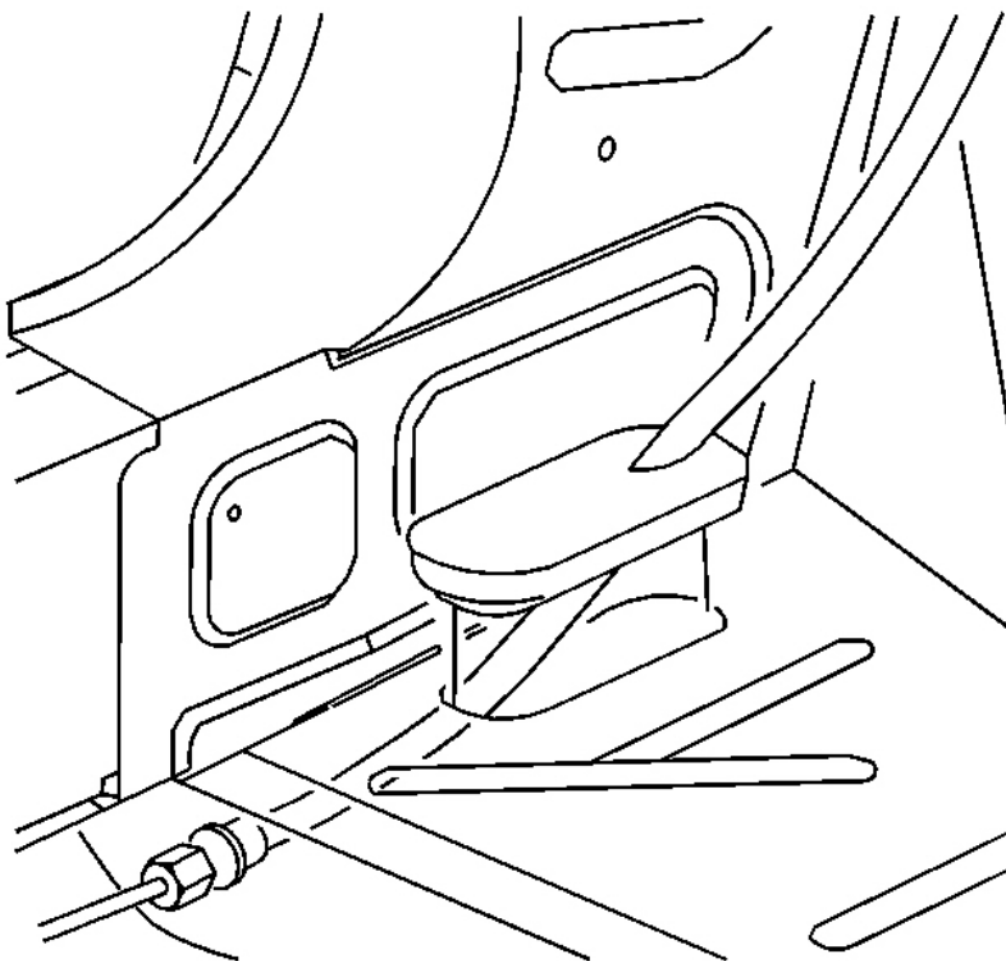


Fig. 16: View Of Floor Pan Grommet
Courtesy of GENERAL MOTORS CORP.

16. Remove the grommet from the floor pan.

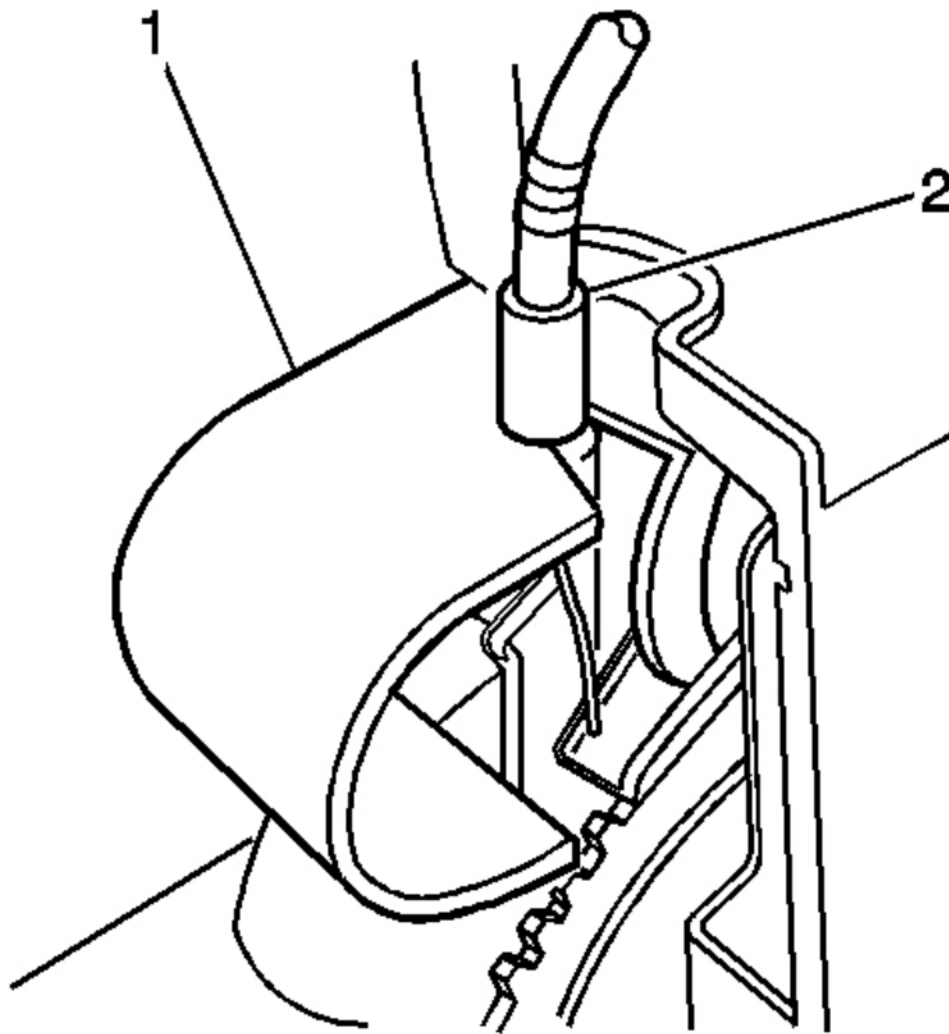


Fig. 17: View Of Park Brake Pedal Assembly & Release Cable
Courtesy of GENERAL MOTORS CORP.

17. Remove the park brake release cable (2) from the park brake pedal assembly (1).

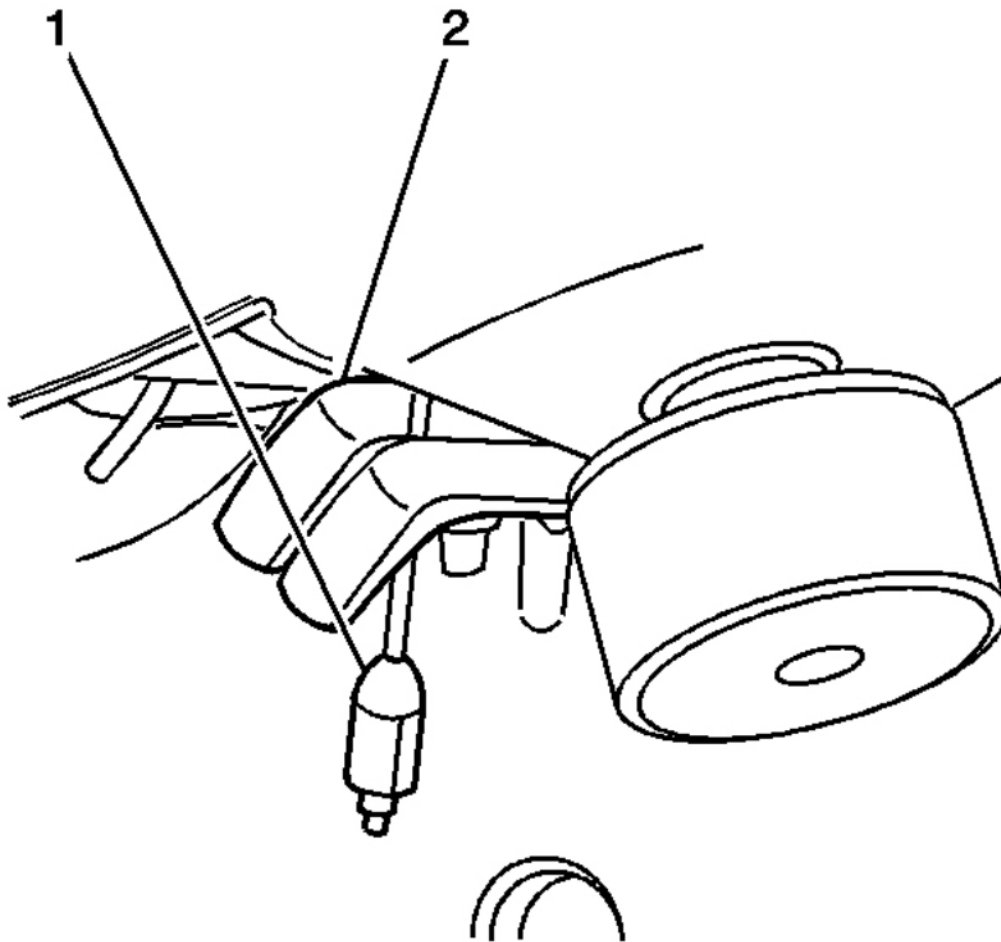


Fig. 18: View Of Park Brake Cable & Pedal Release Lever
Courtesy of GENERAL MOTORS CORP.

18. Disconnect the park brake release cable (1) from the park brake pedal assembly release lever (2).

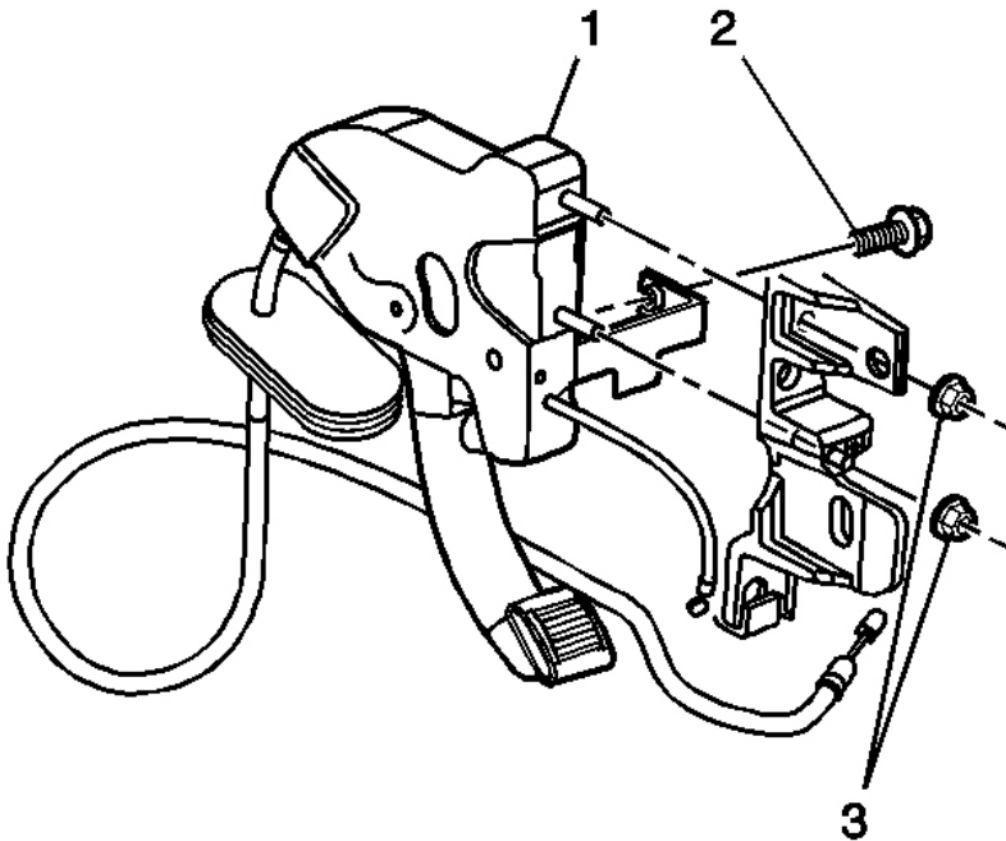


Fig. 19: View Of Park Brake Pedal Assembly
Courtesy of GENERAL MOTORS CORP.

19. Remove the park brake pedal assembly (1) attaching nuts (3).
20. Remove the park brake pedal assembly (1) attaching bolt (2).
21. Remove the park brake pedal and cable assembly (1) from the vehicle.

Installation Procedure

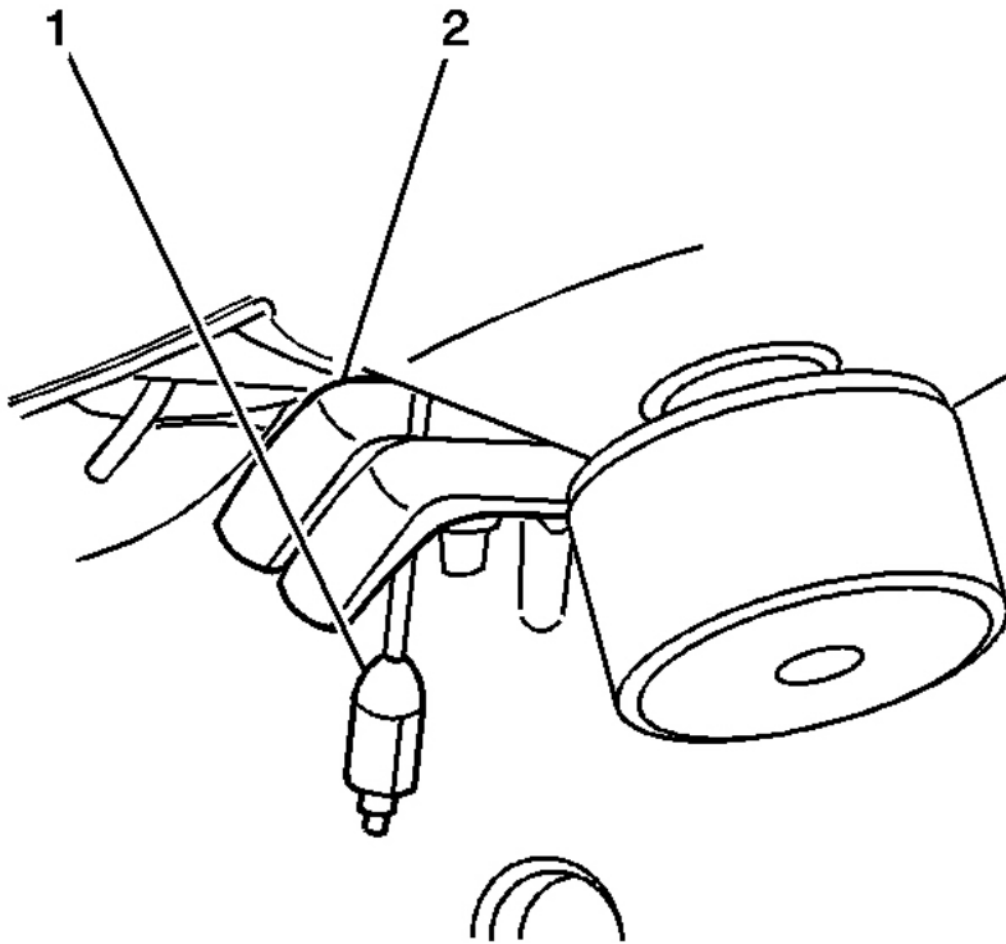


Fig. 20: View Of Park Brake Cable & Pedal Release Lever
Courtesy of GENERAL MOTORS CORP.

1. Connect the park brake release cable (1) to the park brake pedal assembly release lever (2).

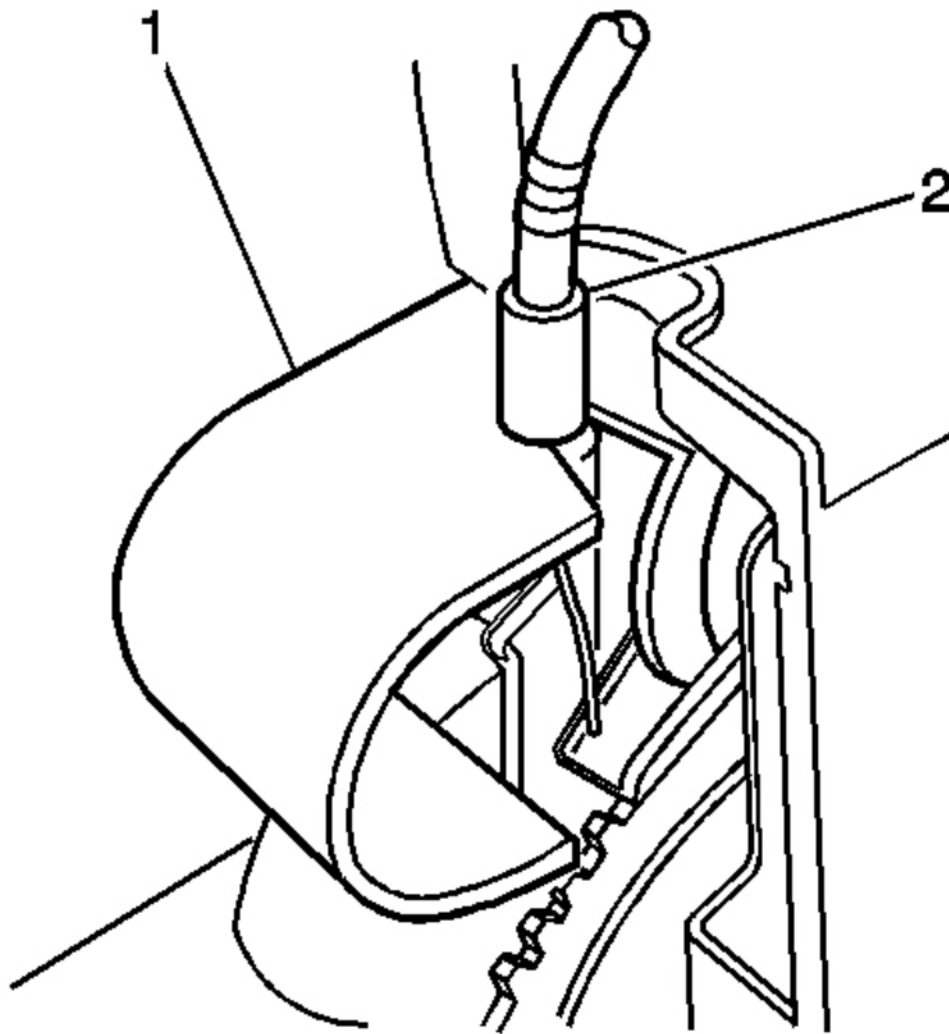


Fig. 21: View Of Park Brake Pedal Assembly & Release Cable
Courtesy of GENERAL MOTORS CORP.

2. Install the park brake release cable housing (2) to the park brake pedal assembly (1).

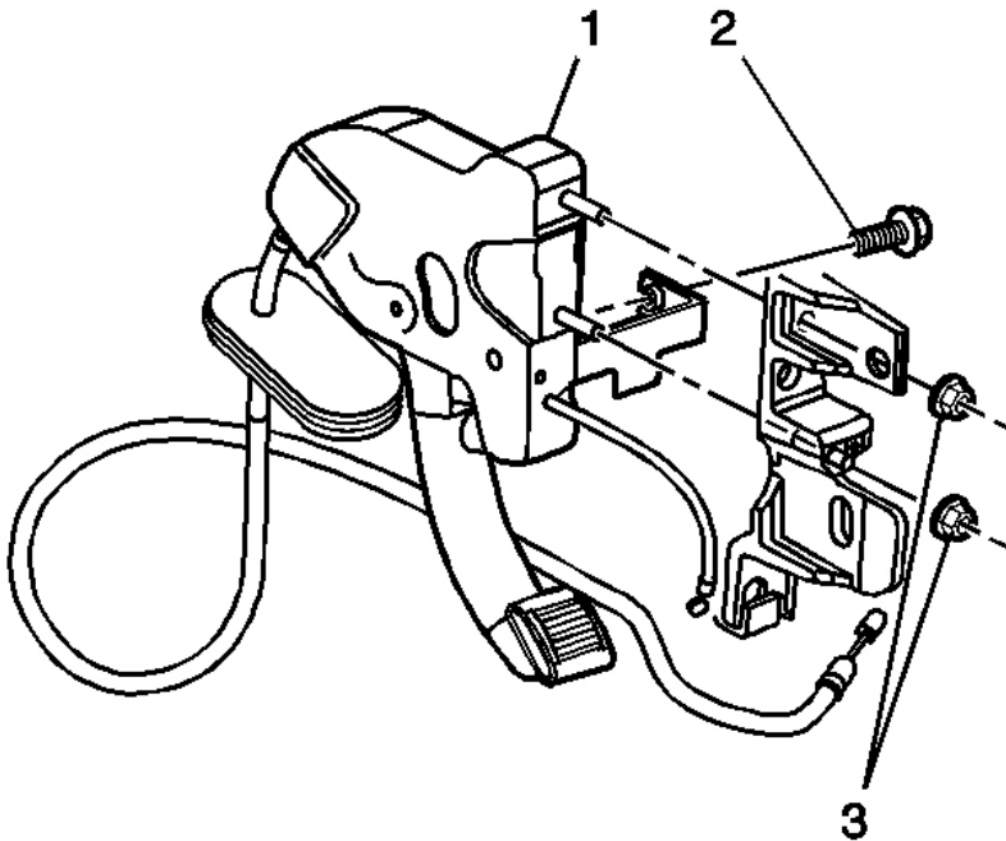


Fig. 22: View Of Park Brake Pedal Assembly
Courtesy of GENERAL MOTORS CORP.

