



Direction-Plus Combo Kit Installation guide for Toyota Hilux 2011-2015 N70

Fuel Manager Post-Filter Kit Installation Guide

This document is to be used as a guide for the installation of the **Direction-Plus™ Fuel Manager™ Post-filter Kit to a Toyota Hilux 1KD-FTV (2011-2015)**. It is recommended that the installation of the product be carried out by a competent qualified mechanic.

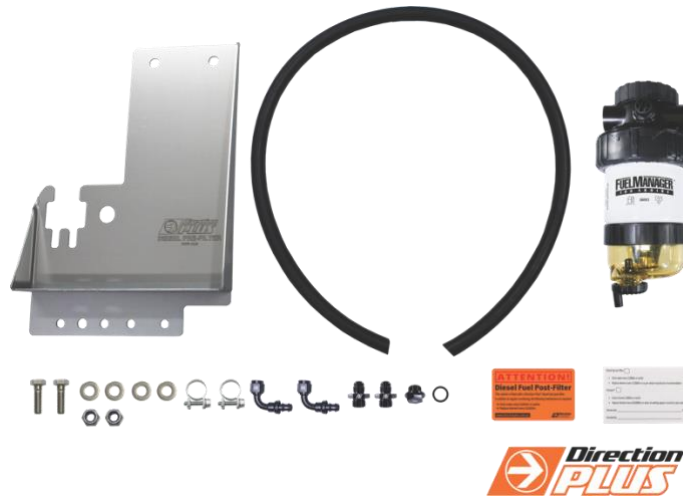
Important before starting

- Ensure the engine bay is clean and free from contaminants.
- The fuel manager 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 FUEL MANAGER element every 5,000 – 10,000km.
- FUEL MANAGER element is to be replaced every 40,000km or as per your vehicles service interval.

Kit contents:



1x filter assembly – 2 micron (42533)	2x push on 90 deg - 10mm (DPP0090-06)
1x fuel line rubber (10mm) 50psi (DPFH10)	2x 1/4" NPTstraight - 10mm (DP816-06-02-011)
1x mounting bracket 1 (PL628-BR)	1x Loctite 567 thread sealant - 6ml (567-6ML-LOC)
1x mounting bracket 2 (PL628-BR)	2x 3/8 " NPT plug (DP733-04)
1x 2 bolts 2 nuts 4 washers (FMB10KIT)	
2x hose clamp - 10mm (FMC10)	

*Kit contents are subject to change based on component availability and/or refinement

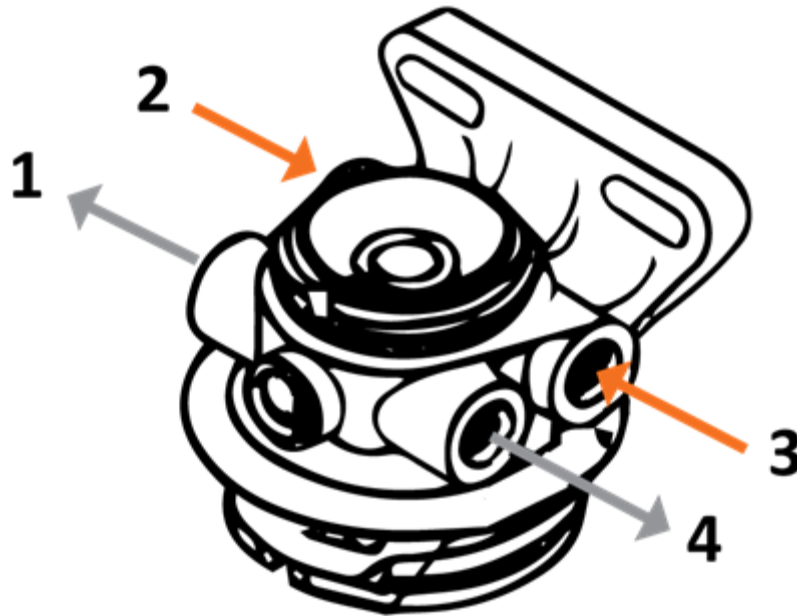
Mounting Location:



Basic Tools Needed:

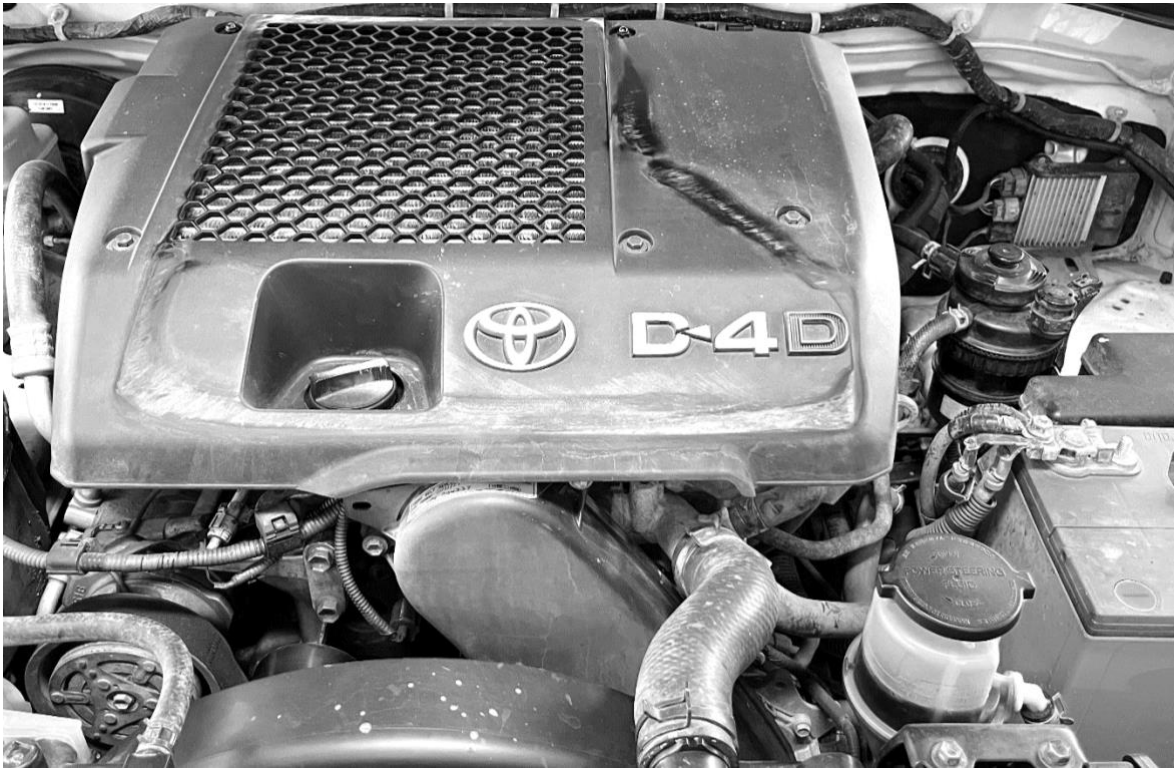
- Spanners
- Sockets
- Screw drivers
- Pliers
- Snips/Cutters
- Rags

