Toyota Land Cruiser 70 Series Direction-Plus™ ProVent® Ultimate Catch Can Installation Guide

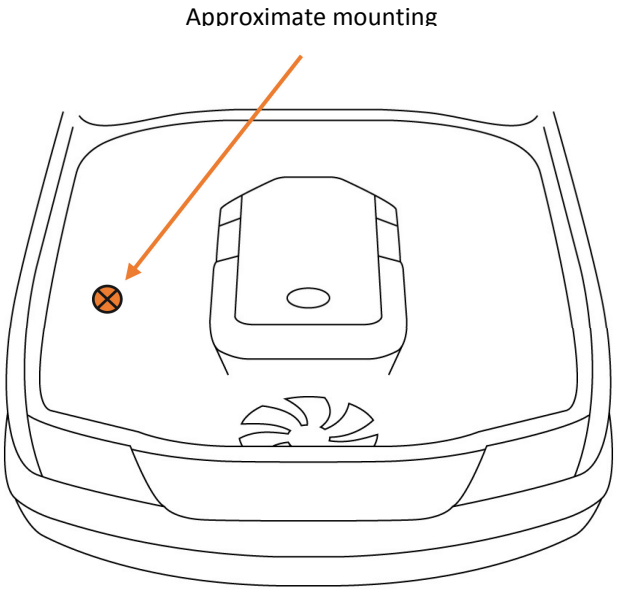
This document is to be used as a guide for the installation of the Direction Plus™ Land Cruiser 70 Series ProVent® 200 Crankcase Ventilation Kit to a 2007+ Toyota Land Cruiser 70 Series V8 Diesel. It is recommended that the installation of the product be carried out by a competent qualified mechanic.

Important Before Starting

- Ensure you have the correct tools to complete the fitment
- Read the instructions in full and familiarize yourself with the installation, before commencing any work

Included in the kit

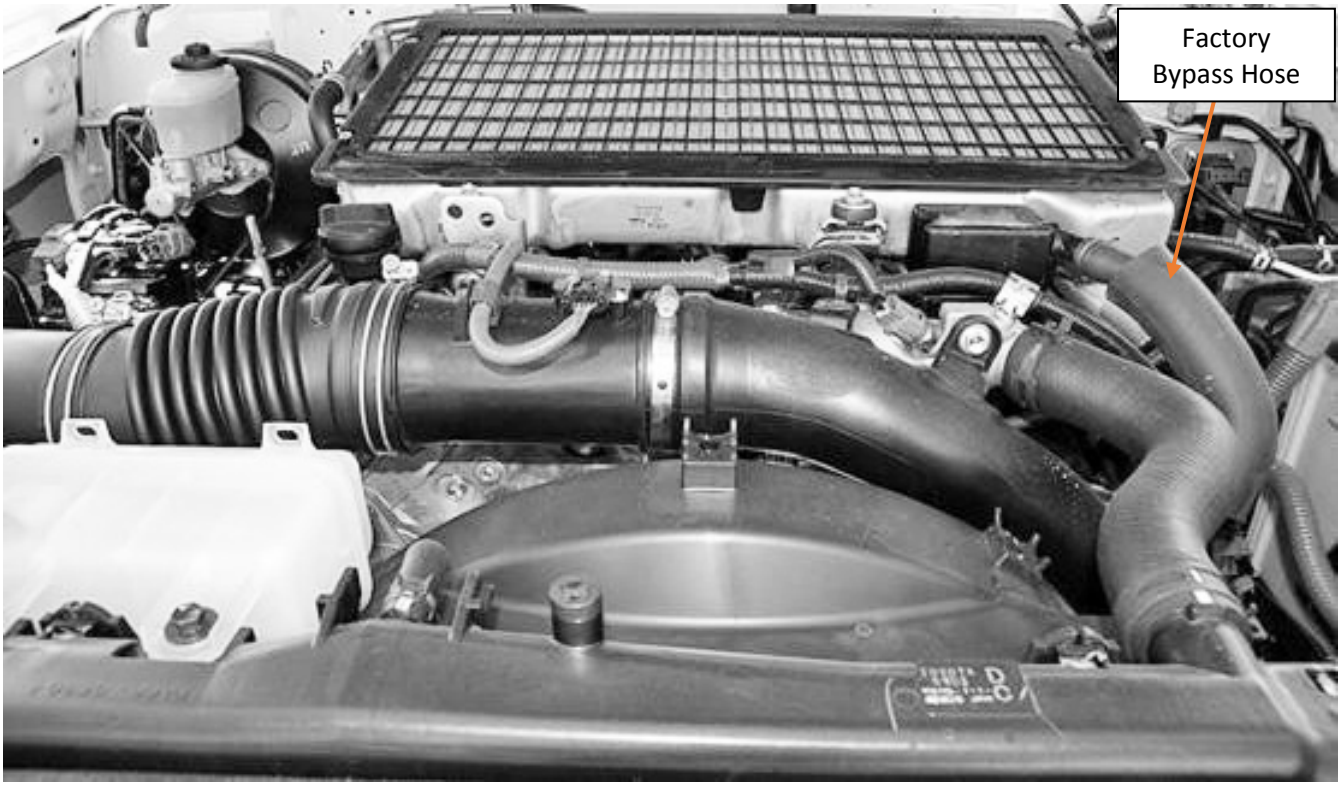
1 x Mann + Hummel ProVent® 200
1 x Mounting Bracket
1 x 850mm of 16mm Hose
1 x 750mm of 16mm Hose
2 x 60mm of 16mm Hose
4 x 16mm 90˚Joiners
8 x 16mm Hose Clamps
2 x 25mm Hose Clamps
2 x 16mm to 25mm Hose Coupler
8 x Cable Ties
2 x M8x25 Bolts
2 x M8 Flat Washers
2 x M8 Spring Washers
1000mm of 12mm Hose
1x Drain Tap assembly
2 x 12-20mm Hose Clamps



