

INSTALLATION INSTRUCTIONS

SUBJECT: FUEL HEATER FOR FLEECE PERFORMANCE 2017-2024 FORD POWERSTROKE FILTER BASE

FPE-2024-129
Revised February, 2025
Page 1 of 6

FITMENT: 2017-2024 Ford F250/350/450/550 with 6.7L Powerstroke
KIT P/N: FPE-FH-FMC-1724
INSTALL TIME: 30 minutes
TOOLS REQUIRED: 4mm allen wrench

KIT CONTENTS:

Item	Description	Qty
1	Fuel heater electrical harness	1
2	Fuel heater	1
3	Harness ties	5
4	Zip ties	12



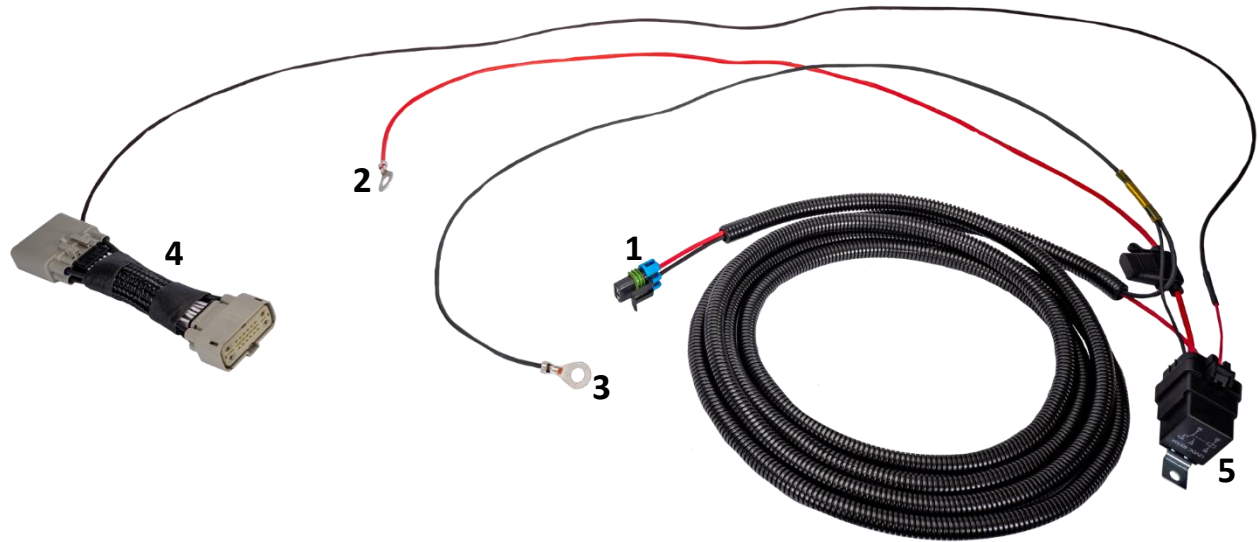
APPLICATION NOTES:

- This kit is designed only for use with a Fleece Performance under bed fuel filter assembly for 2017+ Ford F250-F550

WARNINGS:

- User assumes sole responsibility for the safe & proper use of the vehicle at all times.
- The purchaser and end user releases, indemnifies, discharges, and holds harmless Fleece Performance Engineering, Inc. from any and all claims, damages, causes of action, injuries, or expenses resulting from or relating to the use or installation of this product that is in violation of the terms and conditions on this page, the product disclaimer, and/or the product installation instructions. Fleece Performance Engineering, Inc. will not be liable for any direct, indirect, consequential, exemplary, punitive, statutory, or incidental damages or fines cause by the use or installation of this product.

FUEL HEATER HARNESS CONNECTIONS



1. Fuel heater connector – Routed through the engine bay and along the frame rail to the fuel filter assembly. The connector end will be plugged into fuel heater. For cab and chassis models, an additional extension harness is required – part number FPE-FH-FMC-1724-CC-EXT.
2. Positive battery terminal connection
3. Negative battery terminal connection
4. Ignition trigger and pass-through assembly – The ignition trigger wire will be routed along the top of the firewall to the PCM bulkhead and connected to 16-pin body control module connector (see steps on page 4)
5. Fuel heater relay – Mounted to firewall or existing harness.

PROCEDURE:

STEP 1: Park the vehicle on a flat and level surface.

STEP 2: Locate the block off plate on the left side (when installed) of the fuel filter assembly. Remove the two screws using a 4mm allen wrench. Use a drain pan and rag to contain any fuel that may spill out. Remove the block off plate.

