



Nissan Patrol GU ZD30 Direction-Plus™ ProVent® 200 Installation Guide

This document is to be used as a guide for the installation of the Direction Plus™ Nissan Patrol GU ZD30 ProVent 200 Crankcase Ventilation Kit to a 2002-2015 Nissan Patrol GU Series 3/4 3L diesel. It is recommended that the installation of the product be carried out by a competent qualified mechanic.

Important Before Starting

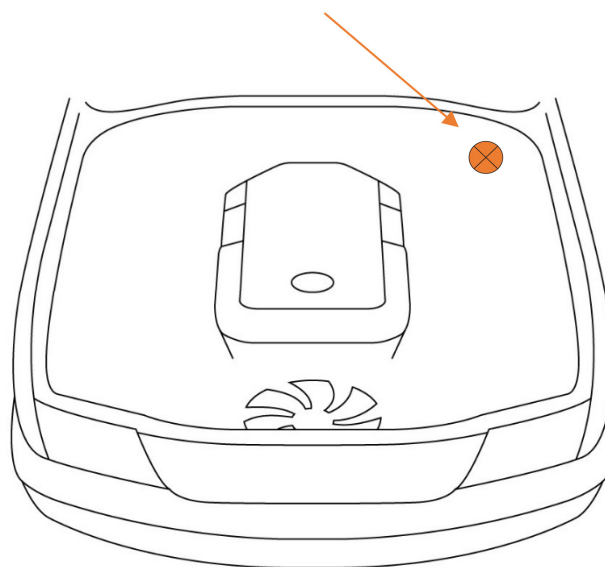
- Ensure you have the correct tools to complete the fitment
- Read the instructions in full and familiarize yourself with the installation, before commencing any work

Included in the kit

1 x Mann + Hummel ProVent 200
1 x Mounting Bracket
1 x 500mm of 16mm Hose
1 x 75mm of 16mm Hose
1 x 300mm of 12mm Hose
2 x 16mm 90° Joiner
1 x 16mm to 12mm Joiner
6 x 16mm Spring Clamps
2 x 25mm Spring Clamps
2 x 12mm Spring Clamps
2 x 16mm to 25mm Hose Coupler
8 x Cable Ties
3 x M6x12 Bolt
3 x M6 Nyloc Nut
6 x M6 Flat Washers
2 x M8x25 Bolts
4 x M8 Flat Washers
2 x M8 Spring Washers
2 x M8 Stainless Steel Nuts
1 x 1000mm of 12mm Hose
1x Drain Tap Assembly
2 x 12-20mm Hose Clamps

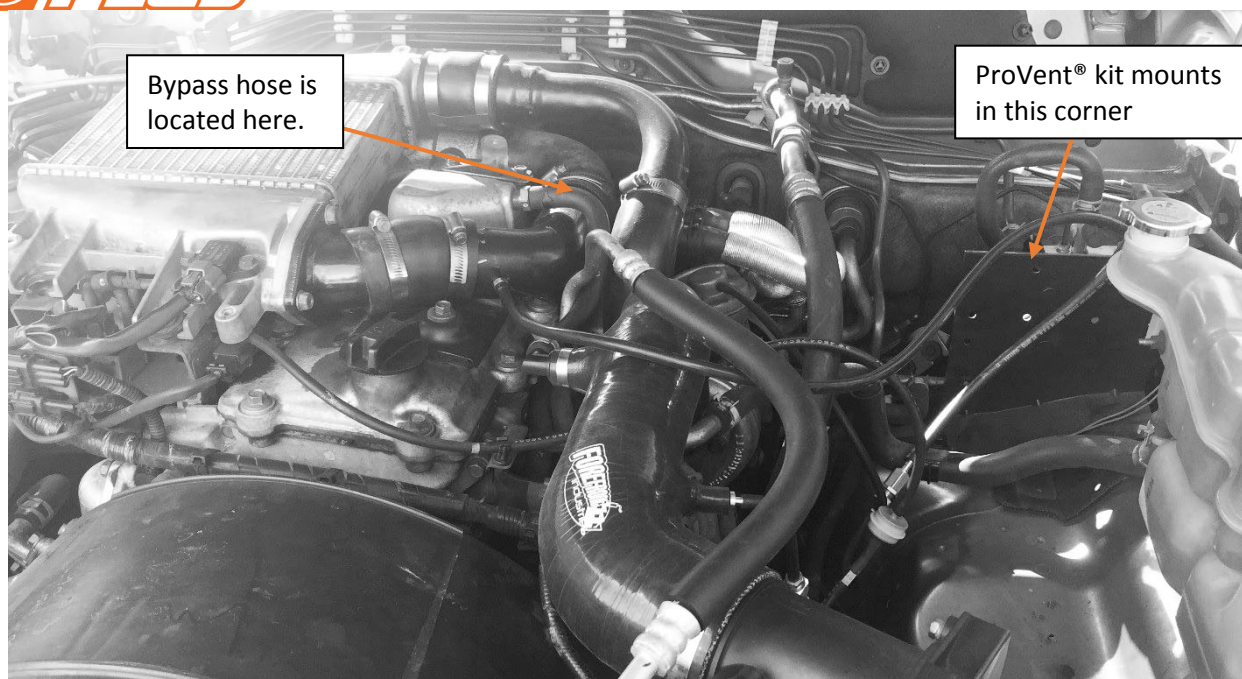
*Kit contents are subject to change based on component availability and/or refinement