3. Install the park brake pedal and front park brake cable assembly (1) to the mounting bracket.

NOTE: Refer to Fastener Notice in Cautions and Notices.

4. Install the park brake pedal assembly attaching nuts (3).

Tighten: Tighten the park brake pedal assembly mounting nuts to 25 N.m (18 lb ft).

5. Install the park brake pedal assembly cross bar mounting bolt (2).

Tighten: Tighten the park brake pedal cross bar mounting bolt to 10 N.m (88 lb in).

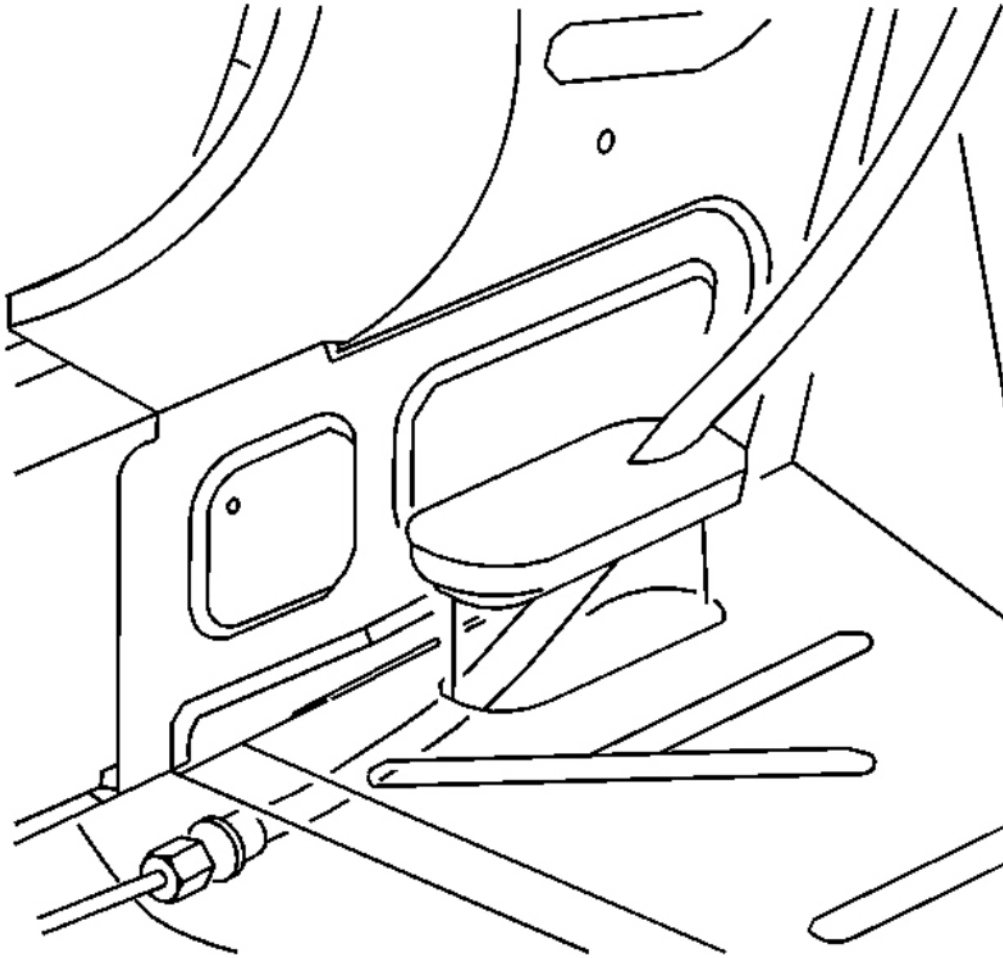


Fig. 23: View Of Floor Pan Grommet
Courtesy of GENERAL MOTORS CORP.

6. Install the grommet to the floor pan.

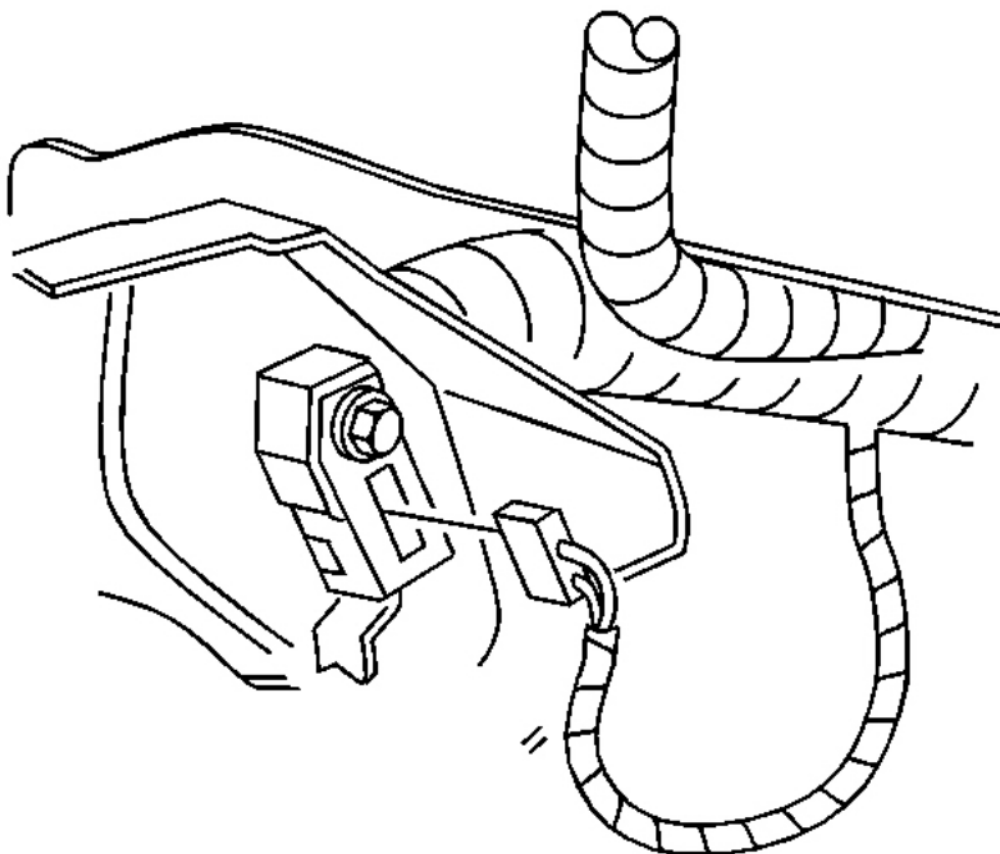


Fig. 24: Identifying Park Brake Warning Switch & Connector
Courtesy of GENERAL MOTORS CORP.

7. Connect the electrical connector to the park brake warning lamp switch.
8. Install the park brake warning lamp switch wiring harness retainer to the park brake pedal assembly.
9. Reposition the carpet.
10. Install the park brake release cable to the handle. Refer to **Park Brake Release Cable Replacement** in Park Brake.
11. Install the left front carpet retainer. Refer to **Carpet Retainer Replacement - Front** in Interior Trim.

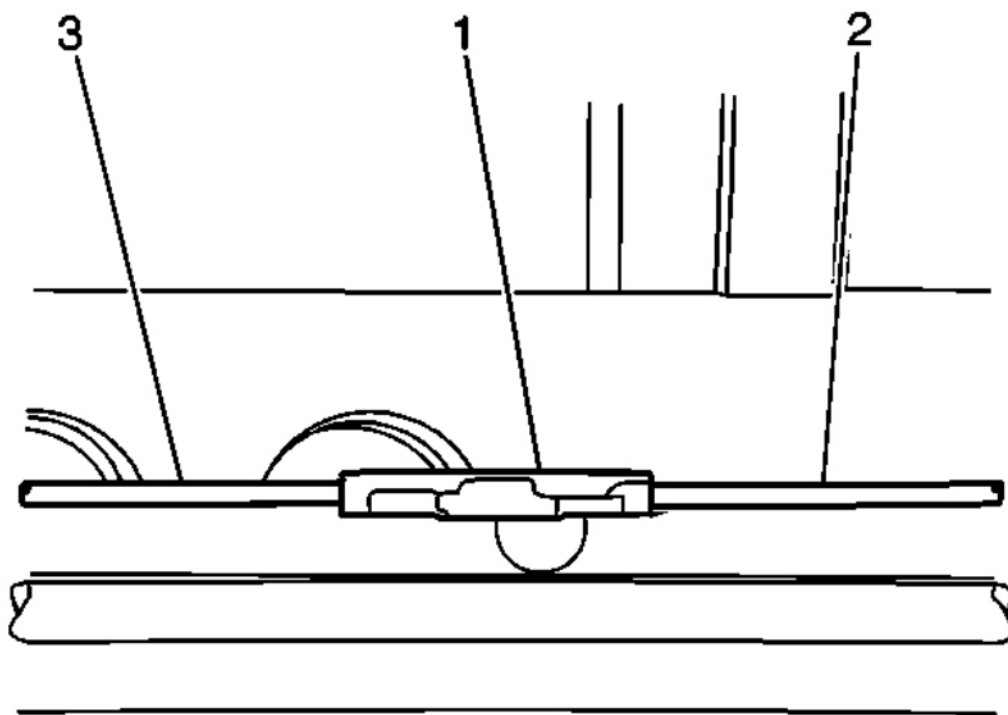


Fig. 25: View Of Park Brake Cable
Courtesy of GENERAL MOTORS CORP.

12. Raise the vehicle. Refer to **Lifting and Jacking the Vehicle** in General Information.
13. Install the park brake cable retainer to the floor pan by pulling the park brake cable retainer into place.
14. Connect the front park brake cable (3) to the park brake cable connector (1).
15. Lower the vehicle.
16. Install the left instrument panel end cap. Refer to **Instrument Panel (I/P) Outer Trim Cover Replacement - Left** in Instrument Panel, Gages and Console.

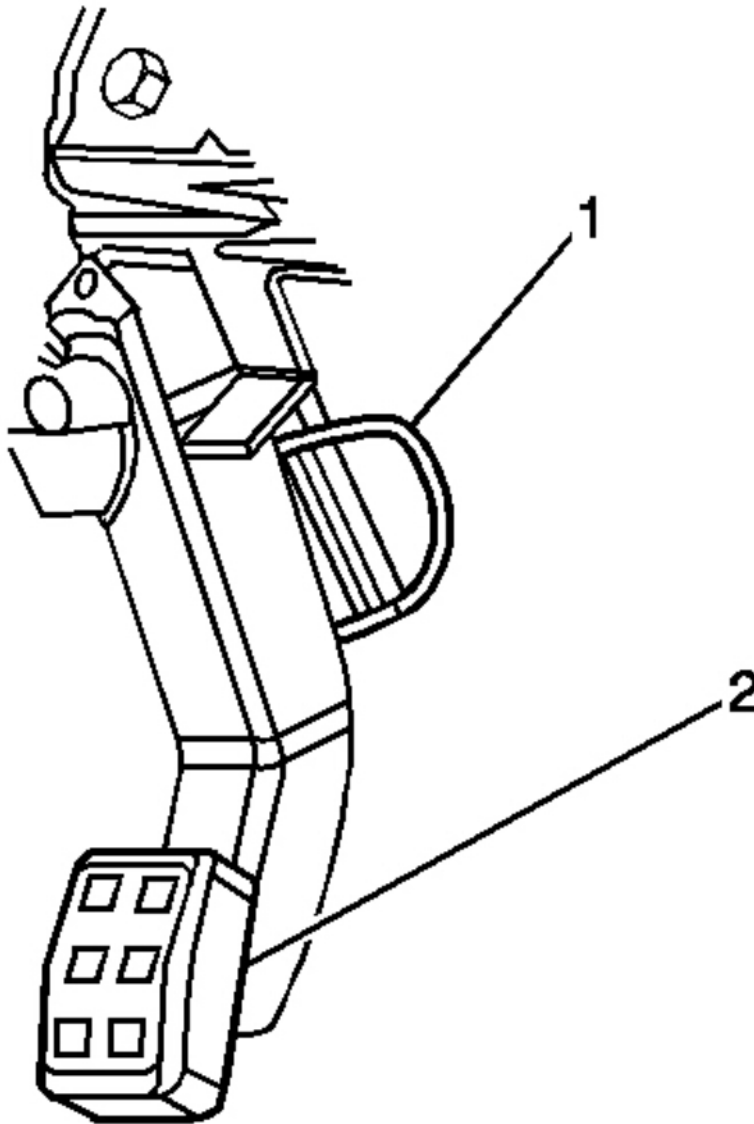


Fig. 26: View Of Park Brake Pedal & Cable Tension Set Pin
Courtesy of GENERAL MOTORS CORP.

17. If a new park brake pedal assembly is being installed, the cable tension set pin has to be removed to set the cable tension.
18. To set the park brake cable tension, rotate the pin (1) forward then rotate the pin to the left.

19. Remove the pin.
20. Apply the park brake pedal (2) 3 full cycles to complete the tension set.
21. Install the left knee bolster. Refer to **Knee Bolster Replacement** in Instrument Panel, Gages and Console.
22. Install the left closeout/insulator panel. Refer to **Closeout/Insulator Panel Replacement - Left** in Instrument Panel, Gages, and Console.

PARK BRAKE WARNING LAMP SWITCH REPLACEMENT

Removal Procedure

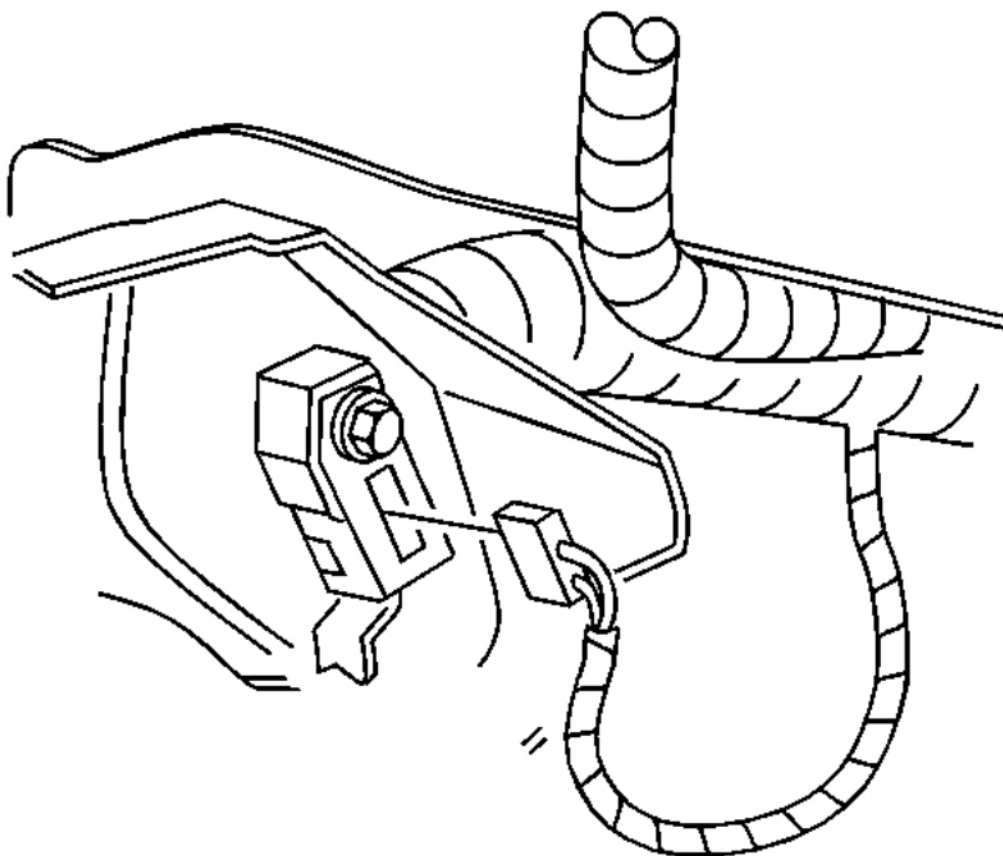


Fig. 27: Identifying Park Brake Warning Switch & Connector
Courtesy of GENERAL MOTORS CORP.

1. Remove the left sound insulator panel. Refer to **Closeout/Insulator Panel Replacement - Left** in Instrument Panel, Gages and Console.
2. Disconnect the electrical connector from the park brake warning lamp switch.
3. Remove the park brake warning lamp switch retaining bolt.
4. Remove the park brake warning lamp switch.

Installation Procedure

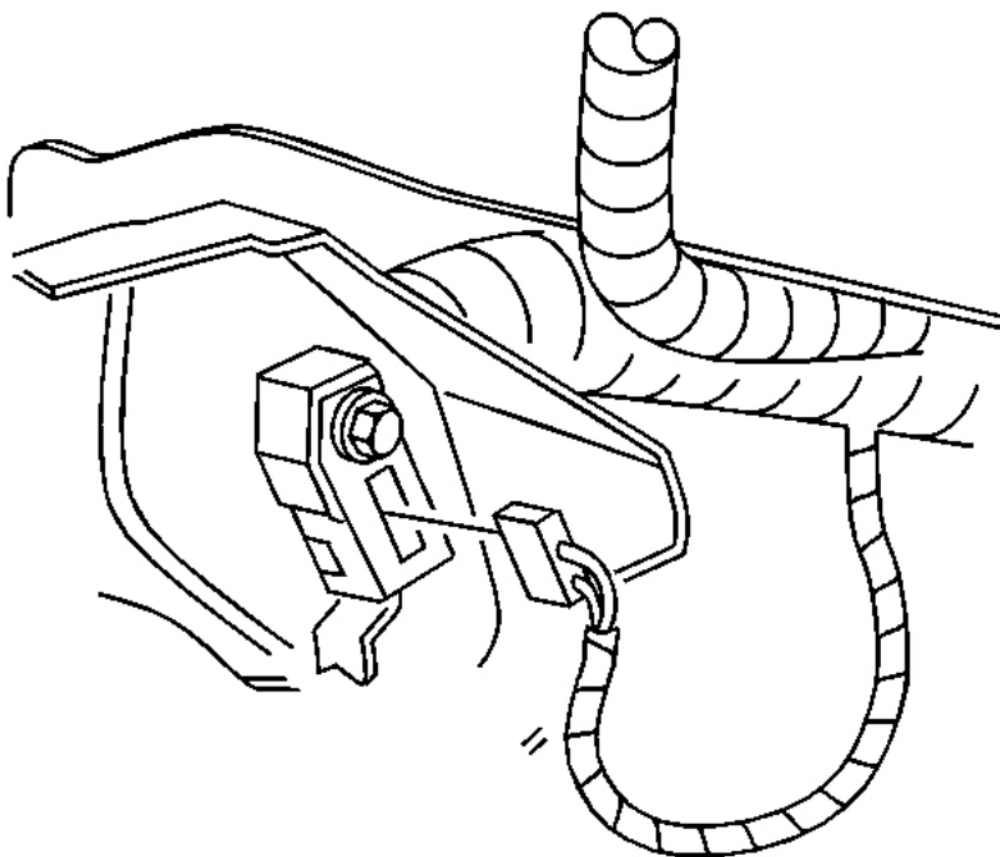


Fig. 28: Identifying Park Brake Warning Switch & Connector
Courtesy of GENERAL MOTORS CORP.

1. Install the park brake warning lamp switch to the park brake lever assembly. Align the locator pin to the locator hole.

NOTE: Refer to Fastener Notice in Cautions and Notices.

2. Install the park brake switch retaining bolt.

Tighten: Tighten the bolt to 2 N.m (18 lb in).

3. Connect the park brake warning lamp electrical connector to the park brake warning lamp switch.
4. Install the left sound insulator panel. Refer to Closeout/Insulator Panel Replacement - Left in Instrument Panel, Gages and Console.

PARK BRAKE CABLE REPLACEMENT - INTERMEDIATE

Tools Required

J 37043 Parking Brake Cable Release Tool. See Special Tools and Equipment.

Removal Procedure

1. Ensure that the park brake is fully released.

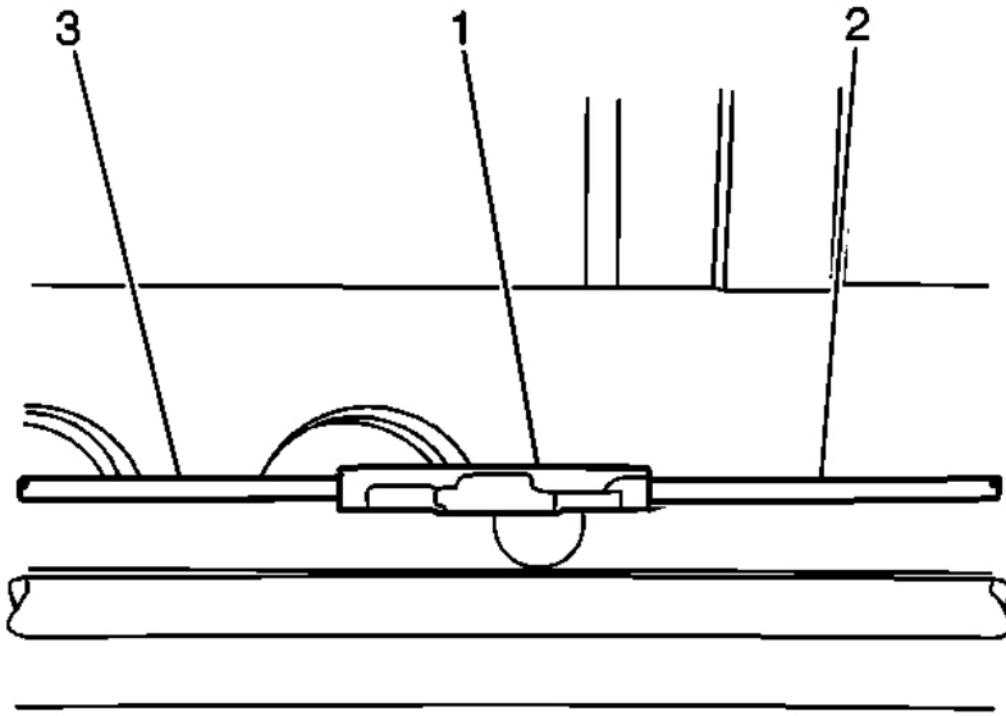


Fig. 29: View Of Park Brake Cable
Courtesy of GENERAL MOTORS CORP.

