



## Direction-Plus PreLine-Plus Pre-Filter Installation Guide for Toyota Land Cruiser 300 Series

This document is to be used as a guide for the installation of the **Direction-Plus PreLine-Plus pre-filter kit (PL635DPK)** to a **Toyota Land Cruiser 300 Series V6 Diesel F33A-FTV (2022 on)**. It is recommended that the installation of the product be carried out by a competent qualified mechanic.

### Included in the kit



Pre-assembled	Hardware Bag	Wiring Bag
1 x PreLine-Plus pre-filter	1 x Bracket (LC300PL150.1)	Wiring Harness
2 x M16x1.5 to -8 Adaptors	1 x Bracket (LC300PL150.2)	Warning Light
2 x -8 to ½" Hose Straight Fittings	1 x Bracket (LC300PL150.3)	Short Earth Lead
2 x M16 Alloy Washers	3 x M8x16 Bolts	10 x 100mm Cable Ties
	3 x M8 Spring Washers	
1 x M10 x 90mm Bolt	3 x M8 Flat Washers	PreLine Mounting Kit Bag
2 x M10 Flat Washers	2 x 18-20mm Fuel Clamps	2 x M10x30 Bolts
1 x M10 Nyloc Nut	1 x 1500mm ½" Fuel Hose	2 x M10 Flat Washers
1 x Inline hand pump	10 x 200mm Cable Ties	2 x M10 Spring Washers



## Mounting Location

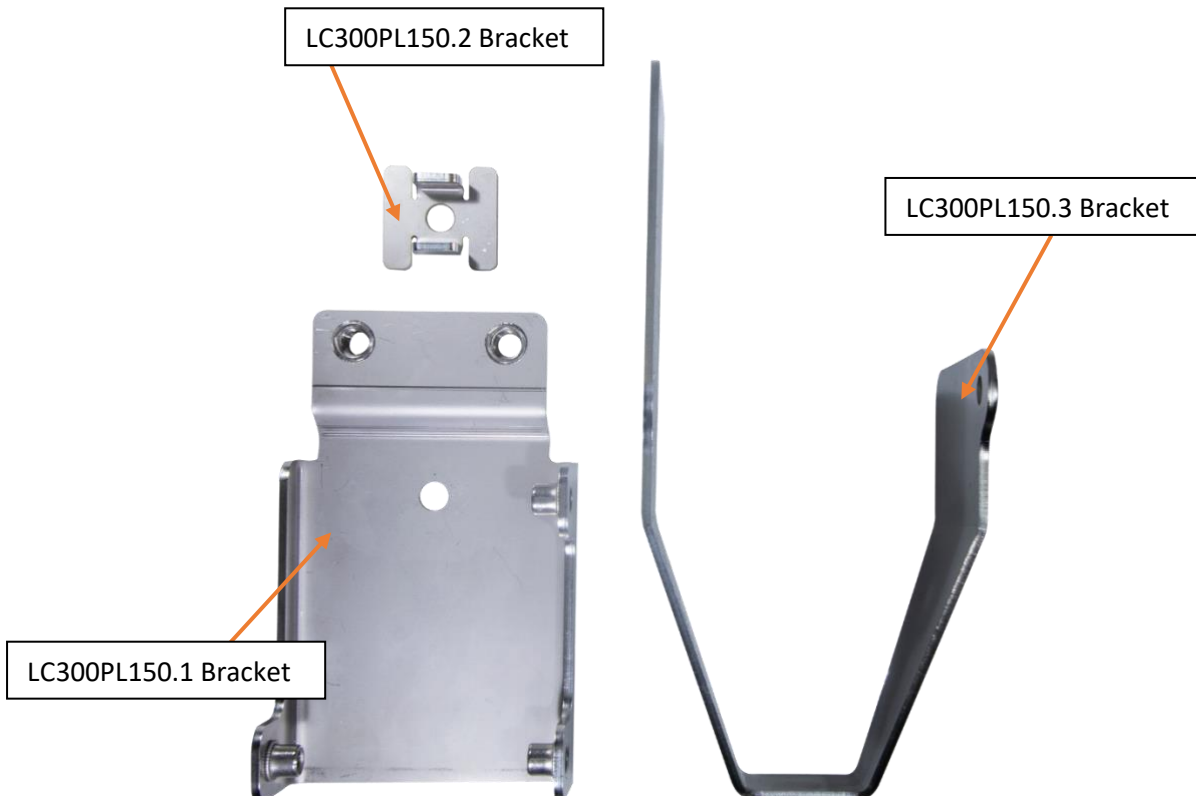


## Tools Needed:

- 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. Begin by removing the spare tire, this will make kit installation much simpler as it provides more access.
2. Using the **M10x90mm bolt**, **two flat washers** and **M10 nyloc nut**, Bolt the fuel filter bracket to the outside of the chassis rail under the driver's rear quarter panel. It uses the **LC300PL150.2** bracket to locate the fuel filter bracket to the slots in the chassis rail.



