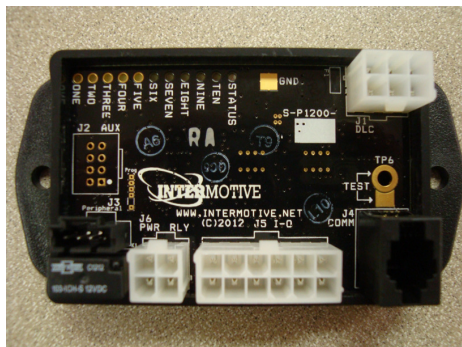


PTM505-A (Pre-Trip Module)

2008 - 2016 Ford E-Series



Introduction

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

PTM505 Add-On Option

PTM505-AP: Installed with the InterMotive Flex Tech System.

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)

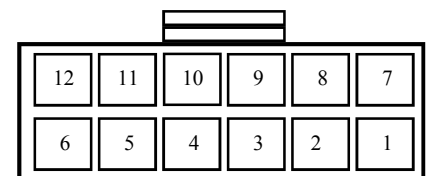
1. Locate the vehicle OBDII Data Link Connector. It will be mounted below the lower left dash panel.
2. Remove the mounting screws for the OBDII connector. Plug the red connector from the Data Link Harness into the vehicle's OBDII-connector. Ensure the connection is fully seated and secured with the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



12-pin Input Output Connector Pin-Out Definition

- Pin #1 - Not Used
- Pin #2 - Not Used
- Pin #3 - Orange - Connect to Right Rear Turn Lamp
- Pin #4 - Brown - Connect to Left Rear Turn Lamp
- Pin #5 - Green/White - Lamp Test Input (Low Input)
- Pin #6 - Not Used
- Pin #7 - Not Used
- Pin #8 - Blue - Connect to Reverse Lamps
- Pin #9 - Not Used
- Pin #10 - Not Used
- Pin #11 - Red/White - Lamp Test Input (High Input)
- Pin #12 - Not Used

12 Pin IO Connector



Back of Connector

PTM Harness (12-Pin Connector) Pre-Trip Engage Inputs

Active Low Lamp Test Module

Attach the PTM Harness connector Pin #5 Green/White wire to a momentary switch that provides a ground signal when the Pre-Trip needs to be engaged.

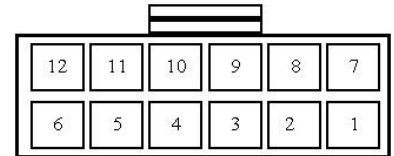
Active High Lamp Test Module

Attach the PTM Harness connector Pin #11 Red/White wire to a momentary switch that provides a 12 volt signal when the Pre-Trip needs to be engaged.

Note: only one input is needed to enable Pre-Trip.



12 Pin Connector



1/2 amp Outputs for Rear Lights

PTM will provide outputs for Left Rear Turn Lamp, Right Turn Lamp and Reverse Lamps. Each output is Rated at 1/2 amp.

Right Turn Lamp Output

Attach Pin #3 Orange wire to a right turn light. This output is rated at 1/2A .

Left Turn Lamp Output

Attach Pin #4 Brown wire to a left turn light. This output is rated at 1/2A .

Reverse Lamps Output

Attach Pin #8 blue wire to the reverse lights. This output is rated at 1/2A .

4-pin Input Output Connector Pin-Out Definition

Pin #1 - Not Used

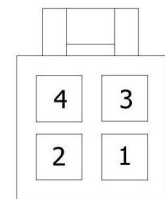
Pin #2 - Purple - Connect the White wire to the Brake Signal and the Purple wire to the rear Brake Lamps.

Pin #3 - Not Used

Pin #4 - Yellow - Connect to Ford rear harness Plug Pin 5 Blue/Red Wire.



4 Pin IO Connector



Back of Connector

Locate the Violet/White wire used for the Center High Mounted Brake Lamp. Confirm signal is +12V when Service Brake is pressed.

Cut this wire and attach the Brake Signal side to the WHITE wire on the 4 pin connector. Attach the Rear Brake Lamp side to the Purple wire on the 4 pin connector.

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 transmission in Park, apply Parking Brake and start the engine.
2. Turn on left turn signal, verify pin 4 (Brown) provides +12V when turn indicator is on.
3. Turn on right turn signal, verify pin 3 (Orange) provides +12V when turn indicator is on.
4. Place transmission in Reverse, verify pin (Blue) provides +12V.
5. Momentarily apply a ground signal to pin 5(Green/White) to enable Pre-Trip mode .
6. When Pre-Trip is engaged the module will cycle the exterior lights. **Note:** This will cycle for about 5 mins and shut off automatically.
7. Release parking brake and confirm Pre-Trip is disabled.
8. Momentarily apply a +12V signal to pin 11 (Red/White) to enable Pre-Trip mode .

