

INSTALLATION INSTRUCTIONS

SUBJECT: CHARGING CIRCUIT HARNESS FOR 2011-2016 FORD 6.7L POWERSTROKE

FPE-2024-127
July, 2024
Page 1 of 4

FITMENT: 2011-2016 Ford F-250/350 Pickup Trucks with 6.7L Powerstroke

KIT P/N: FPE-HAR-FMC-CCH-1116

ESTIMATED INSTALL TIME: 30 Minutes

TOOLS REQUIRED:

KIT CONTENTS:

Item #	Description	QTY
1	Charging circuit harness	1
2	Zip ties	8



WARNINGS:

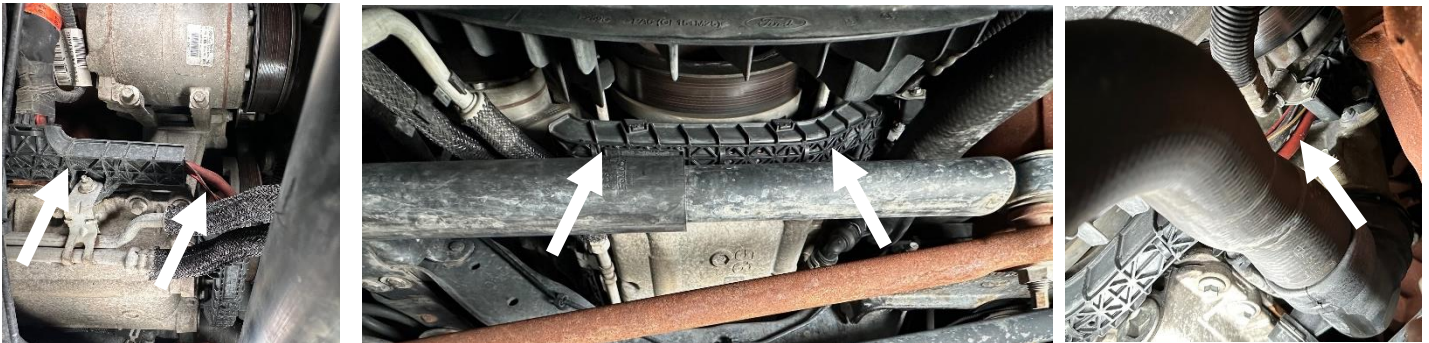
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OVERVIEW

COMPLAINT: Charging circuit MIL illuminated intermittently or continuously on the truck dash.

CAUSE: Damaged, stressed, chafed, or broken charging circuit sense wires in the OEM harness that are routed from the Powertrain Control Module (PCM) to the alternator resulting in an intermittent or continuously low voltage reading to the PCM.

DESCRIPTION: Due to the routing, exposure, and general lack of protection on the small charging circuit sense wires that are routed from Powertrain Control Module (PCM) to the alternator it is common for wire damage to be experienced. The routing of the OE harness is cumbersome and extremely difficult to replace and diagnose. Images below show the routing location of the wires in the plastic channel located on the underside of the engine as well as exposed in sections between the channels. These locations are also subjected to vibration and harsh weather and environment, resulting in shortened service life. Images of the routing location of these wires on the underside of the engine are shown below.



FIX/SOLUTION: The Fleece Performance Charging Circuit Harness for the 2011-2016 Ford F250/350 with 6.7L Powerstroke is a drop-in replacement to replace a failed factory harness causing an intermittent or illuminated charging circuit MIL on the dash. The harness installs directly in line with the factory connections with no cutting or splicing and allows you to reroute the alternator connection along the top side of the engine, avoiding the unprotected channel routing on the underside of the engine.