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

Installation Guide

1. Begin by locating the factory bypass hose which runs from the black box in the front of the intercooler on the passenger side of the vehicle to the intake pipe just under the top radiator hose in front of it, the hose is only about 200mm in length and shaped like an "L". Once located, this hose needs to be removed. Retain the spring clamps for reuse.

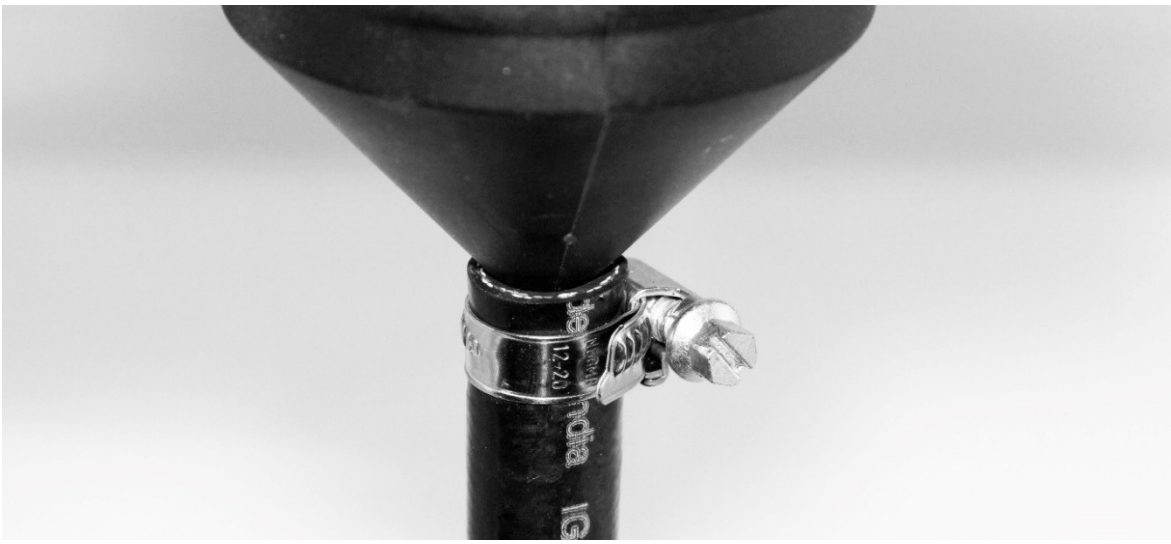


Land Cruiser 70 series engine bay

2. Connect each of the 60mm long 16mm hoses to the ports the factory bypass hose was just removed from. Use a light coat of rubber care or WD-40 to help get them on. Secure in place with the factory spring clamps.