2. Raise the vehicle and support. Refer to **Lifting and Jacking the Vehicle** in General Information.
3. Pull down on the intermediate park brake cable (2) near the park brake connector (1).
4. Remove the intermediate park brake cable (2) from the park brake cable connector (1).

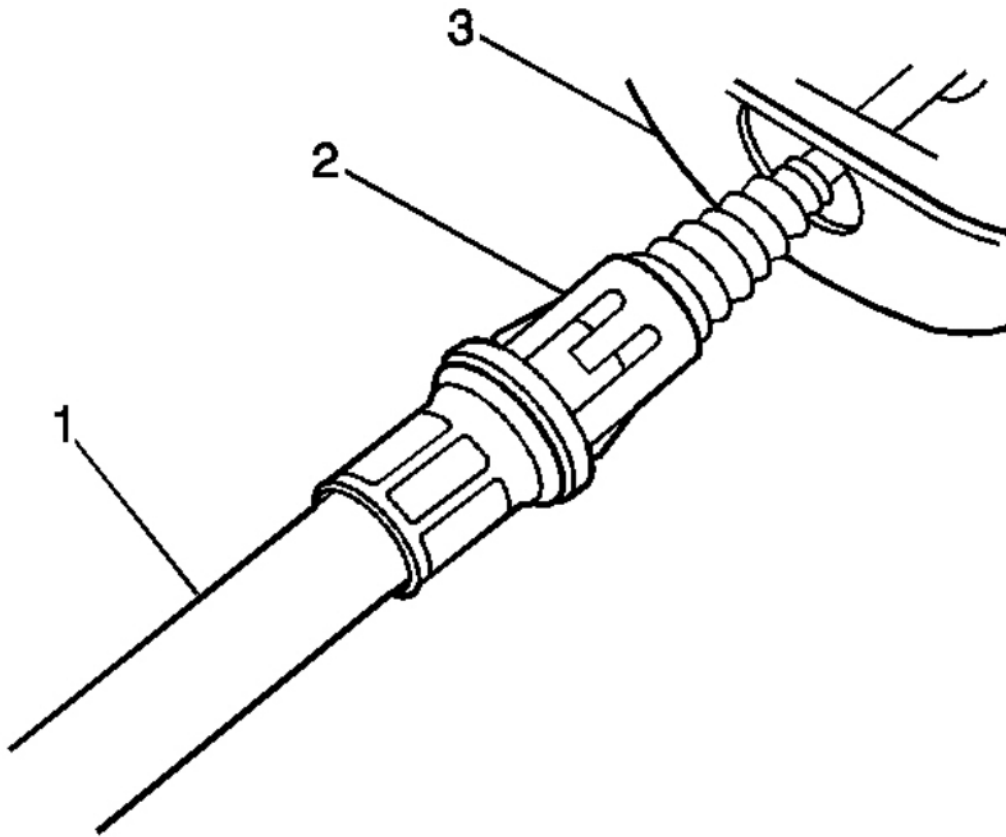


Fig. 30: View Of Intermediate Park Brake Cable Housing & Locking Retainer
Courtesy of GENERAL MOTORS CORP.

5. Use the **J 37043** in order to depress the locking retainer (2) of the intermediate park brake cable housing (1). See **Special Tools and Equipment**.
6. Remove the intermediate park brake cable from the floor pan bracket (3).

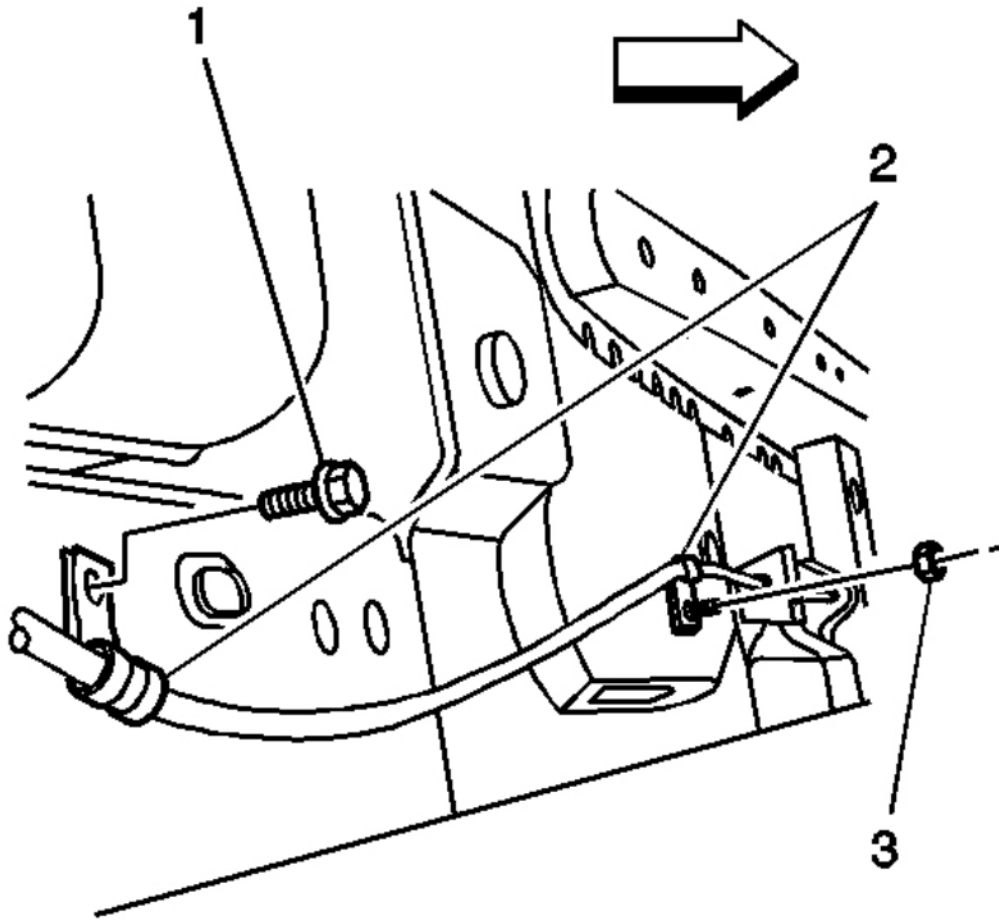


Fig. 31: View Of Park Brake Cable Guides
Courtesy of GENERAL MOTORS CORP.

7. Remove the park brake cable guide nut (3) from the mounting stud.
8. Remove the park brake cable guide bolt (1) from the floor pan.
9. Remove the park cable guides (2).

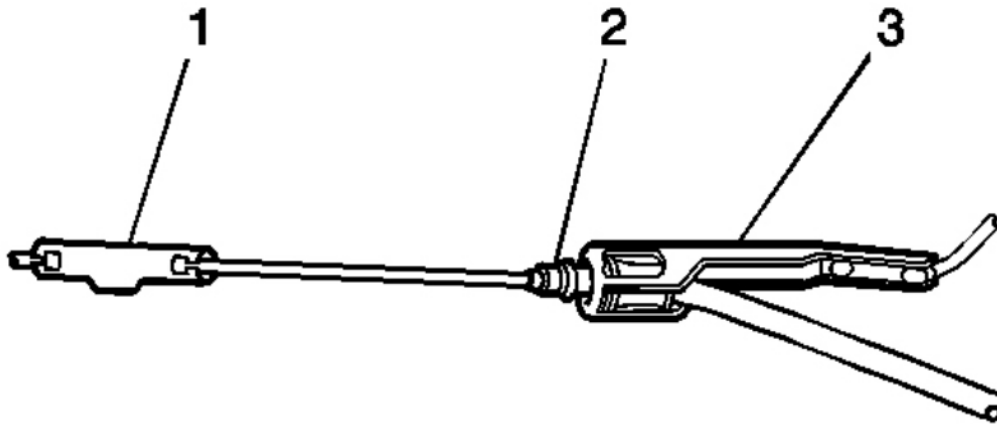


Fig. 32: View Of Intermediate Cable, Right Rear Park Brake Cable Connector & Rear Equalizer

Courtesy of GENERAL MOTORS CORP.

10. Disconnect the intermediate cable (2) from the rear equalizer (3).
11. Disconnect the intermediate cable (2) from the right rear park brake cable connector (1).
12. Disconnect the intermediate cable housing from the rear cable housing retaining bracket by depressing the locking retainer.
13. Remove the intermediate cable from the vehicle.

Installation Procedure

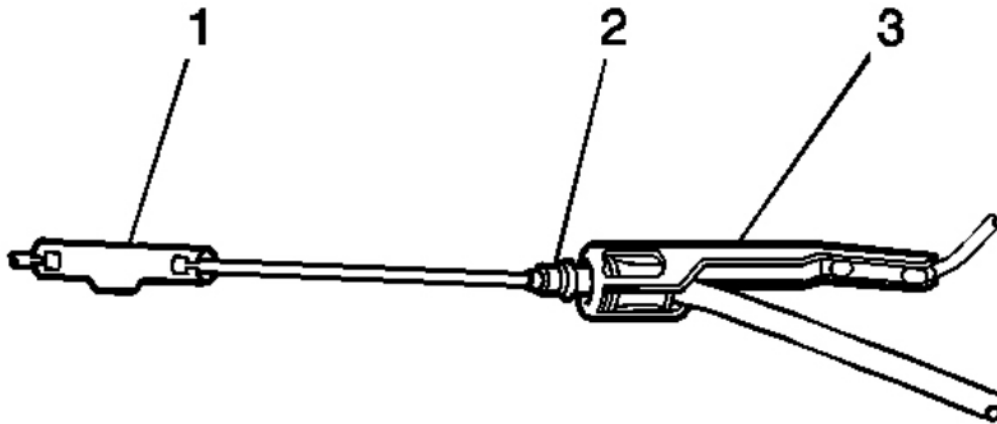


Fig. 33: View Of Intermediate Cable, Right Rear Park Brake Cable Connector & Rear Equalizer

Courtesy of GENERAL MOTORS CORP.

1. Route and install the intermediate park brake cable into park brake cable retaining bracket.
2. Properly seat the intermediate park cable into the park brake cable retaining bracket.
3. Connect the right rear parking brake cable connector (1) to the intermediate park brake cable (2).
4. Connect the intermediate park brake cable (2) to the equalizer (3).

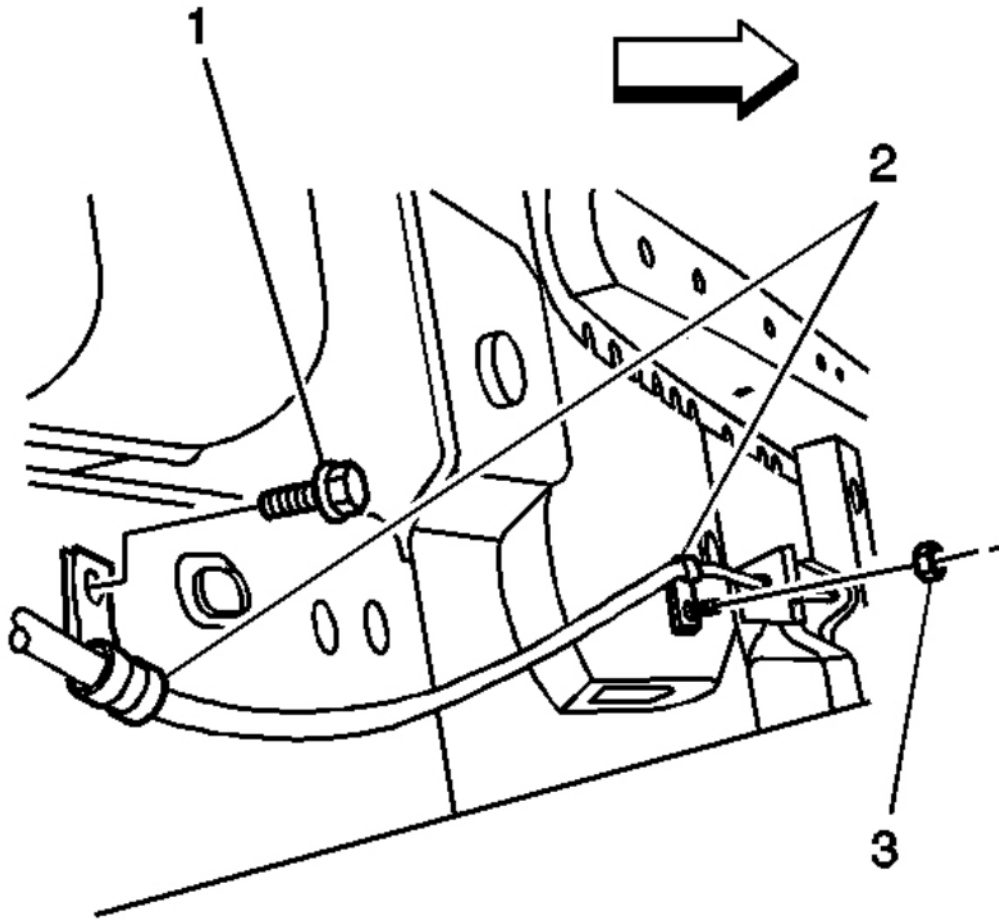


Fig. 34: View Of Park Brake Cable Guides
Courtesy of GENERAL MOTORS CORP.

5. Install the park cable guides (2).

NOTE: Refer to Fastener Notice in Cautions and Notices.

6. Install the park brake cable guide bolt (1) to the floor pan.

Tighten: Tighten the park brake cable guide bolt to 10 N.m (88 lb in).

7. Install the park brake cable guide nut (3) to the mounting stud.

Tighten: Tighten the park brake cable guide nut to 10 N.m (88 lb in).

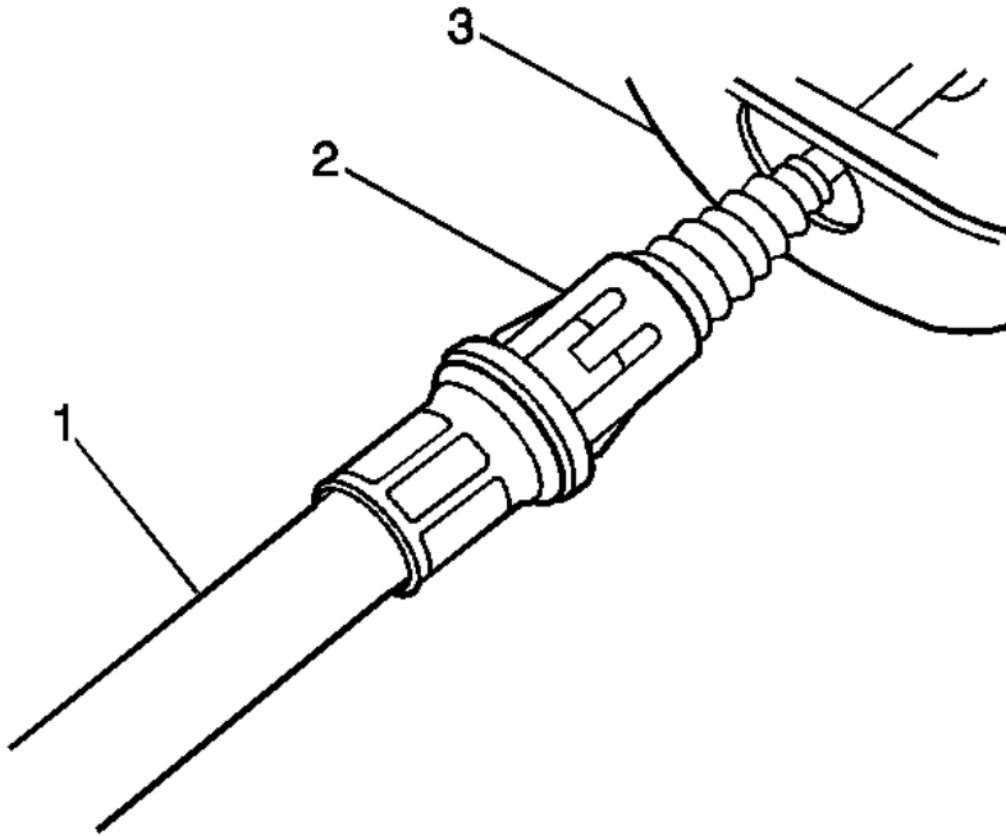


Fig. 35: View Of Intermediate Park Brake Cable Housing & Locking Retainer
Courtesy of GENERAL MOTORS CORP.

8. Connect intermediate park brake cable housing (1) to the floor pan bracket (3).
9. Properly seat the intermediate park brake cable housing retainer to the floor pan.

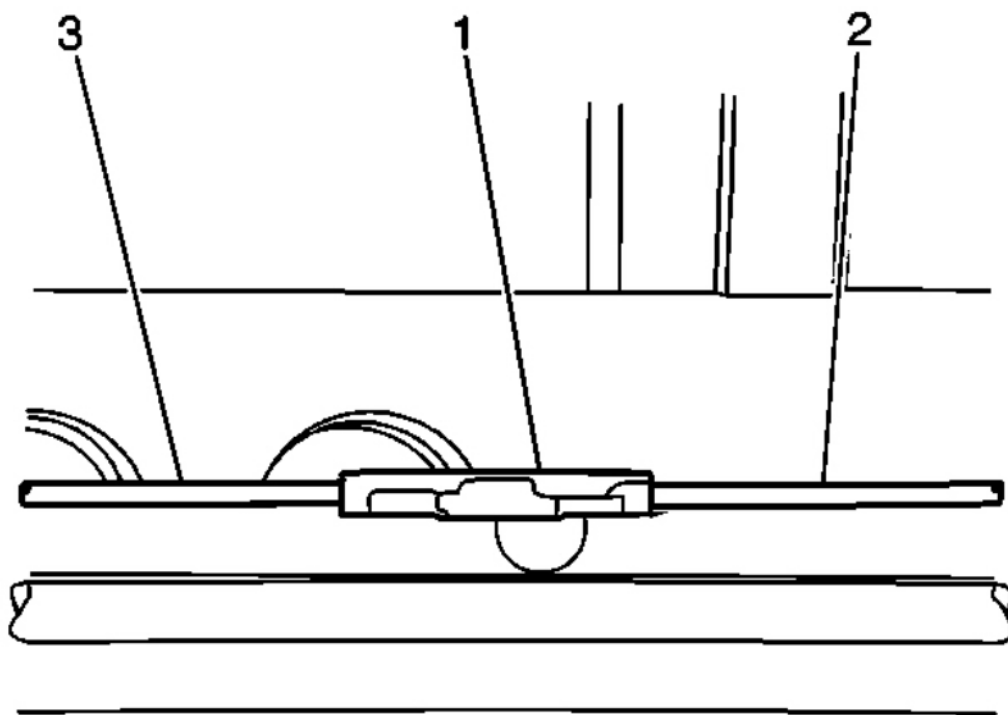


Fig. 36: View Of Park Brake Cable
Courtesy of GENERAL MOTORS CORP.

10. Insert the intermediate park brake cable (2) into the cable retaining bracket and lock the intermediate park brake cable into place.
11. Connect the front of the intermediate park brake cable (2) to the park brake cable connector (1).
12. Lower the vehicle.
13. To ensure that the park brake cable retainers are seated, cycle the park brake pedal 1 to 2 times.

PARK BRAKE CABLE REPLACEMENT - LEFT REAR

Tools Required

J 37043 Parking Brake Cable Release Tool. See **Special Tools and Equipment**.

Removal Procedure

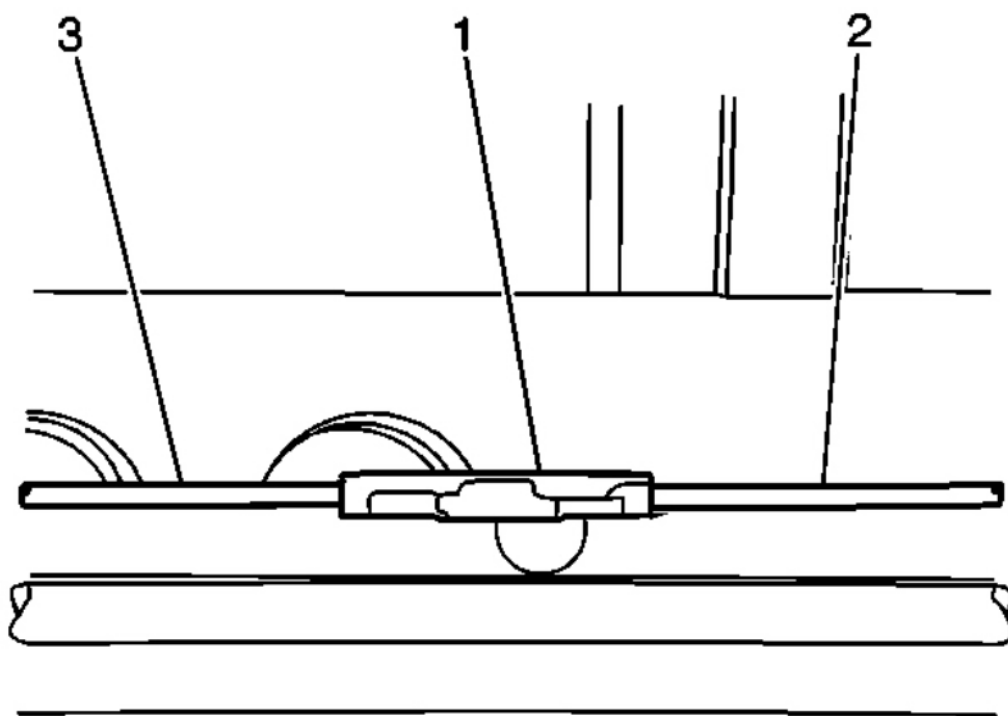


Fig. 37: View Of Park Brake Cable
Courtesy of GENERAL MOTORS CORP.