HARNESS CONNECTIONS

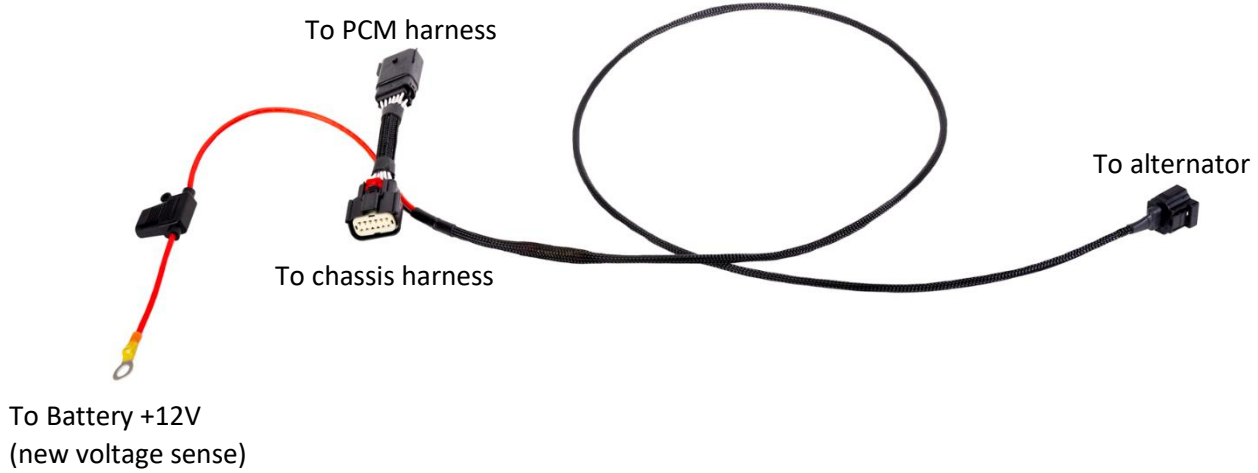
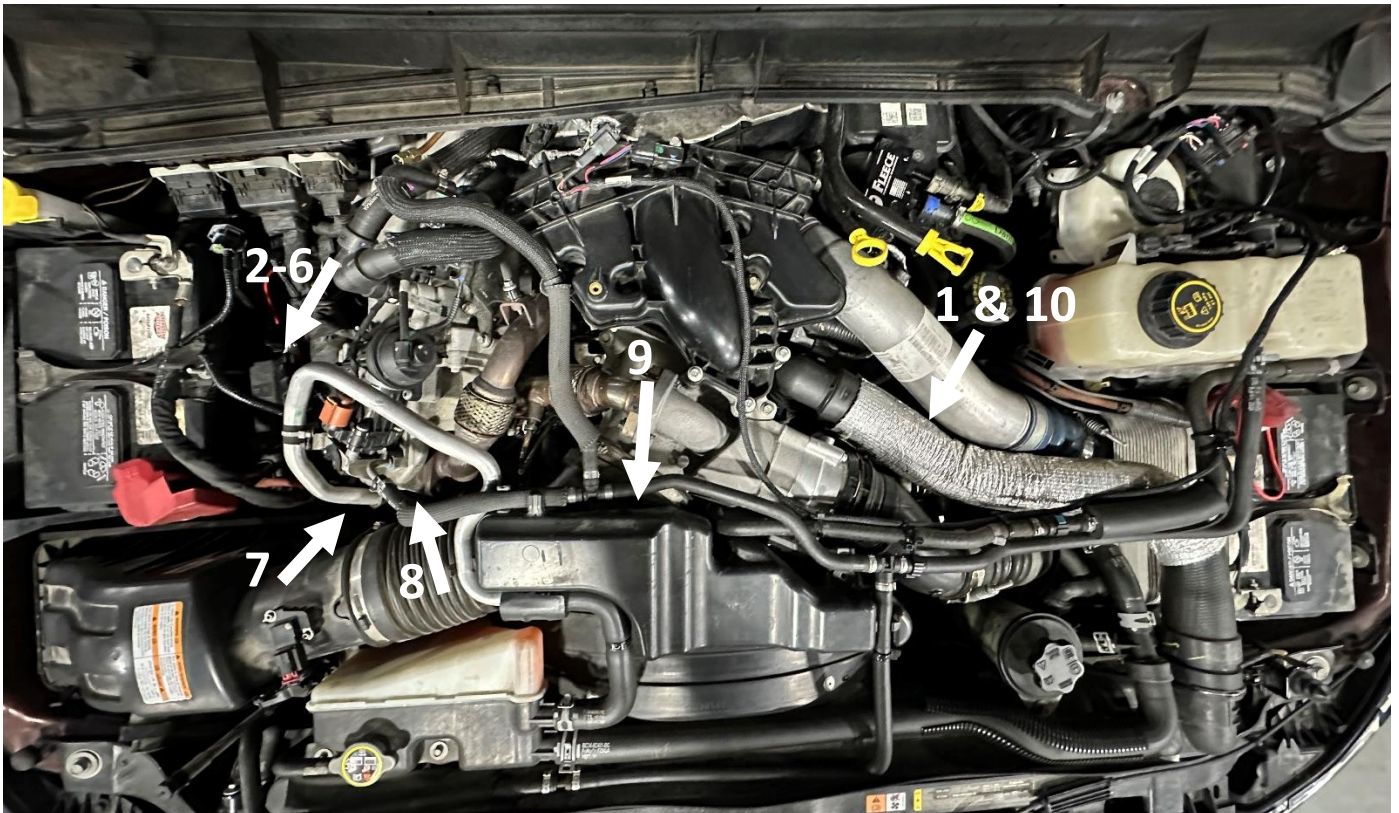


