

# Instructions



## **B-PTM507-C (Pre-Trip Module)**

**2020 Ford Super Duty**

**2020 Ford Transit**

**2021 Ford E-Series**

Contact InterMotive for additional vehicle applications

## **System Overview**

The B-PTM507 controls exterior lights for Pre-Trip Inspection. The lamp test mode cycles the high beams, turn signals, brake lights, and reverse lights on and off so the user can verify exterior lights are working. The PTM507 does not have the ability to control the Parking lights and Low Beams. (the user must manually turn the lights on)

Additionally, the PTM507 has an optional Bluetooth module that has the ability to lock the shifter in park and reports a number of vehicle parameters to a paired tablet or other Bluetooth enabled device.

## **Installation Instructions**

**Disconnect vehicle battery before proceeding with installation.**



### **WARNING**

Disconnect the battery to prevent setting a check engine light.

### **IMPORTANT — READ BEFORE INSTALLATION**

It is the installer's responsibility to route and secure all wiring harnesses where they cannot be damaged by sharp objects, mechanical moving parts and high heat sources. Failure to do so could result in damage to the system or vehicle and create possible safety concerns for the operator and passengers.

Avoid placing the module where it could encounter strong magnetic fields from high current cabling connected to motors, solenoids, etc. Avoid radio frequency energy from antennas or inverters next to the module. Avoid high voltage spikes in vehicle wiring by always using diode clamped relays and solenoids when installing upfitter circuits.

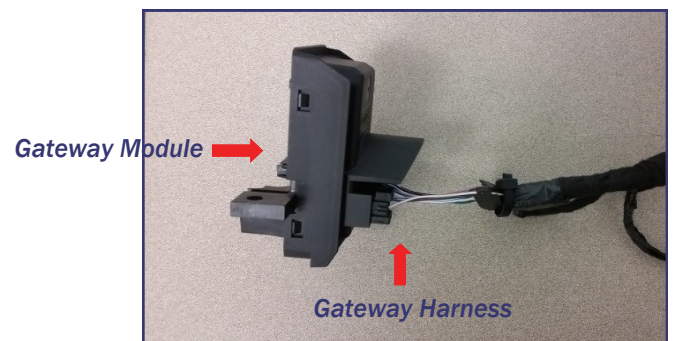
# Instructions

## B-PTM507-C Module

Remove the lower dash panel below the steering column area and find a suitable location to mount the module. Locate the module in an area away from any high heat sources. (engine heat, heater ducts, etc.) Do not actually mount the module until all wire harnesses are routed and secure. Leave enough 'take out harness' to allow dropping the module down for observation of the diagnostic LEDs. The last step of the installation is to mount the module.

## B-PTM507-C

1. Locate the vehicles Gateway Module. It will be mounted below the lower left dash panel.
2. Remove the harness behind the Gateway module by pressing the locking tab and pulling outward.
3. Plug the Female side of the Intermotive Gateway Harness into the back of the Gateway module. Ensure the connection is fully seated and secured by the locking tab.
4. Plug the Male side of the Intermotive Data Link Harness into the Gateway harness.
5. Secure the B-PTM507 Gateway harness so that it does not hang below the lower dash panel.



## PTM507 Connector Definition

### 8-Pin PTM Input Pin-Out Definition (J4)

Connector J4 contains the PTM's 2 discrete wire inputs. One is active low and the other is active high. The active low inputs have their own internal pull up resistors so they can be left floating when not used or not active.

The 2 input pins on connector J4 are defined as follows: (supplied cable harness S-H96DX)

- Pin #1 - Green/Black - momentary low true input to enable PTM mode.
- Pin #2 - Tan/Black (reserved)
- Pin #3 - Gray/Black (reserved)
- Pin #4 - Orange/Black (reserved)
- Pin #5 - Red/White - momentary +12V to enable PTM mode.
- Pin #6 - Blue/White (reserved)
- Pin #7 - Violet/White (reserved)
- Pin #8 - Brown/White (reserved)



**J4 connector**

Connect the inputs to the vehicle equipment as indicated. **\*NOTE:** Do NOT connect both Pin 1 and Pin 5. (only one method of activation can be used) Choose the method for the vehicle and connect only the input needed to the appropriate momentary switch.

# Instructions

## Shift Lock Option

The feature is only compatible with the Transit Check app and it will lock the shifter in park at all times. The app has the capability to unlock the shifter.

