Mitsubishi Triton MQ / Pajero Sport
Direction-Plus™ COMBO KIT
Fuel Manager Pre-Filter & ProVent Kit Installation Guide

Fuel Manager Pre-Filter Installation Guide

This document is to be used as a guide for the installation of the **Direction-Plus™ Fuel Manager™ pre-filter Kit to a Mitsubishi Triton 4N15 (2015-2022) and Pajero Sport 4N15 (2015-2021)**. It is recommended that the installation of the product be carried out by a competent qualified mechanic.

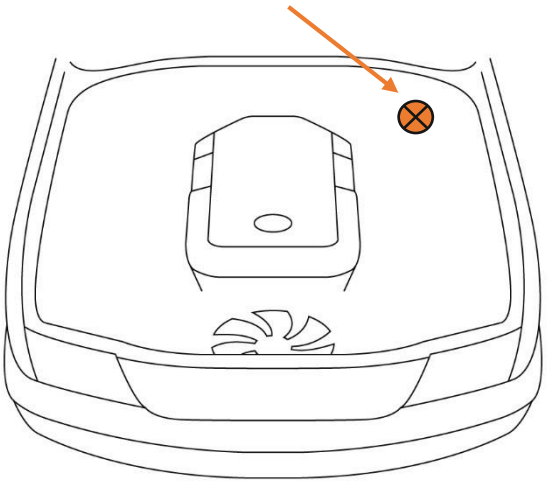
Important before starting

- Ensure the engine bay is clean and free from contaminates
- 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

Kit contents

2x 16MM STRAIGH ADAPTORS
2 BOLTS 2 NUTS 4 WASHERS
1x BOLT - 6X25MM
1x BRACKET - MQ TRITON
1x CABLE TIE 280 X 4.8 (UV)
1x DFL12 - FUEL LINE RUBBER (12MM)
2x 16MM PLUG
1x FM ENGINE BAY LABEL
1x FM100 30 MICRON FILTER ASSY
2x FMC12 - CLAMP 12MM
1x LOCTITE 567 THREAD SEALANT - 6ML
1x NUT - NYLOC 6MM
2x PUSH ON 90 DEG - 12MM
1x WINDSCREEN LABEL