Fuel Manager Post-Filter Normal Flow Header Connection

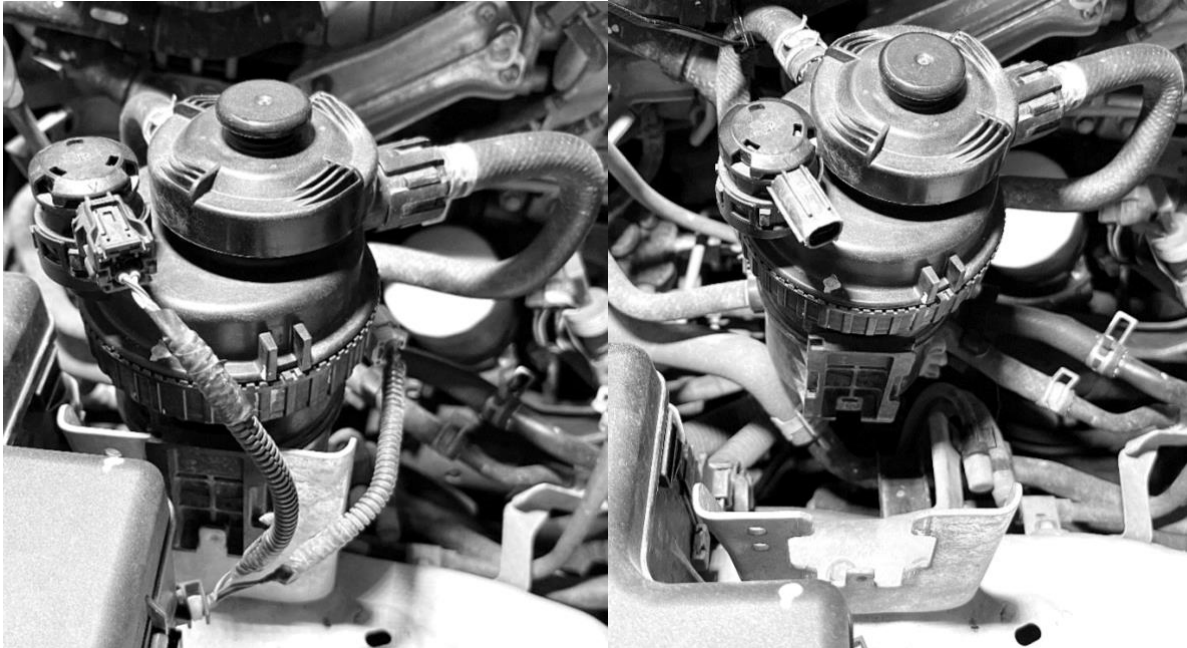


Ports 2 and 3 = INLET
Ports 1 and 4 = OUTLET

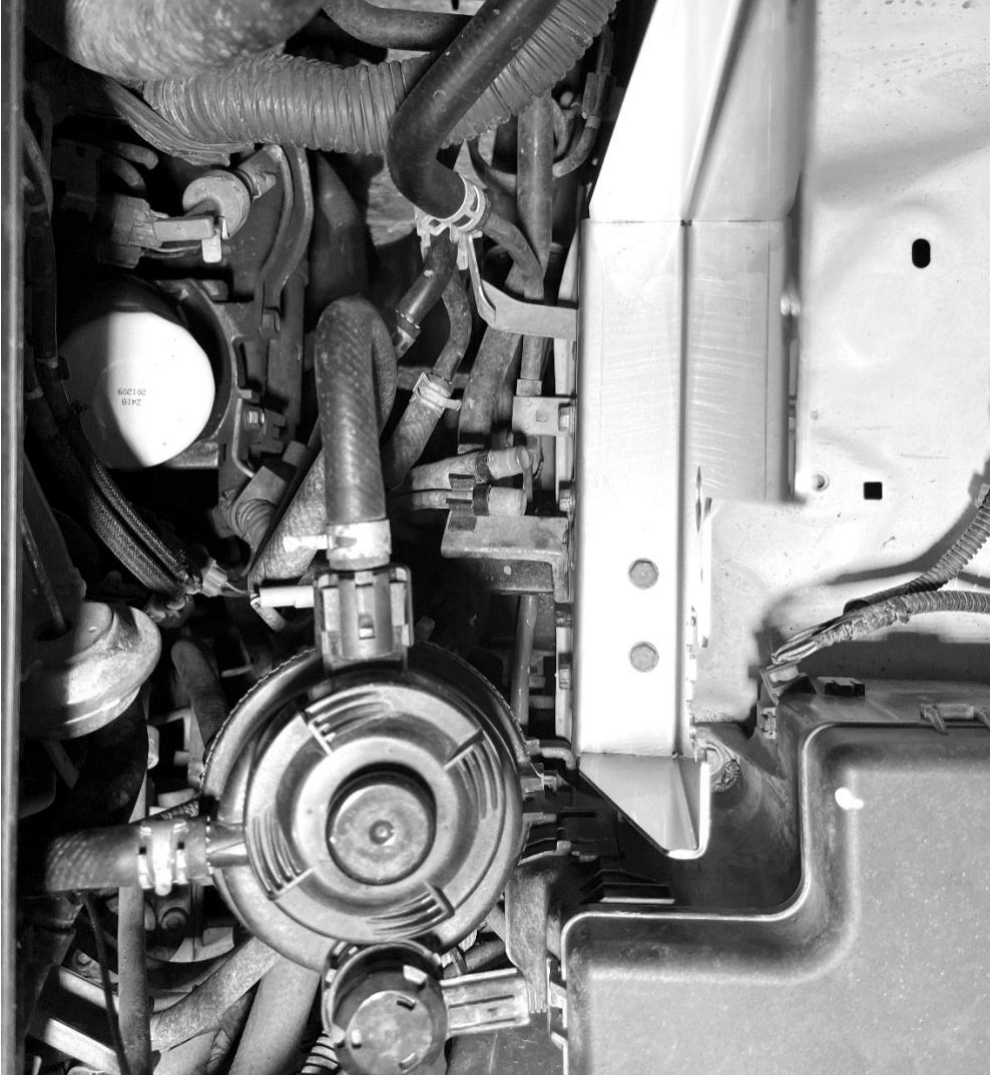
Installation Guide



1. Begin by unplugging the electrical connections to the factory fuel filter. Then, slide the factory fuel filter housing up and off the mounting bracket. The bracket supporting the filter needs to be replaced with mounting bracket A supplied in the kit. There are two M6 bolts from the top and 4 from the engine side.



Left – wiring connected and factory filter in place, Right – wiring unplugged and factory filter removed from bracket



New mounting bracket A bolted in place, use factory bolts to secure it to the original mounting locations

2. Once the new bracket is installed, slide the factory fuel filter back into place. The electrical connections can now be plugged back in.
3. Bolt the fuel filter assembly into place, using the M10x30mm bolts and nyloc nuts, making sure to use a flat washer under each bolt head and nut. Install mounting bracket B directly to the rear face of mounting bracket A, the bolts and washers should sandwich the two together. Adjust the position of the fuel filter assembly till you are happy with the location, mounting the other end of mounting bracket B to the guard. When you're happy with the position, tighten the bolts and nuts.
4. Using the supplied 10mm bolts, washers and nuts, mount the FM100 Fuel Manager Post-filter assembly filter to the engine side of the bracket. This will allow the fitment of a dual battery system
5. Install the NPT adaptors into the filter head ports that are facing towards the rear of the vehicle using the supplied LOCTITE thread sealant.
6. Apply a small amount of LOCTITE thread sealant to the two black NPT plugs and install them into the two remaining ports in the Post-filter head.



