

INSTALLATION INSTRUCTIONS

SUBJECT: UNDER BED FUEL FILTER ASSEMBLY FOR 2017+ FORD POWERSTROKE

FPE-2024-128
Revised March, 2025
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FITMENT: 2017-2024 Ford F250/350/450/550 with 6.7L Power Stroke

KIT P/N: [FPE-FMC-UBFA-1724](#)

INSTALL TIME: 30 minutes

TOOLS REQUIRED: Flathead screwdriver or trim tool, T30 Torx socket, 10mm wrench or socket

KIT CONTENTS:

Item	Description	Qty
1	Filter base assembly	1
2	Donaldson 553203 fuel filter	1
3	Fuel filter o-ring (not shown)	1
4	Water-in-fuel sensor	1
5	WIF sensor extension harness	1
6	M6 bolt	1



IMPORTANT NOTICES FOR CALIFORNIA RESIDENTS:

For California customers: An E.O. identification label is required for Smog Check inspection. The E.O. identification label included with this kit MUST be placed in the engine compartment so that smog check technicians can verify the E.O. number.

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.

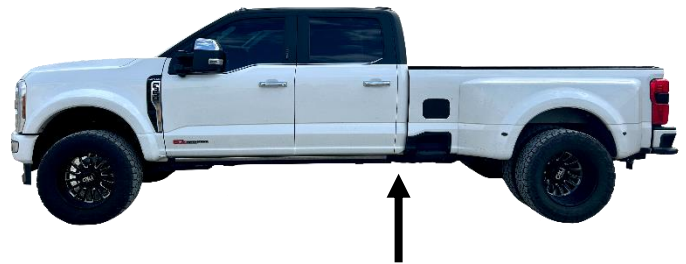
PROCEDURE:

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

STEP 2: Locate the OE fuel filter assembly located on the fuel tank. On short bed vehicles, the filter assembly will be on the forward-facing side of the fuel tank.

On long bed vehicles, the filter assembly will be on the driver's side of the fuel tank facing the frame rail. Reference the images at right for the general location of the fuel filter assembly.

NOTE: The remainder of this document will show the installation process on a short bed vehicle. Although the filter position is different between long and short bed models, the procedure will be the same for both with the exception of steps 3 and 13.

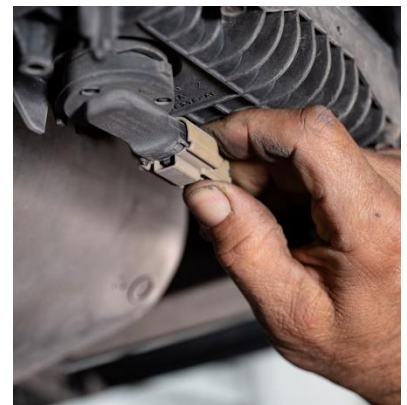
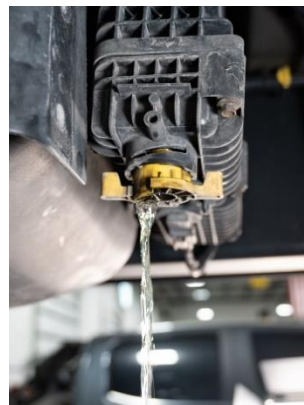


STEP 3 (SHORT BED VEHICLES ONLY): Using a flathead screwdriver or trim tool, remove the three plastic clips retaining the guard on the fuel tank. To disengage the clips, pull outwards on the center plug, then pull the entire clip out of the hole.

NOTE: There are two clips on the passenger side of the tank, and one on the driver's side.



STEP 4: Locate the fuel drain on the underside of the filter assembly. Turn the yellow knob and drain the fuel from the filter into a clean bucket or pan. Locate the WIF sensor connector on the underside of the filter. Disconnect the harness by pressing the release tab as shown and pulling away from the sensor.



STEP 5: Locate the filter assembly retaining screw between the fuel filter and the tank. Using a T30 torx socket or bit, remove the screw from the retaining slot.



STEP 6: Remove the four fuel line connections on the top of the fuel filter assembly.

TIP: On long bed trucks, this step is most easily completed by reaching over the outside of the frame rails to disconnect the fuel lines.