Pre-filter mounting location

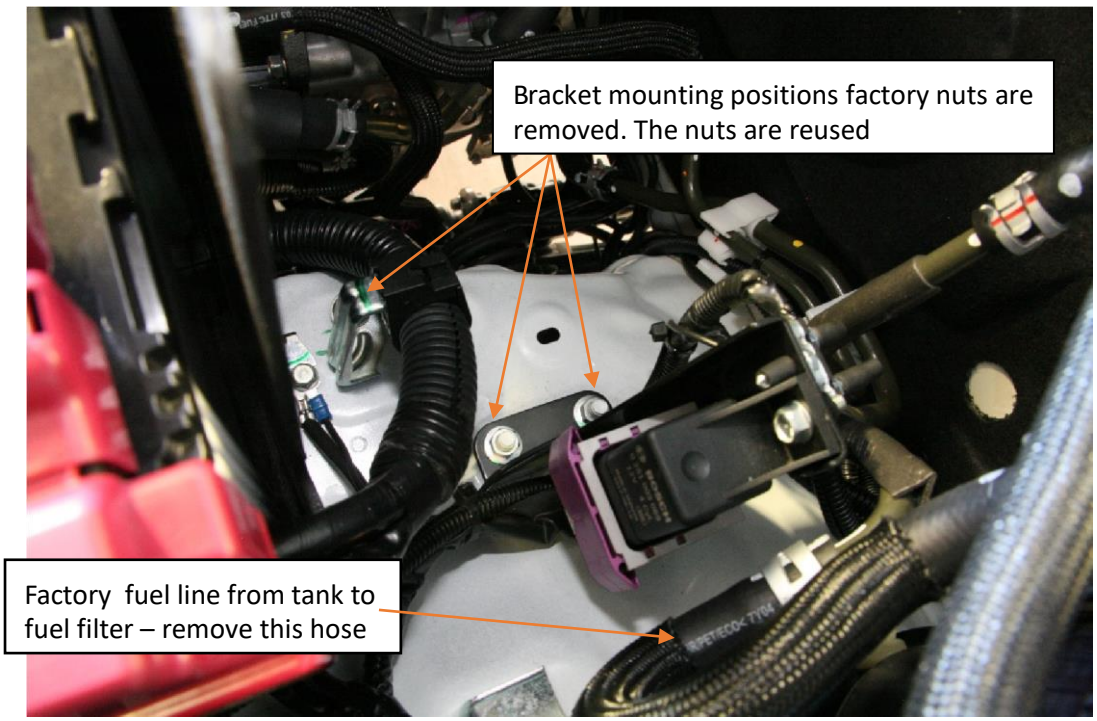


*Kit contents are subject to change based on component availability and/or refinement

Installation Guide

1. The Direction Plus Pre-Filter mounts on the passenger side of the engine bay.

2. Remove the two (2) nuts holding a relay and the one (1) bolt holding a bracket for a wiring harness. Lift the relay from/ off the studs and place Direction Plus bracket in position, refit the bolt holding the wiring harness bracket and tighten. Refit the relay onto the studs, refit and tighten nuts that hold relay in position.



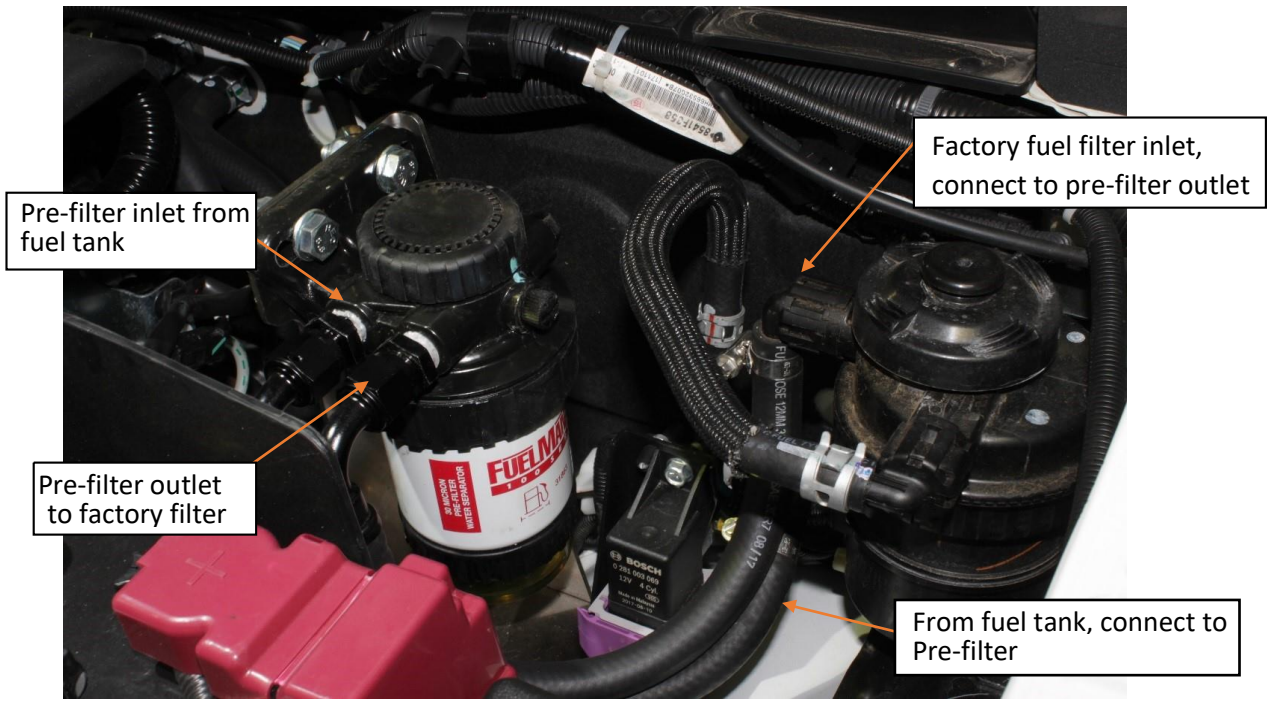
Pre-filter bracket mounting points, one point is located under the under the wiring harness