7. Lubricate the barbed end of one push-lock fitting and the inside portion of the hose to be fitted with a push-lock fitting with diesel fuel or WD40
8. Insert the barbed end of one push-lock fittings into the pre-lubricated end of the hose. Ensuring that the hose stops firmly against the inside of the bell cover.
9. With the assembled hose, screw the push-lock fitting on to the inlet port of the Post-filter. Cut to length and connect the other end of the same hose to the factory fuel filter.
10. Lubricate the barbed end of the remaining push-lock fitting and the inside portion of the remaining hose to be fitted with a push-lock fitting with diesel fuel or WD40
11. Insert the barbed end of the remaining push-lock fittings into the pre-lubricated end of the hose. Ensuring that the hose stops firmly against the inside of the bell cover.
12. With the now assembled hose, screw the push-lock fitting on to the outlet port of the Post-filter.
13. Measuring the hose in place between the outlet port of Post-filter and the inlet of the factory fuel filter, cut the hose to length
14. Using the supplied nylon cable ties, secure any loose hose from rubbing on any other components
15. Bleed the fuel system by pumping the hand primer on the factory filter until firm
16. Start vehicle and run the vehicle, whilst checking all connections for leaks

END OF GUIDE

[Go to Next Page for Provent Ultimate Catch Can Installation Guide](#)

Direction-Plus Provent Ultimate Catch Can Installation Guide for Toyota Hilux N70 - 2011-2015

This document is to be used as a guide for the installation of the **Direction-Plus ProVent Ultimate Catch Can Kit (PV613DPK)** to a **2011-2015 Toyota Hilux N70 1KD-FTV Diesel**.

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



Included in the kit:

<i>Pre-assembled</i>	<i>Hardware Bag</i>	<i>ProVent Fitting Kit Bag</i>
1 x Mann + Hummel ProVent 200 (PV200DP)	1 x M6x16 Bolt (SSSS304M612)	2 x M8x25 Bolts (SSSS304M825)
1 x Mounting Bracket A (PV612-BR)	1 x M6 Flat Washer (FMW6)	4 x M8 Flat Washers (FMW8)
1 x Mounting Bracket B	1 x M6 Spring Washer (FMSW6)	2 x M8 Spring Washers (FMSW8)
1 x 1200mm 16mm Hose (DPPH16)	8 x 200mm Cable Ties (802078)	2 x M8 Stainless Steel Nuts (FMN8)
	2 x 25-16mm Reducers (PV2516DP)	<i>Drain Bag</i>
	2 x 25mm Spring Clamps (DPSC25)	1000mm of 12mm Hose (DPFH12-PEX)
	8 x 16mm Spring Clamps (DPSC16)	1x Drain Tap Assembly (DPDRAIN)
	2 x 16mm Straight Joiners (DPC0016)	2 x 12mm Spring Clamps (DPSC12)
	2 x 16mm 45° Joiners (DPC4516)	

