

Parking Brake

Principles of Operation

Parking Brake System

The parking brake system is cable-actuated and controlled by an independent hand-operated parking brake control that is not self adjusting, The parking brake system is actuated when the parking brake control is pulled up. The parking brake control applies tension to the brake pads through the front parking brake cable and conduit and the LH and RH rear parking brake cables.

Inspection and Verification

NOTE: Prior to carrying out any diagnosis, make sure the red brake warning indicator is functional. Refer to [Section 413-01](#).

The first indication that something may be wrong in the brake system is a change in the feeling through the parking brake control. The parking brake not holding on an incline or dragging after being released are also indicators of system concerns.

Check the operation of the parking brake system with the vehicle on a hoist and the parking brake control fully released. Check for any damaged cables and install new components as necessary. Carry out the brake system diagnosis.

1. Verify the customer concern.
2. Visually inspect for obvious signs of mechanical damage.

Visual Inspection Chart

Mechanical

- Parking brake control
- Parking brake cables
- Parking brake release handle

3. If an obvious cause for an observed or reported concern is found, correct the cause (if possible) before proceeding to the next step.
4. If the cause is not visually evident, verify the symptom and GO to [Symptom Chart](#).

Symptom Chart

Symptom Chart

Condition	Possible Causes	Action
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<ul style="list-style-type: none"> Rear brakes drag 	<ul style="list-style-type: none"> Parking brake component Brake caliper guide pins Brake caliper Brake booster Brake master cylinder 	<ul style="list-style-type: none"> REPAIR or INSTALL new parking brake components as necessary. REFER to Parking Brake Control or Parking Brake Cable — Rear in this section. REPAIR or INSTALL new brake caliper guide pins. REFER to Section 206-04. REPAIR or INSTALL new brake calipers as necessary. REFER to Section 206-04. CARRY OUT the Brake Booster Component Test. REFER to Section 206-00. CARRY OUT the Brake Master Cylinder Component Test. REFER to Section 206-00.
<ul style="list-style-type: none"> The parking brake will not apply 	<ul style="list-style-type: none"> Parking brake control Parking brake cables Parking brake rear wheel components 	<ul style="list-style-type: none"> GO to Pinpoint Test A.
<ul style="list-style-type: none"> The parking brake will not release 	<ul style="list-style-type: none"> Parking brake cables Parking brake control Parking brake rear wheel components 	<ul style="list-style-type: none"> GO to Pinpoint Test B.

Pinpoint Tests

Pinpoint Test A: The Parking Brake Will Not Apply

Normal Operation

The parking brake system is cable-actuated and controlled by an independent hand-operated parking brake control that is not self adjusting, The parking brake system is actuated when the parking brake control is pulled up. The parking brake control applies tension to the brake pads through the front parking brake cable and conduit and the LH and RH rear parking brake cables.

Possible Causes

- Parking brake control
- Parking brake cables
- Parking brake rear wheel components

PINPOINT TEST A : THE PARKING BRAKE WILL NOT APPLY

A1 CHECK THE PARKING BRAKE CABLES	
<ul style="list-style-type: none"> With the vehicle in NEUTRAL, position it on a hoist. Refer to Section 100-02. Inspect for broken or binding parking brake cables. 	
Is there a parking brake cable concern?	
Yes	INSTALL a new parking brake cable as necessary. REFER to Parking Brake Cable — Rear in this section. TEST the system for normal operation.
No	GO to A2 .
A2 CHECK THE PARKING BRAKE CONTROL	
<ul style="list-style-type: none"> Operate the parking brake control. 	

Does the parking brake control operate smoothly?

Yes	GO to A3 .
No	INSTALL a new parking brake control. REFER to Parking Brake Control in this section. TEST the system for normal operation.

A3 CHECK THE PARKING BRAKE COMPONENTS

- Operate the parking brake control and observe the parking brake components.

Do the parking brake components operate correctly?

Yes	CHECK the brake pad installation. REFER to Section 206-04 .
No	INSTALL new components. TEST the system for normal operation.

Pinpoint Test B: The Parking Brake Will Not Release

Normal Operation

The parking brake system is cable-actuated and controlled by an independent hand-operated parking brake control that is not self adjusting. The parking brake system is actuated when the parking brake control is pulled up. The parking brake control applies tension to the brake pads through the front parking brake cable and conduit and the LH and RH rear parking brake cables.

Possible Causes

- Parking brake cables
- Parking brake control
- Parking brake rear wheel components

PINPOINT TEST B : THE PARKING BRAKE WILL NOT RELEASE

B1 CHECK THE FRONT PARKING BRAKE CABLE

- Release the parking brake control.
- If the vehicle cannot be moved, raise and support it.
- Release the parking brake cable tension. Refer to [Parking Brake Cable Tension Release](#) in this section.
- Disconnect the parking brake cable at the parking brake lever.

Does the parking brake release?

Yes	INSPECT the front parking brake cable for binding. INSPECT the parking brake control for wear or damage. INSTALL new components as necessary. Refer to Parking Brake Control in this section. TEST the system for normal operation.
No	GO to B2 .

B2 CHECK THE PARKING BRAKE REAR CABLES

- Disconnect the RH parking brake rear cable and conduit and the LH parking brake rear cable and conduit from the parking brake lever at each wheel.

Does the parking brake release?

Yes	INSPECT the parking brake rear cable and conduits for wear or damage. INSTALL new components as necessary. Refer to Parking Brake Cable — Rear in this section. TEST the system for normal operation.
No	REPAIR the worn or damaged rear wheel parking brake components as necessary. TEST the system for normal operation.