mounting bracket installed

3. Ensuring you have a push-lock barb fitting (supplied) on the INLET and OUTLET side, install the 16mm straight adaptors into the Direction Plus filter assembly using the supplied LOCTITE thread sealant.

image showing ports to have fittings installed ensure thread sealant is used

4. Mount the Pre-Filter and head (black) to the Direction Plus bracket using the supplied 10mm bolts, washers and nuts.



pre-filter assembly installed onto mounting bracket

5. Lubricate the barbed end of one (1) of the push-lock fittings and the inside portion of the hose to be fitted with a push-lock fitting with diesel fuel or WD40.

6. Disconnect the INLET hose from the factory fuel filter and fit this to the push-lock barb fitting on the OUTLET side of the Direction Plus Pre-Filter ensuring that the hose is firmly stopped against the inside of the bell cover.

7. Insert the barbed end of one (1) of the push-lock fittings into the pre-lubricated end of the hose. Fit this to the INLET side of the Direction Plus Pre-Filter ensuring that the hose is firmly stopped against the inside of the bell cover. Secure the other end of this fuel hose to the factory steel fuel line with the supplied hose clamp.

8. Apply a small amount of LOCTITE thread sealant (supplied) to the two (2) remaining black ¼ NPT plugs and install them in to the two (2) remaining ports on the Direction Plus pre-filter head/ assembly.