## 4-Pin PTM Shift Lock Connector Pin-Out Definition (J5) Only available with Bluetooth

Connector J5 contains the PTM's low current output (LCO) pins for the shift lock harness.  
(part # 840-00114)

- Pin #1 - LCO 1, Yellow wire to Shift Lock Harness
- Pin #2 - LCO 2, Not Used
- Pin #3 - LCO 3, Not Used
- Pin #4 - LCO 4, Not Used



**J5 connector**

## Shift Lock harness installation

1. Remove the upper and lower steering column covers by removing the 3 screws in the lower column cover.
2. Locate the Shift Lock (4-pin) harness #840-00114
3. Unplug the Shift Lock connector.
4. Plug the OEM Shift Lock connector into the mating connector on the B-PTM507 harness.
5. Plug the 4-pin connector on the B-PTM507 harness into the mating connector on the OEM Shift Lock harness.



# Instructions

## Post Installation System Operation Test

Perform the following tests before actually mounting the module to allow easy viewing of the diagnostic LED's, if necessary.

1. Place the ignition in the Run position.
2. Place transmission in Park and apply the Parking Brake.
3. Turn the headlight switch to Low Beams
4. Momentarily apply a ground signal to 4w minifit jr pin #1 (green/black) to enable Pre-Trip mode or momentarily apply a +12V signal to 4w minifit jr pin #5 (red/white) to enable Pre-Trip mode.
5. When Pre-Trip is engaged, the module will cycle the exterior lights. **Note:** This will cycle for about 5 mins and shut off automatically.
6. Release Parking Brake and confirm Pre-Trip is disabled.
7. Apply Parking Brake and repeat step 5 to confirm that Pre-Trip mode can once again be enabled.

If the PTM507 fails any of the above tests, check harnesses and review instructions, or check diagnostics below. If necessary, call InterMotive Technical Support at (530) 823-1048.

## Diagnostics

Diagnostic mode is entered by pressing the Red button switch. There are 4 pages of diagnostics and each page is determined by the number of flashes of the Status LED. The module provides diagnostic LEDs which illuminate according to the following table below.

To exit this mode, press the Red button one more time after opening the 4th page of diagnostics.

STATUS LED	Page 1	Page 2	Page 3	Page 4
LED_1	PTM Status	PB Applied	Bluetooth Connected	Reserved
LED_2	PTM Status	TR=PARK	N/A	Reserved
LED_3	PTM Status	Active High Trigger	Shift Lock Enabled	Reserved
LED_4	PTM Status	Active Low Trigger	Shift Lock Status	Reserved

If the B-PTM507-C fails any step in the Post Installation review the installation instructions and check all connections.

**Reinstall the lower dash panel**

# Instructions

## LEAVE IN VEHICLE

### Operating Instructions - Pre-Trip Module

B-PTM507-C

2020 Ford Super Duty

2020 Ford Transit

2021 Ford E-Series

#### System Operation

The Pre-Trip Inspection Module cycles the exterior lights in order to assist the customer to verify all lights are working.

Lamp Test mode may be initiated by either a momentary ground or a momentary power input.

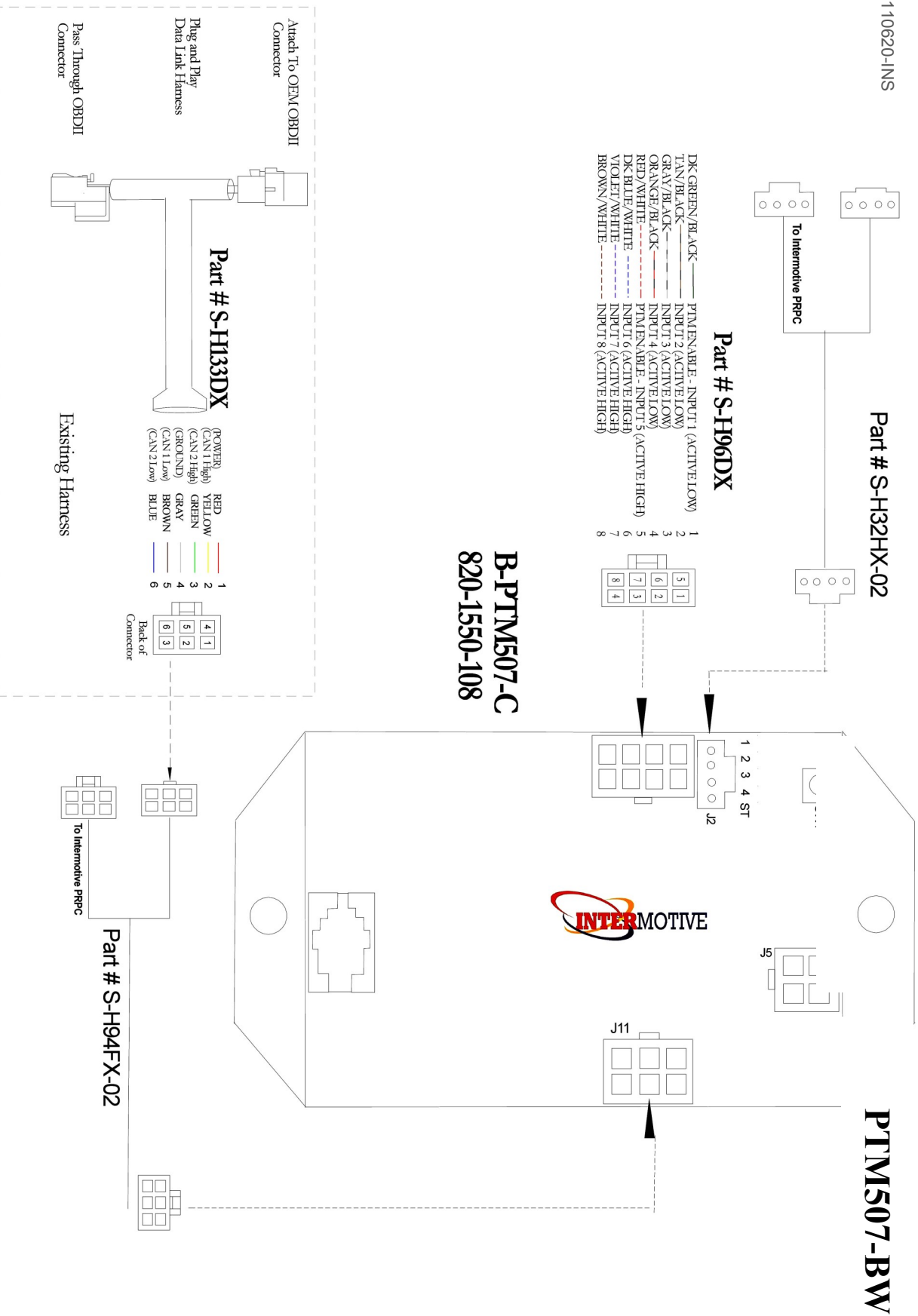
#### Lamp Test Mode:

To enter Lamp Test Mode **all** of the following conditions must be met:

- Transmission in Park
- Apply Parking Brake
- Vehicle speed zero
- Headlights on and in low beam
- Momentarily ground the Green/White wire **or** apply 12v to the Red/White wire

To exit Lamp Test Mode any condition may be applied:

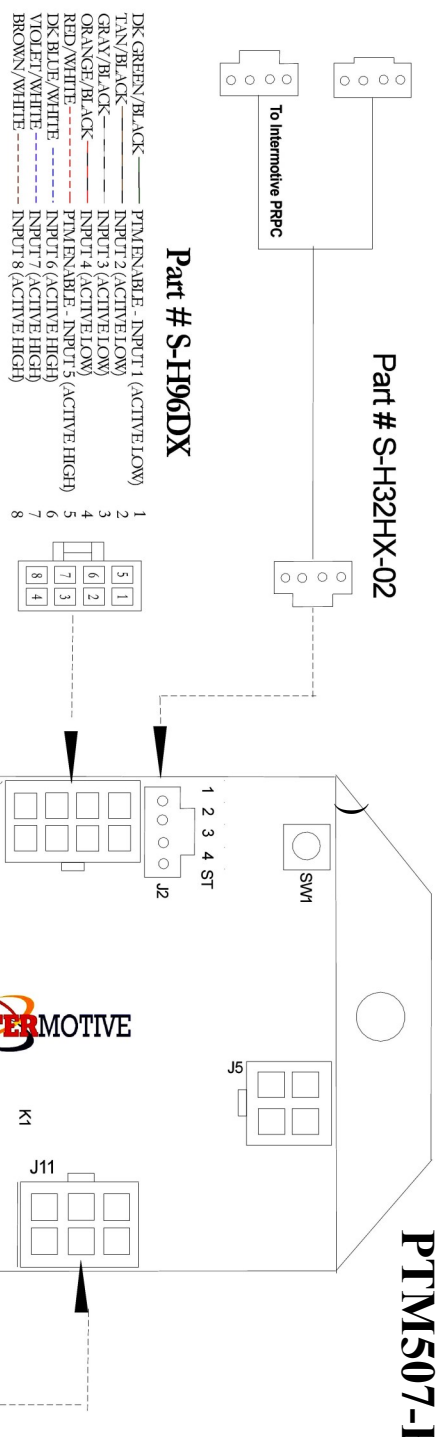
- Momentarily ground the Green/White wire **or** apply 12v to the Red/White wire
- Release Parking Brake
- Place Transmission out of Park