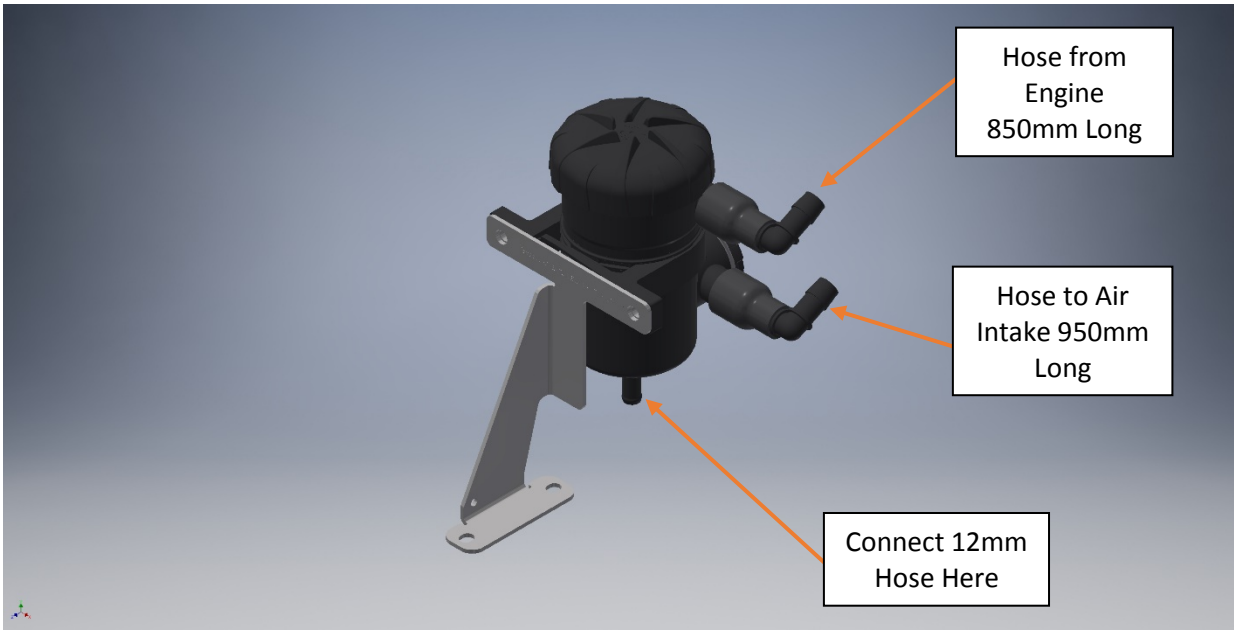
3. Insert a 16mm 90˚ joiner fitting into each of the hoses, using a 16mm clamp to secure them in place.

4. Connect the 12mm Hose to the underside of the catch can and use a 12-20mm Clamp to secure it in place.



ProVent® 200 with 12mm hose connected and secured with 12-20mm worm drive clamp

5. Loosen the front power steering reservoir retaining bolt and remove the rear two bolts. Install the bracket under the rear two power steering reservoir retaining tabs and isolators. Next, bolt the ProVent® 200 to the bracket using the supplied bolts and washers. Once in place, tighten the power steering reservoir bolts to hold in place.



Pre-assembled ProVent® 200 with Land Cruiser 70 series bracket

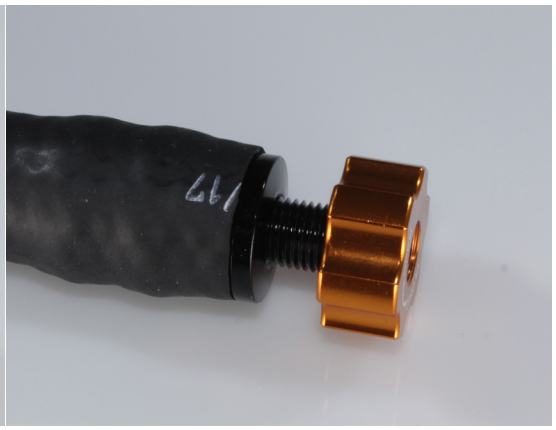
6. Feed the 12mm Hose down under the vehicle to an out of the way location, making sure it is clear of any suspension, driveline and exhaust components, fit the Tap hose tail into the hose.