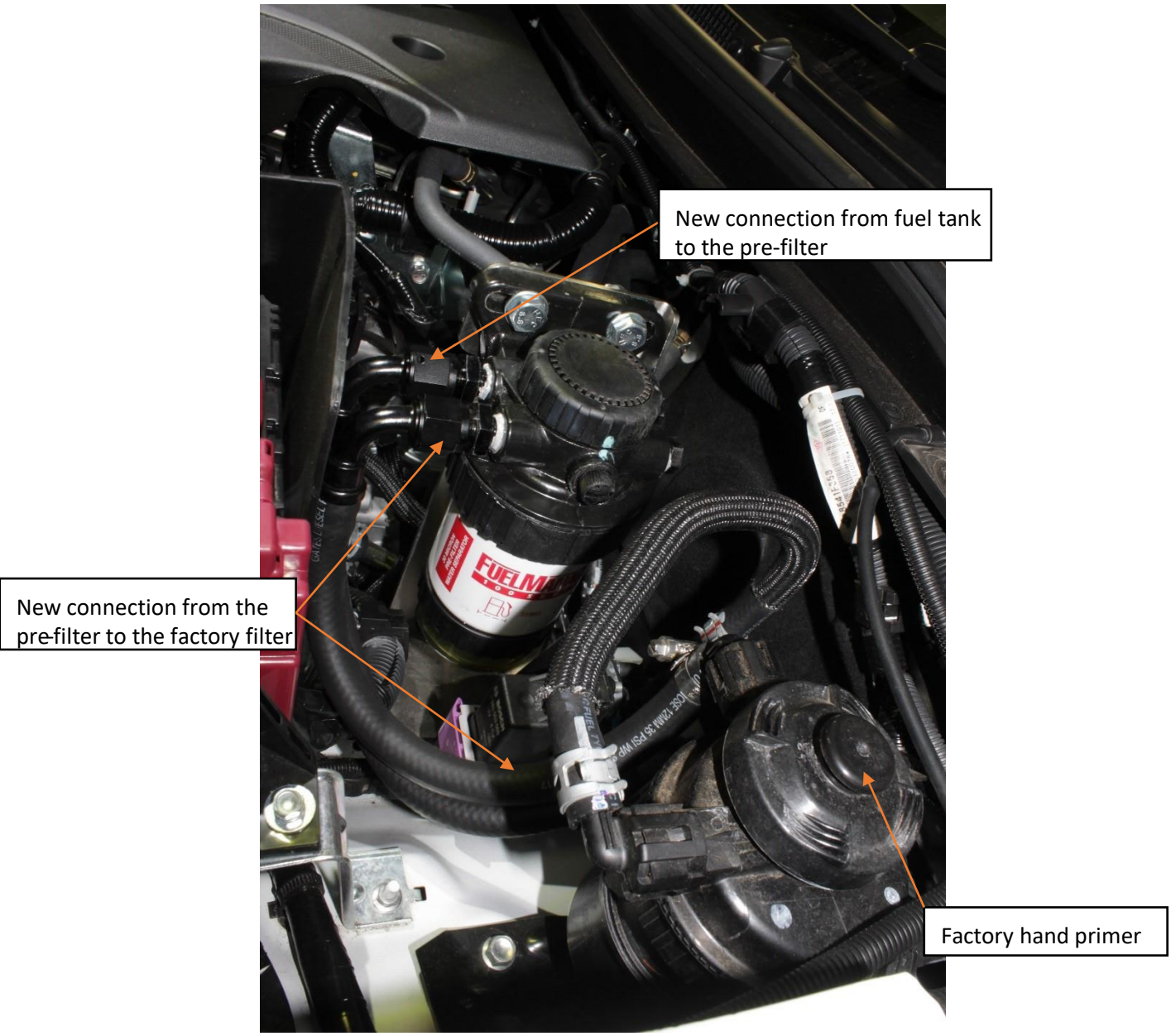


image showing pre-filter connection and hose routing

9. Ensure all fuel lines are suitably secured.
10. Using the supplied nylon cable ties, secure any loose hose to prevent it from rubbing against any other components.

11. Prime the fuel system by using the factory primer until it is firm, the engine is now ready to start.

12. Start and run the engine whilst checking ALL connections for leaks.

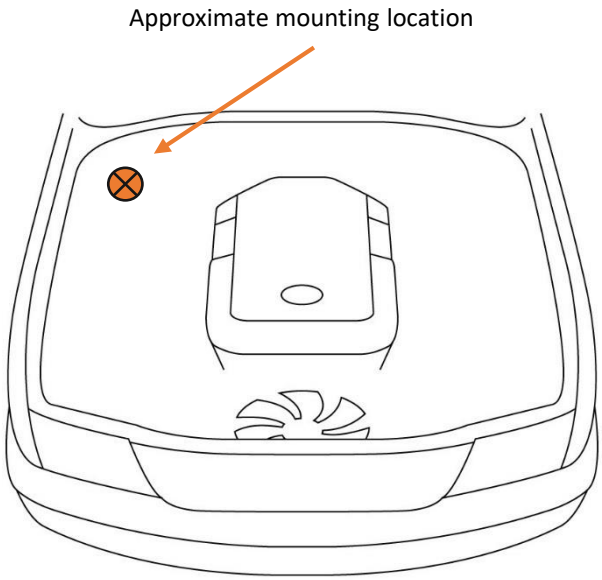
END OF GUIDE

Mitsubishi Triton MQ /Pajero Sport Direction-Plus™ ProVent® Ultimate Catch Can Installation Guide

This document is to be used as a guide for the installation of the **Direction-Plus™ ProVent® Ultimate Catch Can Kit to a Mitsubishi Triton 4N15 (2015-2022) and Pajero Sport 4N15 (2015-2021).** It is recommended that the installation of the product be carried out by a competent qualified mechanic.