1. Raise the vehicle and suitably support. Refer to **Lifting and Jacking the Vehicle** in General Information.
2. Remove the left rear tire and wheel assembly. Refer to **Tire and Wheel Removal and Installation** in Tires and Wheels.
3. Pull down on the intermediate park brake cable (2) near the park brake connector (1).
4. Disconnect the intermediate park brake cable (2) from the park brake cable connector (1).

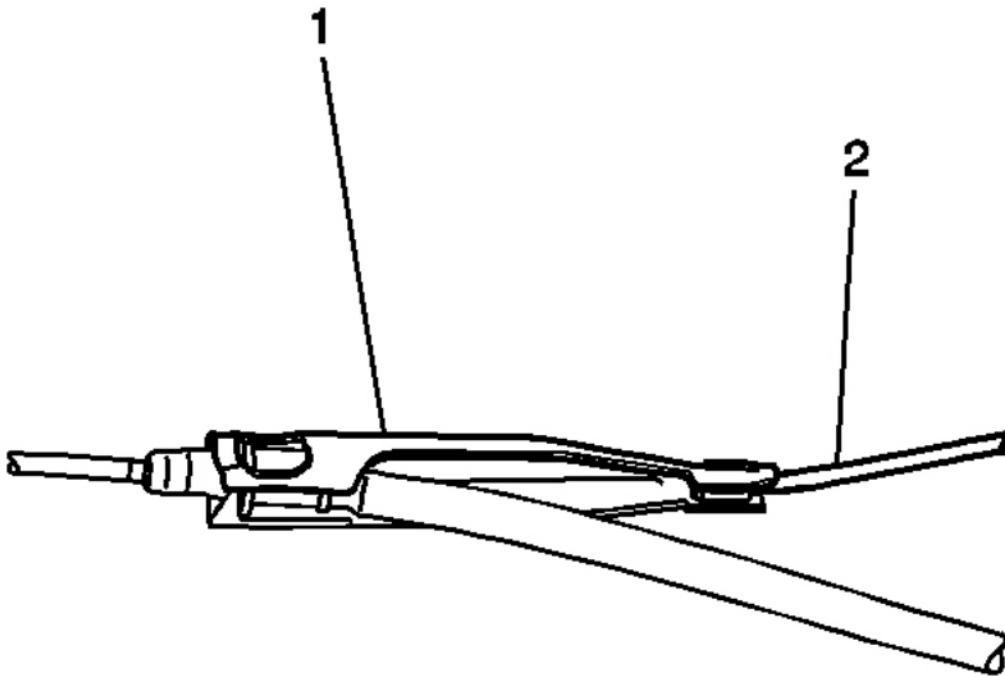


Fig. 38: Disconnecting/Reconnecting Park Brake Cable At Equalizer
Courtesy of GENERAL MOTORS CORP.

5. Disconnect the left rear park brake cable (2) from the equalizer (1).

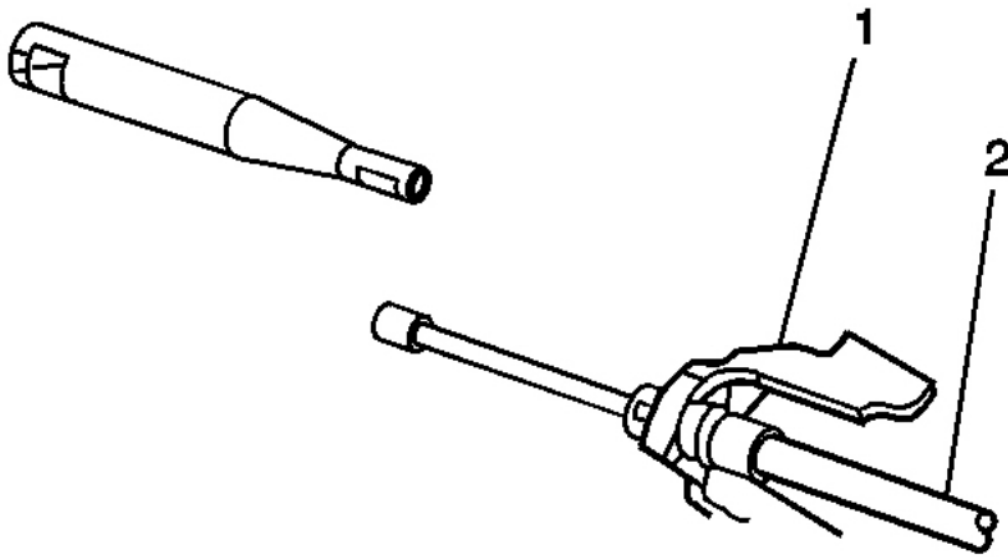


Fig. 39: Removing/Installing Park Brake Cable Components
Courtesy of GENERAL MOTORS CORP.

6. Use the **J 37043** in order to depress the left rear park brake cable retainer. See **Special Tools and Equipment**.
7. Remove the left rear park brake cable (2) from the left rear park brake cable support bracket (1).

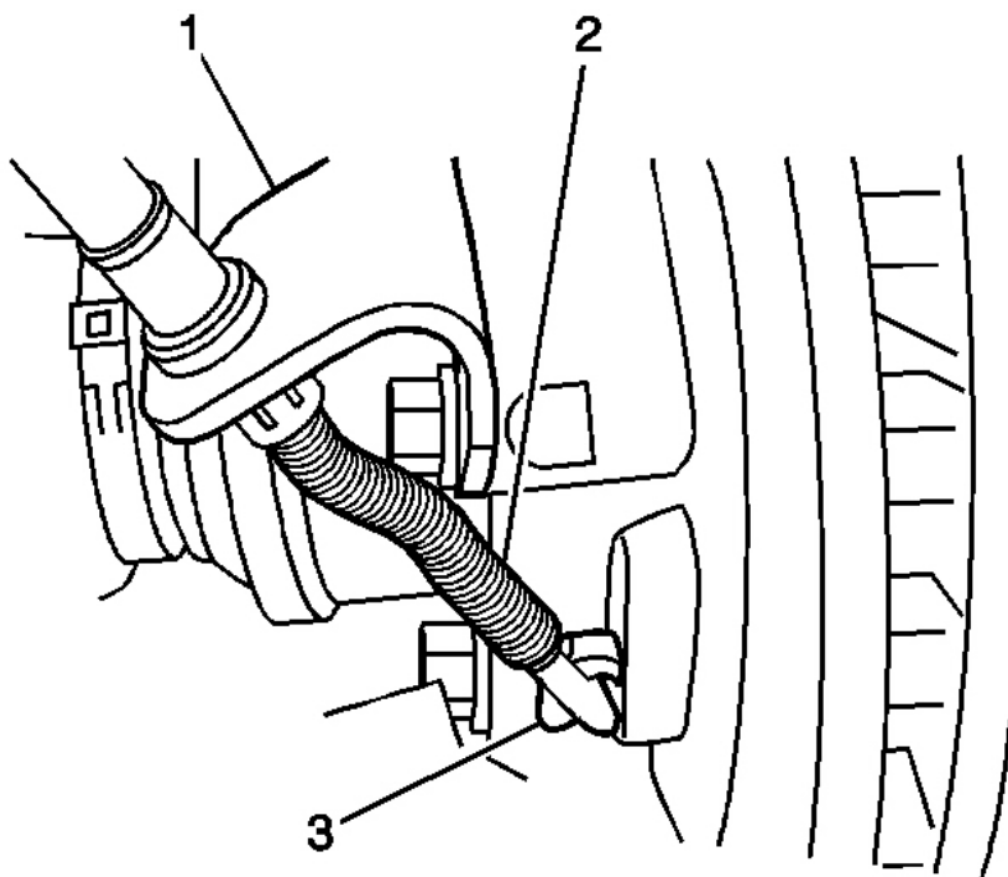


Fig. 40: View Of Left Rear Park Brake Cable, Support Bracket & Actuator Lever
Courtesy of GENERAL MOTORS CORP.

8. Disconnect the left rear park brake cable (2) from the left rear park brake actuator lever (3).
9. Use the **J 37043** in order to depress the retainer on the left rear park brake cable (2). See **Special Tools and Equipment**.
10. Remove the left rear park brake cable (2) from the left rear park brake cable support bracket (1).

Installation Procedure

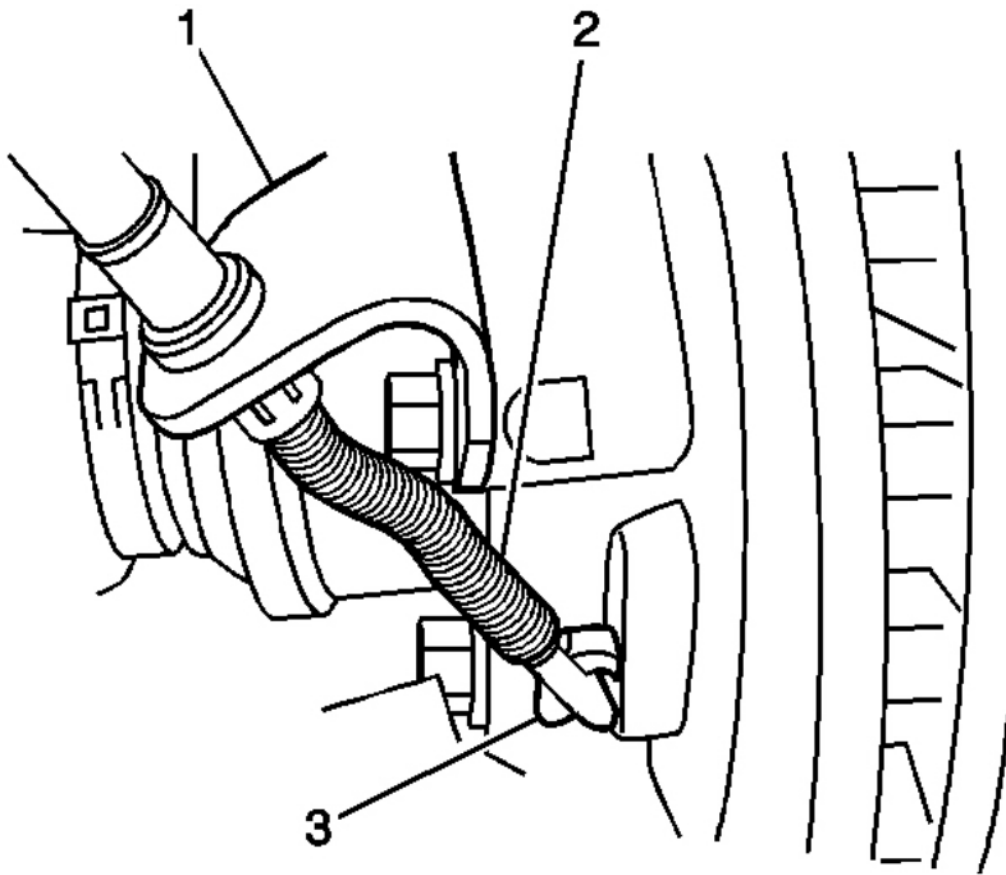


Fig. 41: View Of Left Rear Park Brake Cable, Support Bracket & Actuator Lever
Courtesy of GENERAL MOTORS CORP.

1. Install the left rear park brake cable (2) to the left rear park brake cable bracket (1).
2. Ensure that the locking tabs are properly seated.
3. Connect the left rear park brake cable (2) to the left rear park brake actuator lever (3).

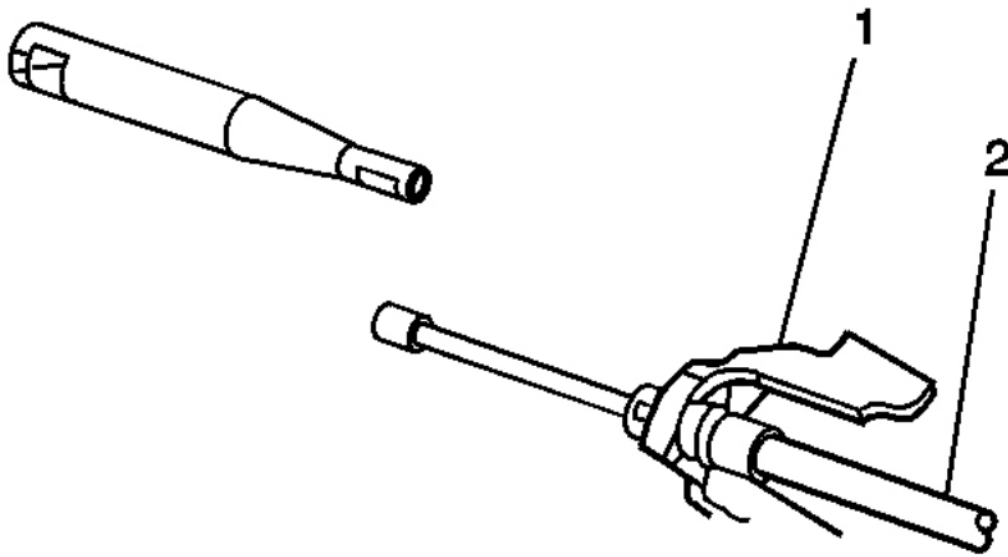


Fig. 42: Removing/Installing Park Brake Cable Components
Courtesy of GENERAL MOTORS CORP.

4. Install the left rear park brake cable (2) to the left rear support mounting bracket (1).
5. Ensure that the locking tabs are properly seated.

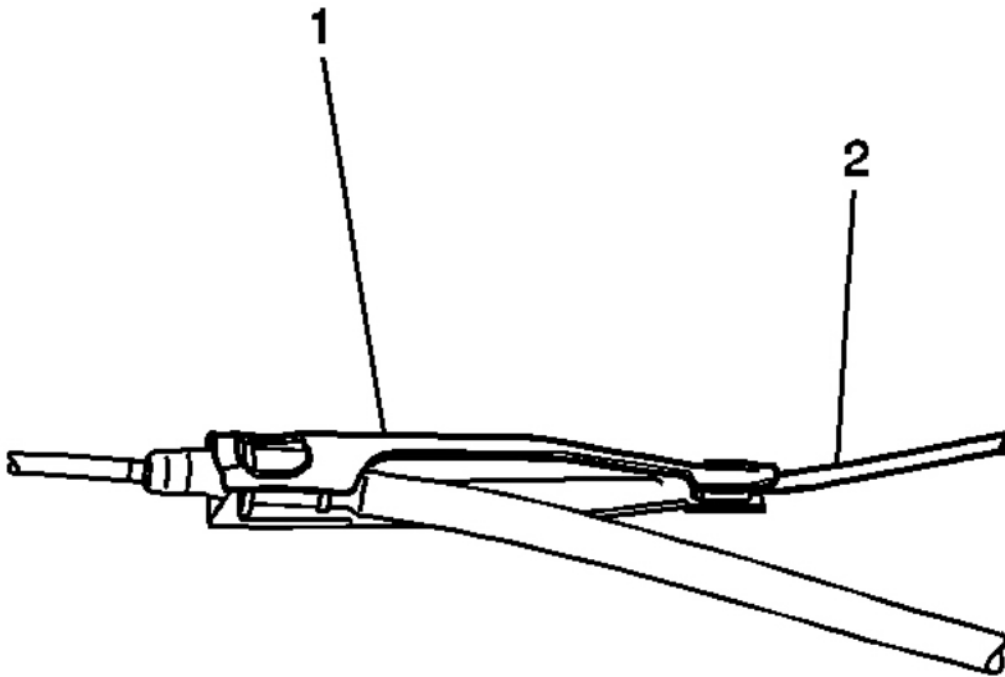


Fig. 43: Disconnecting/Reconnecting Park Brake Cable At Equalizer
Courtesy of GENERAL MOTORS CORP.

6. Connect the left rear park brake cable (2) to the equalizer (1).

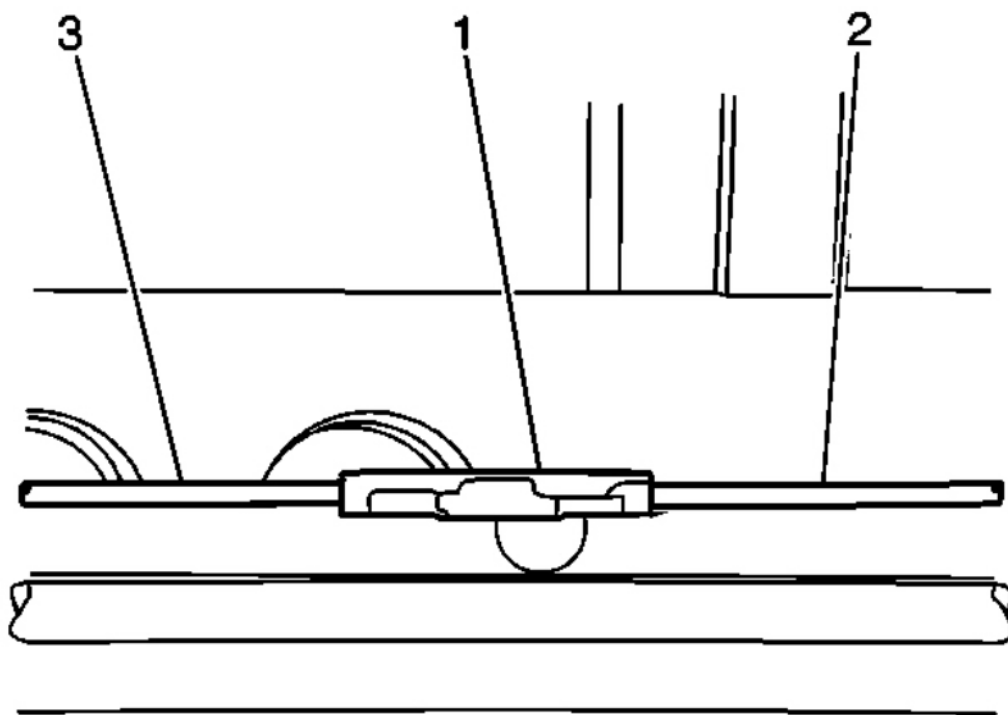


Fig. 44: View Of Park Brake Cable
Courtesy of GENERAL MOTORS CORP.

7. Connect the intermediate park brake cable (2) to the park brake cable connector (1).
8. Install the left rear tire and wheel assembly. Refer to **Tire and Wheel Removal and Installation** in Tires and Wheels.
9. Lower the vehicle.
10. To ensure that the park brake cable retainers are seated, cycle the park brake pedal 1 to 2 times.

PARK BRAKE CABLE REPLACEMENT - RIGHT REAR

Tools Required:

J 37043 Park Brake Cable Release Tool. See **Special Tools and Equipment**.

CAUTION: Refer to **Brake Dust Caution** in Cautions and Notices.

Removal Procedure

1. Raise the vehicle and suitably support. Refer to **Lifting and Jacking the Vehicle** in General Information.
2. Remove the right rear tire and wheel assembly. Refer to **Tire and Wheel Removal and Installation** in Tires and Wheels.

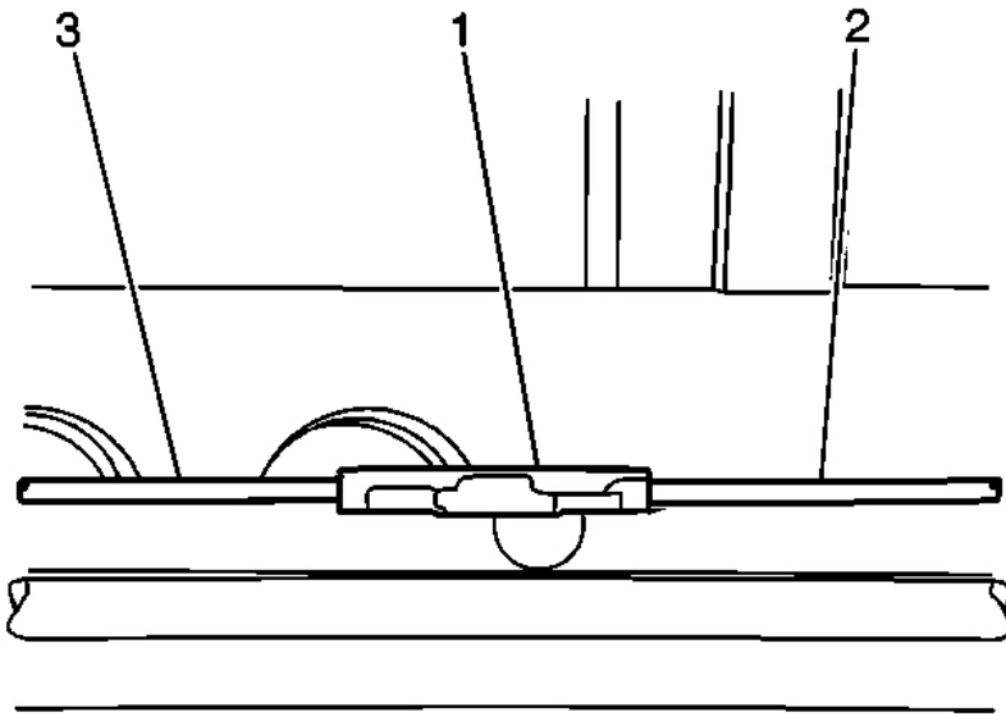


Fig. 45: View Of Park Brake Cable
Courtesy of GENERAL MOTORS CORP.

