



Inspection Bulletin

North American Standard Inspection Program

2025-03 – Electronic Parking Brake Control Systems

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Summary

Some newer trucks/tractors have electronic parking brakes that function differently than the typical push-pull dash valves in air braked vehicles or mechanical parking brakes in hydraulic vehicles. These parking brake applicators look different, and some of them are equipped with a system that will automatically apply the parking brake springs on an air brake combination or the electronic parking brake on a vehicle with hydraulic brakes when the driver opens the door.

This inspection bulletin provides information on the electronic parking brake systems on air and hydraulic braked systems and in some cases, a means to override the system to allow an inspector to complete a Level I, II or V Inspection.

Background

Air Brakes

During a Level I Inspection on an air braked combination, when a driver is requested to get out of the vehicle to open the hood and/or cargo doors or remove the gladhands during the tractor protection system test, the parking brake may automatically apply as soon as the door is opened. This reduces air pressure for the remainder of the inspection, causing the pushrods to move, and requires the engine to be started to build up air and release the brakes again. It also results in a driver not being able to remove a charged emergency line from the trailer because when the driver door is opened to remove the gladhand, the parking/emergency/spring brakes apply. An indication of this occurring is hearing the release of air that accompanies the application of the spring brakes as the door is being opened.

Hydraulic Brakes

During a Level I or II Inspection, when a driver is requested to apply the parking brake and the parking brake is electronic, it is imperative the inspector is aware of some of the safety features that may be incorporated in the system to ensure the test is done correctly. If the guidance in this bulletin is not followed, vehicles may be put out of service incorrectly.

Feature(s) Information

Each original equipment manufacturer (OEM) may have a different way of applying these electronic parking brakes, thus overriding the system. Therefore, it is important to understand how each manufacturer's design functions.

Electronic Air Brake Parking Systems

This feature mitigates the possibility of a roll-away resulting from the driver failing to apply the parking brakes on the vehicle. The system detects situations where the vehicle is unparked and the driver is not

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present in the driver's seat, based on inputs from the vehicle, including the cab doors, service brakes and engine throttle pedal. The feature automatically sets the parking brakes on the tractor and trailer if the driver forgets to do so and the vehicle determines that the driver does not have control.

The system may apply the parking brakes when the driver's door is opened, the seat belt is unbuckled or the driver gets off the driver's seat, AND all of the following conditions are met:

- The vehicle's speed is low or zero.
- The accelerator pedal is not pressed.
- The foot brake is not being applied.

This situation will likely occur during a Level I or II Inspection when the driver is asked to leave the vehicle with all the brakes released (to open the hood and cargo doors and/or remove the gladhands). For this reason, the inspector should have the driver override the system at the start of the inspection.

Setting the Brakes

In some vehicles, during vehicle startup, all four LEDs on the dash electronic control unit (DECU) will illuminate for approximately three seconds, turn off for approximately two seconds, then indicate the parking brake's status.

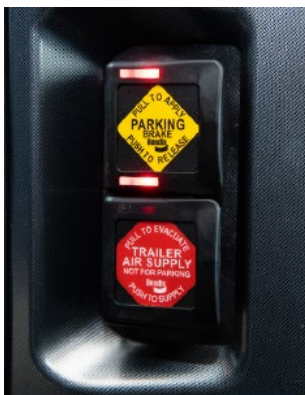
Releasing the Brake

To release the parking brake, all of the following conditions must be met:

- The driver's door is closed.
- The service brake pedal is pressed.
- The ignition power is on.



Once these above conditions are met, the red and yellow parking brake switches may be pressed to release the trailer's and tractor's parking brakes. LEDs will illuminate on the dash to indicate which parking brakes are set. See the example below.



**Parking Brakes Set
Tractor Only**



**Parking Brakes NOT Set
Neither Tractor nor Trailer**



**Parking Brakes Set
Trailer Only**



**Parking Brakes Set
Both Tractor and Trailer**

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OEM Recommendation to Override System for Rollaway Intervention System

International

The following procedure can be used to override the rollaway intervention system to release the brakes for inspection. The override system can be activated in 20 seconds by taking the following steps:

- Ensure the key is in the “on” position and the service brake is NOT applied.
- Have the driver fully press and release the yellow tractor parking brake switch consecutively four times.
- On the fifth time, have the driver press and hold the yellow tractor parking brake switch for approximately five seconds.

When the override is active, the middle LED(s) will blink three times continuously followed by a brief pause and then blink another three times continuously until the parking brake is activated again.

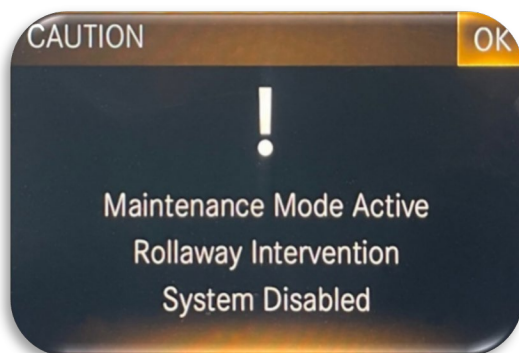
All the rollaway intervention system features, if applicable, will be disabled and the driver can release the brakes. The driver can disable the override by pulling the yellow switch or cycling the key on/off.