Hose tail and tap assembly inserted into 12mm hose, hose clamp not required

7. Use the supplied cable ties to secure the 12mm hose into the location required to prevent movement, just leave a slight amount of slack in the line where the body and chassis join to prevent stretching the hose.

8. 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.



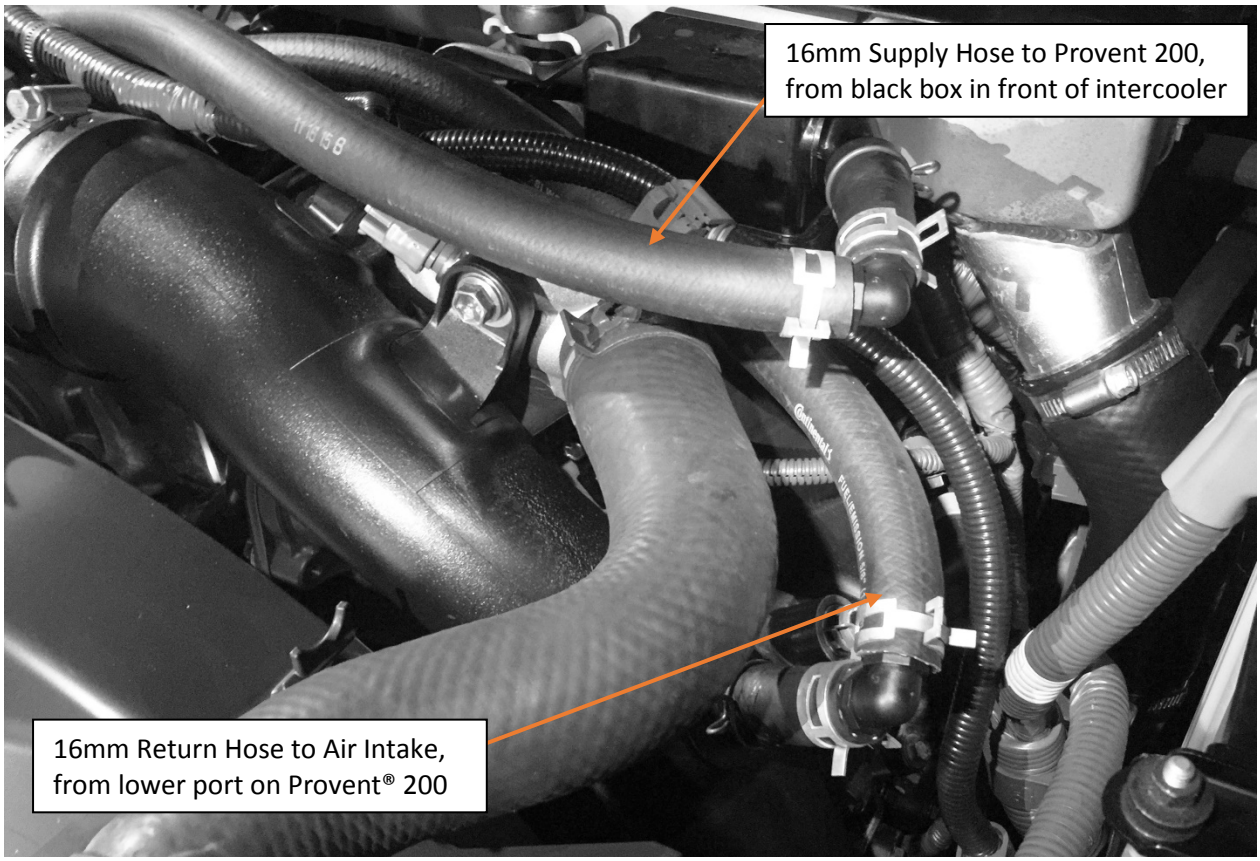
Right image – Tap Closed.

9. Mount one end of the 850mm long 16mm hose to the lower 16mm 90˚ joiner fitting on the ProVent® 200. Use a 16mm clamp to secure it in place.