*LC300 PreLine-Plus mounting brackets and mounting hardware*



*PreLine-Plus bracket secured in place, note how smaller bracket lock in to prevent movement from the main bracket*



*Inside view of new bracket secured in place*

3. Install the threaded adaptors onto the PreLine 150, using the **M16 washers** between the filter head and the **M16 adaptors**. Apply thread sealant like **Loctite 567** or equivalent. Keep the exposed -8 thread clean when installing.



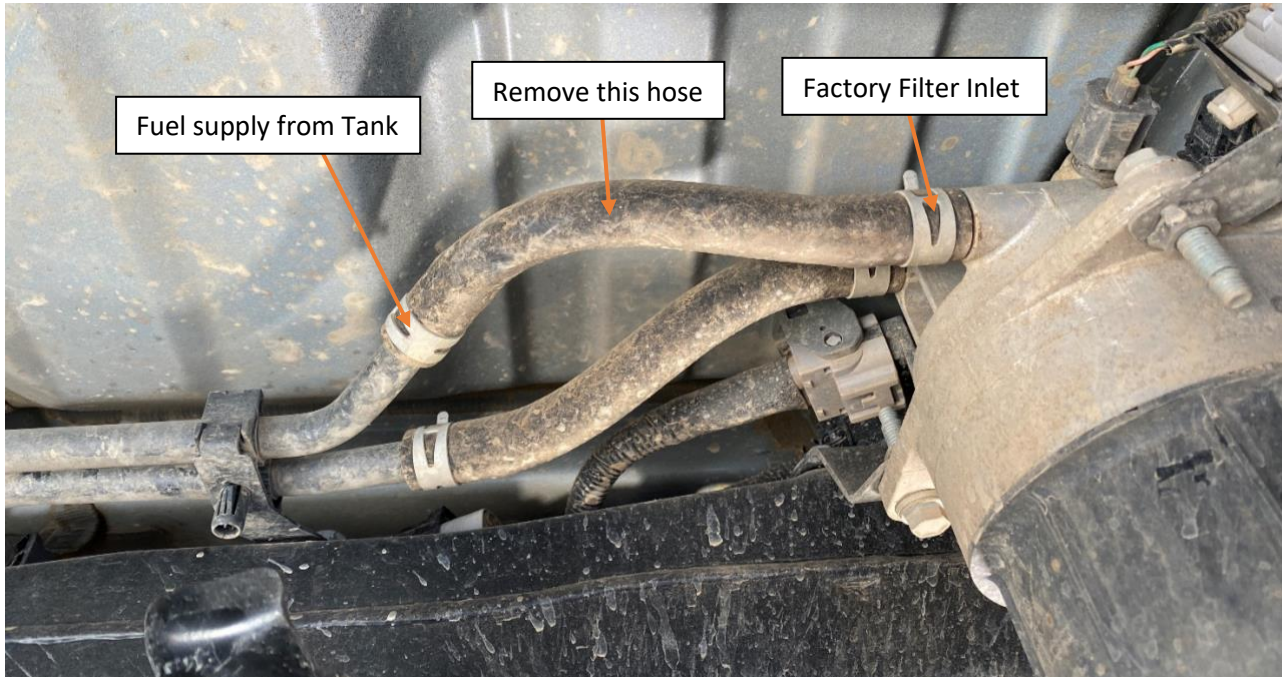
*PreLine-Plus in place on bracket with M16x1.5 to -8 Adaptors installed*

4. Install the PreLine 150 to the fuel filter bracket using the **2x M10x30 bolts**, **2x spring washers** and **2x flat washers**.