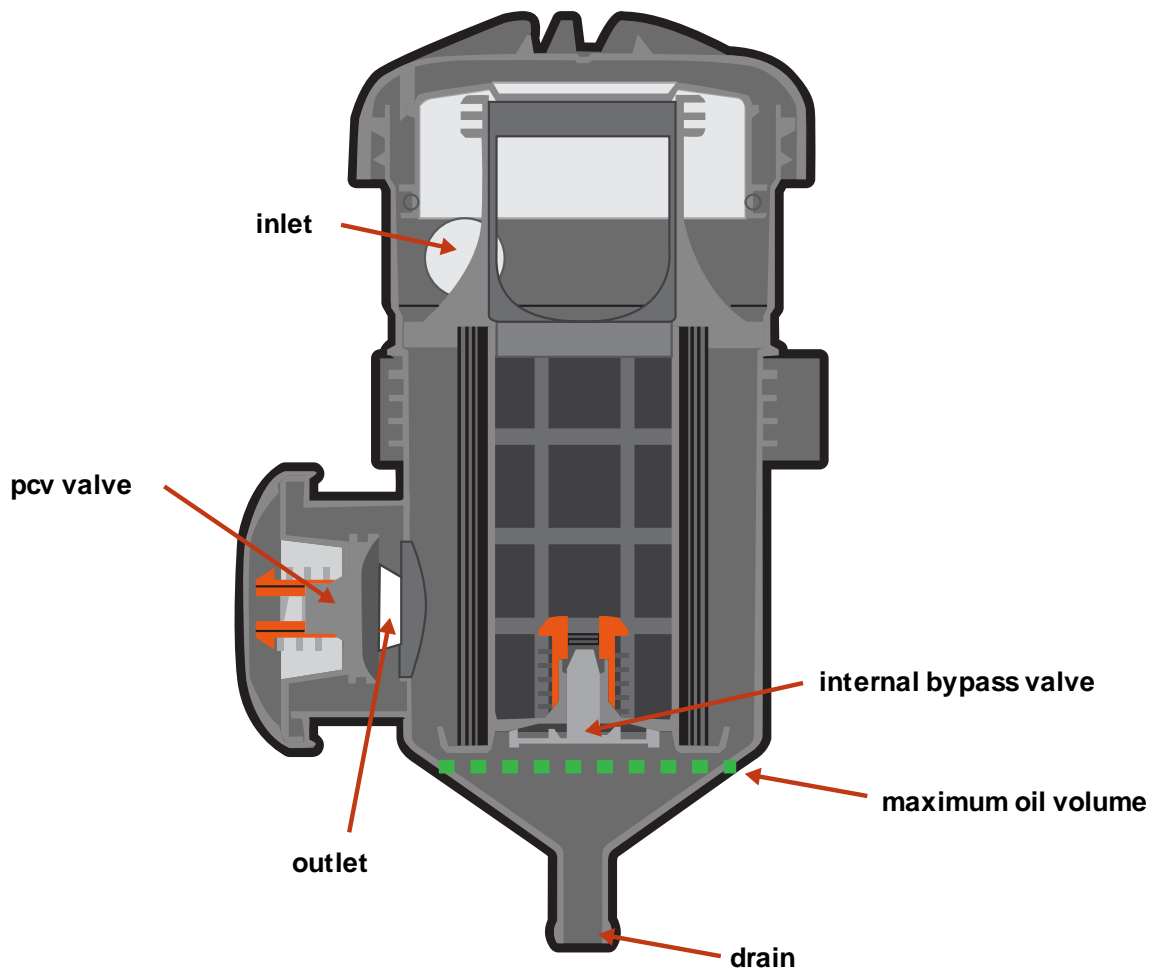
**APPROXIMATE MOUNTING LOCATION
PROVENT ULTIMATE CATCH CAN KIT
PV613DPK**



Basic Tools Needed:

- Spanners
- Sockets
- Screw drivers
- Pliers
- Snips/Cutters
- Rags

PV200 INTERNAL BYPASS VALVE SECTIONAL DIAGRAM



Due to the way the internally vented PV200 works, the PV200 must be drained regularly to ensure correct operation of the internal bypass valve. Failure to regularly draining/servicing the Catch Can may cause engine damage due to over pressurisation of the crankcase ventilation system.

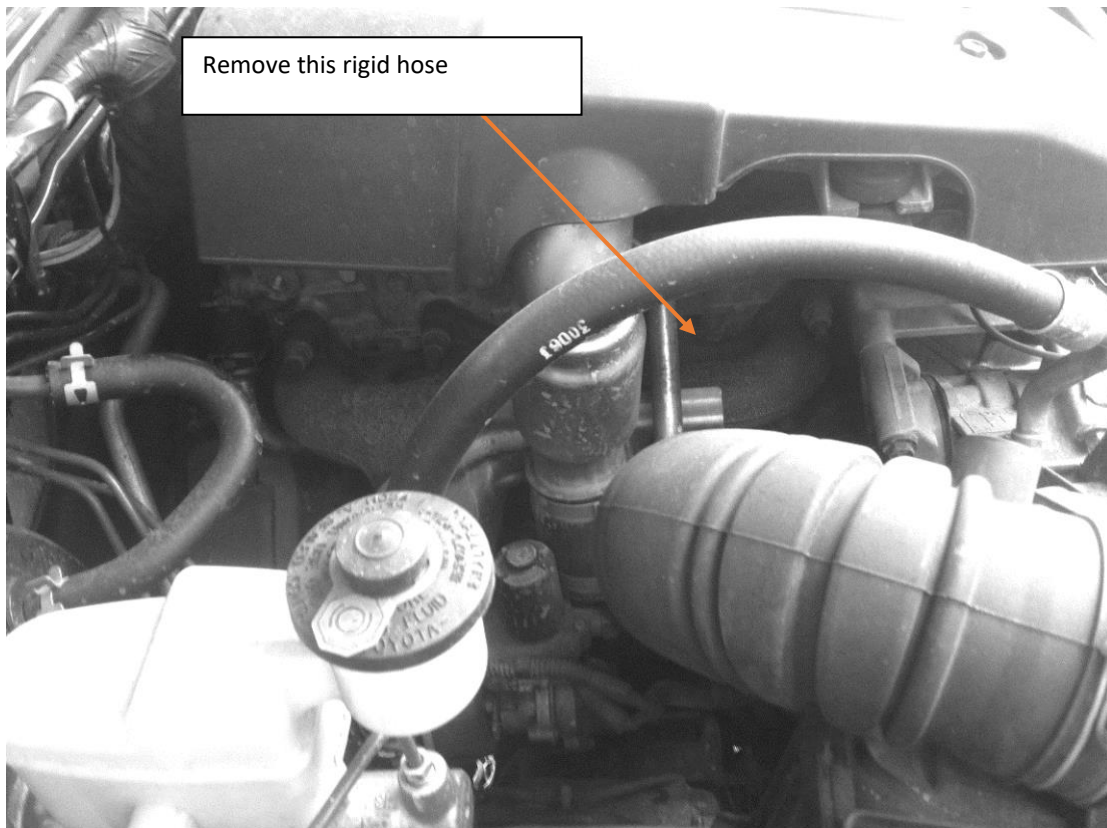
The ■ ■ ■ in the diagram indicates the maximum permissible oil level. For the PV200 internal bypass valve to correctly operate the internal oil volume MUST NOT exceed the level indicated by the ■ ■ ■ shown in the diagram.