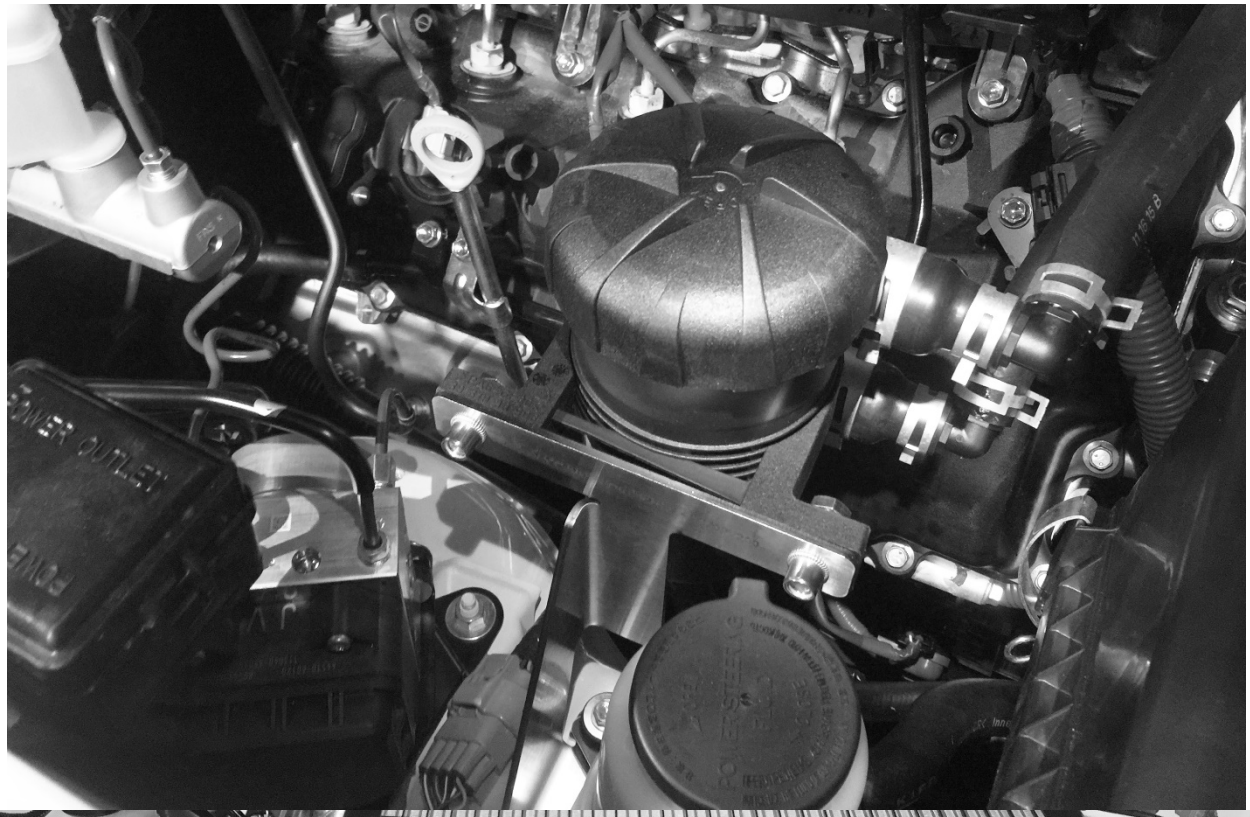
10. Mount the other end of the 850mm long 16mm hose to the 16mm 90˚ joiner fitting on the hose connected to the hose running to the black air intake pipe on the front passenger side, using a 16mm clamp to secure it in place.