IMAGE LOCATION REFERENCE FOR INSTALLATION



INSTALLATION INSTRUCTIONS

PROCEDURE:

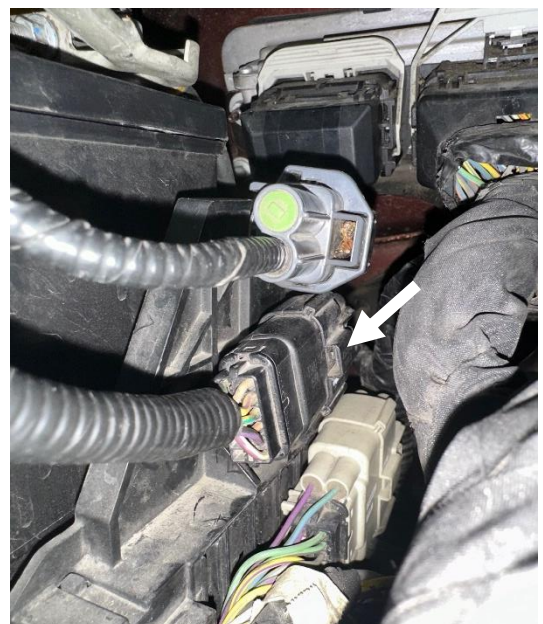
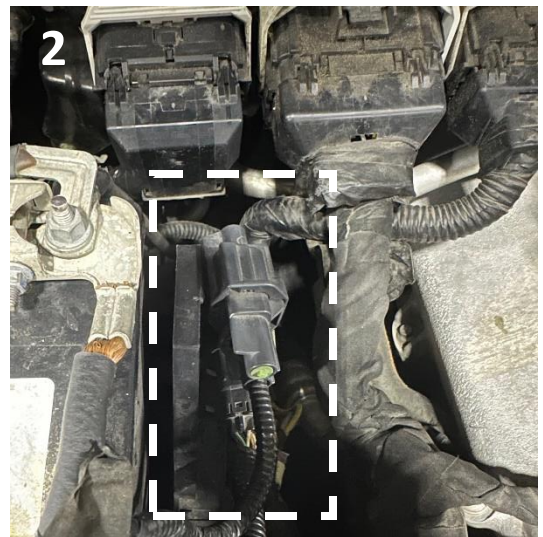
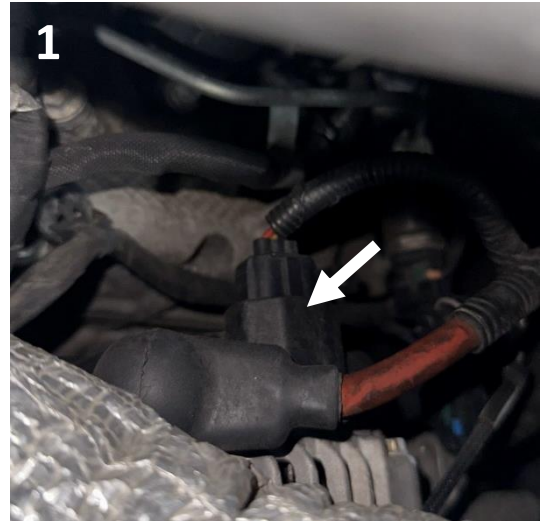
Before beginning, disconnect the +12V supply for both batteries.

STEP 1: Locate the alternator. Disconnect the three-pin signal wire connector on the rear of the alternator and zip tie the connector out of the way.

STEP 2: Locate the PCM which is mounted on the passenger side firewall. There will be a bank of three connectors secured to the right side of the battery tray that are located directly below the PCM.

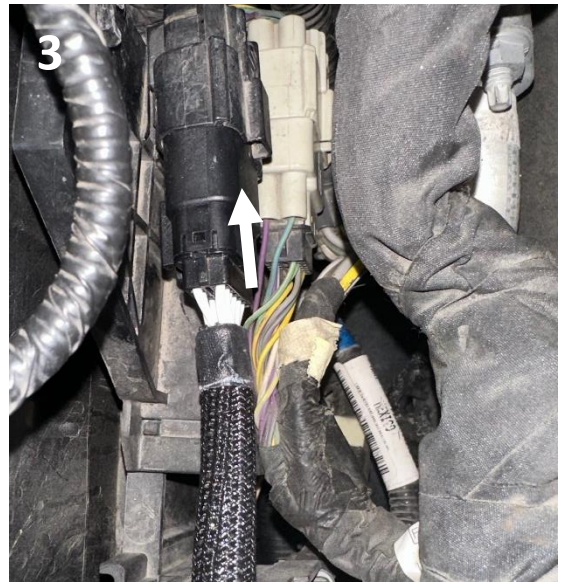
Locate the black, 12-pin connector body, it will be the second connector down from the top. Release the locking tab for the connector body and separate the connector.