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 shorting the two "Test" pads together. The module provides diagnostic LEDs which illuminate according to the following table. To exit this mode, short the two "test" pads again cycle the key.

PTM505 Diagnostics	
LED#	Description
LED 1	Lamp Test Status
LED 2	Low Input Active
LED 3	High Input Active
LED 4	TR = Park
LED 5	VSS <=2
LED 6	Diag. Session Active
LED 7	Left Turn Signal
LED 8	Right turn Signal
LED 9	Reverse Signal
LED 10	not used

Leave in Vehicle PTM505-A (Pre-Trip Module) 2008 - 2016 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:

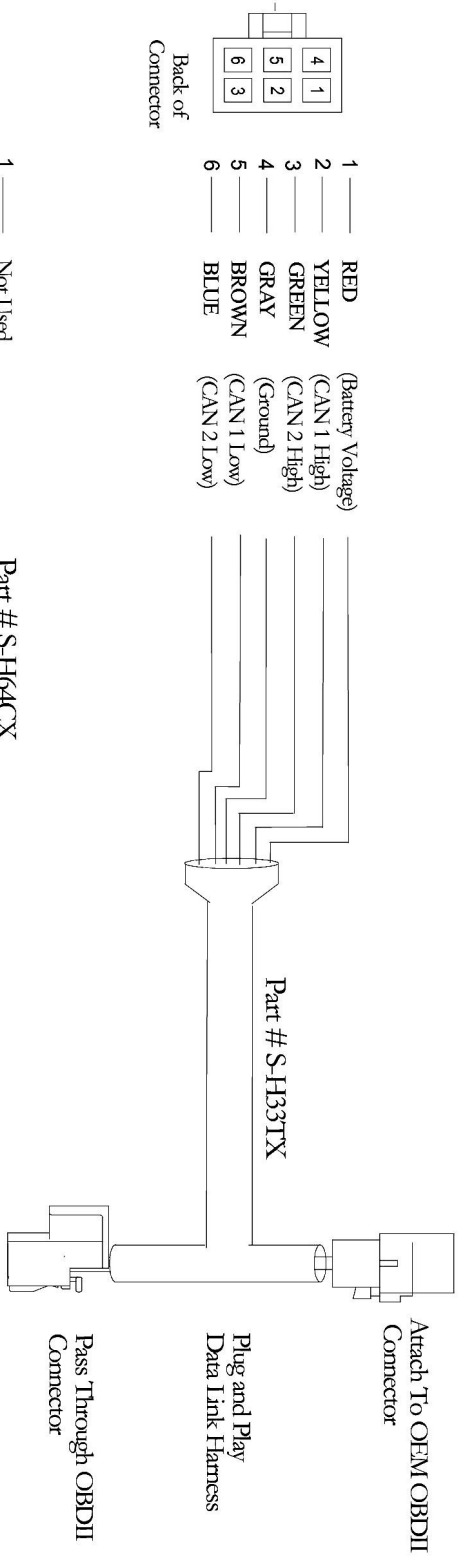
To enter Lamp Test Mode all conditions must be met.

- 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:

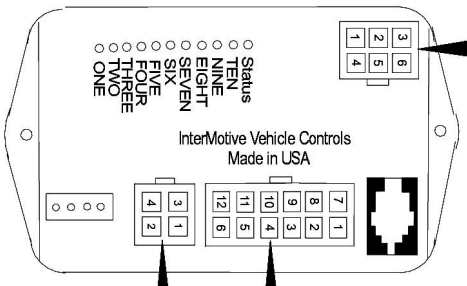
- Momentarily ground the Green/White wire or apply 12v to the Red/White wire.
- Release Parking Brake,
- Place Transmission out of Park.

(Note: exiting Lamp Test Mode results in the am/fm radio clicking off momentarily as well as causing the headlights to briefly flash).



