

BENDIX® INTELLIPARK® ELECTRONIC PARKING BRAKE CONTROL SYSTEM FOR FREIGHTLINER® TOWING AND NON-TOWING VEHICLES OPERATOR'S MANUAL



AVAILABLE AT



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IMPORTANT SAFETY INFORMATION



Bendix safety technologies complement safe driving practices. No commercial vehicle safety technology replaces a skilled, alert driver exercising safe driving techniques and proactive, comprehensive driver training. Responsibility for the safe operation of the vehicle remains with the driver at all times.



The Bendix® Intellipark® Electronic Parking Brake (EPB) system is a driver assistance, not driver replacement, technology. Safe driving practices, habits, and driver training are critical for safety on the road.



The driver should always manually set the tractor and trailer parking brakes and should not rely on the Intellipark EPB system to do so. Data captured through the Intellipark EPB system can show most abuse or misuse of the system.



Bendix®-brand Electronic Control Units (ECUs), including the Intellipark EPB ECU, are not designed to store data for purposes of accident reconstruction, and Bendix® ACom® PRO™ Diagnostic Software is not intended to retrieve data for purposes of accident reconstruction. Bendix makes no representations as to the accuracy of data or video retrieved and interpreted from ECUs for purposes of accident reconstruction. Bendix does not offer accident reconstruction services or interpretation of stored data. Bendix ECUs are not protected from fire, loss of power, impact damage, or other conditions that may be sustained in a crash situation and may cause data to be unavailable or irretrievable.



Vehicle operators and maintenance personnel must observe the LEDs present on the red and yellow switches to determine the status of the Intellipark EPB system. Consult the Intellipark Operator's Manual if all LEDs do not illuminate immediately after the system powers on, or if any of the LEDs are blinking. For complete maintenance information, refer to *SD-03-1189, Bendix® Intellipark® Electronic Park Brake (EPB) System*, on B2Bendix.com.



In certain situations – particularly in cold weather or when the vehicle has low system pressure – a long switch push or pull may be required for the vehicle to unpark or park. This is similar to the current pneumatic valve functionality. In these circumstances, hold the switch in the pushed or pulled position until the LEDs indicate the requested state (parked: illuminated LEDs; unparked: non-illuminated LEDs).

INTRODUCTION

This vehicle is equipped with a Bendix® Intellipark® Electronic Parking Brake (EPB) system. The Operator's Manual provides an overview of the Intellipark EPB system Dash Electronic Control Unit (DECU) for select Freightliner® towing and non-towing vehicles. This manual explains the safe practices, functions, features, and alerts of the system. Vehicles equipped with the Intellipark EPB system include electronic DECU switches instead of pneumatic push/pull parking brake knobs.

Read this manual thoroughly before operating the system. Be familiar with the controls, system alerts, and what to expect when the system is in operation. Keep this manual in the vehicle at all times as a reference for the system, its operation, and its performance characteristics.



**Dash Electronic
Control Unit (DECU) Switches**

Included with the Intellipark EPB System



**Pneumatic
Push/Pull Knobs**

Replaced by the Intellipark DECU Switch(es)

MAINTENANCE

Vehicle maintenance mode can be used when maintenance needs to be performed. For complete maintenance information, refer to *SD-03-1189, Bendix® Intellipark® Electronic Park Brake (EPB) System*, on B2Bendix.com.

SWITCH CONFIGURATIONS

There are two (2) different configurations of the Bendix® Intellipark® Dash Electronic Control Unit (DECU):

- Towing Vehicles: Two-switch vertical configuration
- Non-towing Vehicles: One-switch vertical orientation

Towing Vehicle DECU
Vertical Configuration



Non-towing Vehicle DECU
Vertical Configuration



NOTE: This Operator's Manual will detail the operation for the towing vehicle DECU, but the functionality remains the same for both towing and non-towing DECU configurations.

SETTING AND RELEASING THE BRAKES



Fully PULL the switches until the LEDs illuminate to indicate the parking brakes have been set



Fully PUSH the switches until the LEDs are no longer illuminated to indicate the parking brakes have been released

LEDs ON THE DASH ELECTRONIC CONTROL UNIT (DECU)

Illuminated LEDs on the parking brake switches indicate that the parking brakes are set.



Parking Brakes Set
Both Tractor and Trailer



Parking Brakes NOT Set
Neither Tractor nor Trailer



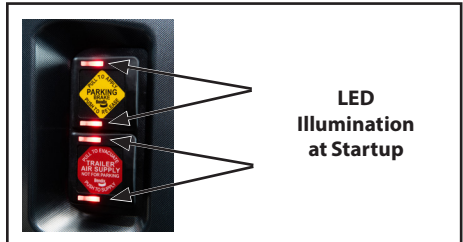
Parking Brakes Set
Trailer ONLY



Parking Brakes Set
Tractor ONLY

VEHICLE STARTUP

During vehicle startup, all four (4) LEDs located on the DECUs will illuminate for approximately three (3) seconds, turn off for approximately two (2) seconds, then indicate the parking brake status.