Included in the kit

1 x Mann + Hummel ProVent® 200
1 x Mounting Bracket
1 x Mounting Spacer
1x 280mm of 19mm Hose
1x 160mm of 19mm Hose
1x 420mm of 19mm Hose
1x 65mm of 19mm Hose
4 x 19mm 90˚Joiners
10 x 19mm Spring Clamps
2 x 25mm Spring Clamps
2 x 19mm to 25mm Hose Coupler
8 x Cable Ties
1 x M8x16 Bolt
1 x M8 Flat Washer
1 x M8 Spring Washer
1 x M6 Nyloc Nut
1 x M6 Flat Washer
2 x M8x25 Bolts
2 x M8 Flat Washers
2 x M8 Spring Washers
1000mm of 12mm Hose
1x Drain Tap assembly
2 x Hose Clamps



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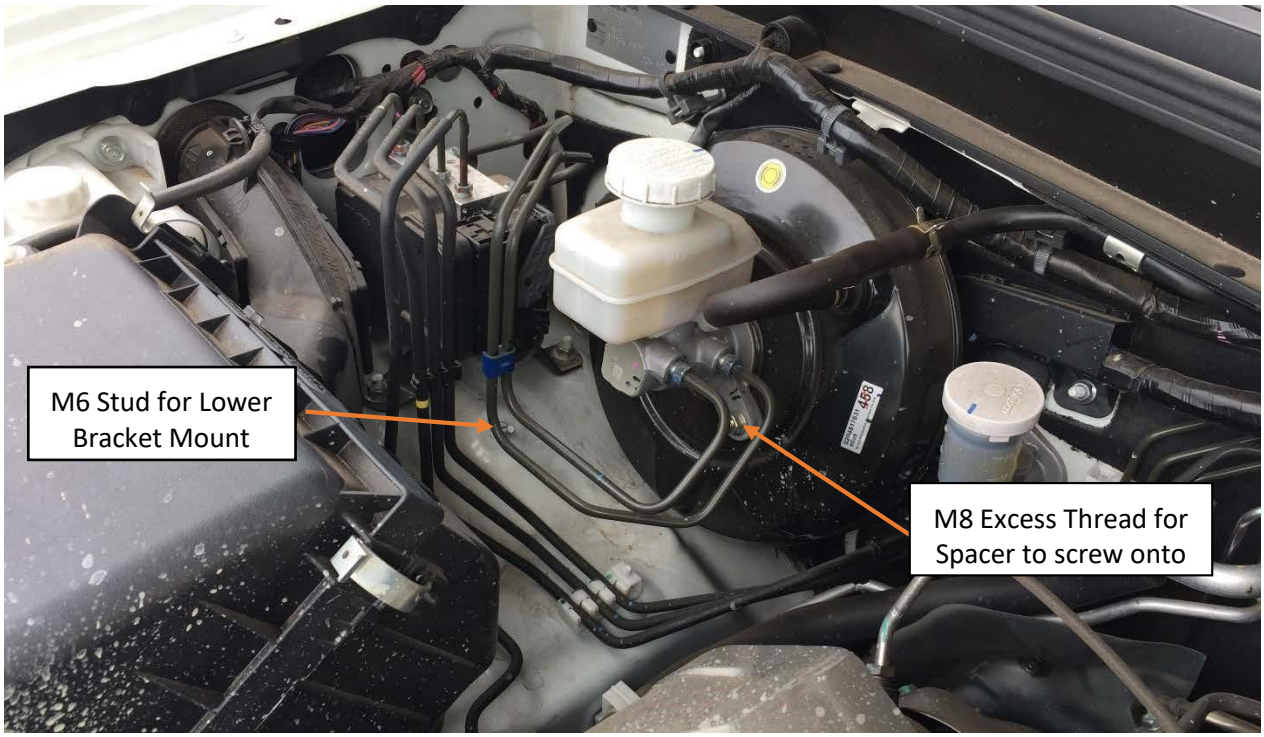
Installation Guide

1. Begin by removing the factory engine cover. It is held in place by four bolts. Locate the factory bypass hose which runs from the driver's side of the top of the engine to the air intake pipe before the turbocharger. The hose is only about 300mm in length and shaped like an "L". Once located, this hose needs to be removed from the vehicle.