- 1 — RED (Battery Voltage)
- 2 — YELLOW (CAN 1 High)
- 3 — GREEN (CAN 2 High)
- 4 — GRAY (Ground)
- 5 — BROWN (CAN 1 Low)
- 6 — BLUE (CAN 2 Low)

Back of Connector



PTM505
S-M1200-101

Part # S-H64CX

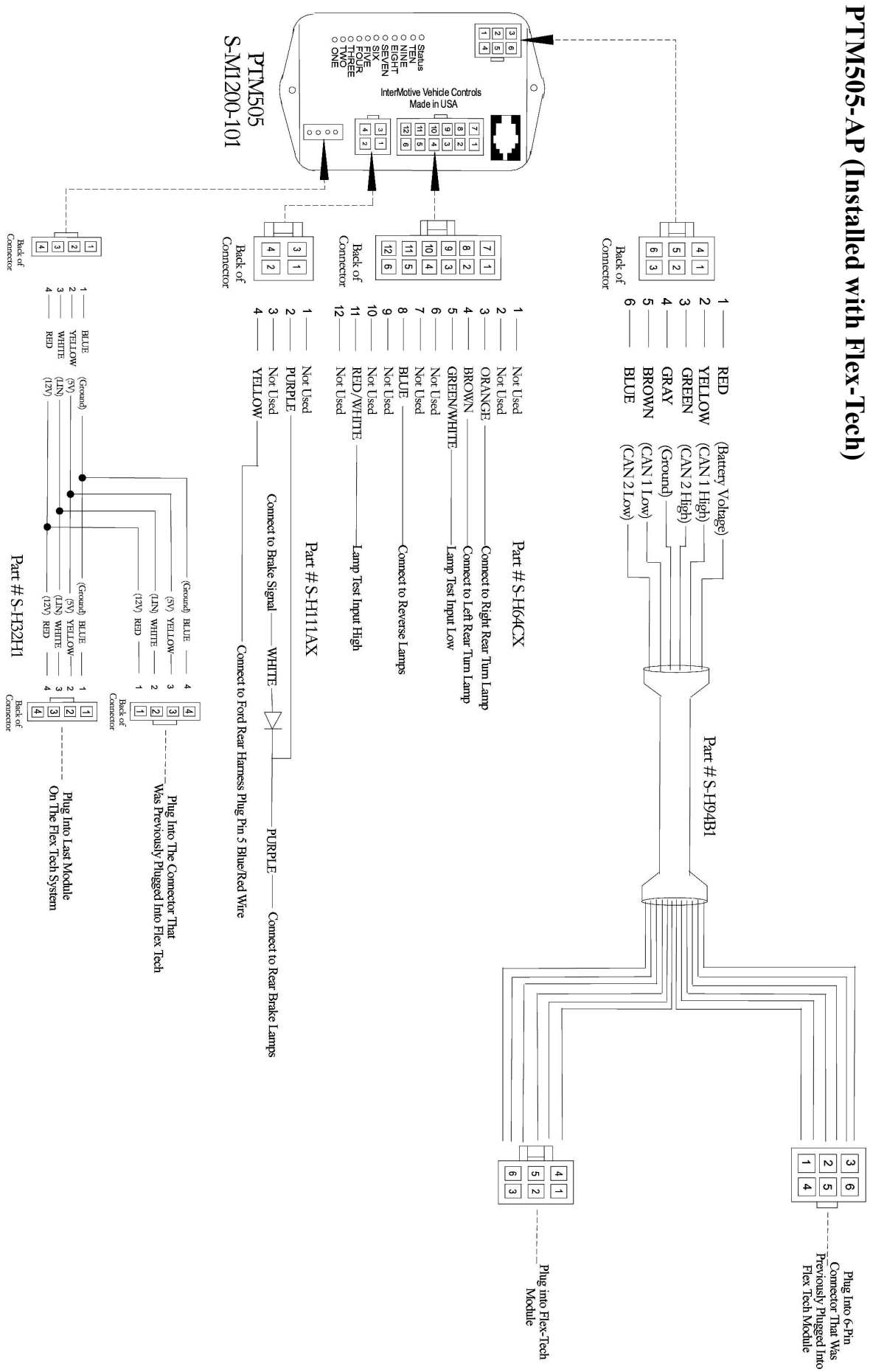
- 1 — Not Used
- 2 — Not Used
- 3 — ORANGE — Connect to Right Rear Turn Lamp
- 4 — BROWN — Connect to Left Rear Turn Lamp
- 5 — GREEN/WHITE — Lamp Test Input Low
- 6 — Not Used
- 7 — Not Used
- 8 — BLUE — Connect to Reverse Lamps
- 9 — Not Used
- 10 — Not Used
- 11 — RED/WHITE — Lamp Test Input High
- 12 — Not Used

Part # S-H111AX

- 1 — Not Used
- 2 — PURPLE — Connect to Brake Signal
- 3 — Not Used
- 4 — YELLOW — Connect to Ford Rear Harness Plug Pin 5 Blue/Red Wire

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

PTM505-AP (Installed with Flex-Tech)



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