



Direction-Plus Ryco Pre-Filter Installation Guide for Ford Ranger PX

This document is to be used as a guide for the installation of the **Direction-Plus™ Ranger PX Ryco Pre-filter (RC661DPK)** to a **2011-2019 Ford Ranger PX & PXII 3.2 & 2.2 Diesel**.

It is recommended that the installation of the product be carried out by a competent qualified mechanic.

Important before starting

- Ensure the engine bay is clean and free from contaminants
- The filter head has direction arrows indicating the direction of flow
- You have the correct tools to complete the fitment
- Read the instructions in full and familiarize yourself with the installation before commencing any work

Maintenance / Servicing

- It is recommended to drain the element every 5,000 – 10,000km
- Ryco filter element is to be replaced every 40,000km or as per your vehicles service interval

Included in the kit



1x RANGER PX BRACKET (PLPV661-BR)	1x WINDSCREEN LABEL (DPLABEL1)	1x NYLOC NUT M8 (FMN8)
1x RYCO ASSY (Z980SK16L)	1x ENGINE BAY LABEL (DPLABEL5)	1x M8 x 16 BOLT 304 SS (SSSS304M816)
2x 9.89 ELBOW 8MM BARBV (D0)	1x DP STICKER (DPLABEL6)	2x 8MM X 17MM (FMW8)
1m DFL10 - FUEL HOSE (DPFH10)	2x DP BAGS (DPBAG)	1x M6 X 16mm BOLT (SSSS304M616)
2x PUSH ON 90 DEG - 10MM (DPP0090-06)	1x DEFENCE STICKER (DPLABEL7)	1x WASHER - 6MM (FMW6)
2x FITTING 10MM (DP816-6-M1615)	1x DP HOLO SECURITY SEAL (DPLABEL8)	1x DP ZIP LOCK BAG (DPZIPBAG)
2x HOSE CLAMP - 10MM (FMC10)	9x CABLE TIE (802078)	1x RYCO FILTER KIT BOX (RCBOX)