MQ Triton Rear Driver's Corner of Engine Bay

2. Thread the M8 alloy spacer onto the exposed thread on the master cylinder mounting bolt. Just tighten snug by hand. Secure the mounting bracket to the M6 stud on the inner guard and the alloy spacer using the M6 flat washer and nyloc nut, as well as the M8x16 bolt, M8 flat washer and M8 spring washer.

MQ Triton: ProVent® 200 mounting bracket in place.

3. Connect the 12mm hose if the drain kit 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 clamp

4. Install the ProVent® 200 to the bracket using the supplied M8x25 bolts, flat washers and spring washers. Take care to feed the 12mm drain hose down the inner guard.

MQ Triton: ProVent® 200 bolted in place on mounting bracket.

Feed the 12mm drain 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 and secure with a hose clamp.

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

5. Use the supplied cable ties to secure the 12mm drain 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.

6. 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.

7. Place the 25-19mm reducing couplers into the 25mm ports on the ProVent® 200. Secure in place with the large supplied spring clamps.

8. Place a 19mm plastic elbow into each of the reducers, using one of the smaller spring clamps to secure in place.

9. Connect the 420mm long hose to the lower side port on the ProVent®, using a spring clamp to secure it in place. To the other end fit a 19mm elbow and clamp.

10. Connect the 65mm long hose to the vacant turbo inlet pipe (the factory location you removed the stock hose from). Use a spring clamp to secure in place. To the other end connect the elbow from the 420mm line from the previous step, secure in place with a spring clamp.

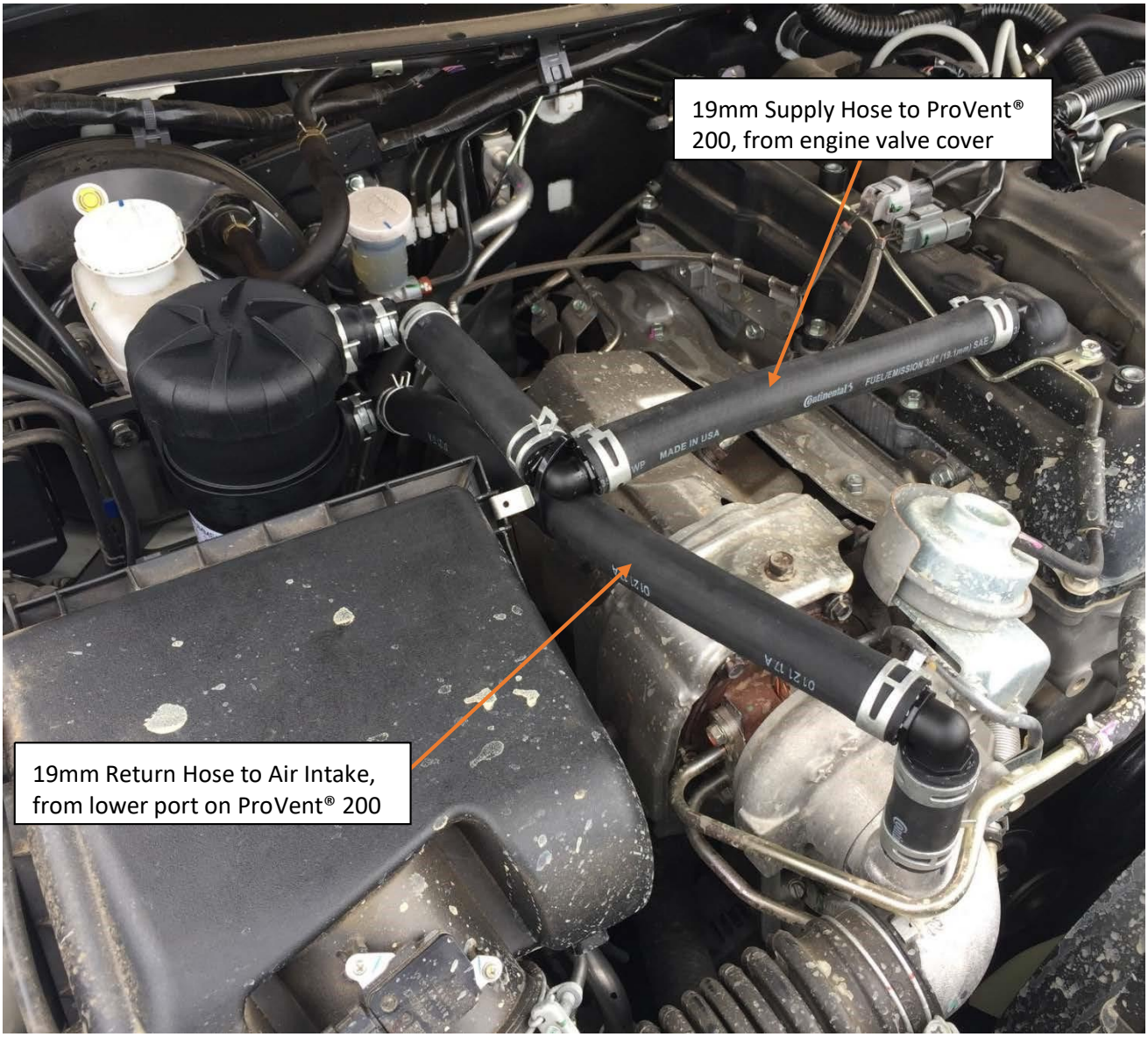
11. Mount one end of the 160mm to the Upper 16mm 90˚ joiner fitting on the ProVent® 200. Use a spring clamp to secure it in place. To the other end fit a 19mm elbow and clamp.