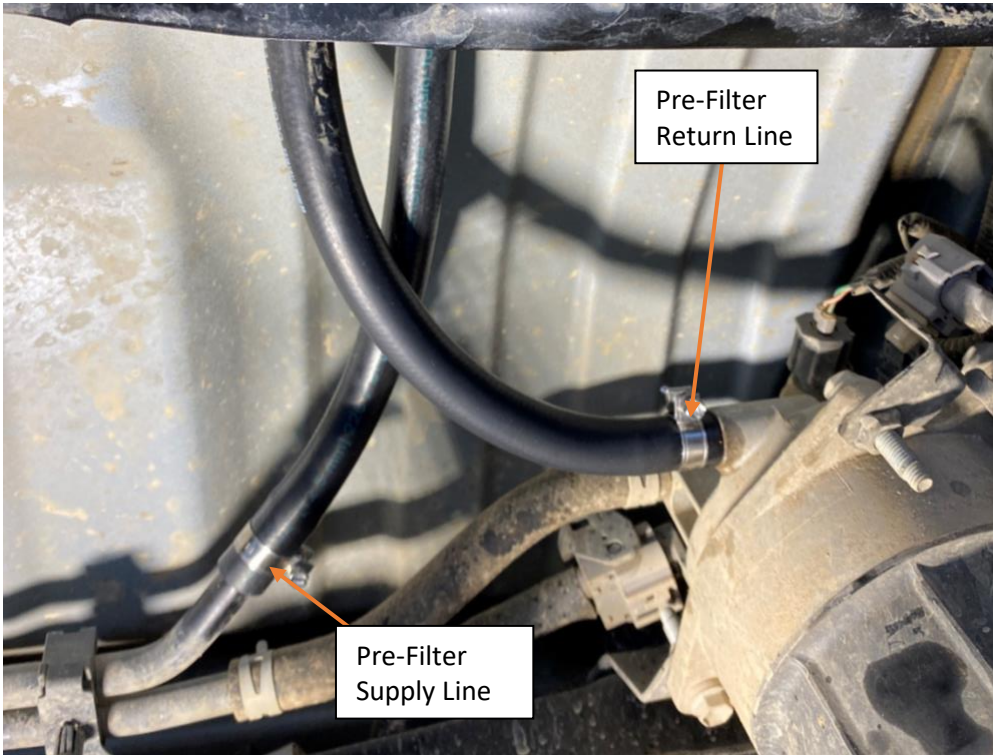


5. Connect the supplied **wiring harness** to the water sensor in the bottom of the fuel filter. Check to make sure the water sensor and the filter are snug on the assembly, do not over tighten as the thread can strip. Run the harness up through the grommet in the vehicle floor. Use **cable ties** to retain in place. **Ref to harness instructions in kit.**



*Factory Fuel Filter hose locations*

6. Cut the **supplied ½" fuel line** in half. Install the **straight° -8 hose fittings** to one end of each of two hoses. Make sure the hose is seated all the way on the push lock fitting. Finally, apply **loctite 567** to the -8 thread on the adaptor in the fuel filter ports before securing the straight -8 hose fitting in place.
7. Find the factory fuel hose that supplies the factory fuel filter. Remove the hose completely. To the hardline side, measure, cut and install other end of the new fuel filter supply hose and secure with one of the new **stainless EFI hose clamps**.
8. Measure and cut the **new fuel filter return hose** to the inlet to the factory fuel filter do not secure yet.
9. Temporarily install the **inline priming pump** to the end of the pre-filter return hose, pump until there is fuel just about to come out of the pre-filter outlet hose. This is done to minimize any air locks in the system. **Retain hand pump in vehicle for future filter servicing & replacement.**
10. Remove the inline priming pump and connect the hose from the pre-filter assembly outlet to the factory fuel filter. Secure in place with an **18-20mm clamp**. Use the factory priming pump in the engine bay to draw the fuel the rest of the way.



*LC300 Pre-filter fuel hose installed.*



*LC300 factory fuel system priming pump*

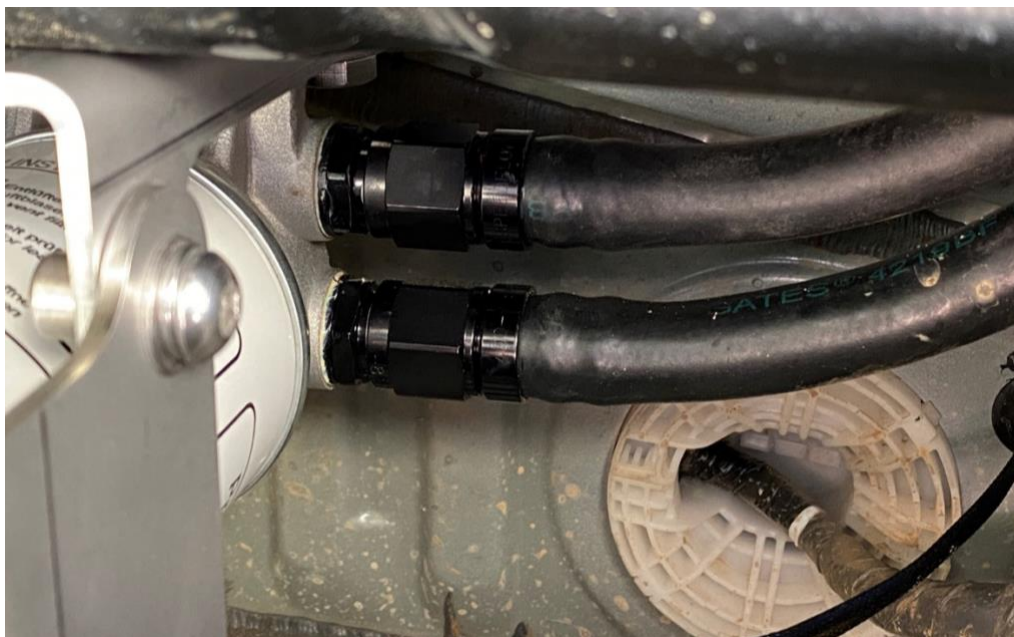


11. Bolt the fuel filter cover into place (**bracket LC300PL150.3**), using the **3x M8x16mm bolts**, **3x spring washers**, and **3x M8 flat washers**.



*Fuel hose routing for PreLine-Plus on LC300*





*PreLine-Plus cover (LC300PL150.3) bolted in place.*

12. Once complete start the vehicle, carefully and thoroughly checking for leaks.
13. Run the vehicle for at least 20 minutes to ensure there are no air pockets in the fuel system.
14. Reinstall the spare tire that you removed in step 1.

**End of Installation Guide**