*Kit contents are subject to change based on availability



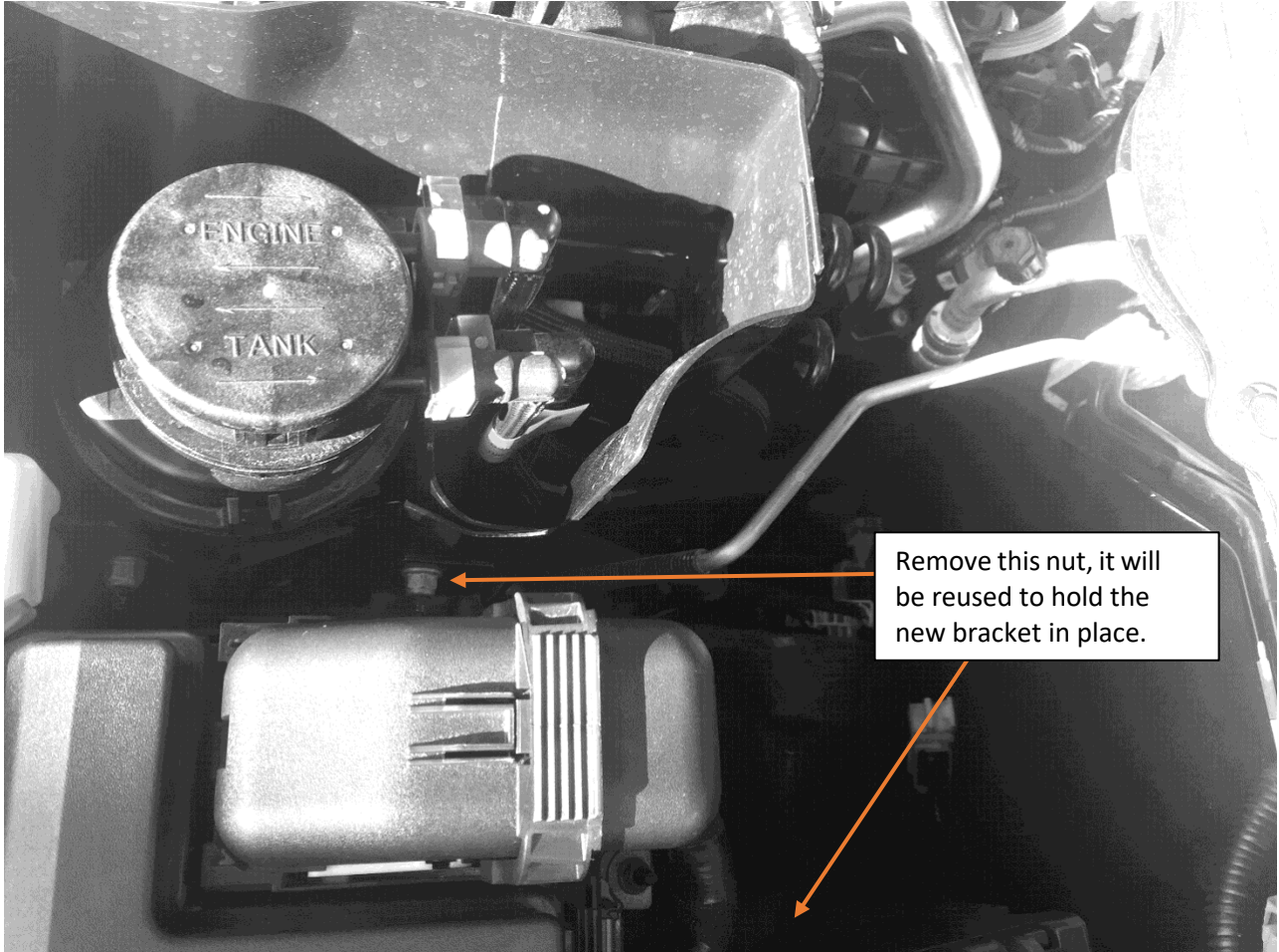


Tools Needed:

- Spanners
- Sockets
- Screw Drivers
- Pliers
- Snips/Cutter
- Rags
- Small container for priming
- We suggest using a thread sealant like Loctite 567 or equivalent.