12. Connect the 280mm long hose to the vacant valve cover port (the factory location you removed the stock hose from). Use a spring clamp to secure in place. To the other end connect the elbow from the 160mm line from the previous step, secure in place with a spring clamp.

13. Use a cable tie to secure the two lines together to prevent anything from moving.

14. Reinstall the engine cover.

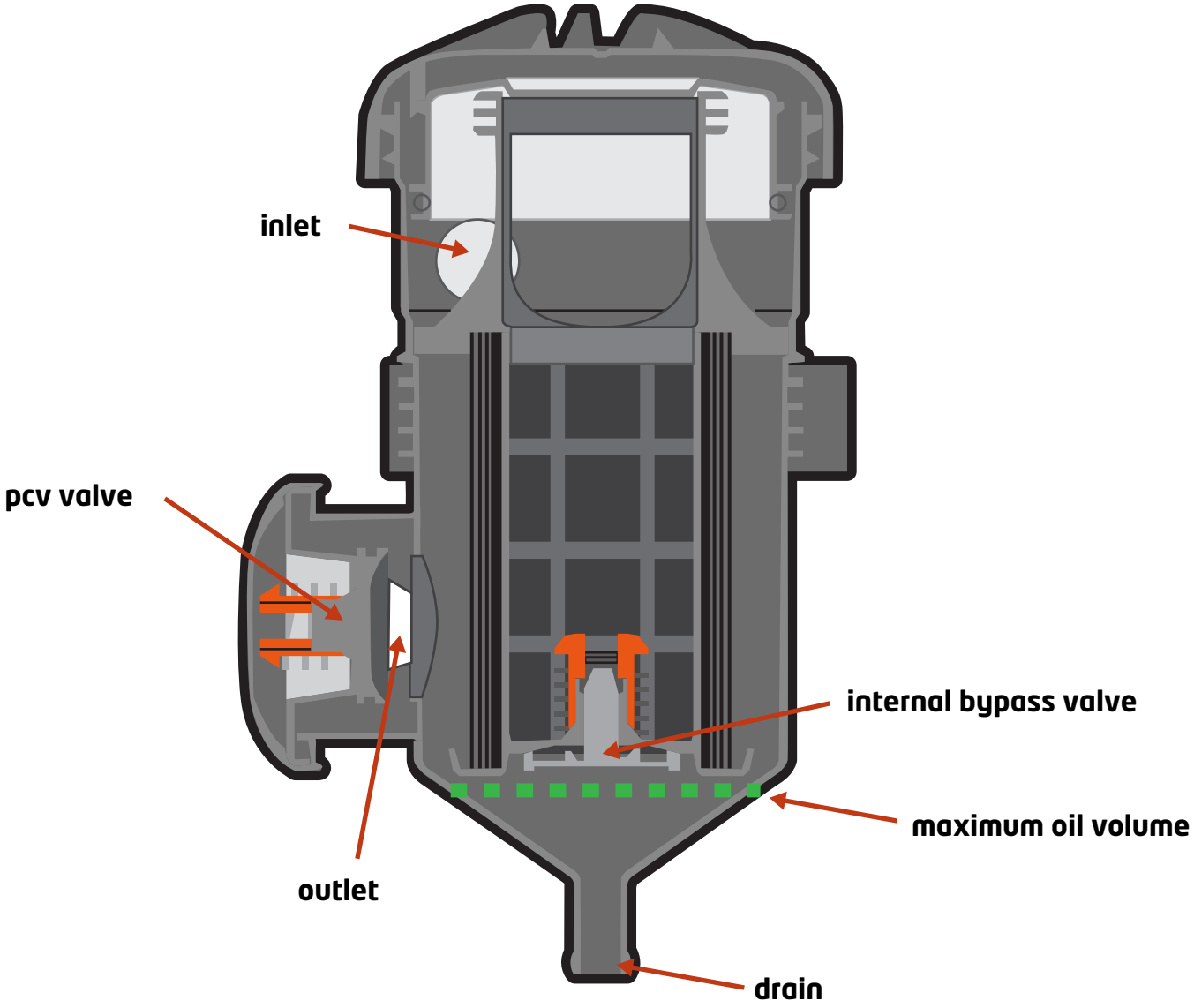
15. The ProVent® should be drained every 5000km. Filter elements should last an average of 40,000km