Approximate mounting location



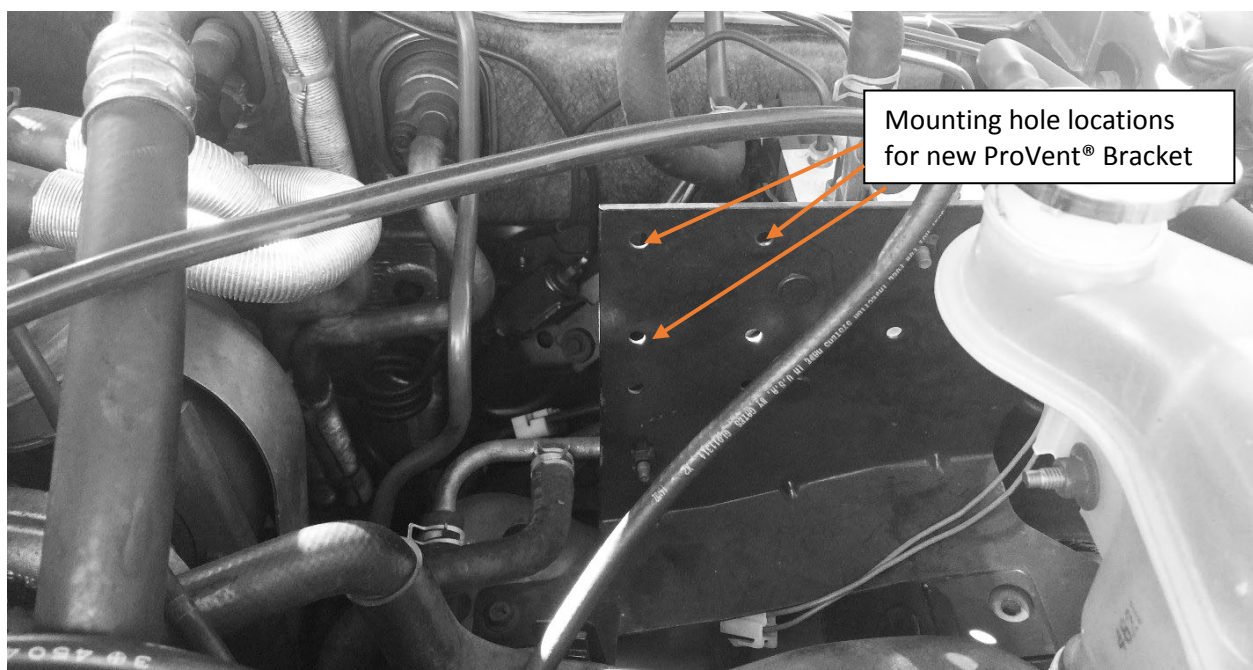
Installation Guide

1. Begin by removing the engine cover (not on all models) to give access to the crankcase bypass hose in the front passenger corner.