3. Pull down on the intermediate park brake cable (2) near the park brake cable connector (1).
4. Disconnect the intermediate park brake cable (2) from the park brake connector (1).

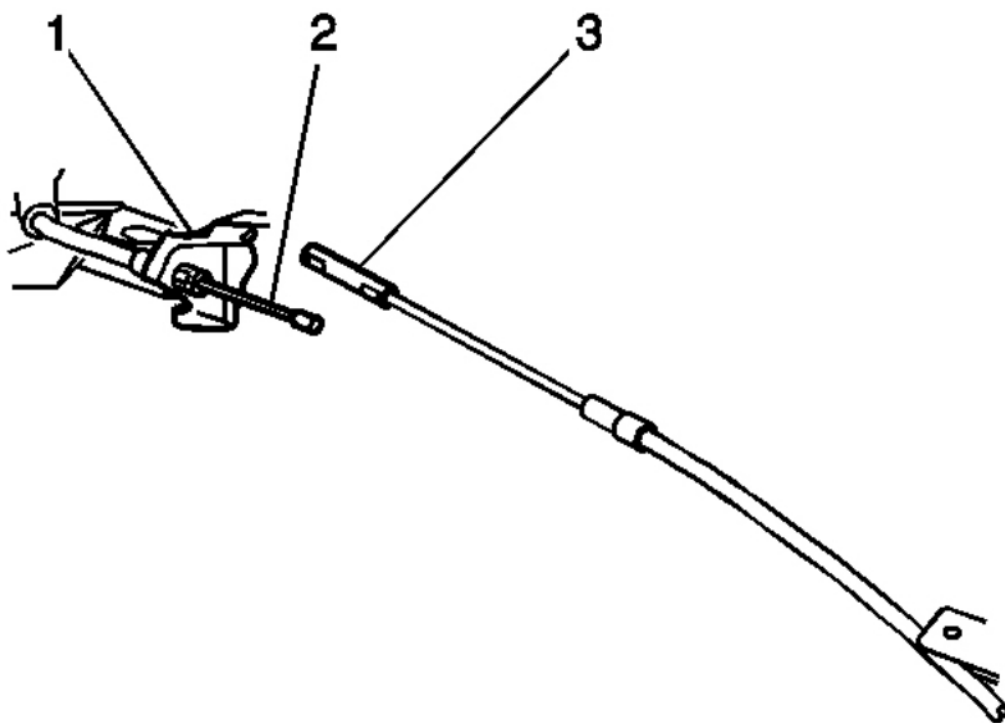


Fig. 46: Park Brake Cable And Intermediate Park Brake Cable Connector
Courtesy of GENERAL MOTORS CORP.

5. Disconnect the right rear park brake cable (2) from the intermediate park brake cable connector (3).
6. Use the **J 37043** in order to depress the right rear brake cable retainer. See **Special Tools and Equipment**.
7. Remove the right rear park brake cable (2) from the right rear park brake cable bracket (1).

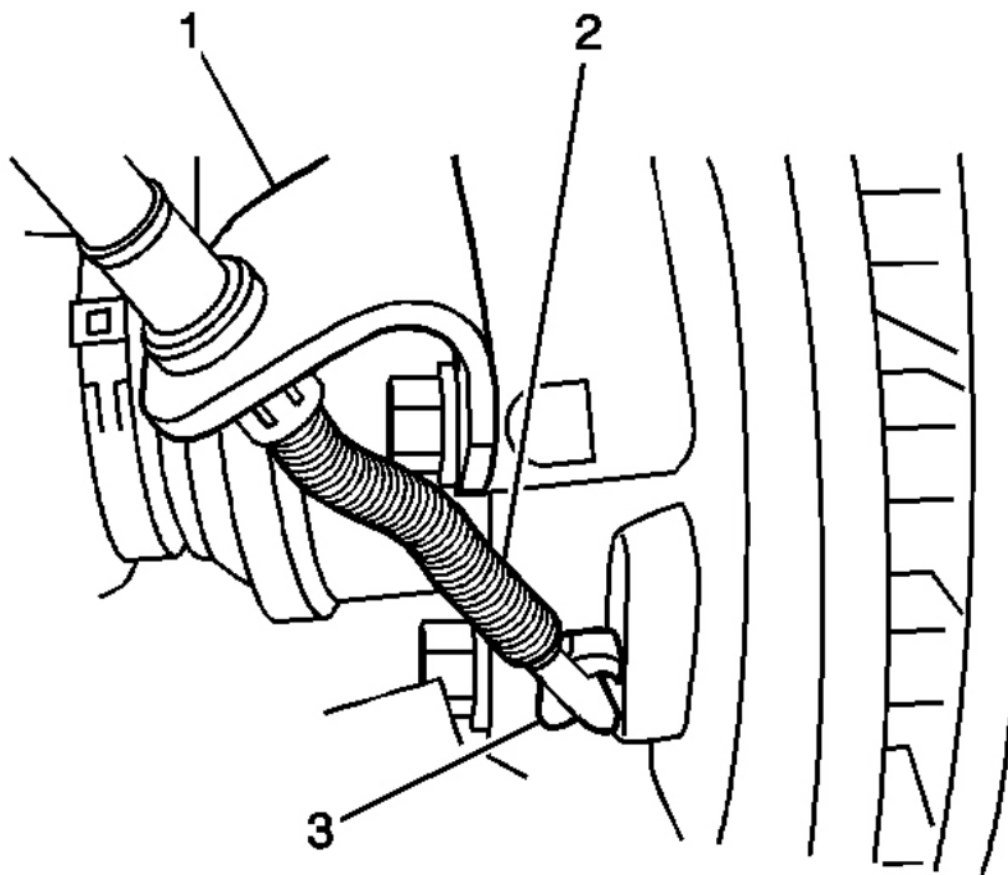


Fig. 47: View Of Left Rear Park Brake Cable, Support Bracket & Actuator Lever
Courtesy of GENERAL MOTORS CORP.

8. Use the **J 37043** in order to depress the right rear brake cable retainer. See **Special Tools and Equipment**.
9. Remove the right rear park brake cable from the right rear cable bracket (1).
10. Disconnect the right rear park brake cable (2) from the right rear park brake actuator lever (3).
11. Remove the right rear park brake rear cable (2).

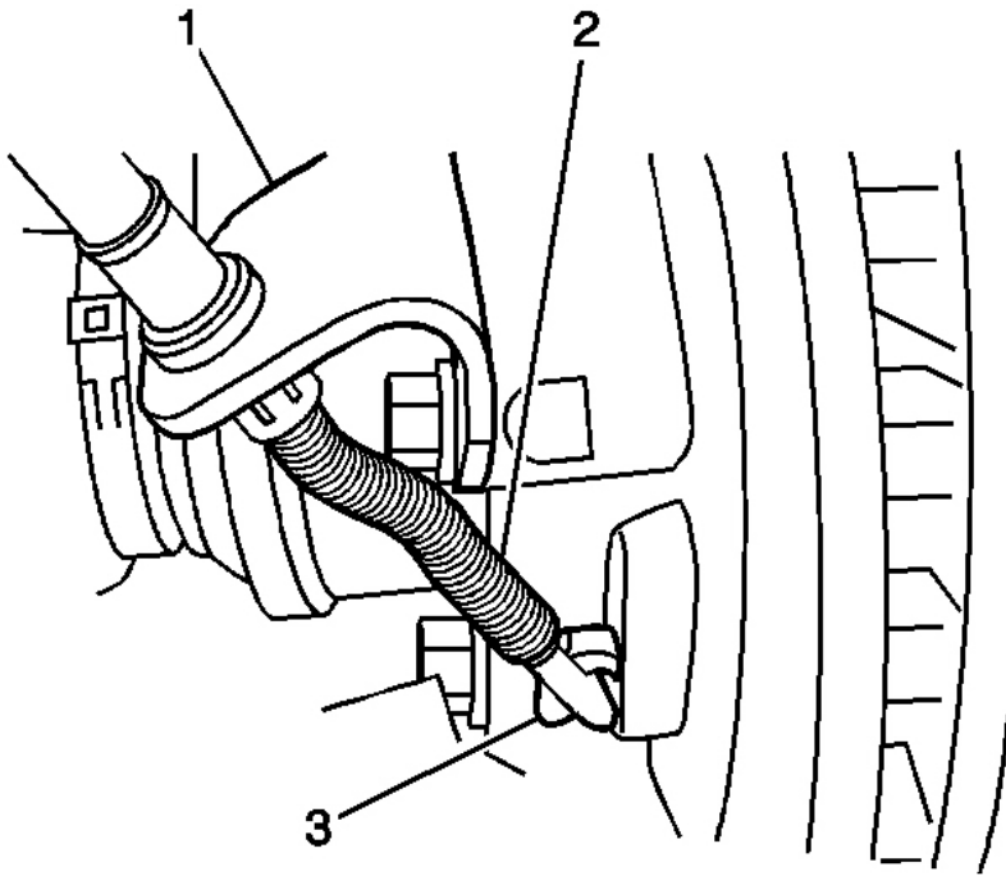


Fig. 48: View Of Left Rear Park Brake Cable, Support Bracket & Actuator Lever
Courtesy of GENERAL MOTORS CORP.

1. Install the right rear park brake cable (2) to the right rear park brake cable bracket (1).
2. Ensure that the locking tabs are properly seated.
3. Connect the right rear park brake cable (2) to the right rear park brake actuator lever (3).

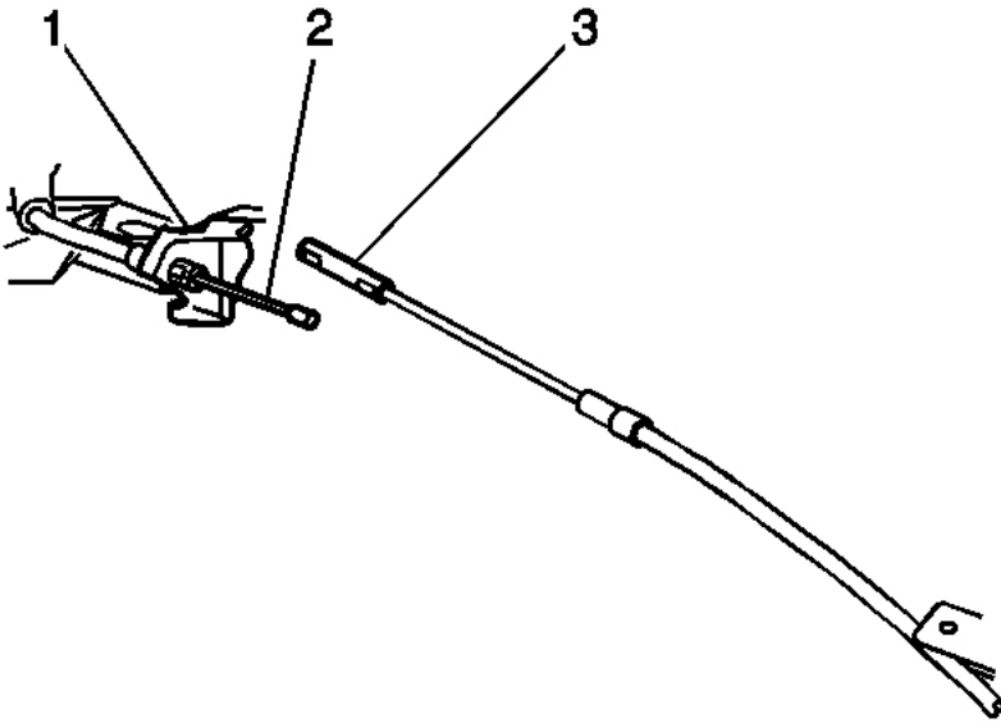


Fig. 49: Park Brake Cable And Intermediate Park Brake Cable Connector
Courtesy of GENERAL MOTORS CORP.

4. Install the right rear park brake cable (2) to the mounting support bracket (1).
5. Ensure that the locking tabs are properly seated.
6. Connect the intermediate park brake cable connector (3) to the right rear park brake cable (2).

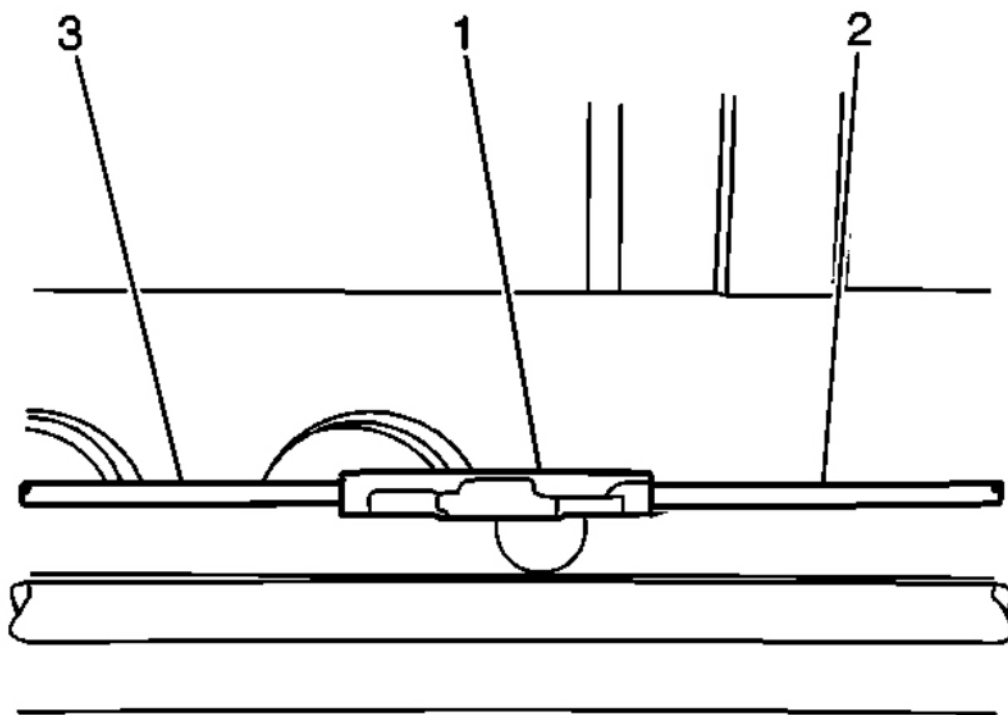


Fig. 50: View Of Park Brake Cable
Courtesy of GENERAL MOTORS CORP.

7. Pull down on the intermediate park brake cable (2) near the park brake cable connector (1).
8. Connect the intermediate park brake cable (2) to the park brake connector (1).
9. Install the right rear tire and wheel assembly. Refer to **Tire and Wheel Removal and Installation** in Tires and Wheels.
10. Lower the vehicle.
11. To ensure that the park brake cable retainers are seated, cycle the park brake pedal 1 to 2 times.

PARK BRAKE CABLE MOUNTING BRACKET REPLACEMENT

Tools Required:

J 37043 Park Brake Cable Release Tool. See **Special Tools and Equipment**.

CAUTION: Refer to Brake Dust Caution in Cautions and Notices.

Removal Procedure

1. Raise the vehicle and suitably support. Refer to Lifting and Jacking the Vehicle in General Information.
2. Remove the rear tire and wheel assembly. Refer to Tire and Wheel Removal and Installation in Tires and Wheels.

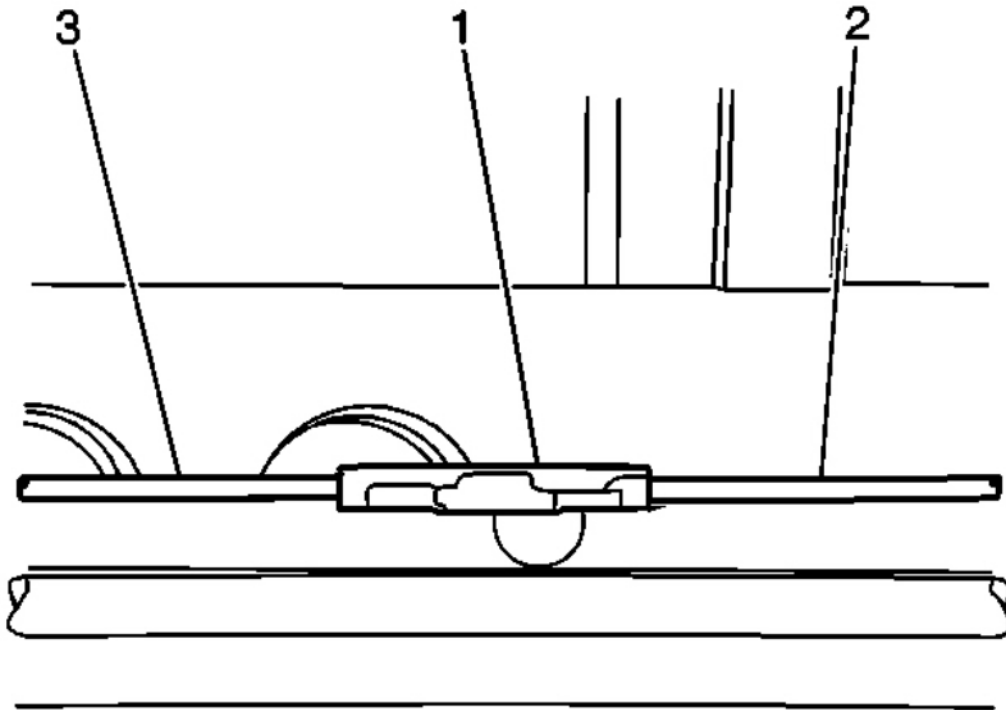


Fig. 51: View Of Park Brake Cable
Courtesy of GENERAL MOTORS CORP.

3. Pull down on the intermediate park brake cable (2) near the park brake cable connector (1).
4. Disconnect the intermediate park brake cable (2) from the park brake connector (1).

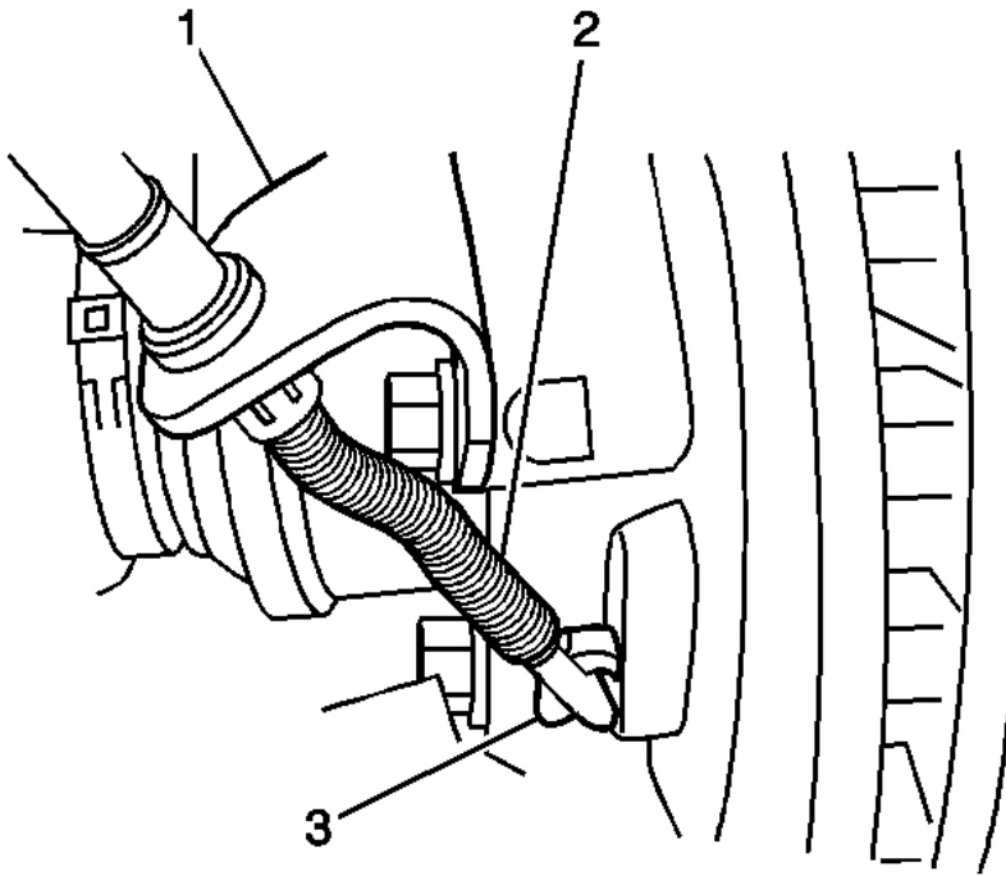


Fig. 52: View Of Left Rear Park Brake Cable, Support Bracket & Actuator Lever
Courtesy of GENERAL MOTORS CORP.

5. Use the **J 37043** in order to depress the rear brake cable retainer. See **Special Tools and Equipment**.
6. Remove the rear park brake cable from the rear cable bracket (1).
7. Disconnect the park brake cable (2) from the park brake actuator lever (3).