Engine bay hose locations for MQ Triton 2.4L 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).

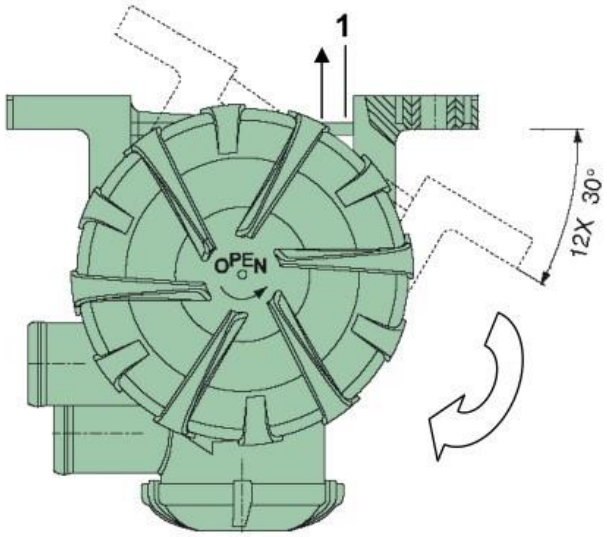


Fig. 5 Positions of outlet for ProVent 200

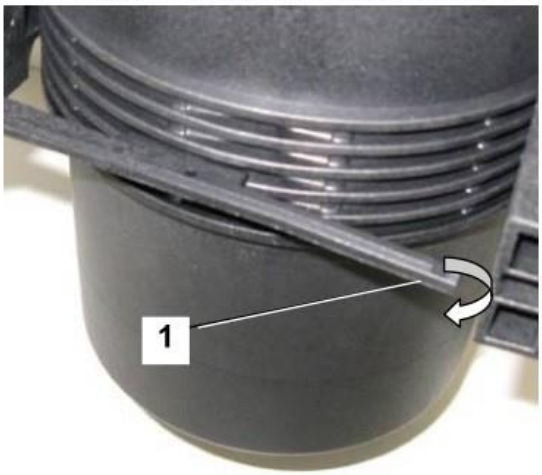


Fig. 6 Holder for ProVent 200