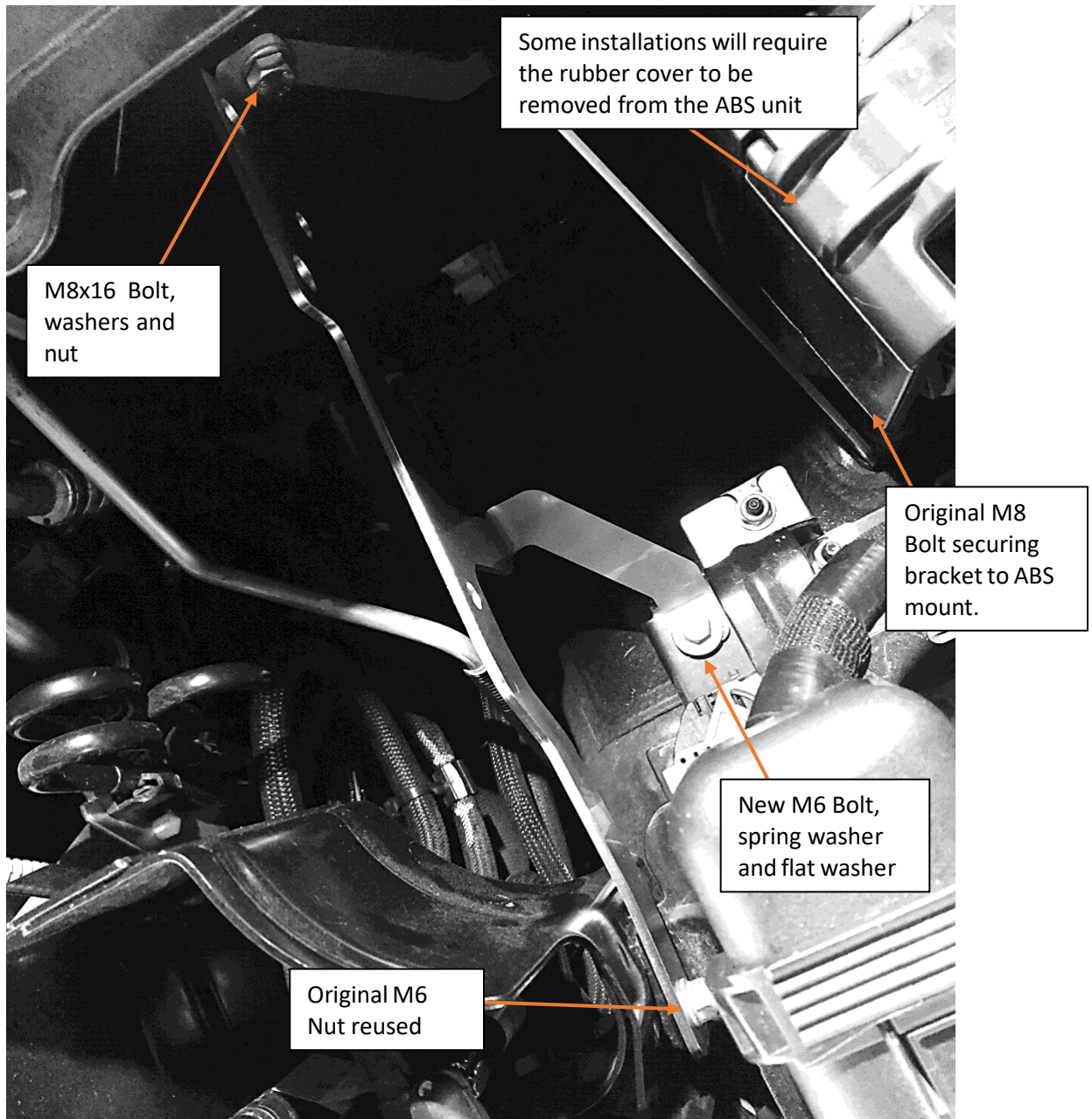
Installation Guide

1. Locate the M6 nut located on the factory fuel filter bracket. It needs to be removed to allow fitment of the new bracket. You will also need to remove the bolt that retains the ABS unit nearby, the brace secures to this and the factory bolt gets reused.



Top down view: image shows new ProVent bracket mounting location

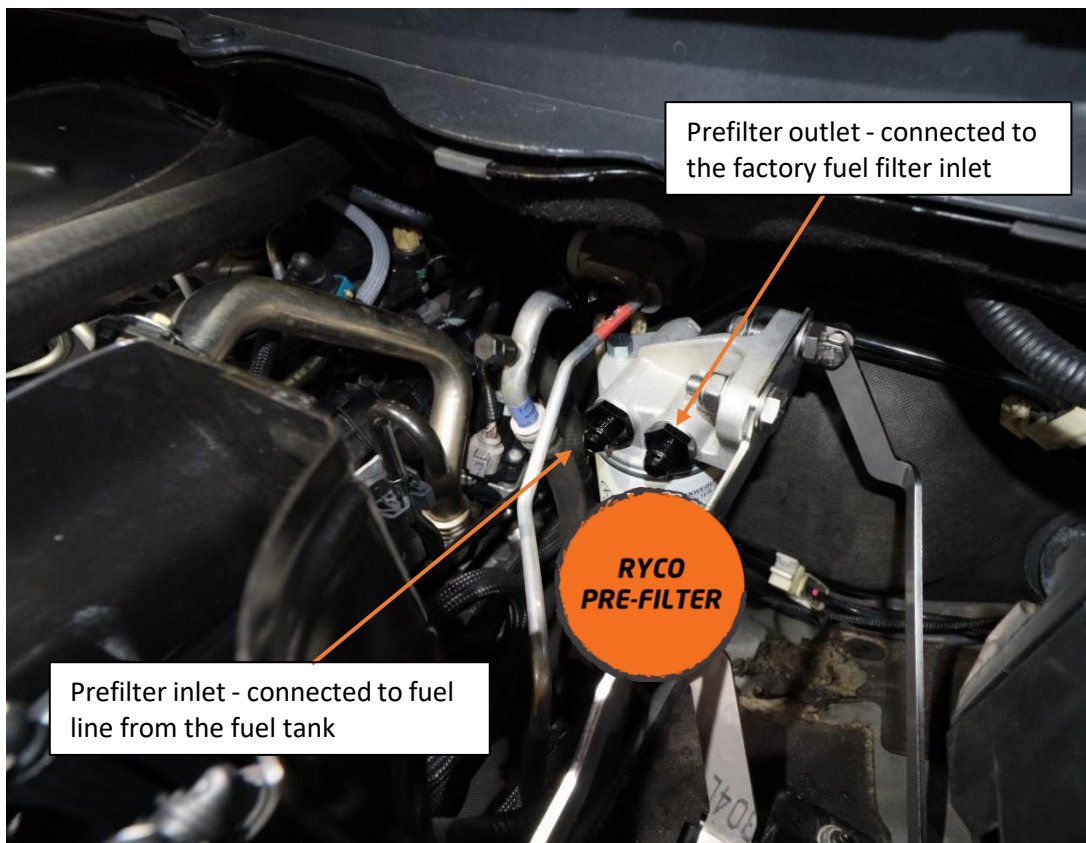
2. Bolt the Brackets into place using the M6 stud from the previous step to locate. Then use the M6 bolt, spring washer and washer on the leg to the existing empty threaded hole on the vehicle. Lastly, bolt the brace in place and secure the two brackets together using the M8x16 bolt, two flat washers, a spring washer and M8 nut. The bracket when in place should look like the picture below.