Note: To aid in dis-connection of the connector, the connector body may be removed from the mounting bracket by releasing the locking clip on the bracket and sliding the connector backwards.

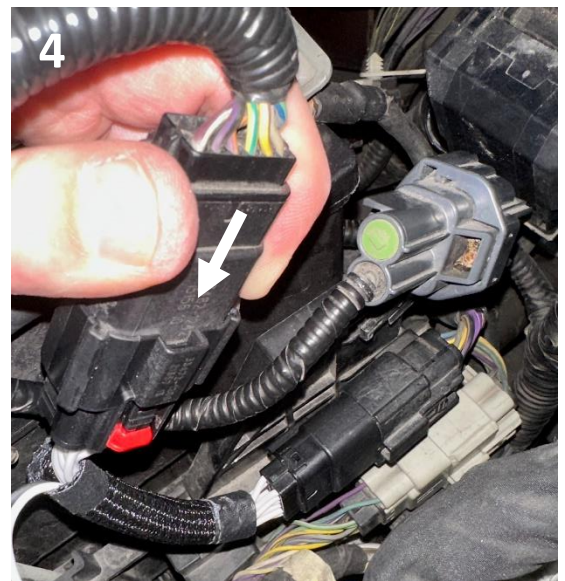


INSTALLATION INSTRUCTIONS

STEP 3: Install the interconnecting portion of the new charging circuit harness to the PCM side connector.

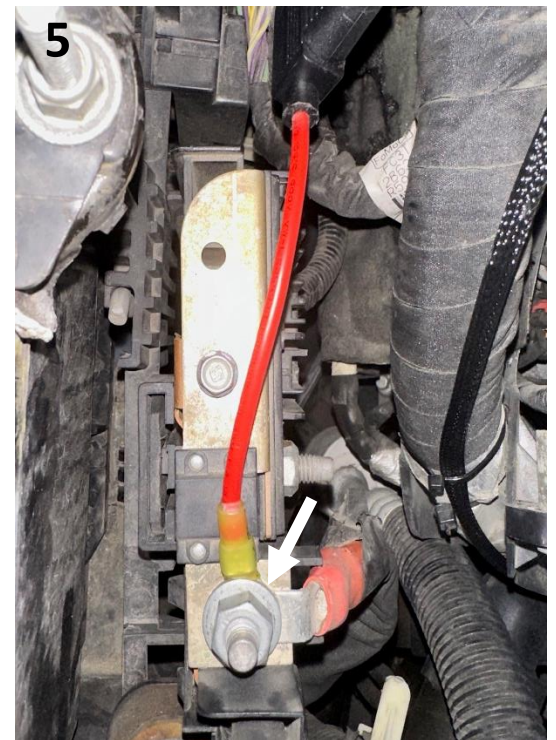
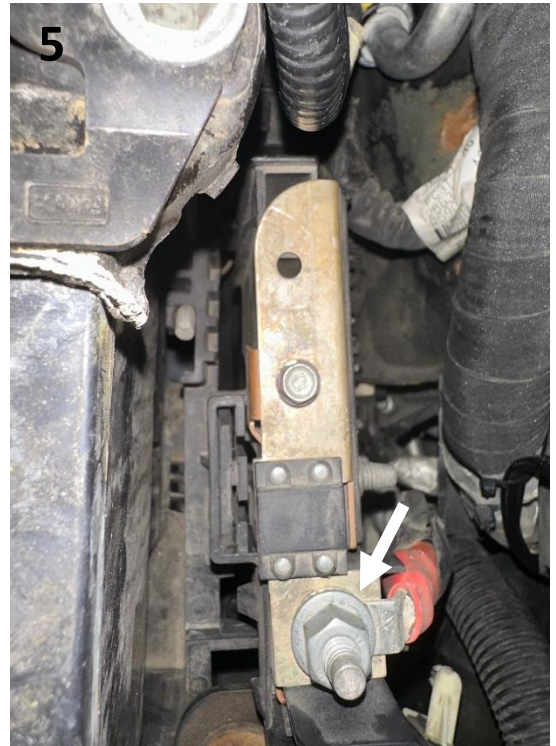


STEP 4: Install the chassis side connector into the new charging circuit harness.