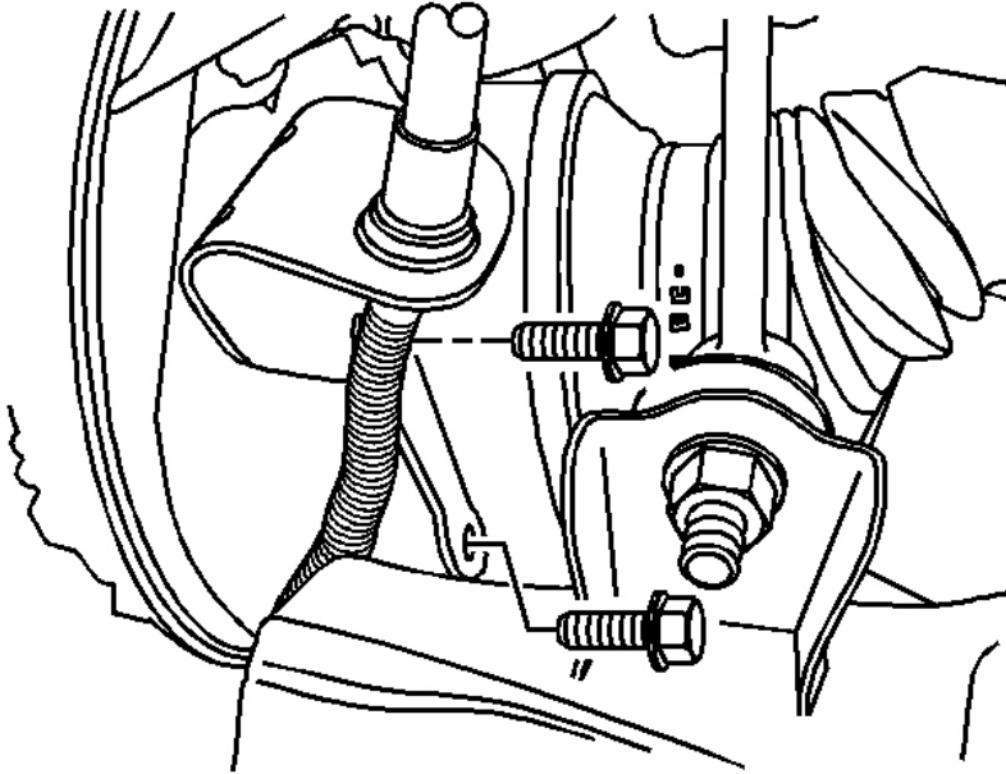


Fig. 53: View Of Park Brake Cable Bracket Mounting Bolts
Courtesy of GENERAL MOTORS CORP.

8. Remove the park brake cable bracket mounting bolts.
9. Remove the park brake cable bracket.

Installation Procedure

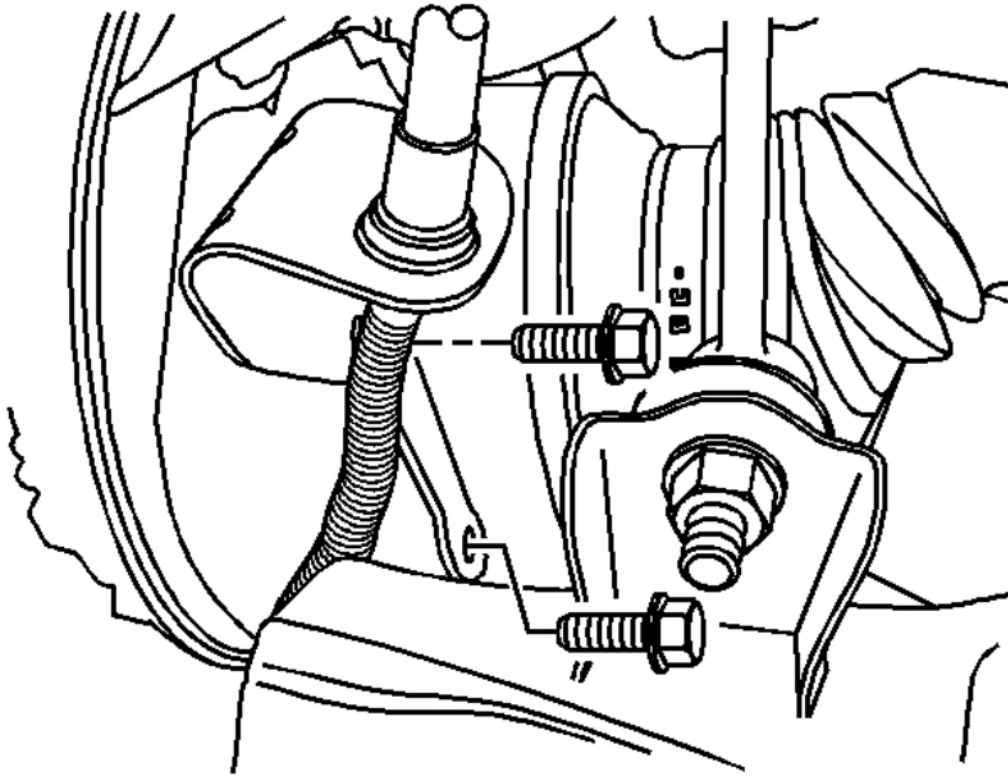


Fig. 54: View Of Park Brake Cable Bracket Mounting Bolts
Courtesy of GENERAL MOTORS CORP.

1. Install the park brake cable bracket.

NOTE: Refer to **Fastener Notice** in Cautions and Notices.

2. Install the 2 park brake cable bracket mounting bolts.

Tighten: Tighten the park brake cable bracket mounting bolts to 60 N.m (44 lb ft).

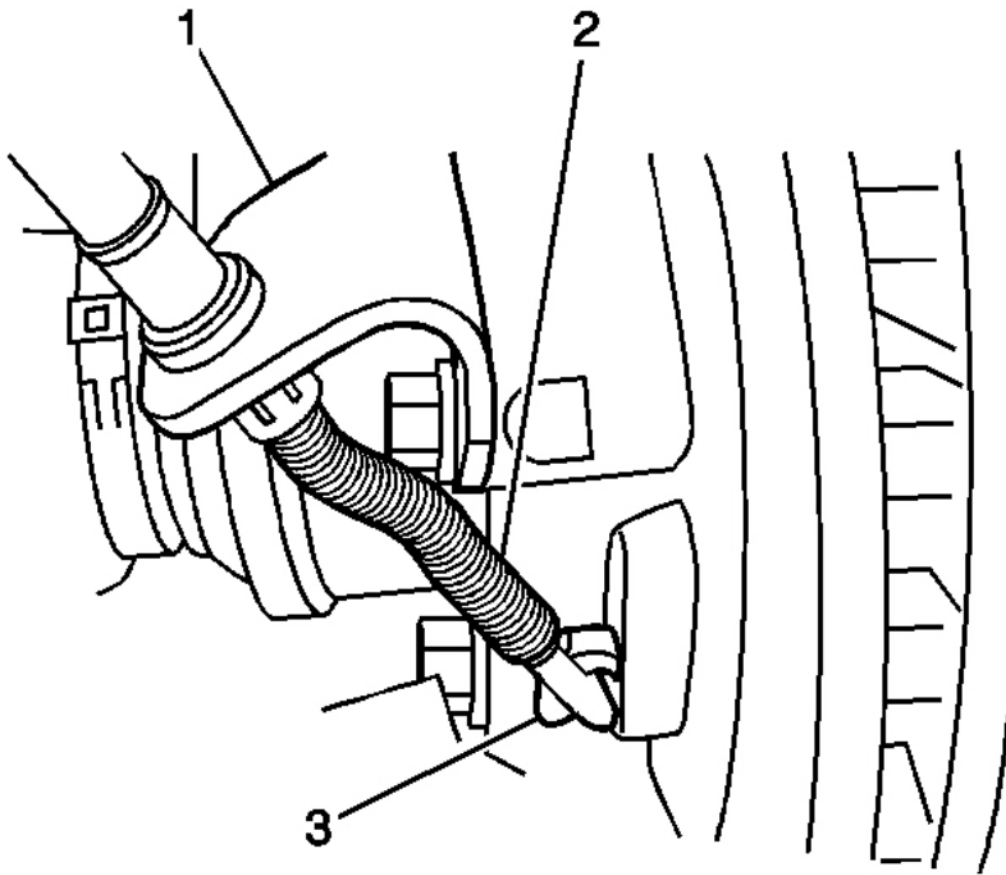


Fig. 55: View Of Left Rear Park Brake Cable, Support Bracket & Actuator Lever
Courtesy of GENERAL MOTORS CORP.

3. Install the rear park brake cable (2) to the rear park brake cable bracket (1).
4. Ensure that the locking tabs are properly seated.
5. Connect the rear park brake cable (2) to the park brake actuator lever (3).

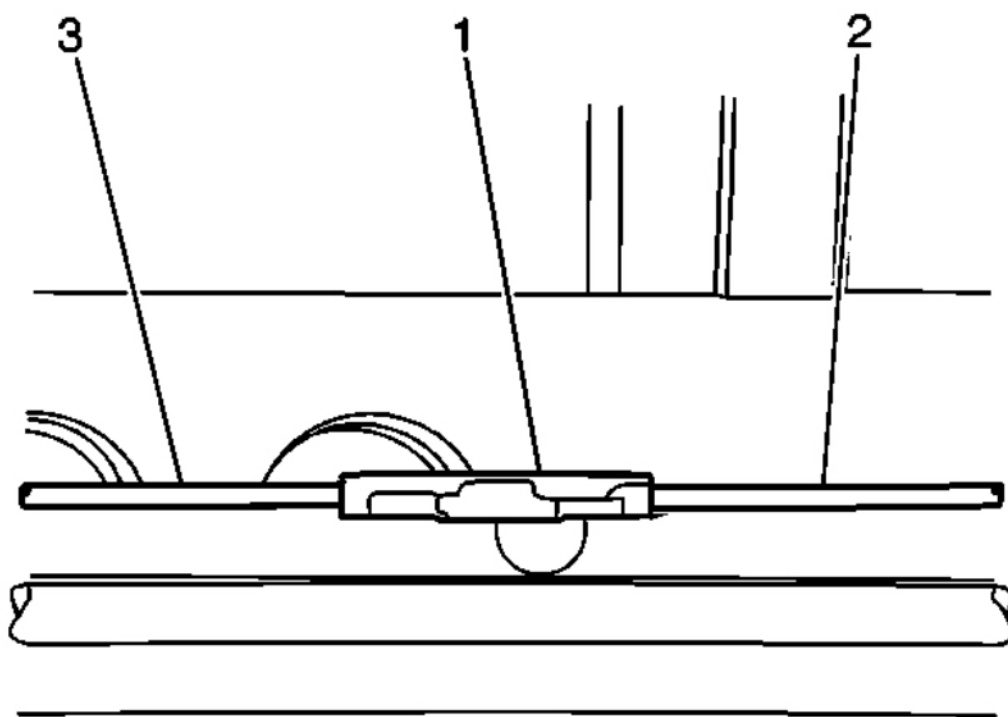


Fig. 56: View Of Park Brake Cable
Courtesy of GENERAL MOTORS CORP.

6. Pull down on the intermediate park brake cable (2) near the park brake cable connector (1).
7. Connect the intermediate park brake cable (2) to the park brake connector (1).
8. Install the rear tire and wheel assembly. Refer to **Tire and Wheel Removal and Installation** in Tires and Wheels.
9. Lower the vehicle.
10. To ensure that the park brake cable retainers are seated, cycle the park brake pedal 1 to 2 times.

PARK BRAKE ACTUATOR REPLACEMENT

Removal Procedure

1. Raise and support the vehicle. Refer to **Lifting and Jacking the Vehicle** in General Information.

2. Remove the rear tire and wheel assemblies. Refer to **Tire and Wheel Removal and Installation** in Tires and Wheels.

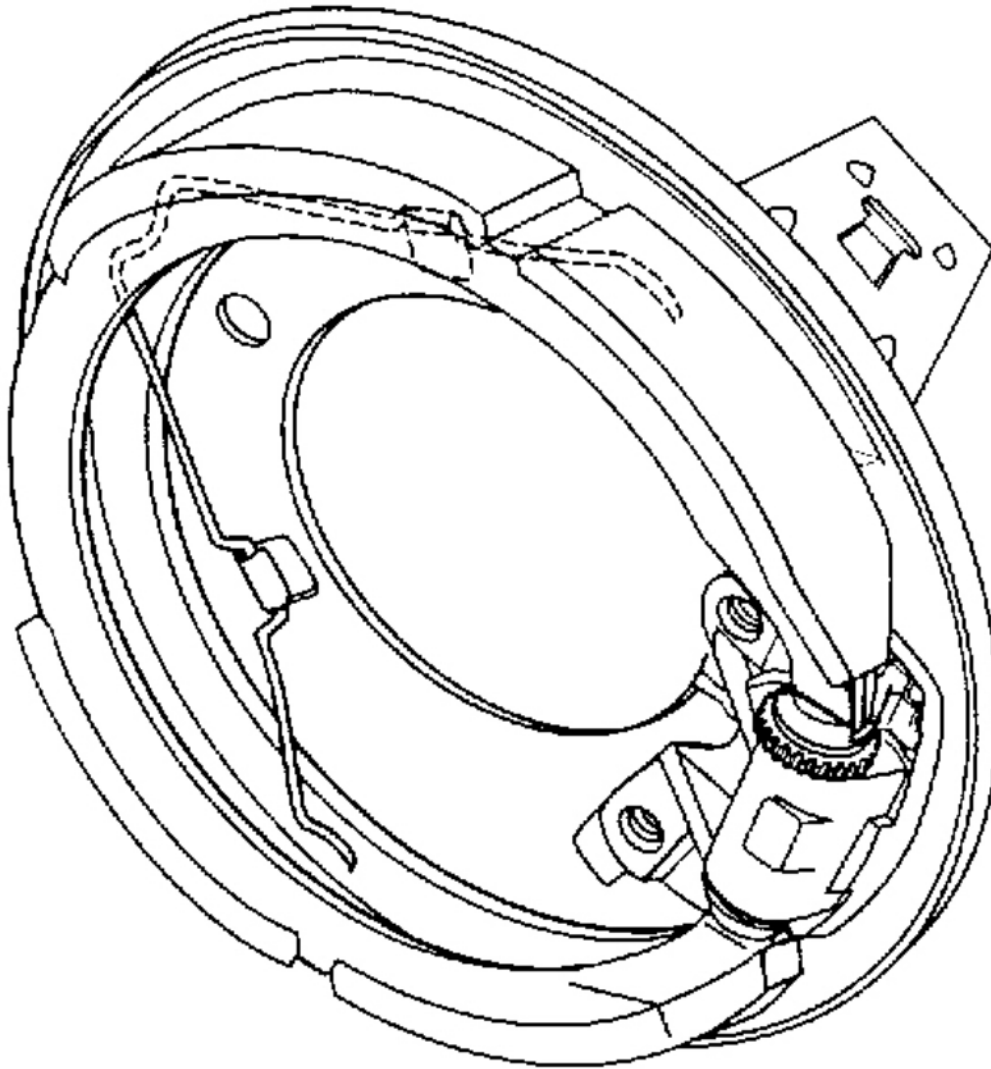


Fig. 57: View Of Park Brake Shoes
Courtesy of GENERAL MOTORS CORP.

3. Remove the rear wheel hub and bearing assembly. Refer to **Wheel Bearing/Hub Replacement - Rear** in Rear Suspension.

4. Rotate the park brake adjuster nut until the bolt is in the closed position.
5. Remove the park brake shoe hold down spring.

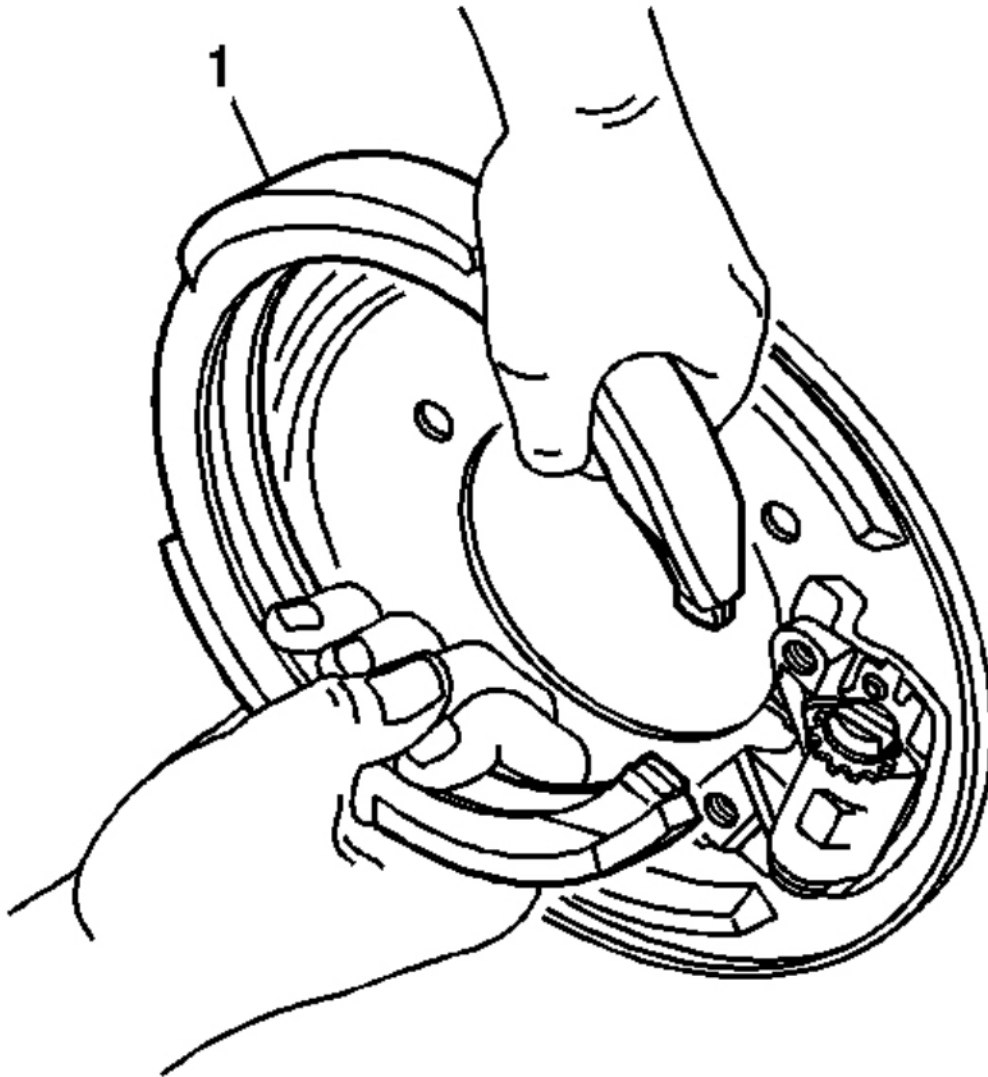


Fig. 58: View Of Park Brake Shoe Assembly
Courtesy of GENERAL MOTORS CORP.

6. Remove the park brake shoe assembly (1) by grasping the shoe and spreading slightly while

pulling the shoe from the actuator assembly.

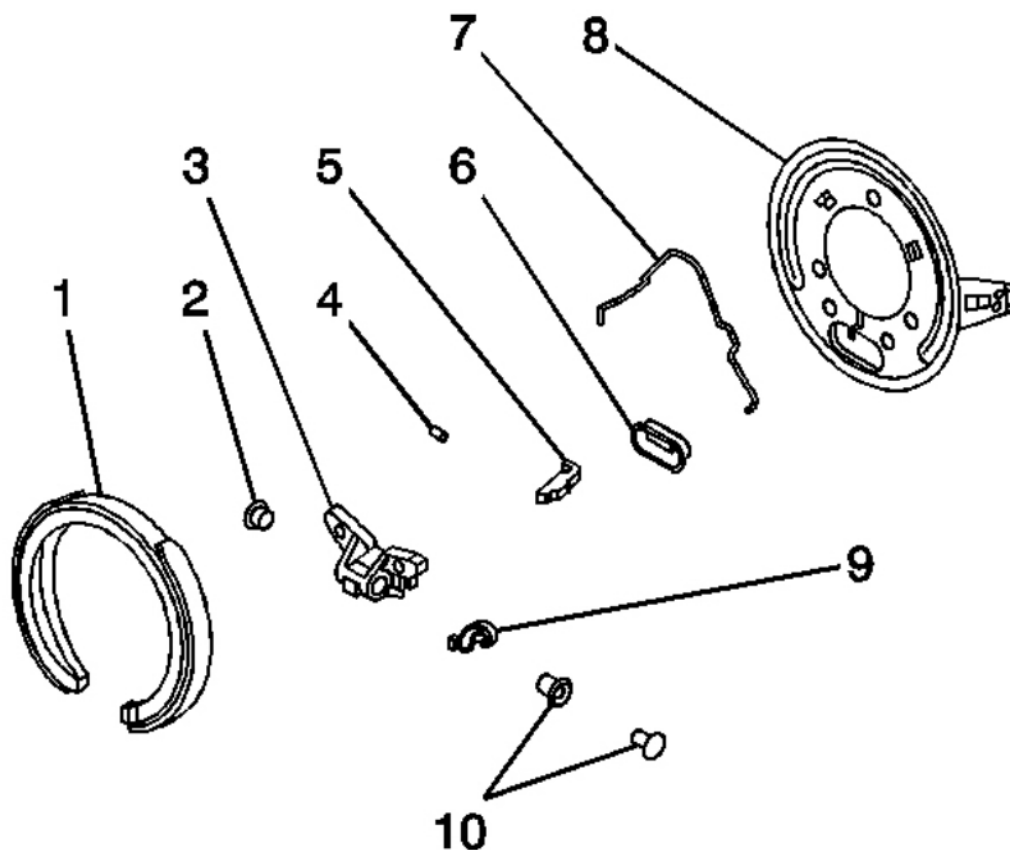


Fig. 59: Exploded View Of Park Brake Actuator
Courtesy of GENERAL MOTORS CORP.

7. Using a flat bladed tool remove the adjusting nut (10).
8. Using a flat bladed tool remove the tappet (2).
9. Remove the adjustment pawl (9).
10. Move the hand brake lever (5) to the apply position and remove the hand brake pushrod (4).
11. Pull the hand brake out and remove.
12. Using a flat bladed tool, move the actuator retaining tab outward and remove the abutment plate (3) from the dust shield (8).
13. Remove the dust cover.

