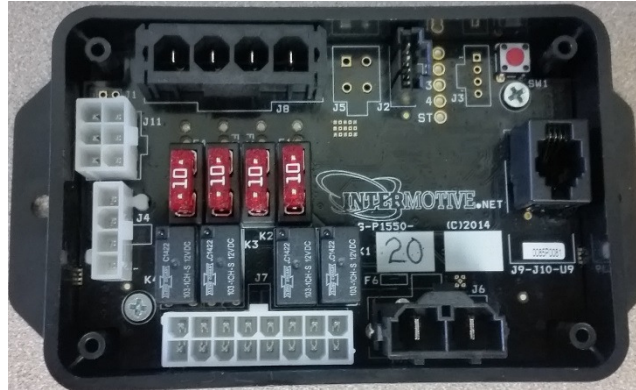


PTM505 B-BW (Pre-Trip Module)

2009 - 2017 Ford E-Series



Introduction

The PTM505 controls exterior lights for Pre-Trip Inspection. Lamp Test mode cycles lights ON and OFF so the user can verify all exterior lights are working. PTM will also provide separate outputs for Left Turn Lamps, Right Turn Lamps, Reverse Lamps and Brake Lamps.

Installation Instructions

Disconnect vehicle battery before proceeding with the installation.



WARNING

Disconnect the battery to prevent setting a check engine light.

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.

It is important to avoid placing the module where it could encounter strong magnetic fields from high current cabling connected to motors, solenoids, etc. Also avoid radio frequency energy from antenna's or inverters next to the module. Finally, avoid high voltage spikes in vehicle wiring by always using diode clamped relays when installing upfitter circuits.

PTM Module

Remove the lower dash panel below the steering column and find a suitable location to mount the module. Do not mount the module until all wire harnesses are routed and secure. The last step of the installation is to mount the module. Mount the module in an area away from any external heat sources (engine heat, heater ducts, etc.). Route the harnesses such that the tilt steering column does not contact them in the full down position. When installing the harnesses, leave several inches of take-out in order to remove the module if necessary.

Data Link Harness (6-pin connector)

1. Locate the vehicle OBDII Data Link Connector. It will be mounted below the lower left dash panel.
2. Remove the mounting screws for the OBDII connector. Plug the red connector from the Data Link Harness into the vehicle's OBDII-connector. Ensure the connection is fully seated and secured with the supplied wire tie.
3. Mount the black connector from the Data Link Harness in the former location of the vehicle's OBDII connector.

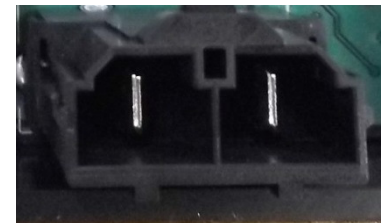


2w Minifit Sr

BLACK - Connect to clean metal contact near OBDII ground.

RED - Connect to direct 12V battery source.

2w Minifit Sr



PTM 16w Minifit Jr (Red Jumpers)

Connect S-H30EX red wire connector into 16-pin connector.

WARNING DO NOT USE BLACK WIRE JUMPER VERSION!



16 Pin Connector

4w Minifit Jr

Pin #1 - Green/White wire to momentary low true input to enable PTI mode.

Pin #2 - Not Used

Pin #3 - Red/White wire momentary high true input to enable PTM mode.

Pin #4 - Not Used



4 Pin MiniFit Connector

4W SABRE Outputs for Rear Lights

PTM will provide Outputs for Left Rear Turn Lamp, Right Rear Turn Lamp, Reverse Lamps and Brake. Each Output is Rated at 10 amp.

Pin #1 - Blue wire, Connect to Brake Lamp

Pin #2 - Yellow wire, Connect to after market Left Turn Lamp

Pin #3 - Green wire, Connect to after market Right Turn Lamp

Pin #4 - Orange wire, Connect to Reverse Lamp Circuit



4 Pin Sabre Connector

Installation Instructions

Left Turn Lamp Output

Attach Relay #2 Yellow wire to a Left turn light. This output is rated at 10A .