INSTALLATION INSTRUCTIONS

STEP 5: Locate the bus bar on the inboard side of the passenger side battery. Remove the plastic cover. Using a 10mm socket, remove the nut retaining the positive cable. Install the new voltage sense lead on the charging circuit harness and reinstall the retaining nut. Reinstall the plastic cover.

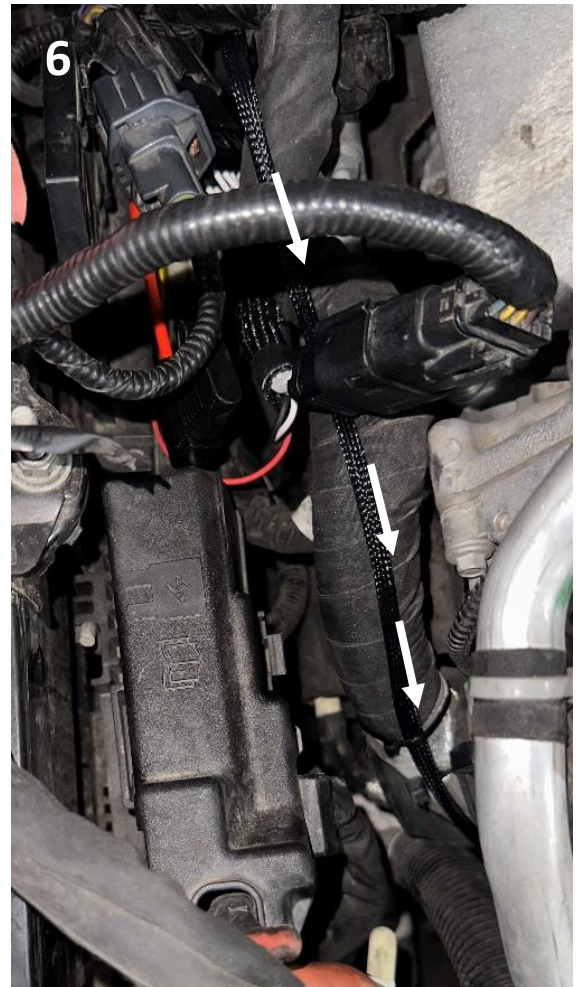


INSTALLATION INSTRUCTIONS

STEP 6: Disconnect the mass airflow sensor connector on the top of the air filter. Disconnect the top of the airbox and loosen the hose clamp around the air intake manifold. Remove the air intake hose to allow for clearer access and routing of the alternator signal wire.



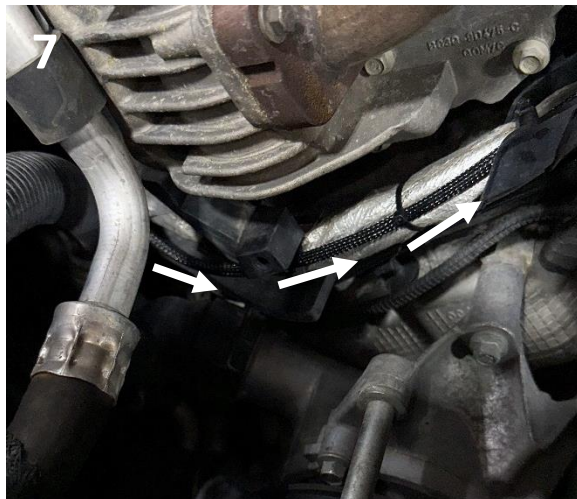
STEP 7: Route the alternator signal wire along the main electrical harness as shown at right. Use zip ties to retain the wire to the harness.



INSTALLATION INSTRUCTIONS

STEP 8: Continue to route the alternator signal harness along the OE harness underneath the EGR cooler and into the harness tray underneath the air intake.

Continue routing the alternator signal harness up and through the plastic tray towards the driver's side of the vehicle. Use the included zip ties at evenly spaced intervals to retain the wire to the existing electrical harness. Leave enough slack in the wire for the connector to reach the alternator.



INSTALLATION INSTRUCTIONS

STEP 9: Connect the end of the harness to the alternator. Use another zip tie to retain the signal wire as shown.



STEP 10: Reinstall the air intake tube, the upper half of the air filter box, and reconnect the MAF sensor.

Reconnect the battery terminals.

STEP 11: Start the vehicle and check that the alternator signal is reading correctly, and that the charging MIL is no longer illuminated. The use of a scan tool may assist in this step.