Installation Procedure

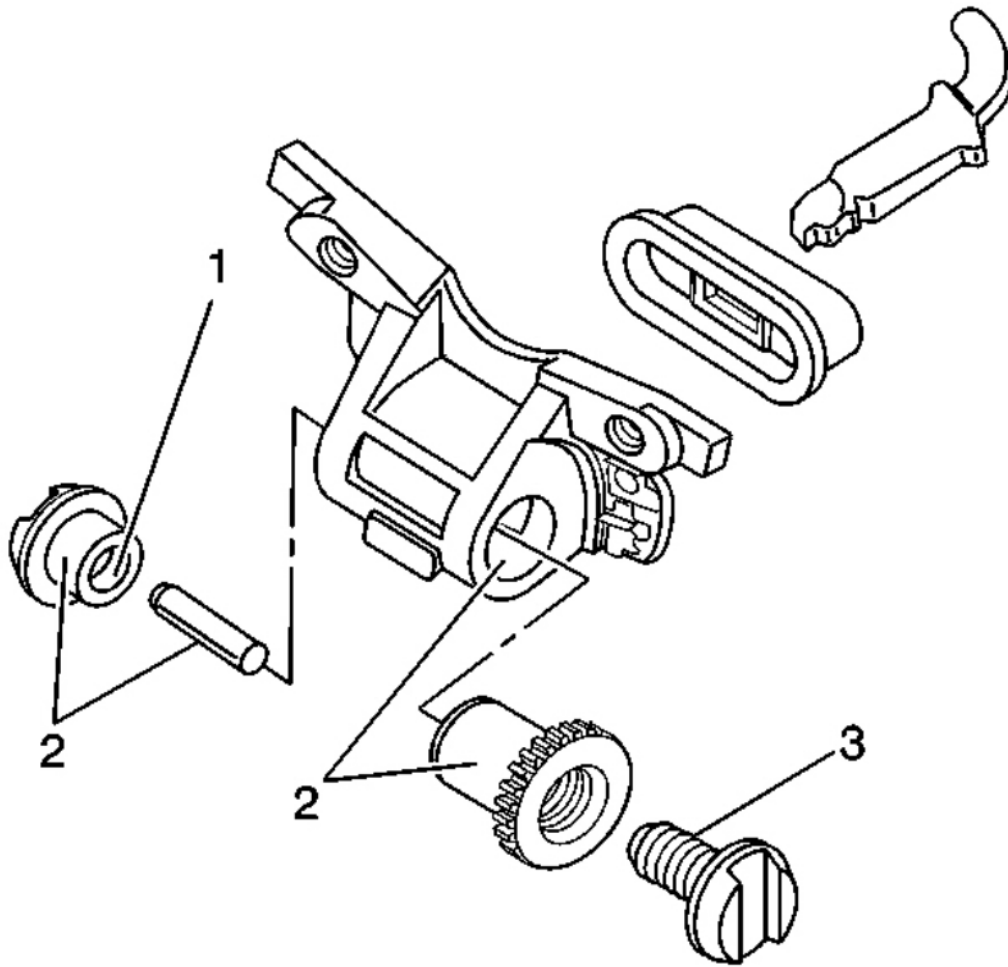


Fig. 60: Applying Silicone Grease
Courtesy of GENERAL MOTORS CORP.

1. Apply a small amount silicone grease to positions (1,2) use GM P/N 18010909 (Canadian P/N 10953488) or equivalent. Do not apply grease to the bolt threads (3).
2. Install the dust cover (6) to the abutment plate (3).

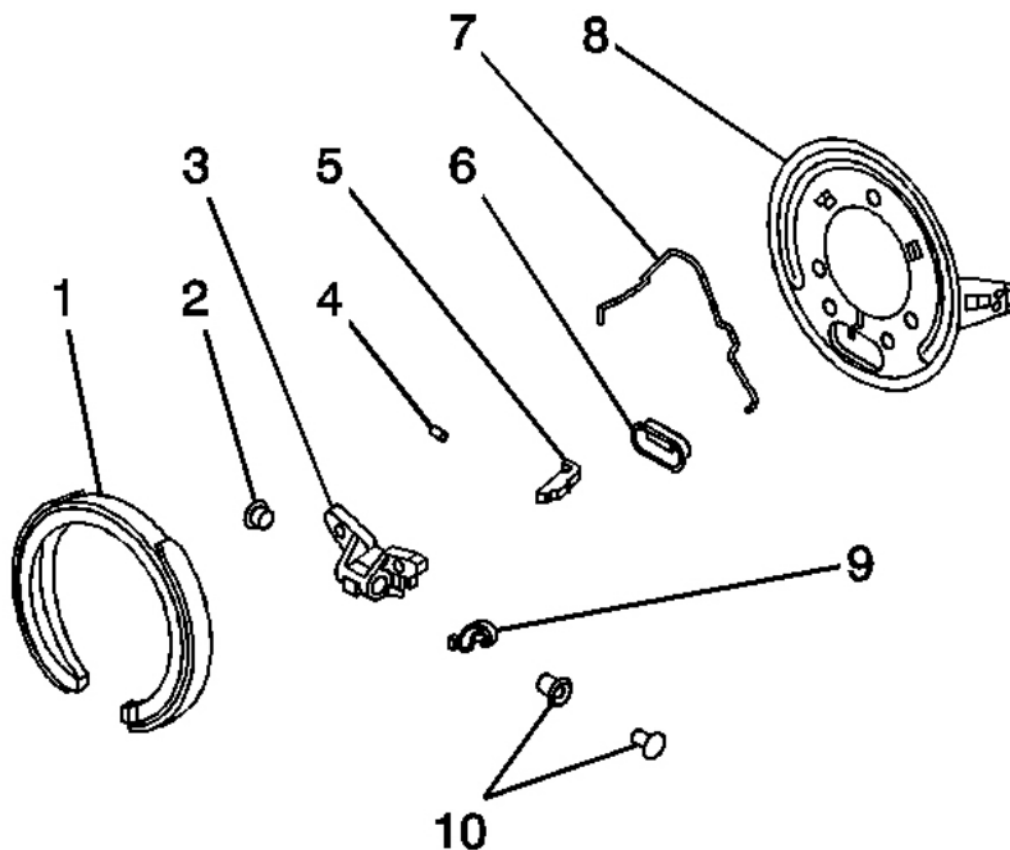


Fig. 61: Exploded View Of Park Brake Actuator
Courtesy of GENERAL MOTORS CORP.

3. Using a flat bladed tool, move the actuator retaining tab outward and Install the abutment plate (3) to the dust shield (8). Ensure that the abutment plate (3) is seated and secure.
4. Install the hand brake lever (5) to the abutment plate.
5. Install the adjustment pawl (9) to the abutment plate.
6. Install the hand brake pushrod (4) to the abutment plate.
7. Install the tappet (2) to the abutment plate.
8. Install the adjusting nut (10) to the abutment plate.

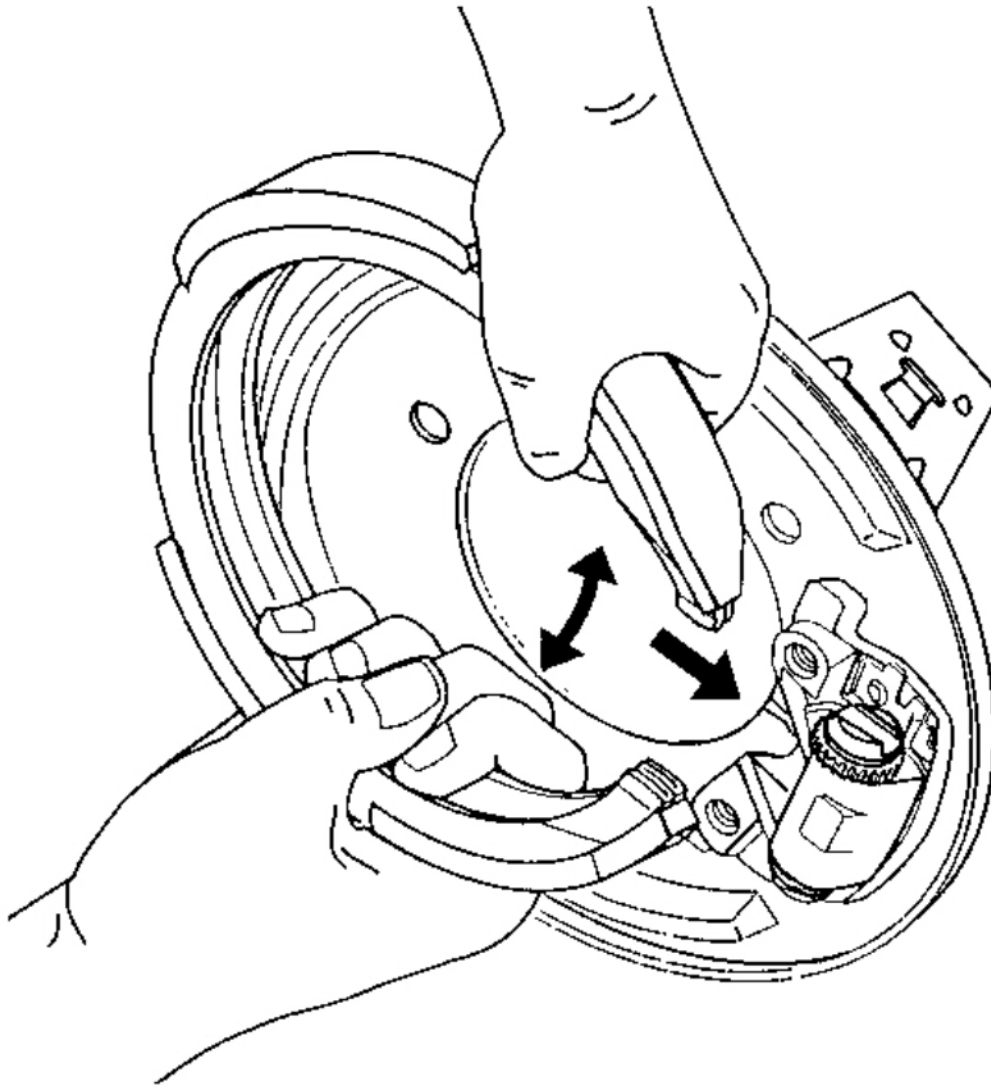


Fig. 62: View Of Park Brake Shoe Assembly
Courtesy of GENERAL MOTORS CORP.

9. Install the park brake shoe assembly by grasping the shoe and spreading slightly while pulling the shoe over the actuator assembly.

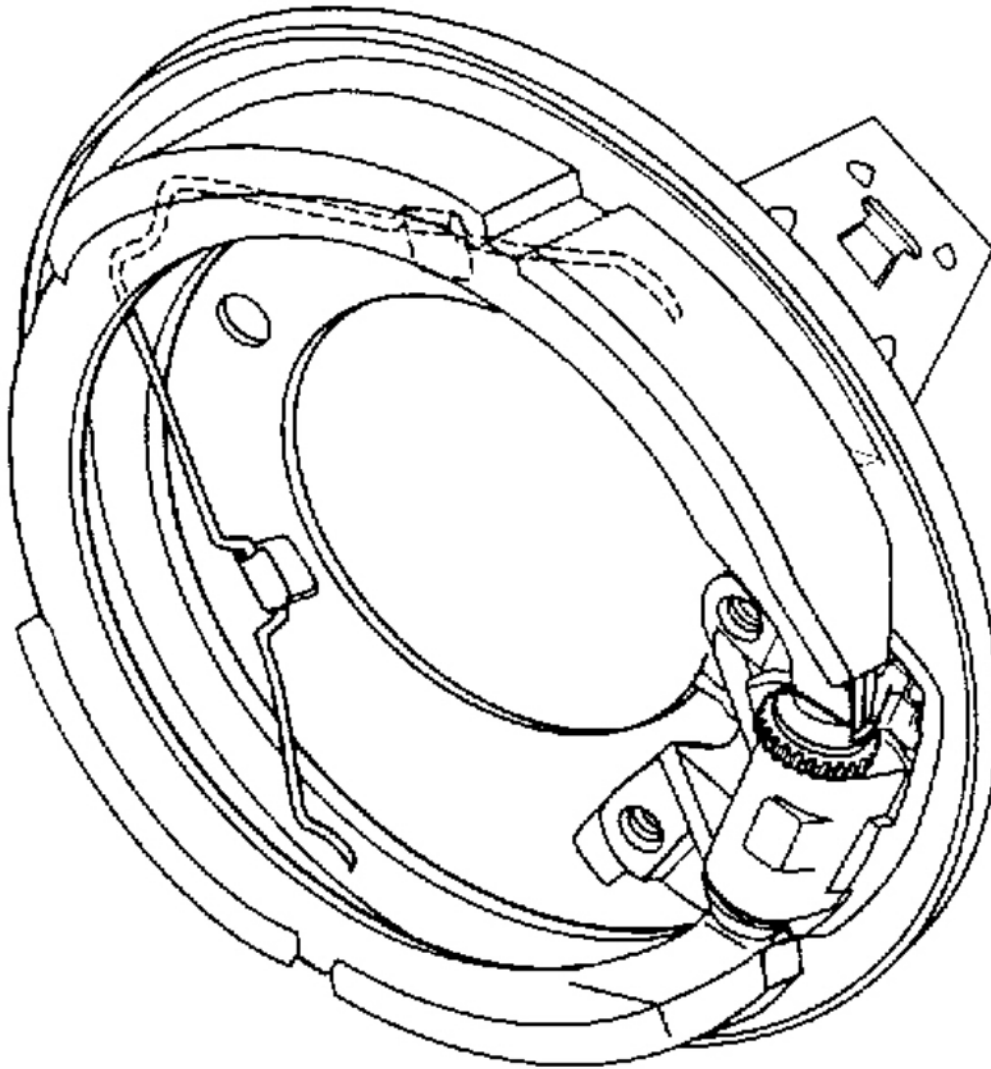


Fig. 63: View Of Park Brake Shoes
Courtesy of GENERAL MOTORS CORP.

10. Install the park brake shoe hold down spring.
11. Adjust the park brake. Refer to **Park Brake Adjustment**.
12. Install the rear wheel hub and bearing assembly. Refer to **Wheel Bearing/Hub Replacement - Rear** in Rear Suspension.

2004 Cadillac SRX

2004 BRAKES Park Brake - SRX

13. Install the rear tire and wheel assembly. Refer to **Tire and Wheel Removal and Installation** in Tires and Wheels.
14. Lower the vehicle.

PARK BRAKE BACKING PLATE REPLACEMENT

Removal Procedure

1. Raise and support the vehicle. Refer to **Lifting and Jacking the Vehicle** in General Information.
2. Remove the rear tire and wheel assemblies. Refer to **Tire and Wheel Removal and Installation** in Tires and Wheels.

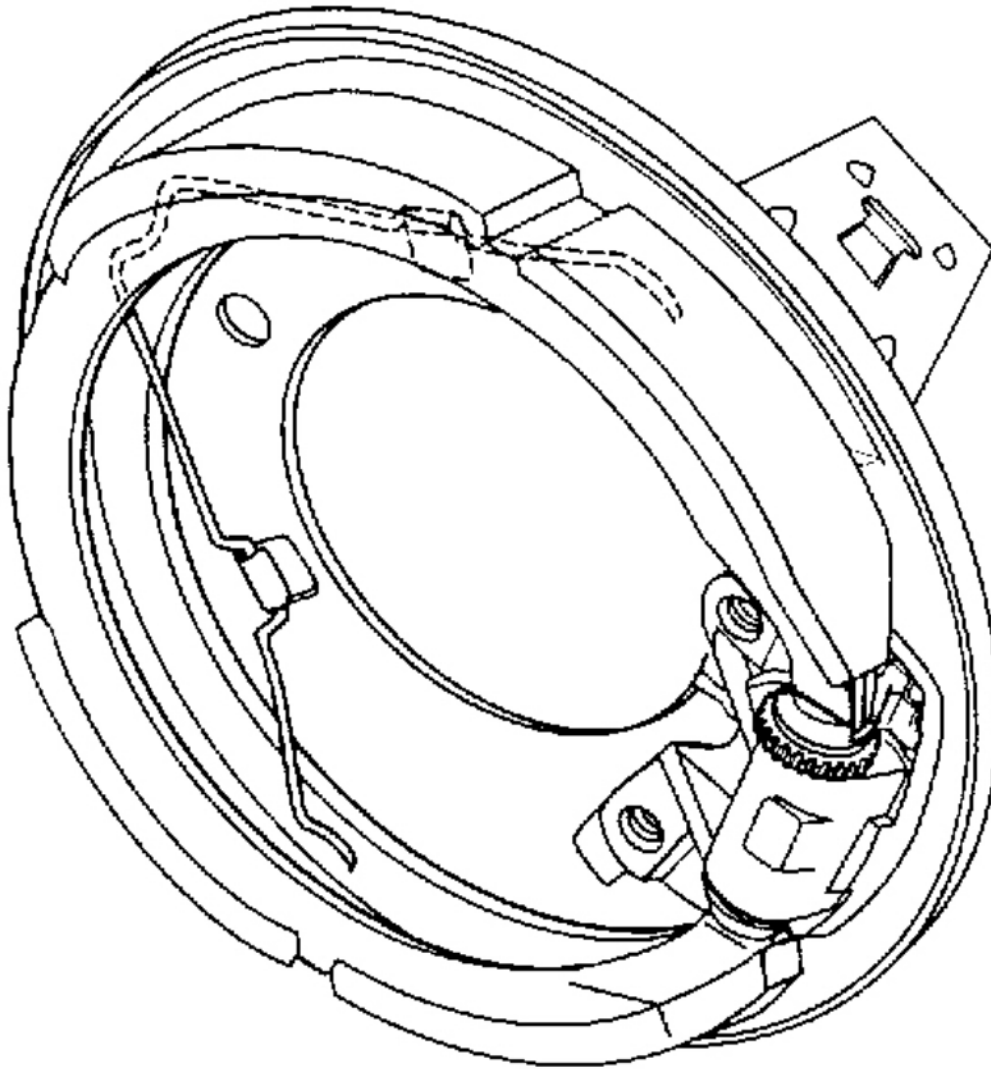


Fig. 64: View Of Park Brake Shoes
Courtesy of GENERAL MOTORS CORP.

3. Remove the rear wheel hub and bearing assembly. Refer to **Wheel Bearing/Hub Replacement - Rear** in Rear Suspension.
4. Rotate the park brake adjuster nut until the bolt is in the closed position.
5. Remove the park brake shoe hold down spring.

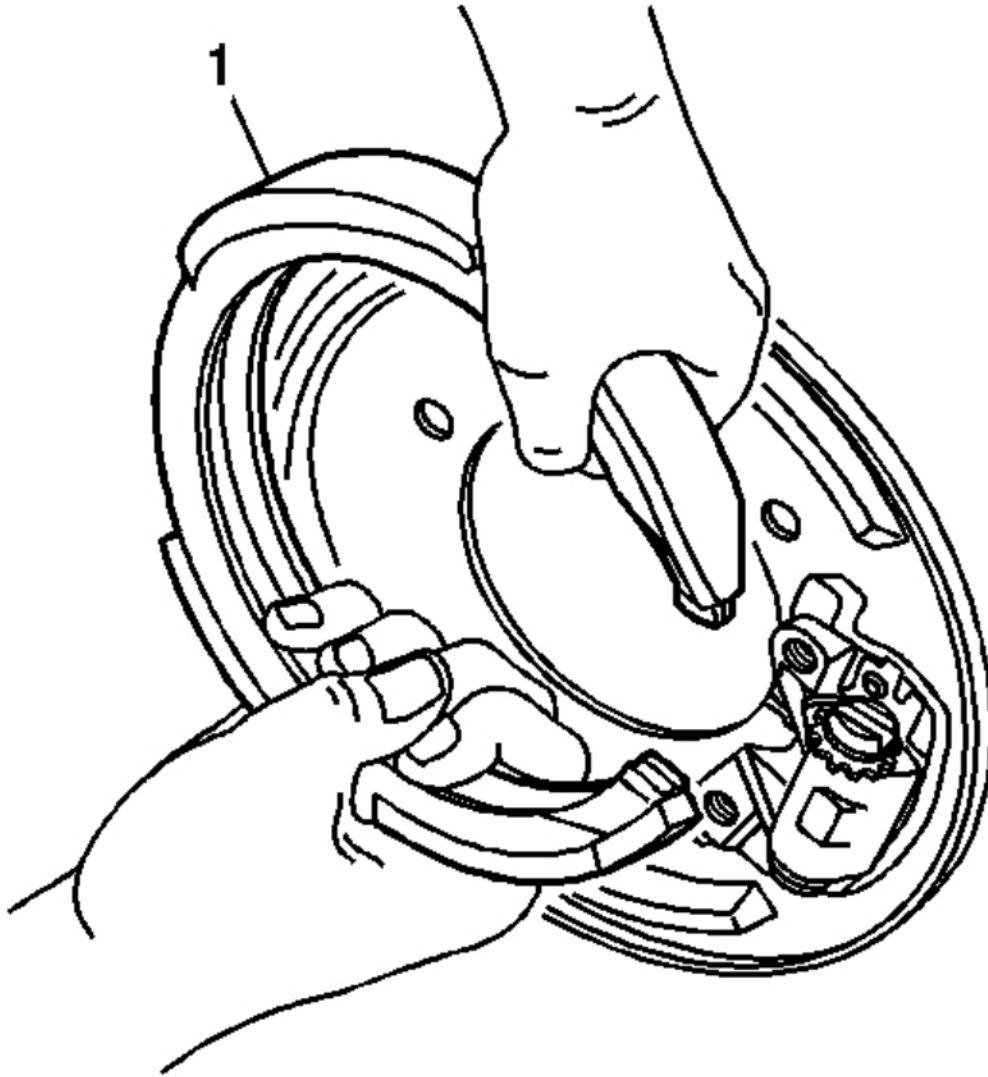


Fig. 65: View Of Park Brake Shoe Assembly
Courtesy of GENERAL MOTORS CORP.