Nissan Patrol GU ZD30 Engine Bay – Overall View

2. Begin by locating the factory bypass hose which runs from the hump in the valve cover on the passenger side to the intake pipe 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.
3. Using the three (3) supplied M6 bolts and nuts, secure the mounting bracket in place behind the black plate in the engine bay. It uses three unused factory threaded holes to locate and mount from. Please note the “kink” in the bracket should angle towards the rear of the vehicle.



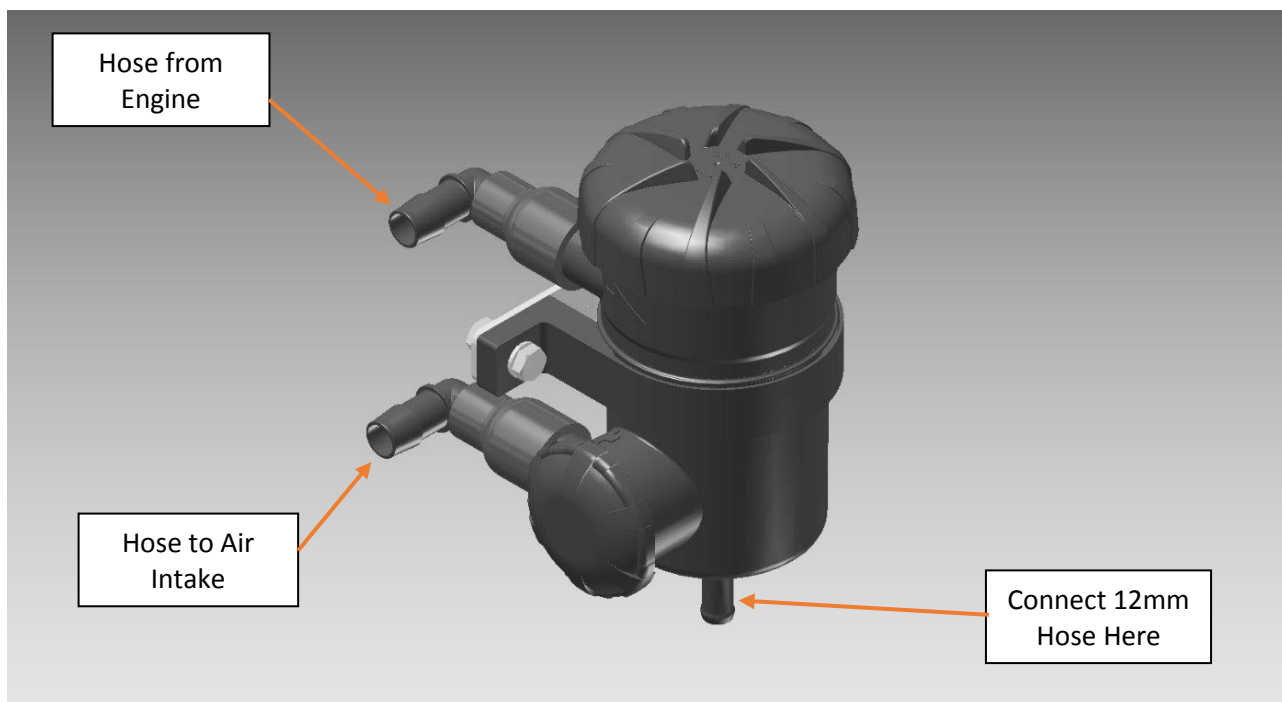
Front view: image shows new ProVent bracket location

4. Connect the 12mm (1/2”) Hose to the underside of the catch can body, using a 12-20mm worm drive clamp to secure it in place.



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

5. 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.



Pre-assembled Provent® 200 with bracket – Please note ProVent® rotation in this image is correct, your ProVent® should come at the correct rotation in the box – if it is not, refer to the image on the last page of this installation guide.

6. 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 Tap hose tail into the hose and secure with a 12-20mm clamp.



Hose tail and tap assembly inserted into 12mm hose, secured with 12-20mm worm drive clamp

7. 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.
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.