DRIVER ASSISTANCE FEATURES

Smart Unpark™

To release the Electronic Parking Brake (EPB), **all of the following conditions must be met:**

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

NOTE: An additional condition exists to unpark vehicles equipped with certain Allison® transmissions. For non-towing variant vehicles equipped with an Allison 1000 or 2000 Series transmission with the optional Bendix® Park-via-Shifter functionality, the shifter has to be moved to a non-parked state (neutral, drive, reverse, etc.) to unpark the vehicle.

Once all of the above conditions are met, the red and yellow parking brake switches may be pressed to release the trailer and tractor parking brakes.

NOTE: If the driver receives a low air pressure warning, the vehicle may not be able to be unparked.

Rollaway Intervention

The Rollaway Intervention feature is intended to automatically set the parking brakes on both the tractor and trailer if the driver forgets to do so and the Bendix® Intellipark® Electronic Parking Brake (EPB) system detects the driver does not have control over the vehicle and it is not parked.

The system may determine the driver does not have control over the vehicle when the driver door is open AND all of the following conditions are met:

- The vehicle speed is low or zero;
- The accelerator pedal is not pressed;
- The foot brake is not being applied; and

Refer to the table on Page 12 for notifications you may see on the integrated display associated with this feature.

Rollaway Intervention Acknowledgement

When the Rollaway Intervention feature is activated, the LEDs will continuously blink and sound an audible noise alert until the driver acknowledges the rollaway intervention event by pulling the yellow parking brake switch.

Once the driver acknowledges the rollaway intervention event by pulling the yellow parking switch, the parking brakes will be manually set. After the parking brakes are set, this warning and audible noise alert will go away. To release the parking brakes, the driver must follow the Smart Unpark™ conditions previously mentioned in this manual.

Exhaust-at-Speed

In an emergency situation, at low vehicle speeds, the Bendix® Intellipark® Electronic Parking Brake (EPB) system may help the driver slow the vehicle when the service brakes are not available. Pull the yellow or red Dash Electronic Control Unit (DECU) switch until the parking brakes are applied. Pulling the yellow DECU switch will apply both the tractor and trailer brakes, while pulling the red DECU switch will apply the trailer brakes only.

Once an exhaust-at-speed event has been initiated, if the driver releases the switch while the vehicle is in motion, the parking brakes may release if there is no brake system malfunction that would prevent them from releasing. If the driver releases the switch when the vehicle is at low or zero speed, the parking brakes will remain applied unless the driver pushes the switch(es).



Vehicle stability may be compromised when the Exhaust-at-Speed feature is active.

NOTE: Refer to the section titled *Smart Unpark™* to ensure all conditions are met to properly release the parking brakes.

Park via Shifter

If your vehicle is equipped with an Allison® 1000 or 2000 Series Transmission with Bendix® Park-via-Shifter functionality, the parking brake will automatically be set when the vehicle is at low or zero speed, unparked, and when the shifter is moved from a non-parked state (neutral, drive, reverse, etc.) to park. All LEDs on the DECU and the park sign on the vehicle cluster will then be illuminated.



This is a driver-assistant feature. The driver must pay close attention to the LEDs on the DECU and dash indication to make sure the vehicle is parked before exiting the vehicle.



WARNING: Blinking LEDs may indicate there is a problem, such as if the driver unparked the vehicle with low system supply pressure. Refer to the integrated display for further instructions on how to proceed. In some instances, parking brakes may be unavailable and the vehicle should NOT be driven. Refer to the table on Page 12 for notifications you may see on the integrated display associated with Bendix® Intellipark® Electronic Parking Brake (EPB) system Diagnostic Trouble Codes (DTCs).

Refer to the Bendix Intellipark Electronic Parking Brake System Service Data Sheet, SD-03-1189, on B2Bendix.com for further information on system DTCs.



WARNING: Towing vehicles: If the two (2) inside LEDs are fully lit and not blinking, the system has generated a Diagnostic Trouble Code (DTC). The vehicle should NOT be driven and should be serviced immediately.

Non-towing vehicles: If one LED is fully lit and not blinking, and the other LED is off, the system has generated a DTC. The vehicle should NOT be driven and should be serviced immediately.



LEDs surrounded by a solid line represent fully lit, non-blinking LEDs. LEDs surrounded by a dotted line represent blinking LEDs.

OPERATING THE BENDIX® INTELLIPARK® ELECTRONIC PARKING BRAKE (EPB) SYSTEM WITH ACTIVE DIAGNOSTIC TROUBLE CODES (DTCs)

For complete DTC information, refer to SD-03-1189, Bendix® Intellipark® Electronic Park Brake (EPB) System, on B2Bendix.com.