If the internal oil volume is to exceed the level indicated by the ■ ■ ■ shown in the diagram, the internal bypass valve cannot operate as designed due to it being submerged. This condition is likely to cause over pressurisation of the crankcase ventilation system and damaging the engine.

WARNING: Colder climates can cause increased condensation inside the Catch Can. This will fill the reservoir quicker than oil and will need to be drained regularly. Failure to do so could & can damaged the Catch Can or vehicle.

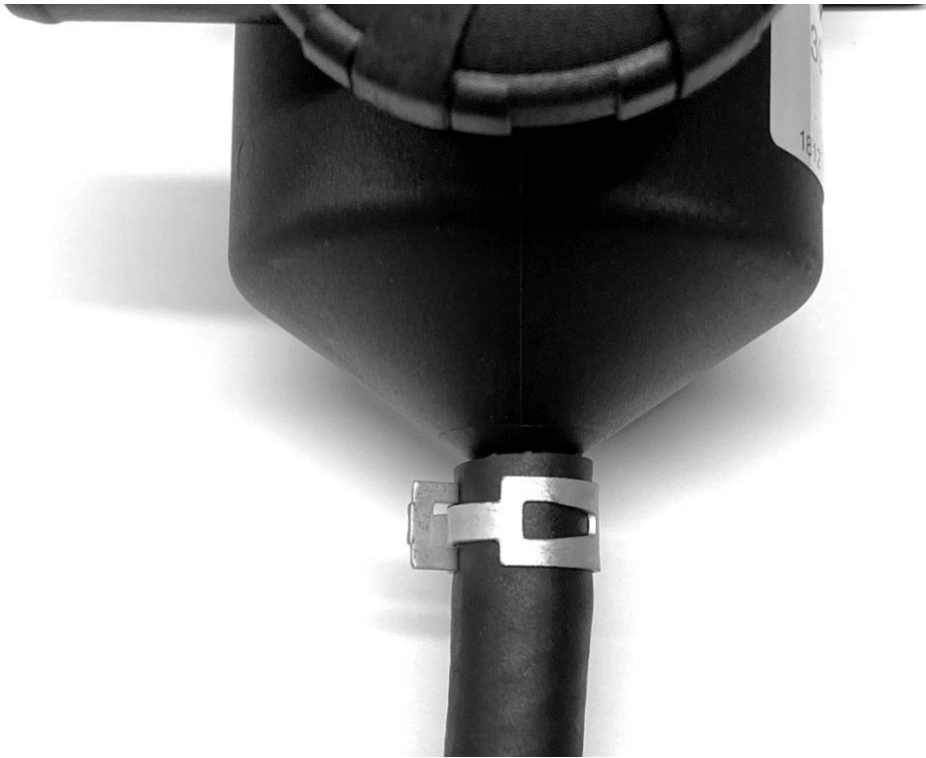
Installation Guide

1. Begin by removing the factory bypass hose which runs from the top of the rocker cover, down to the air inlet hose just before the turbocharger. You will need to leave the rubber 25mm to 16mm reducer in place on the inlet pipe as well as the elbow attached to the valve cover. Note: You may need to remove the engine cover and intercooler for better access.