Right Turn Lamp Output

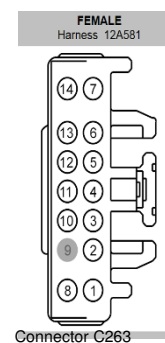
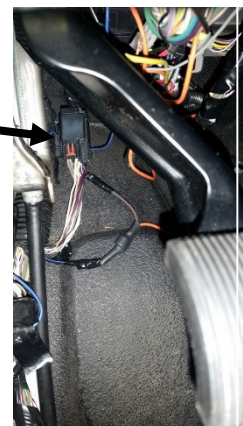
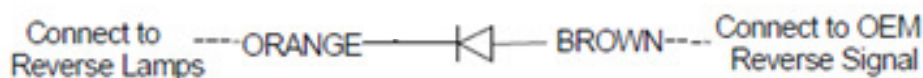
Attach Relay #3 Green wire to a Right turn light. This output is rated at 10A.

PTM505 Installation cont.

These connections must be made using solder and the supplied heat shrink tubing. Cut the tubing to 1" lengths for this purpose.

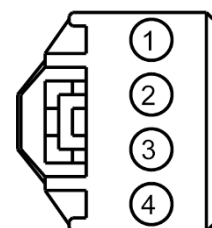
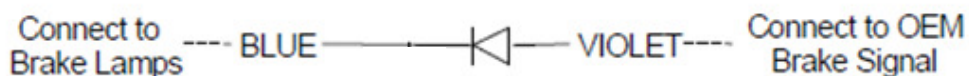
Reverse Lamp Circuit

1. Locate Connector C263 near parking brake.
2. **Verify** with a DVM that there is 12V on Pin 2 (Blue/White) when the vehicle is in Reverse and 0V when the vehicle is in any gear other than Reverse.
3. Cut the Blue/White wire, about 3 inches from the connector.
4. Attach the BCM side of the Blue/White wire, to the Brown wire of the PTM Harness
5. Attach the Lamp side of the Blue/White wire to the Orange wire of the PTM Harness



Brake Lamp Circuit

1. Locate Connector C278 near service brake.
2. **Verify** with a DVM that there is 12V on Pin 4 (Violet/White) when the Service Brake is depressed and 0V when the Service Brake is *not* depressed.
3. Cut the Violet/White wire, pin #4 about 3 inches from the connector.
4. Attach the Pedal side of the Violet/White wire, to the Violet wire of the PTM Harness
5. Attach the Lamp side of the Violet/White wire, to the Blue wire of the PTM Harness



Post Installation System Operation Test

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

1. Place the ignition in the Run position and verify that LED's 1 - 4 turn On indicating Bluetooth was successfully renamed.
2. Cycle the ignition Off and On and verify that LED's 1 - 4 turn Off when the ignition is in the Run position.
3. Place transmission in Park, apply parking brake and start the engine.
4. Turn on left turn signal, verify 4W SABRE (Green) provides +12V when turn indicator is on.
5. Turn on right turn signal, verify 4W SABRE (Yellow) provides +12V when turn indicator is on.
6. Turn on Hazards, verify both 4W SABRE wires (Green and Yellow) provides +12V when on.
7. Momentarily apply a ground signal to 4w minifit jr pin #1 (green/white) to enable Pre-Trip mode. Or momentarily apply a +12V signal to 4w minifit jr pin #3 (red/white) to enable Pre-Trip mode.
8. When Pre-Trip is engaged the module will cycle the exterior lights. **Note:** This will cycle for about 5 mins and shut off automatically.
9. Release parking brake and confirm Pre-Trip is disabled.
10. Apply parking brake and repeat step 5 to confirm that Pre-Trip mode can once again be enabled.

If the PTM505 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	Brake	PB	PTM Mode	BT Connected
LED_2	Left TS	VSS<2	n/a	n/a
LED_3	Right TS	TR=Park	Active High Trigger	n/a
LED_4	Reverse	n/a	Active Low Trigger	n/a

Leave in Vehicle PTM505 (Pre-Trip Module) 2009 - 2017 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.