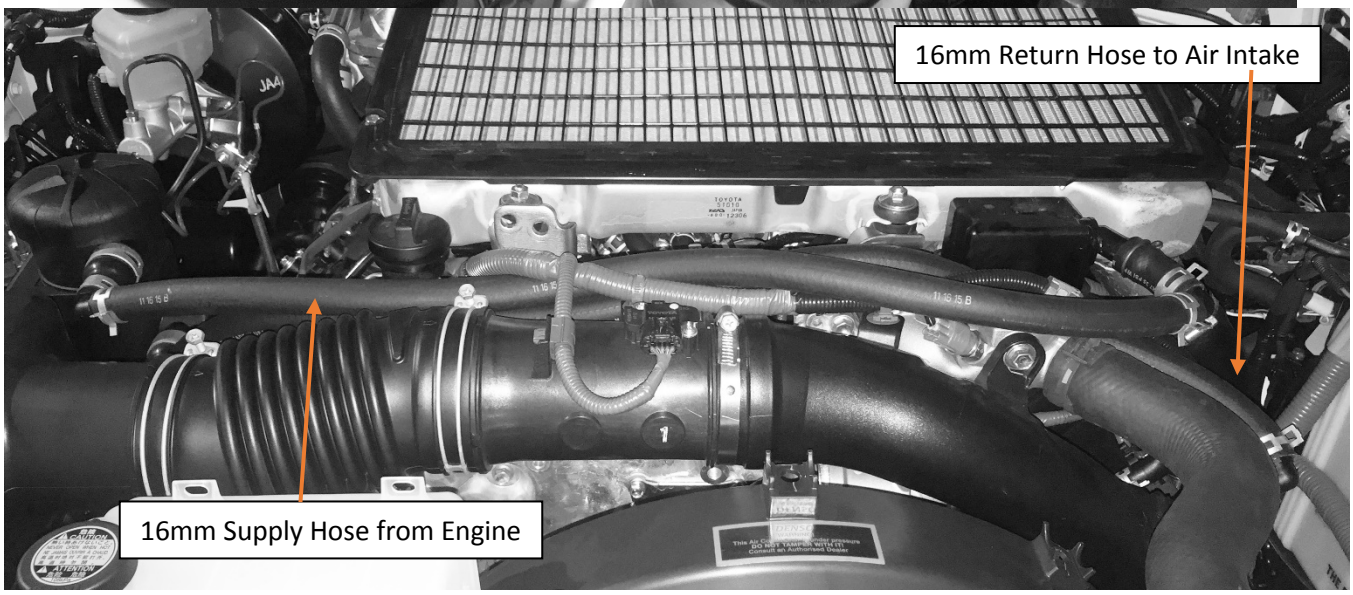
11. Mount one end of the 750mm 16mm hose to the Upper 16mm 90˚ joiner fitting on the ProVent® 200. Use a 16mm clamp to secure it in place.

12. Mount the other end of the 750mm 16mm hose to the 16mm 90˚ joiner fitting on the hose connected to the hose running to the black box in front of the intercooler on the front passenger side, using a 16mm clamp to secure it in place.