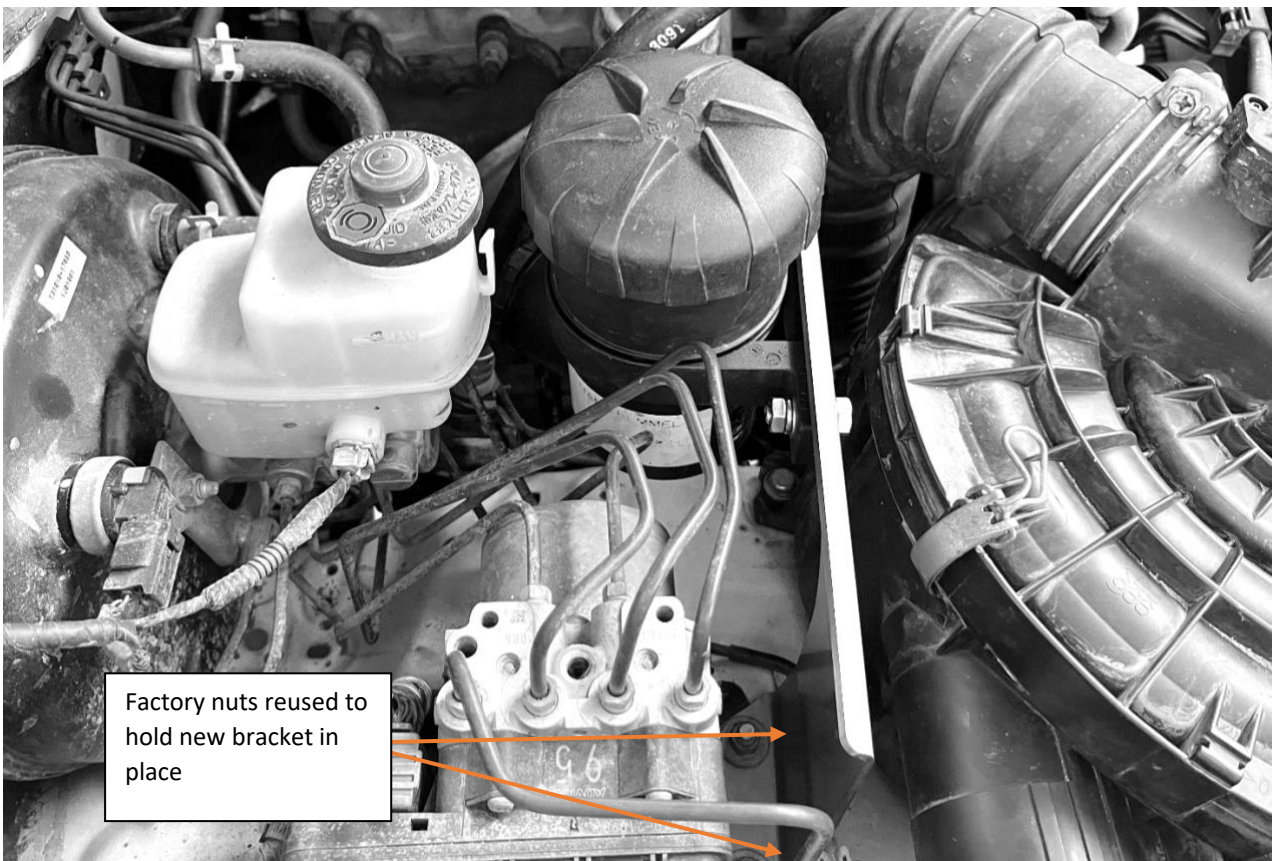
Hilux Engine Bay- Exhaust Side

2. The bracket bolts to the two front studs that mount the ABS unit, remove the nuts and bolt the bracket in place.
3. Connect the 12mm (1/2") Hose to the underside of the catch can body, using a 12mm spring clamp to secure it in place.



ProVent 200 with 12mm hose connected and secured with a clamp

4. With a flat washer on each of the M8x25mm bolts, mount the ProVent 200 to the mounting bracket. Use a flat washer, spring washer and nut to secure the bolts on the other side.



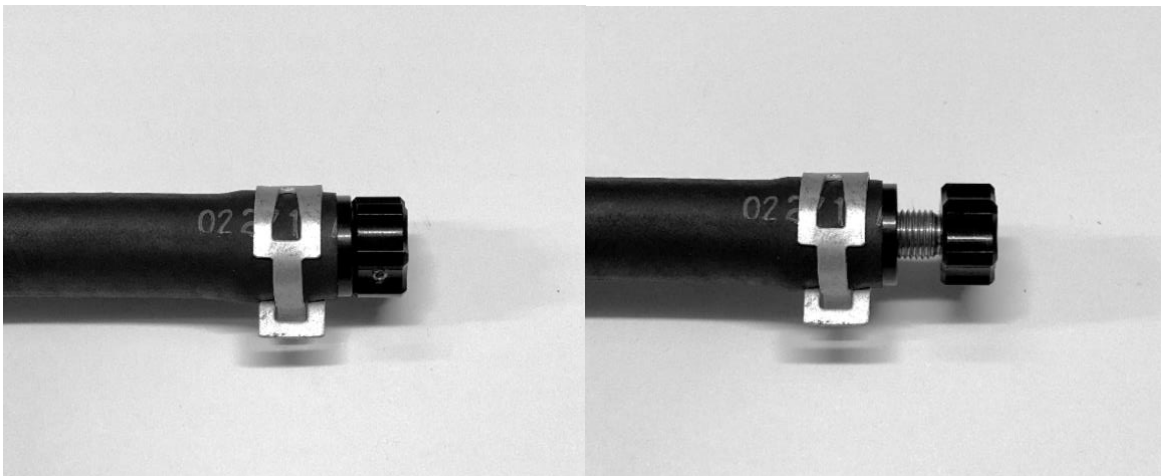
ProVent 200 bolted to bracket– Please note ProVent rotation in this image is correct, refer to the image on the last page of this installation guide for how to rotate the unit.