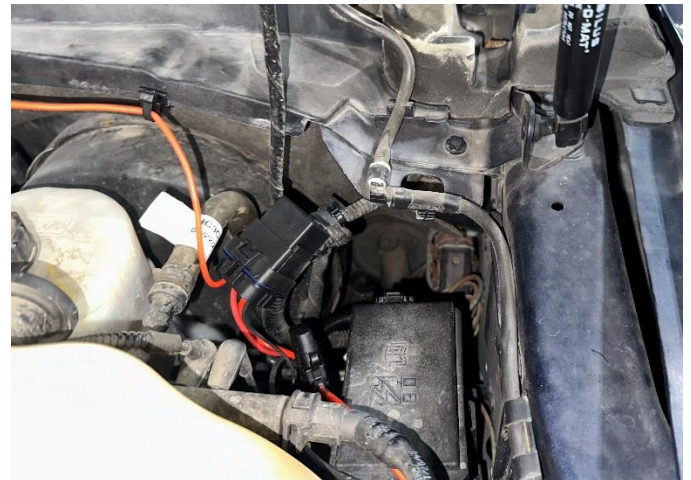
NOTE: The two screws from the block off plate will be reused to install the fuel heater.



STEP 3: Lubricate the O-rings on the heater with clean fuel and install the fuel heater into the port where the block-off plate was removed. Reinstall the screws using a 4mm allen wrench.



STEP 4: Starting from the top side of the engine bay, on the driver's side of the vehicle, route the fuel heater connection end of the harness down along the firewall and towards the driver's side frame rail. Using a zip tie, retain the fuel heater harness relay to the firewall or a harness as shown at right.



Route the fuel heater harness underneath the steering column and back along the driver's side frame rail.



STEP 5: Connect the positive and negative battery terminals from the harness onto the driver's side battery. Route the wires as shown at right using zip ties to retain them.



STEP 6: Route the ignition trigger harness along the firewall towards the passenger side of the vehicle as shown at right. Use the included harness clips spaced at even intervals. The clips will install directly onto the plastic lip of the vent screen.

NOTE: The red harness tap wire in your kit will have black sheathing over it. The image at right does not show the sheathing to more clearly outline the proper routing of the wire.



STEP 7: Locate the 16-pin, tan colored body harness connector near the PCM (powertrain control module) bulkhead. Disconnect the harness connector.

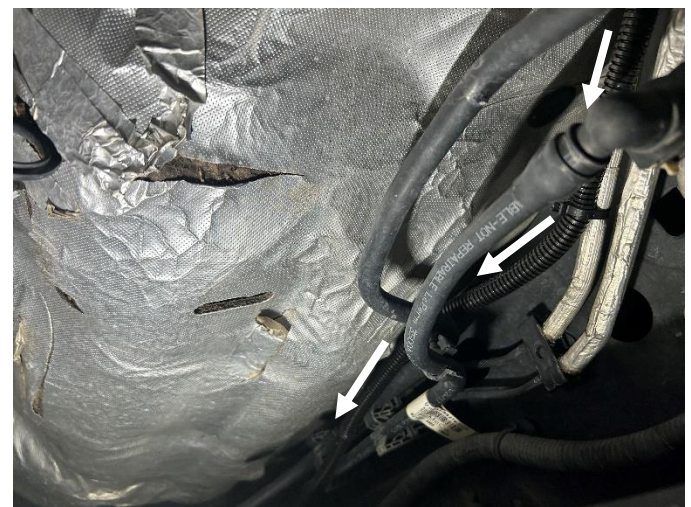
NOTE: The tan 16-pin body harness connector can be found in several locations near the PCM bulkhead. The image at right has the connector to the right of the bulkhead. Other locations where the connector may be present are circled.



STEP 8: Install the pass-through harness for the ignition trigger between the body connector and chassis harness as shown at right. Both ends will click when fully seated.



STEP 9: Underneath the front, driver's-side corner of the cab, route the fuel heater harness along the frame rail and back towards the fuel filter assembly. The harness can be routed either inside of the frame rail or outside of the frame and along a chassis harness. Use the included zip ties to retain the fuel heater harness to the frame rail or chassis harness.



STEP 12 (CAB & CHASSIS VEHICLES ONLY): Once the main harness is routed along the frame rail, an additional harness will be required to reach the fuel heater on the filter assembly. Part number FPE-FH-FMC-1724-CC-EXT will connect to the end of the main fuel heater harness and route back further to the filter assembly.

STEP 13: With the harness routed and retained, connect the end of the harness to the fuel heater installed into the filter base assembly.

STEP 14: Prime the fuel system by cycling the ignition on without starting. Wait five seconds, then repeat the process two to three times. Start the vehicle and check for any leaks.

FUEL HEATER TEMPERATURE SWITCHING POINTS:

ON: 28.4F +/- 5.4F

OFF: 48.2F +/- 5.4F

At typical fuel flow, a temperature increase of between 4-8F will occur across the heating element.