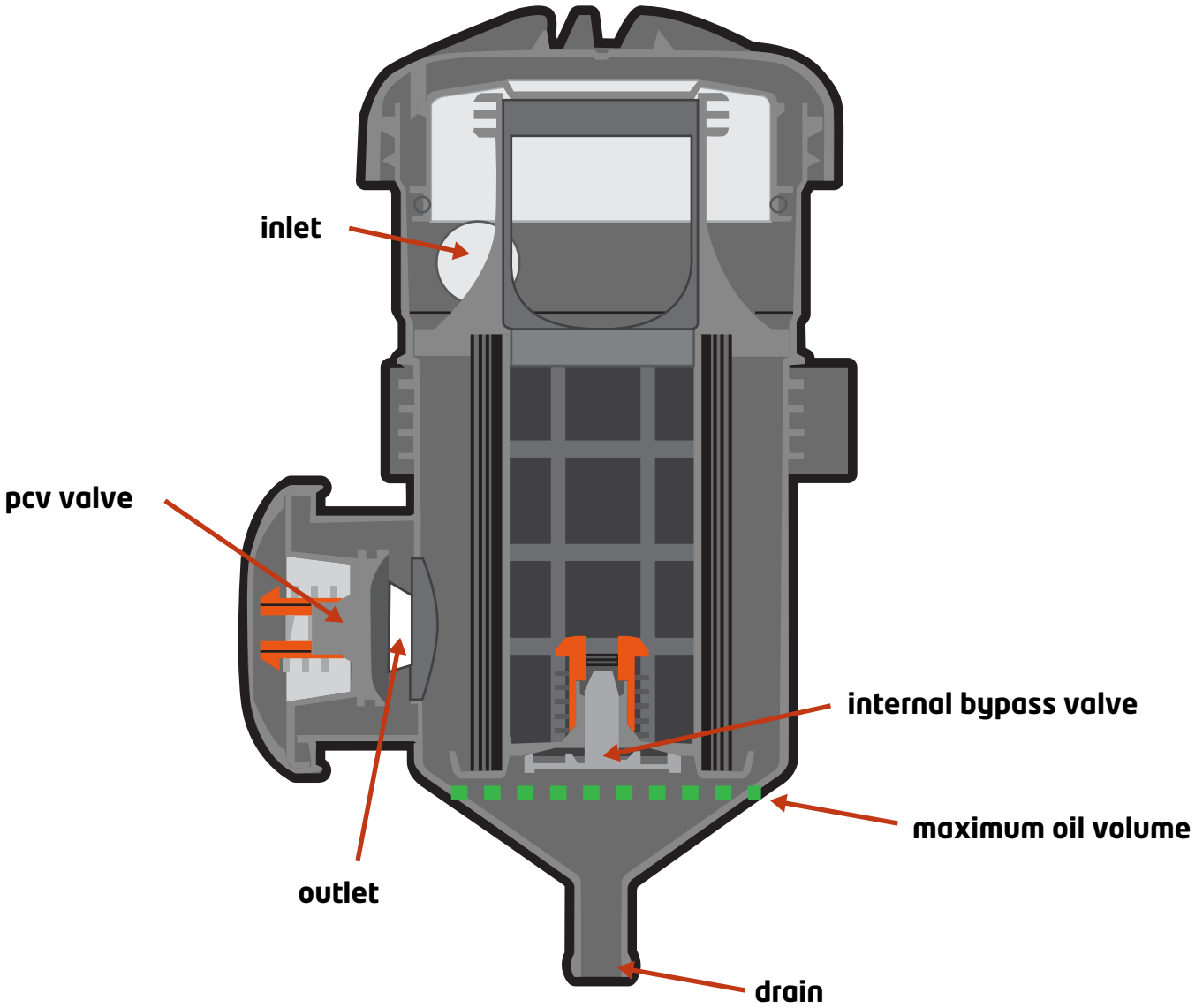
Engine bay hose locations for Land Cruiser 70 series V8 diesel





End of Installation Guide

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.

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).

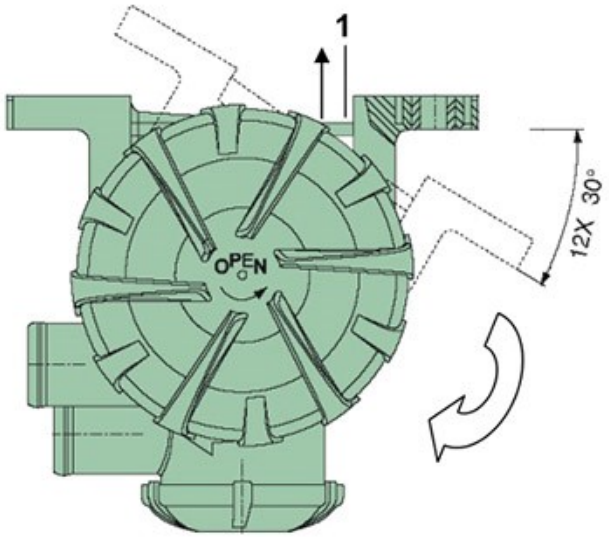


Fig. 5 Positions of outlet for ProVent 200

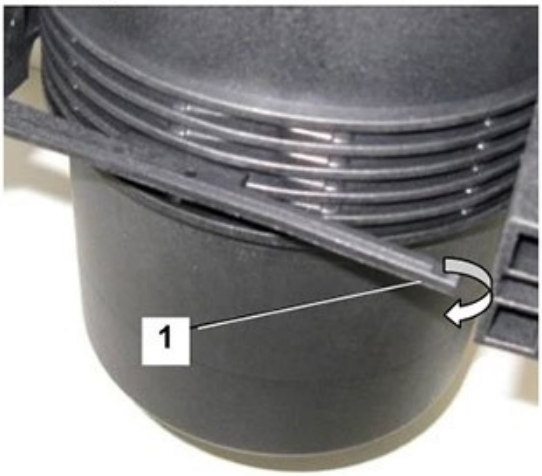


Fig. 6 Holder for ProVent 200