6. Remove the park brake shoe assembly (1) by grasping the shoe and spreading slightly while pulling the shoe from the actuator assembly.

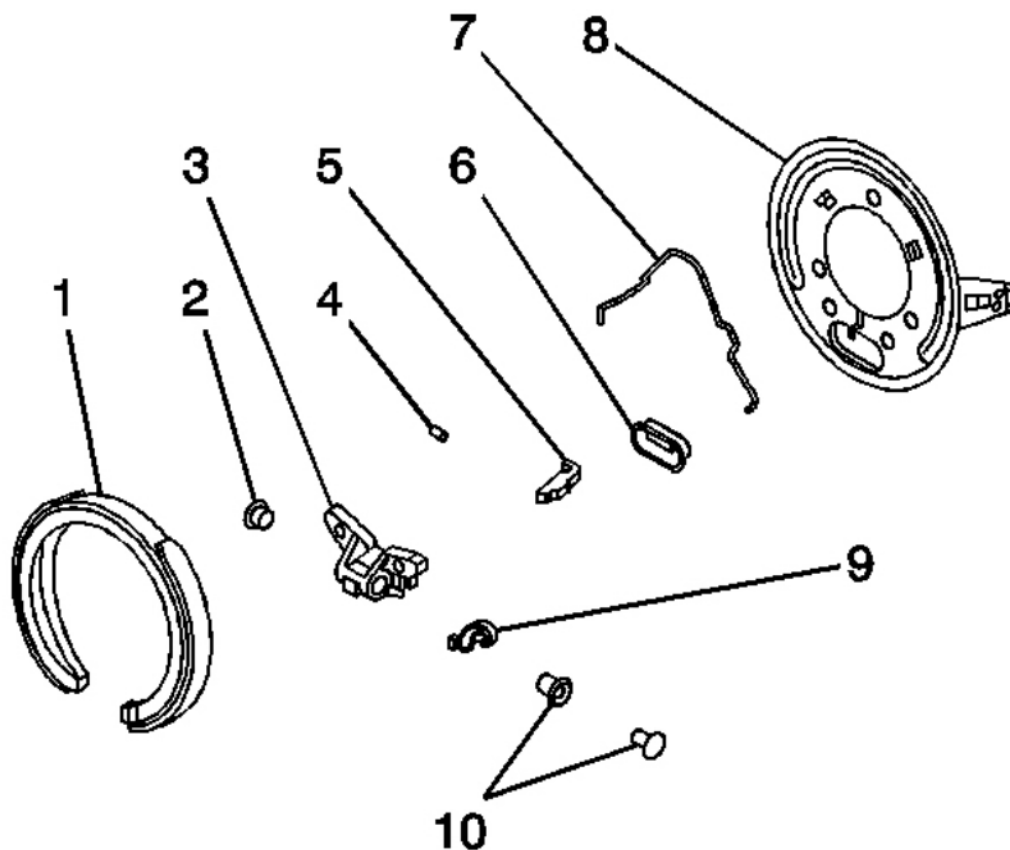


Fig. 66: Exploded View Of Park Brake Actuator
Courtesy of GENERAL MOTORS CORP.

7. Remove the dust cover (6).
8. Remove the two park brake cable bracket to knuckle mounting bolts.
9. Remove the backing plate from the knuckle.
10. Using a flat bladed tool, move the actuator retaining tab outward and remove the actuator (3) from the backing plate (8).

Installation Procedure

1. Move the actuator retaining tab outward and install the actuator (3) to the backing plate (8).
2. Install the backing plate to the knuckle.

NOTE: Refer to Fastener Notice in Cautions and Notices.

3. Install the two park brake cable bracket to knuckle mounting bolts.

Tighten: Tighten the park brake cable bracket to knuckle mounting bolts to 60 N.m (44 lb ft).

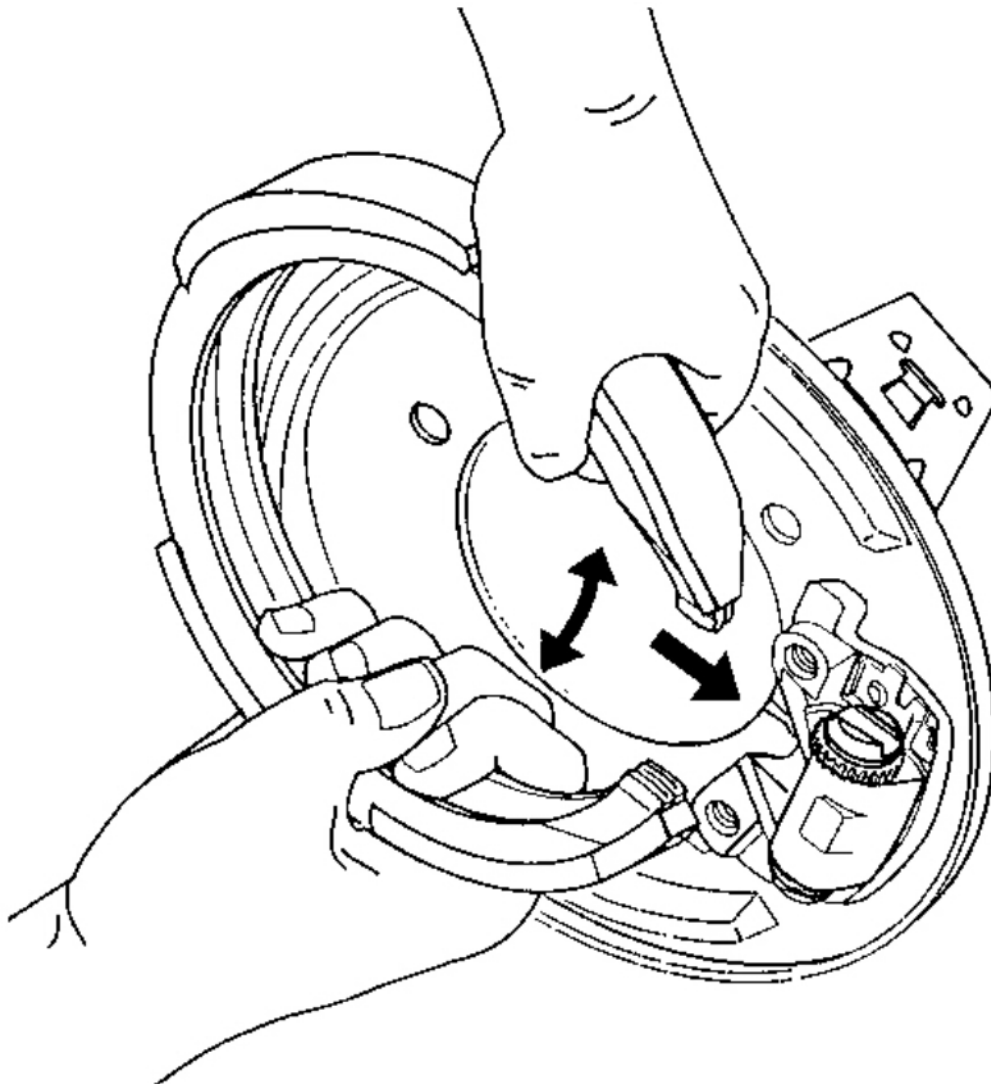


Fig. 67: View Of Park Brake Shoe Assembly

Courtesy of GENERAL MOTORS CORP.

4. Install the park brake shoe assembly by grasping the shoe and spreading slightly while pulling the shoe over the actuator assembly.

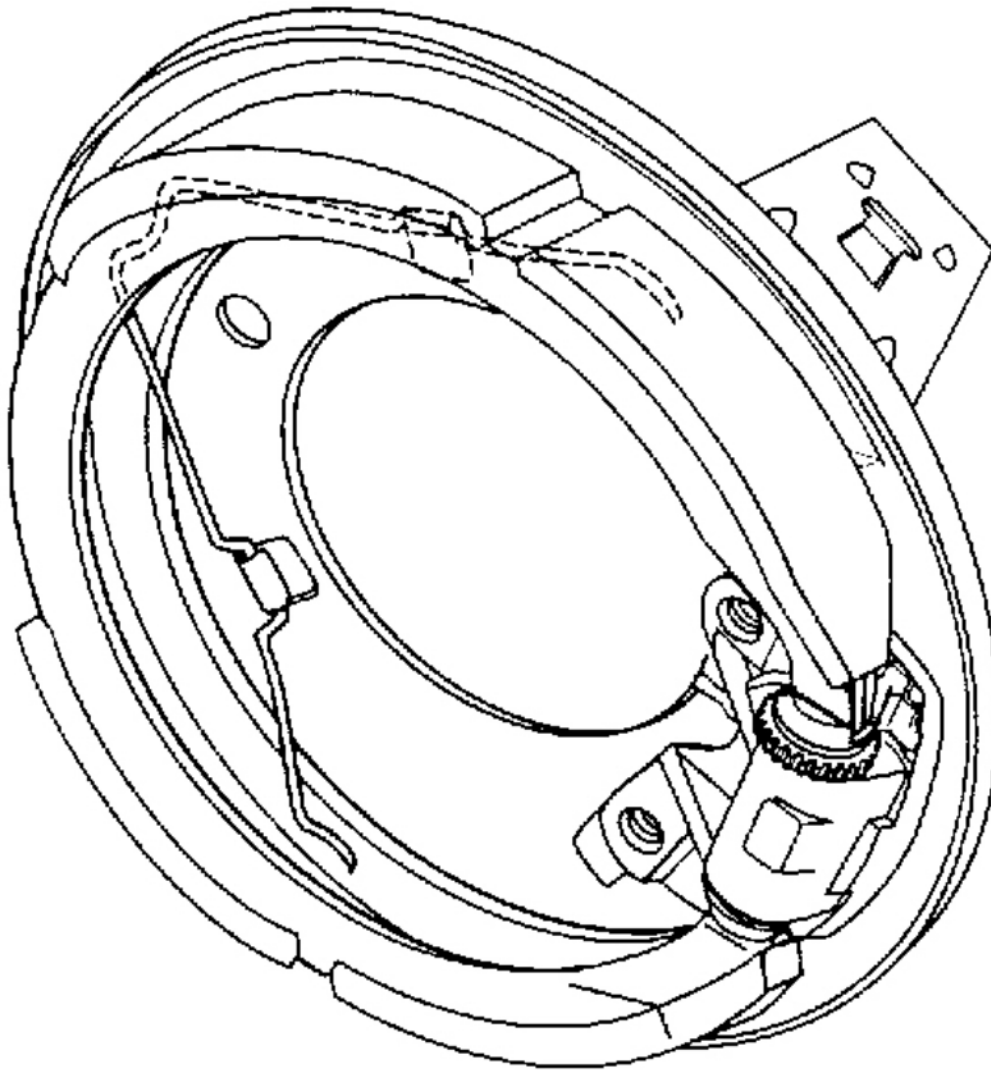


Fig. 68: View Of Park Brake Shoes
Courtesy of GENERAL MOTORS CORP.

5. Install the park brake shoe hold down spring.
6. Adjust the park brake. Refer to **Park Brake Adjustment**.
7. Install the rear wheel hub and bearing assembly. Refer to **Wheel Bearing/Hub Replacement - Rear** in Rear Suspension.
8. Install the rear tire and wheel assembly. Refer to **Tire and Wheel Removal and Installation** in Tires and Wheels.
9. Lower the vehicle.

PARK BRAKE ADJUSTMENT

Tools Required:

J 21177-A Drum To Brake Shoe Clearance Gage. See **Special Tools and Equipment**.

1. Adjustments to the park brake shoe are not necessary after replacing the park brake lever or park brake cables. The park brake is adjusted automatically by cycling the park brake lever three times.
2. DO not operate the park brake lever with the rear disc brake rotor(s) removed.
3. Apply and fully release the parking brake three times.
4. Verify that the parking brake pedal releases completely.
5. Raise and suitably support the vehicle. Refer to **Lifting and Jacking the Vehicle** in General Information.
6. Remove the rear tire and wheel assembly. Refer to **Tire and Wheel Removal and Installation** in Tires and Wheels.
7. Remove the rear brake caliper brackets. Refer to **Brake Caliper Bracket Replacement - Rear** in Disc Brakes.
8. Remove the rear brake rotors (1). Refer to **Brake Rotor Replacement - Rear** in Disc Brakes.

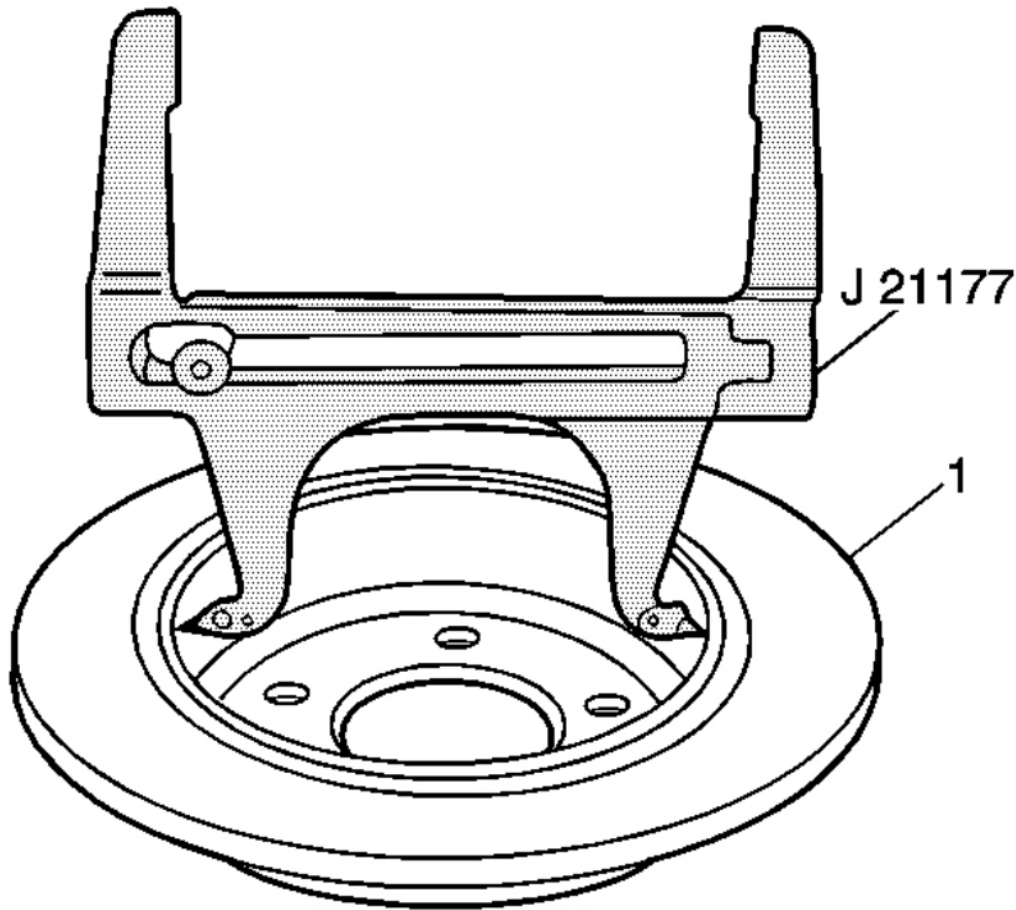


Fig. 69: Measuring Inside Of Rotor
Courtesy of GENERAL MOTORS CORP.

9. Set the **J 21177-A** inside of the park brake drum at the widest point. See **Special Tools and Equipment**.
 - Place the contacts on the tool to the widest point of the drum.
 - Tighten the set screw on the tool to ensure the proper measurement when removing the tool from the drum.

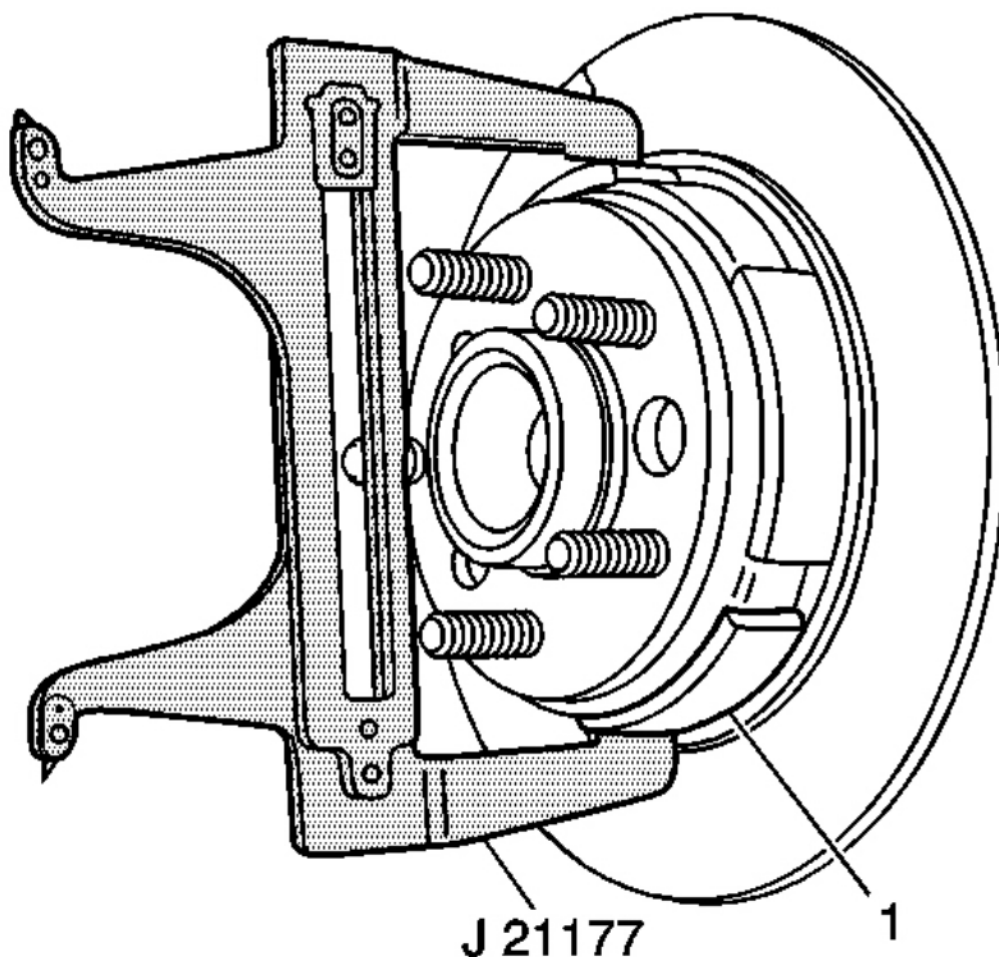


Fig. 70: Adjusting Parking Brake Shoes Using Special Tool
Courtesy of GENERAL MOTORS CORP.

10. Position the **J 21177-A** over the park brake shoe (1) at the widest point. See **Special Tools and Equipment**.
11. Turn the adjuster on the actuator until the park brake shoe just contacts the **J 21177-A** . See **Special Tools and Equipment**.
12. Repeat steps 9 through 11 for the opposite side.
13. Install the rear brake rotors. Refer to **Brake Rotor Replacement - Rear** in Disc Brakes.
14. Install the rear caliper brackets. Refer to **Brake Caliper Bracket Replacement - Rear** in

Disc Brakes.

15. Install the rear tire and wheel. Refer to **Tire and Wheel Removal and Installation** in Tires and Wheels.
16. Lower the vehicle to curb height.
17. Set and release the park brake lever 3 times.

IMPORTANT: If the rear wheels rotate during the following test, readjust the parking brake shoes.

18. Apply the parking brake. Inspect the rotation of the rear wheels:
 - The wheels should not rotate forward.
 - The wheels should not drag or rotate backward.
19. Release the parking brake. Verify that the wheels rotate freely.
20. Lower the vehicle.

DESCRIPTION AND OPERATION

PARK BRAKE SYSTEM DESCRIPTION AND OPERATION

System Component Description

The park brake system consists of the following:

Park Brake Pedal Assembly

Receives and transfers park brake system apply input force from driver to park brake cable system.

Park Brake Release Handle Assembly

Releases applied park brake system when pulled.

Park Brake Cables

Transfers input force received from park brake pedal, through park brake cable equalizer, to park brake apply lever.

Park Brake Cable Equalizer

Evenly distributes input force to both the left and right park brake units.

Threaded park brake cable equalizers are also used to remove slack in park brake cables.

Park Brake Apply Lever

Multiplies and transfers input force to park brake actuator.

Park Brake Actuator/Adjuster

Uses multiplied input force from apply lever to expand park brake shoe toward the friction surface of the drum-in-hat portion of the rear brake rotor.
Threaded park brake actuators are also used to control clearance between the park brake shoe and the friction surface of the drum-in-hat portion of the rear brake rotor.

Park Brake Shoe

Applies mechanical output force from park brake actuator to friction surface of the drum-in-hat portion of the rear brake rotor.

System Operation

Park brake apply input force is received by the park brake pedal assembly being depressed, transferred and evenly distributed, through the park brake cables and the park brake cable equalizer, to the left and right park brake apply levers. The park brake apply levers multiply and transfer the apply input force to the park brake actuators which expand the park brake shoe toward the friction surface of the drum-in-hat portion of the rear brake rotor in order to prevent the rotation of the rear tire and wheel assemblies. The park brake release handle assembly releases an applied park brake system when it is pulled reward.

SPECIAL TOOLS AND EQUIPMENT

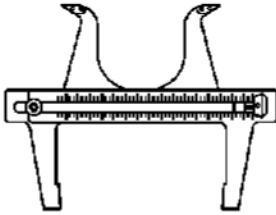
SPECIAL TOOLS

Special Tools

Illustration	Tool Number/ Description
	J 21177-A Drum To Brake Shoe Clearance Gage

2004 Cadillac SRX

2004 BRAKES Park Brake - SRX



J 37043
Parking Brake Cable Release Tool