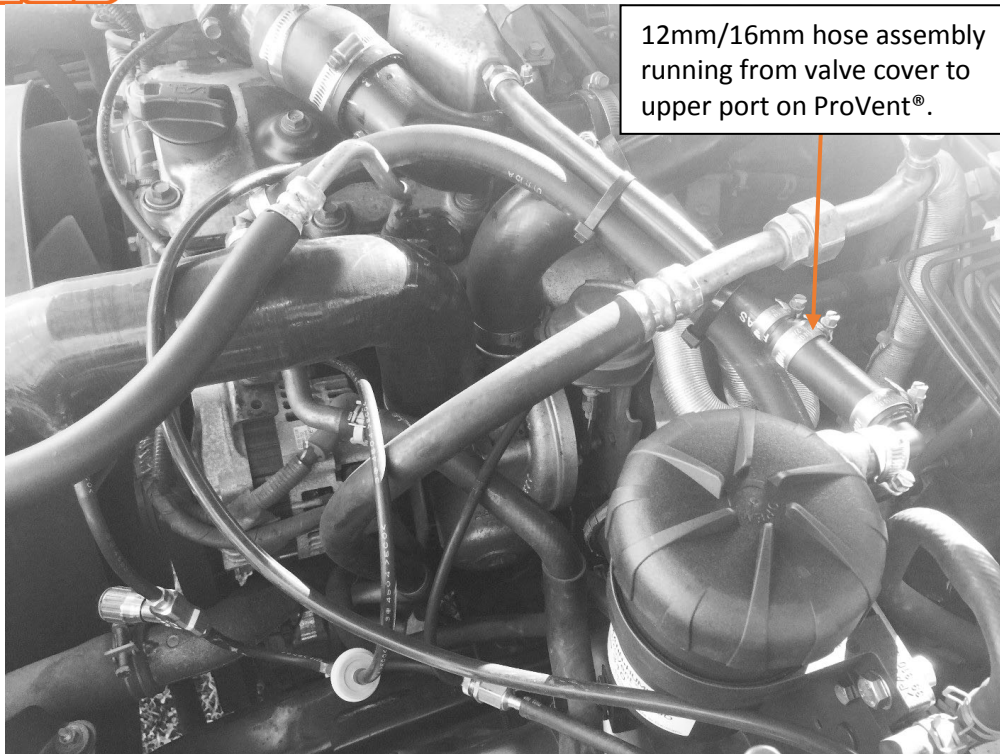


Left image – Tap Open.



Right image – Tap Closed.

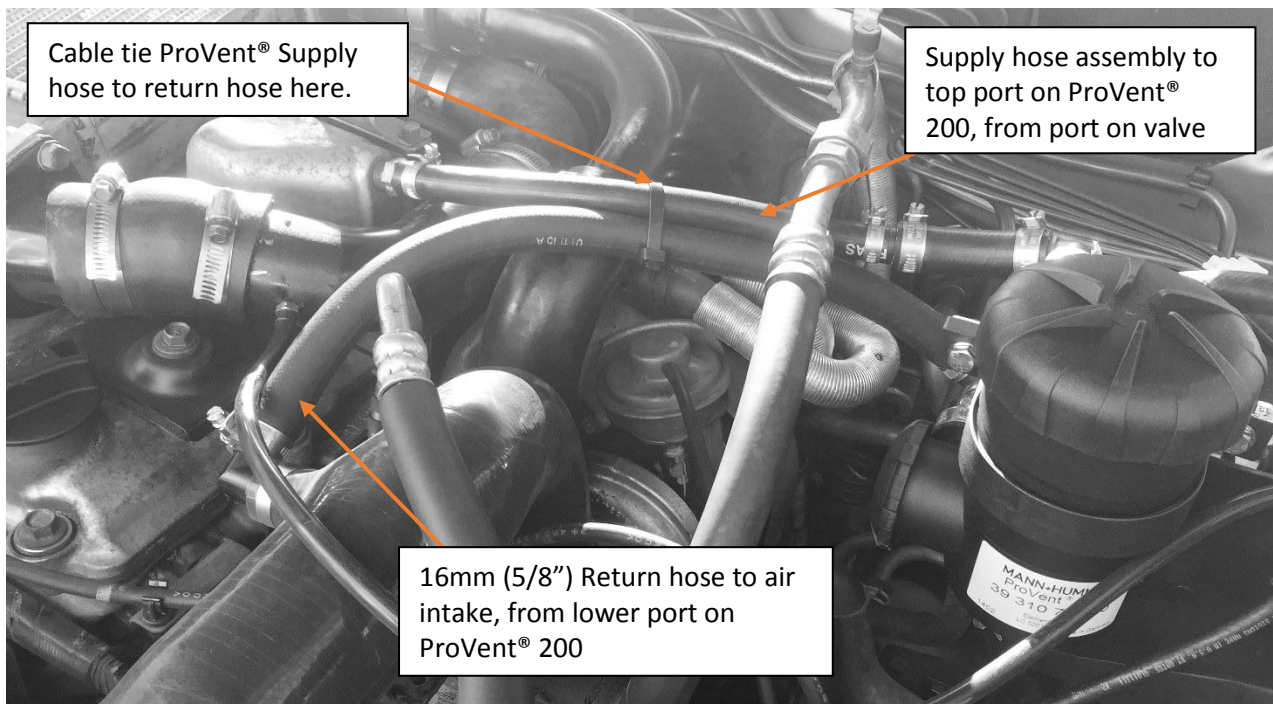
1. Push the 16mm end of the 16-12mm joiner into the 75mm long 16mm (5/8") hose. Secure with 16mm spring clamp. Push the 12mm end into the 300mm long 12mm (1/2") hose. Secure with 12mm spring clamp. Mount the other end of the 75mm long 16mm (5/8") hose to the upper 16mm (5/8") 90° joiner fitting on the ProVent® 200 and secure with a 16mm spring clamp.
2. Mount the other end of the same hose assembly to the vacant fitting the original ventilation line was connected to on the valve cover. Secure in place with a 12mm spring clamp.