Freightliner

A Freightliner vehicle needs to be put in maintenance mode. To do this, ensure the key is in the “on” position, air is at maximum pressure (must be over 100 psi (690 kPa) during the entire procedure) and the door is closed. With the service brake applied, have the driver disengage the tractor parking brake by pressing the yellow parking brake switch. After the parking brakes are disengaged, have the driver push and hold the yellow parking brake switch while turning the key from the “on” to the “off” position. Have the driver turn the key back to the “on” position, and a pop-up in the driver display will appear indicating maintenance mode is activated.

To disable maintenance mode, repeat the same steps. It will also disable when the vehicle is driven at a speed above 18 mph (30 km/h). The parking brake control LED indicates the status of the parking brake. The LED remains off when the parking brake is disengaged and remains illuminated when the parking brake is engaged, regardless of whether the vehicle is in maintenance mode.



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Volvo and Mack

The following procedure can be used to override the rollaway intervention system to release the brakes for inspection. The Volvo or Mack needs to be put in “service mode.”

- With the air pressure at maximum and the engine running, release the spring brakes and have the driver apply the foot brake. Press and hold the electronic parking brake lever(s) for at least five seconds and while still pressing them, turn the ignition key or start/stop button to the “off” position and then back to the “on” position.
- A message on the instrument display will show that the parking brake is in service mode. The driver can exit the vehicle without the spring brakes activating.
- The service mode is deactivated when the electronic park brake lever is pulled.



NOTE: In all cases, if the inspector required the safety features to be overridden for the inspection, the inspector must ensure that the override is disengaged once the inspection is complete.

Electronic Hydraulic Parking Brake Systems

Some hydraulic truck OEMs may have different features on vehicles equipped with electronic parking brakes to prevent damage to the vehicle or for safety reasons.

Some vehicles will disengage the parking brake if the accelerator is pressed with the door open or closed, while others will prevent the parking brake from being released if the door is open. Also, some vehicles will shift from drive into park if the door is opened.

To prevent these features from affecting the parking brake test, instruct the driver to:

- Keep the door open during the parking brake test.
- Apply the parking brake.
- Observe the driver's foot and ensure they are not touching the accelerator pedal. (They should not be instructed to do so.)
- Put the vehicle in drive or low forward gear and then reverse. The vehicle should not roll.

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Inspection Guidance

Air Brakes

When conducting a North American Standard Level I, II or V Inspection, if the parking brakes activate on a vehicle or combination of vehicles equipped with an electronic parking brake when the driver's door is opened, take into consideration the make of the vehicle being inspected. Follow the steps in this bulletin relative to the type of vehicle and override the parking brake for the inspection, if necessary.

Inspectors should attempt the override process more than once, exactly as the steps are outlined. If the override is unsuccessful, an email should be sent to cvсахq@cvsa.org stating the year, make and model of the vehicle.

Hydraulic Brakes

When conducting a North American Standard Level I, II or V Inspection, to inspect the parking brake, follow the steps in this bulletin to ensure the parking brake stays applied and the vehicle remains in gear.

Visor Cards

On the following page, there is a visor card to use for quick reference for activating and deactivating the override system for different vehicle manufacturers.

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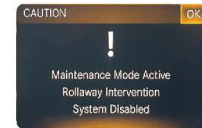
How to Override the Automatic Application of the Electronic Parking Brake on Different Vehicle Types for Roadside Inspections

NOTE: In all cases, if the inspector requires this safety feature to be overridden for the inspection, the inspector must ensure the override is deactivated once the inspection is complete.

Freightliner

To Activate

- ✓ With the key in the “on” position, the air system at maximum pressure and the door closed, have the driver apply the service brake.
- ✓ Have the driver disengage the parking brake by pressing the yellow parking brake switch.
- ✓ Once parking brakes are disengaged, have the driver push and hold the yellow parking brake switch while turning the key to the “off” position and then back to the “on” position. The maintenance mode will be activated.



To Deactivate

- ✓ Have the driver repeat the activation process.



NOTE: The maintenance mode will deactivate automatically if the vehicle is driven above 18 mph (30 km/h).

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International

To Activate

- ✓ Ensure the key is in the “on” position and the service brake is NOT applied.
- ✓ Have the driver fully press and release the yellow tractor parking brake switch four times consecutively.
- ✓ On the fifth time, have the driver press and hold the yellow tractor parking brake switch for approximately five seconds.
- ✓ When the override is active, the middle LED(s) will blink three times continuously followed by a brief pause and then blink another three times continuously until the parking brake is activated again.



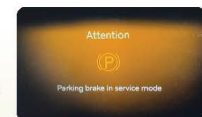
To Deactivate

- ✓ The driver can deactivate the override by pulling the yellow switch or cycling the key on/off.

Volvo and Mack

To Activate

- ✓ With the air pressure at maximum and the engine running, release the spring brakes and have the driver apply the foot brake. Press and hold the parking brake lever(s) for five seconds.
- ✓ While still pressing the lever(s), turn the ignition key or start/stop button to the “off” position and then back to the “on” position.
- ✓ A message on the instrument display will show that the parking brake is in service mode.



To Deactivate

- ✓ The service mode is deactivated when the electronic park brake lever is pulled.



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