3. Install the M16x1.5 adapters and M16 flat washers to the inlet and outlet ports that are facing toward the front of the vehicle when the prefilter is installed. **Note: depending on installation you may need to remove and reposition the already installed plugs**

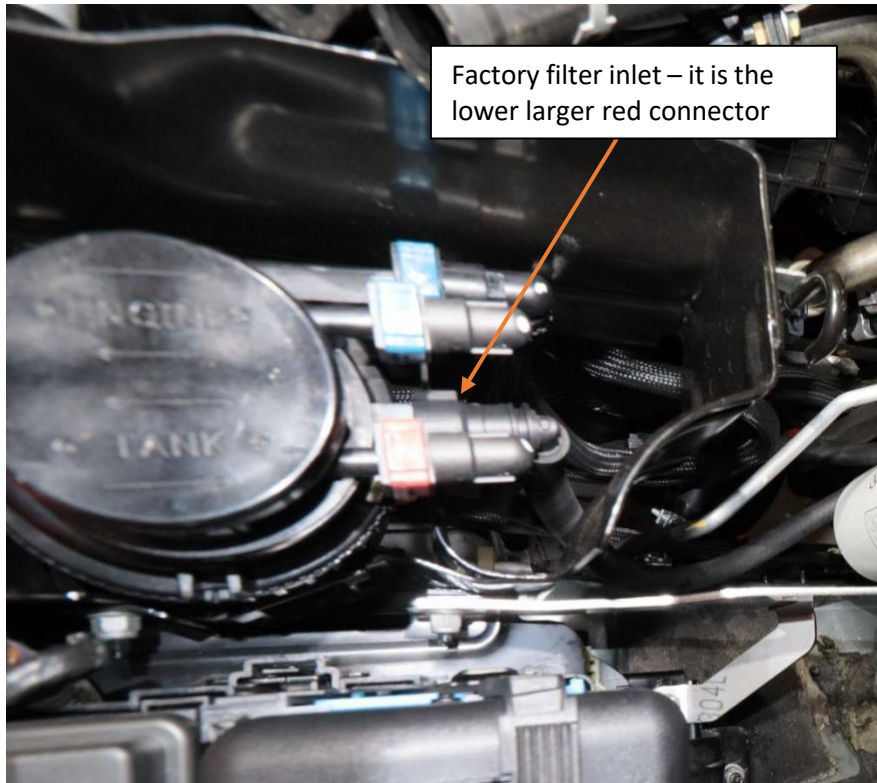


4. Mount the RYCO Pre-filter assembly to the mounting bracket using the 2 x 10mmx30mm bolts, 2 x 10mm flat washers.

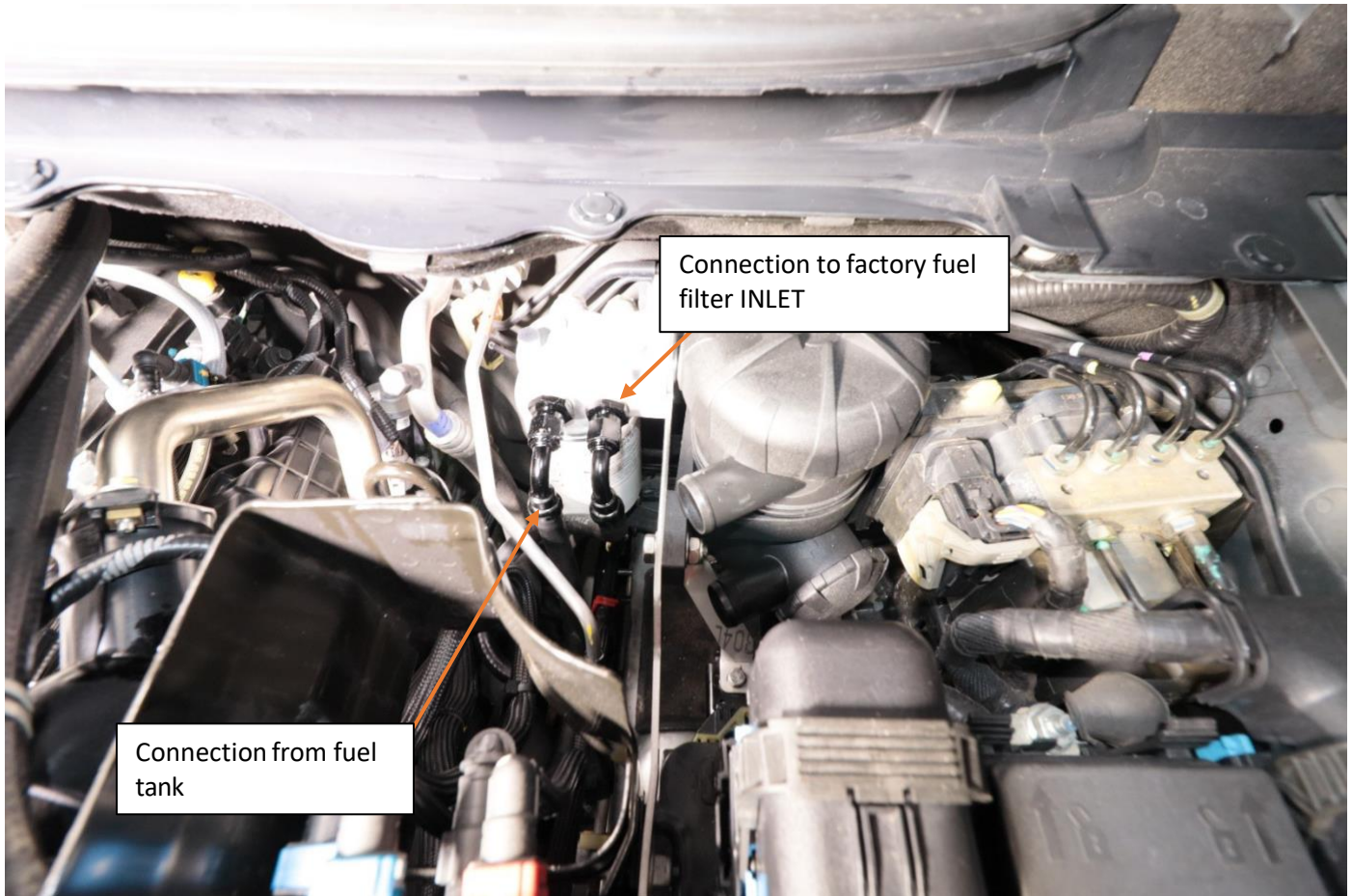


note: the ProVent has been removed to better illustrate the prefilter mounting

5. Remove the RED quick disconnect fitting from the original filter head (the larger lower fitting) and the other end of the pipe coming from the tank. Remove the factory piece of pipe. Keep this pipe in a safe place as it will be needed if the vehicle needs to be return to factory specification



6. With one end of the supplied 10mm fuel hose, Lubricate the inside portion of one end using diesel fuel or WD40
7. Install one of the 10mm 90° push-lock fittings into the pre-lubricated end of the 10mm fuel hose, ensuring that the hose stops firmly against the inside of the bell cover.
8. Connect the 10mm 90° push-lock fitting to the inlet of the pre-filter housing. Adjust the angle of the fitting tail to clear any obstructions.
9. Route the 10mm fuel hose down to the steel fuel pipe that was connected to inlet of the factory fuel filter and cut the hose to length approximately 25mm past the end of the steel fuel pipe