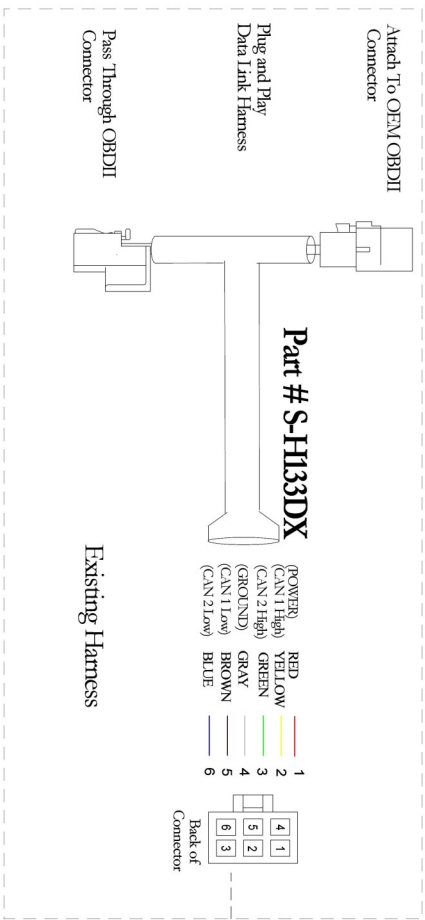
Submit product registration at [www.intermotive.net](http://www.intermotive.net)

If the B-PTM507-C fails any step in the Post Installation Check List, review the installation instructions and check all connections.  
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# PTM507-BP/BPW



**B-PTM507-C**  
**820-1550-108**

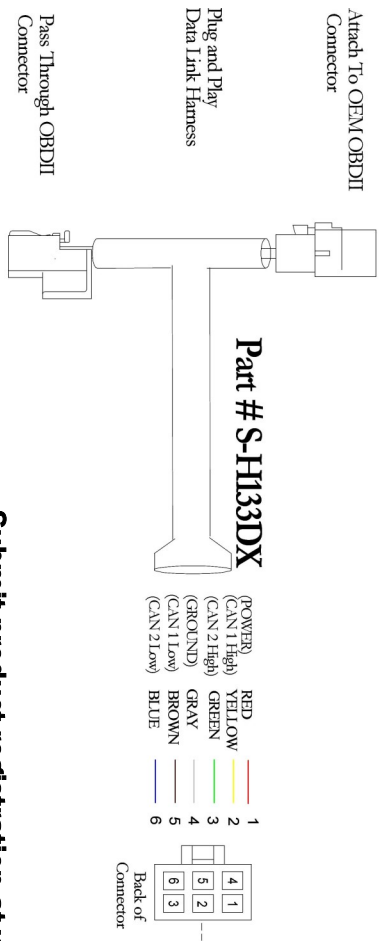
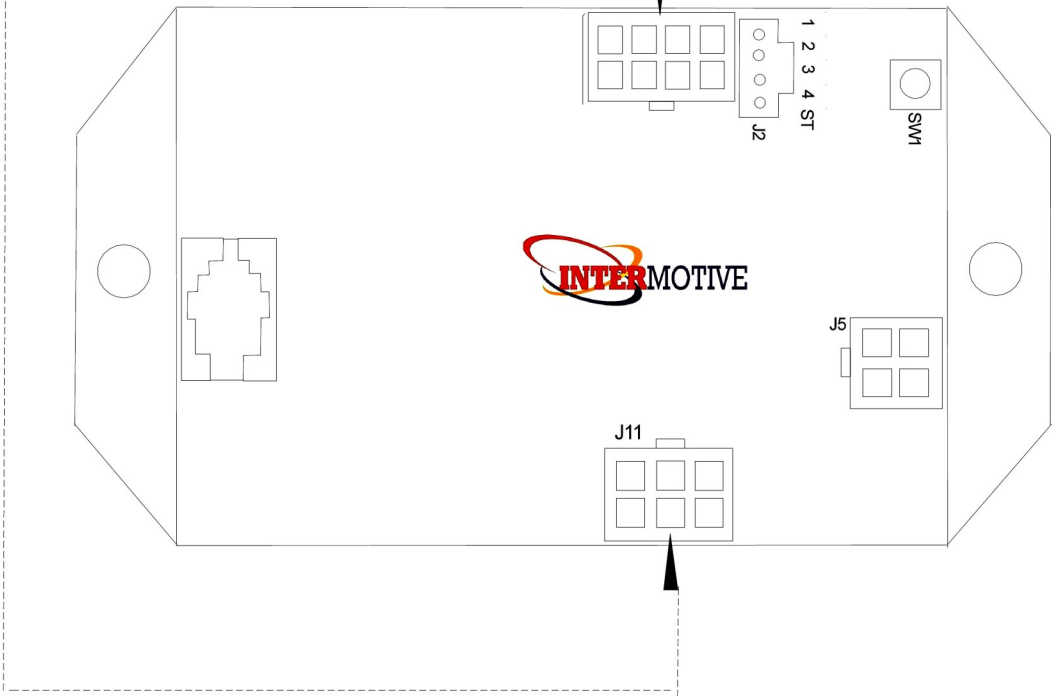


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**B-PTM507-C**  
**820-1550-108**



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