12mm/16mm hose assembly running from valve cover to upper port on ProVent®.

Upper hose connected to inlet port on the ProVent® 200. Please note old style clamps shown, kit comes with OEM style Spring Clamps.

3. Mount one end of the 500mm 16mm (5/8") hose to the lower 16mm (5/8") 90° joiner fitting on the ProVent® 200.
4. Mount the other end of the 500mm 16mm (5/8") hose to the vacant fitting on the air intake piping hose connected to the hose running to the black box in front of the intercooler on the front passenger side.



Cable tie ProVent® Supply hose to return hose here.

Supply hose assembly to top port on ProVent® 200, from port on valve

16mm (5/8") Return hose to air intake, from lower port on ProVent® 200

Hose configuration in GU Patrol ZD30 with ProVent® 200 installed – Note, the hoses need to be run underneath the air conditioning line. Please note old style clamps shown, kit comes with OEM style Spring Clamps.



[End of Installation Guide](#)

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).

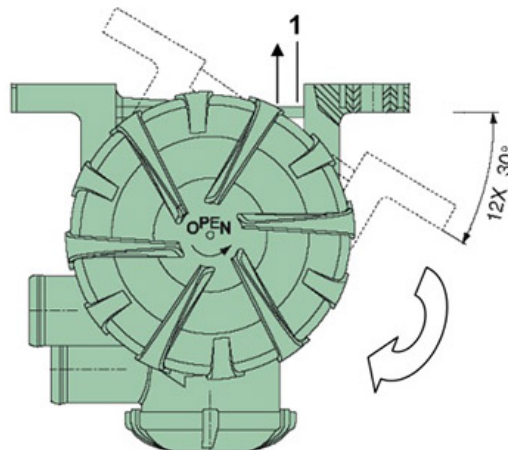


Fig. 5 Positions of outlet for ProVent 200

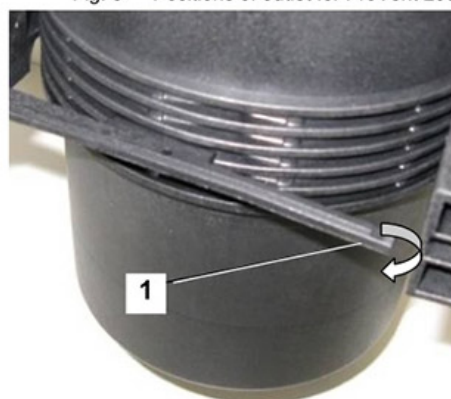


Fig. 6 Holder for ProVent 200