10. In the end of the same piece of fuel hose, install one of the 9.89mm female quick disconnect fitting and secure with a hose clamp. Connect this hose to the supply line from the tank.
11. With the remaining length of 10mm fuel hose Lubricate the inside portion of one end using diesel fuel or WD40.
12. Install the last 10mm 90° push-lock fitting into the pre-lubricated end of the 10mm fuel hose, ensuring that the hose stops firmly against the inside of the bell cover.
13. Connect the 10mm 90° push-lock fitting to the outlet of the pre-filter housing. Adjust the angle of the fitting tail to clear any obstructions.



Example of RYCO FILTER fitting orientation

14. Route the 10mm fuel hose to the inlet of the factory fuel filter and cut the hose to length, approximately 25mm past the end of the inlet barb
15. Install the last 9.89mm female quick disconnect fitting in the end of the same fuel hose and secure with a hose clamp. Connect this hose to the inlet of the factory fuel filter and secure with a supplied hose clamp.
16. Using the supplied nylon cable ties carefully secure both fuel hoses, ensuring they are not kinked and cannot contact any hot components.
17. Remove any loose tools from the work area
18. Turn the ignition key ON and allow the system to prime for approximately 30-60 seconds, repeat 4-6 times
19. Start and run the vehicle checking for leaks

End of Installation Guide