5. Feed the 12mm Hose down the side of the engine bay, under the vehicle to an out of the way location, making sure it is clear of any suspension, driveline, and exhaust components, fit the Drain Tap into the hose and secure with a 12mm spring clamp.



Drain Tap inserted into 12mm hose, secured with a clamp

6. Use the supplied cable ties to secure the 12mm hose into the location required under the vehicle to prevent movement. Note: Leave a slight amount of slack in the line where the body and chassis join to prevent stretching the hose.
7. Make sure the tap position is closed and avoid placing the tap in a location in which it will fill with dirt and mud.



Left image – Tap Open. Right image – Tap Closed.

8. Use the brace to mount the side closest to the engine to the vacant threaded M6 hole in the inner guard. Use the supplied M6 Bolt, flat washer and spring washer to secure in place.



ProVent 200 bolted to bracket– Please note ProVent rotation in this image is correct, refer to the image on the last page of this installation guide for how to rotate the unit. Brace upper mounting location shown.



Brace lower mounting location, M6 hardware used to secure

9. Install the 25-16mm reducers to the ports on the ProVent 200. Use a 25mm spring clamp to secure it in place.
10. Install the two straight joiners, one in the elbow attached to the valve cover the stock metal hose was removed from, one to the upper ProVent 200 Port, use a 16mm clamp on each to secure in place.
11. Install the two 45° joiners, one into the vacant 16mm port on the air intake pipe the stock metal hose was removed from, one to the lower ProVent 200 Port, use a 16mm clamp on each to secure in place. The fittings should be aimed towards each other.

12. Install one end of the 16mm hose to the straight joiner attached to valve cover installed in step 10, measure and cut the hose to length and join it to the straight joiner on the upper ProVent 200 Port. Use a 16mm clamp on each end of the hose to secure in place.
13. Install one end of the remaining 16mm hose to the 45° joiner connected to the air intake pipe in step 11, measure and cut the hose to length and join it to the 45° joiner on the lower ProVent 200 Port. Use a 16mm clamp on each end of the hose to secure in place.

ProVent 200

The housing can (prior to installation) be turned in the holder in 30° steps around the longitudinal axis.

This enables the position "Inlet and outlet fitting to flange" to be flexibly adjusted to the installation situation.

- Remove the retaining clip (1) upward from the groove and turn the holder into the desired position.
- Press the holder together somewhat in the desired position and engage the retaining clip in the groove again
- Mount the holder in the vertical position. Recommended tightening torque for M8 screws: 10 Nm.
- Ensure sufficient strength of the screw and nut material.
- Connect the hoses to the inlet, outlet and oil return fittings (make sure a sufficient length of hose is pushed on) and secure with hose clamps (see Chap.4.2 and 4.3).
- Connect the oil return hose (and non-return valve if necessary) to the oil sump.
- To ensure proper functioning, the ProVent should be protected against dirt (mount splash guards if necessary).

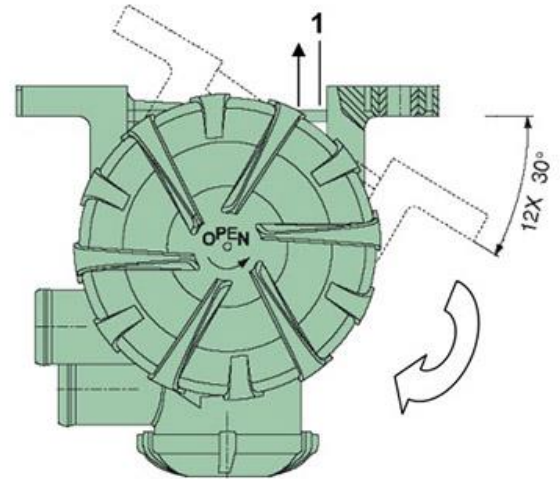


Fig. 5 Positions of outlet for ProVent 200

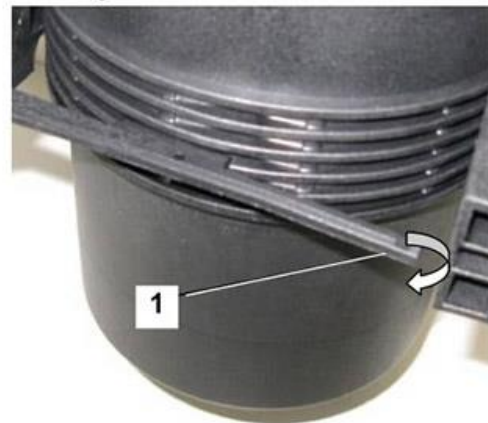


Fig. 6 Holder for ProVent 200

End of Installation Guide