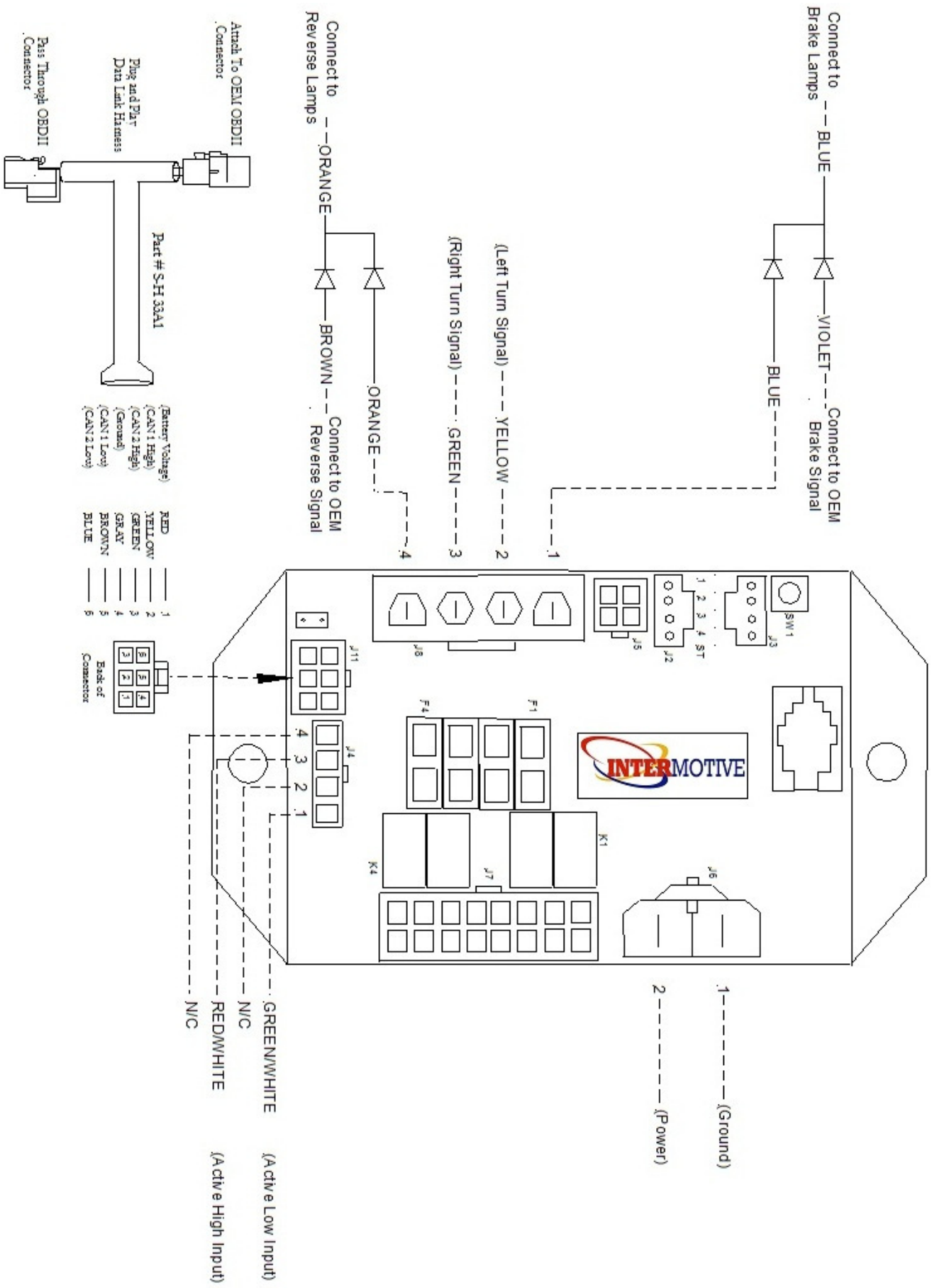
Lamp Test Mode:

To enter Lamp Test Mode all conditions must be met.

- Transmission in Park
- Apply Parking Brake
- Vehicle speed zero.
- 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

If the PTM fails any step in the System Operation Test, review the installation instructions and check all connections. If necessary, call Intermotive Technical Support at (530) 823-1048