NOTE: Image at right shown with short bed tank removed for clarity. Truck side return line not shown. Long bed vehicles will have the same connections and connectors as the short bed vehicles.



There will be one of two styles of fittings connected to the fuel filter assembly. The fittings can be either blue or yellow in color.

STYLE #1 – LOCKING SQUEEZE TAB: To disengage the lock, pull the locking tab out from the center of the fitting (1). Squeeze the release tab (2), then push the fitting towards the filter assembly to release the connector. Pull the fitting away to disconnect.



STYLE #2 – SQUEEZE TAB: Squeeze the blue tab, then push the fitting towards the filter assembly to disengage the lock. Pull the fitting away to disconnect.



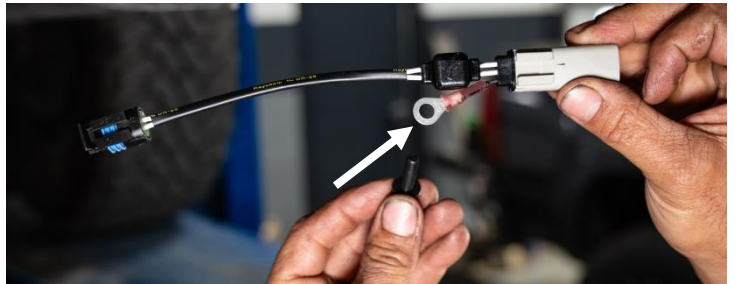
STEP 7: With the fuel lines disconnected, push upwards on the fuel filter assembly and remove it from the mount on the fuel tank.



STEP 8: Install the new Fleece Performance fuel filter base assembly into the mounting notch as shown at right. Reconnect all fuel lines in the same locations that they were removed from.



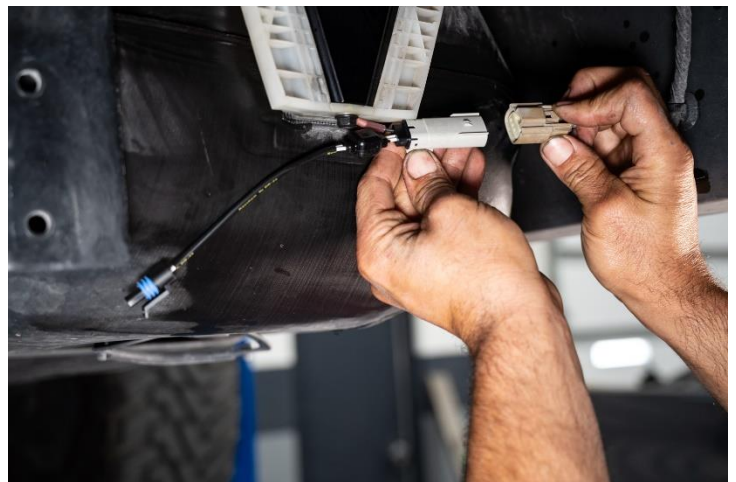
STEP 9: Insert the included bolt into the eyelet on the WIF sensor extension harness as shown at right. Install the bolt into the bottom of the mounting notch where the original screw was removed. Using a 10mm socket or wrench, torque the bolt to 10 ft-lbs.



Note: The purpose of this grounding eyelet is for static discharge, additional ground connection is not required.



STEP 10: Connect the WIF sensor harness to the harness extension.



STEP 11: Remove the water drain on the bottom of the included Donaldson fuel filter and install the WIF sensor as shown at right.



STEP 12: Place the included square cut rubber o-ring onto the snout of the filter base. Install the included fuel filter onto the filter base. Connect the WIF sensor extension harness to the WIF sensor.



NOTE: Installations on long bed vehicles are complete at this point.



STEP 13 (SHORT BED VEHICLES ONLY): Install the guard back onto the tank using the three plastic clips removed in step 3. With the center section of the clip still pulled out, install the clips into the mounting holes. Push the center section into the clip to lock them in place.



STEP 14: Prime the fuel system by cycling the ignition to the on position and waiting five seconds. Repeat this process two to three times, then start the vehicle. Check for leaks.