Setting the parking brakes while there is an active DTC on the Intellipark EPB System

Stop on a level surface and in a safe place. Shut off the engine (the key should be in the off position) and open the driver-side window so the exhaust of air can be heard, which would indicate the parking brakes being applied. Perform the following steps:

1. Chock the wheels.
2. Attempt to park the trailer by pulling the trailer parking switch (red). Listen for the exhaust of air.
3. Attempt to park the tractor by pulling the tractor parking switch (yellow). Listen for the exhaust of air.
4. If the tractor or the trailer brakes did not apply, ensure the vehicle is keyed off and “fan down” the reservoirs by repeatedly depressing the service brake pedal to automatically apply the spring brakes.
5. Switch off the battery disconnect to the vehicle or key off for approximately 30 seconds.
6. Key on the vehicle or connect the battery and then attempt to park.
7. If the issue persists, service the vehicle.

Starting the vehicle after a DTC on the Intellipark EPB System has been remedied

1. Ensure the reservoirs are depleted of air.
2. Once the reservoirs are depleted of air, remove the wheel chocks prior to starting the engine.
3. Keep the brake pedal depressed to hold the vehicle stationary in case the spring brakes are released.
4. Start the engine and stay in the driver’s seat as the air brake system builds air, filling the reservoirs.
5. Once the system air is at a normal operating range, the vehicle can be unparked and driven. Push the red and yellow switches to unpark the vehicle.

Bobtail Mode

When driving bobtail – or driving without a trailer attached to the tractor – the trailer switch LEDs will be illuminated *unless* bobtail mode is entered. Bobtail Mode allows you the ability to turn off the two (2) red LEDs on the trailer air supply switch when driving bobtail. Bobtail Mode can be entered manually by following the steps below.

To enter Bobtail Mode:

- The vehicle must be stationary or at a low speed.
- The driver must press the yellow switch and release the tractor parking brakes.
- The driver must pull and hold the red trailer switch for a minimum of approximately three (3) seconds.

Situations in which the vehicle will exit Bobtail Mode:

- The key is turned off.
- The driver applies the tractor parking brake by pulling the yellow switch.
- The vehicle experiences a Rollaway Intervention Event. *Refer to Page 7 for additional details.*

Interlocks Override Mode







In an emergency situation, such as when an interlock Diagnostic Trouble Code (DTC) appears or reports incorrect information and the driver cannot unpark the vehicle, the following procedure can be used to unpark:

1. Turn the ignition on.
2. Fully press and release the yellow tractor parking brake switch consecutively four (4) times.
3. On the fifth switch, press and hold the yellow tractor parking brake switch for approximately five (5) seconds.

If this sequence is completed in less than approximately 20 seconds and full system pressure is present, the Bendix® Intellipark® Electronic Parking Brake (EPB) Control System will enter Interlocks Override Mode and the driver will be able to unpark without interlocks. All interlock features related to the foot brake, door, and transmission (if applicable) will be disabled. Once the vehicle is unparked, one can exit this mode by pulling the yellow switch and parking the vehicle or performing a key cycle on/off. When the Interlocks Override Mode is active, the middle LED(s) will blink three (3) times continuously followed by a brief pause and then blink another three (3) times continuously until the Interlocks Override Mode is exited by pulling the yellow tractor parking brake switch.

Freightliner® Integrated Display Notifications

Refer to the OE manual for more details on the latest vehicle-specific display notifications – if available – for the Bendix® Intellipark® Electronic Parking Brake (EPB) Control System.

<div><div>Notice</div><div> Park</div><div>To Release Park Brake Check Air, Ignition, Svc Brake, Door Status</div><div></div></div>	<p>SITUATION: One (1) or more than one (1) interlock (doors closed, ignition on, service brake pressed, and/or – if applicable – shifter in non-park state [drive, reverse, neutral, etc.]) is not met and the driver is attempting to unpark the vehicle with a yellow and/or red switch push.</p> <p>RESOLUTION: Ensure all interlocks (doors closed, ignition on, service brake pressed, and – if applicable – shifter in non-park state [drive, reverse, neutral, etc.]) are met followed by a yellow and red switch push.</p>
<div><div>Warning</div><div> Park</div><div>Engage Parking Brake</div><div></div></div>	<p>SITUATION: The driver is not in control of the vehicle (vehicle unparked, service brake not pressed, and/or door is open). Rollaway Intervention is about to set the parking brake unless the driver acts.</p> <p>RESOLUTION: Take control of the vehicle by pulling the yellow switch to set the parking brake.</p>
<div><div>Warning</div><div> Park</div><div>Rollaway Intervention Activated Pull Park Brake Switch</div></div>	<p>SITUATION: Rollaway Intervention has activated and set the parking brake.</p> <p>RESOLUTION: Acknowledge Rollaway Intervention by pulling the yellow switch to unpark the vehicle.</p> <div><div> Park</div><div>Tractor/straight truck parked indication.</div></div>

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