

# Volkswagen Amarok Direction-Plus<sup>™</sup> Pre-Filter Kit Installation Guide

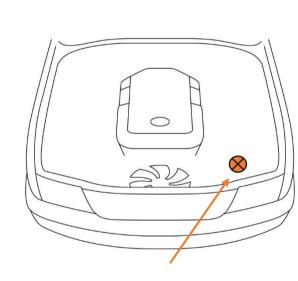
This document is to be used as a guide for the installation of the Direction-Plus<sup>™</sup> Fuel Manager<sup>™</sup> FM100 prefilter Kit to a Volkswagen Amarok. It is recommended that the installation of the product be carried out by a competent qualified mechanic.

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 tool to complete the fitment
- Read the instructions in full and familiarize yourself with the installation before commencing any work

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<u>Kit contents</u>
M8 1.25 X 40 Z PS SCR
WASHER 6MM X 25MM
1/4'' NPT STRAIGHT - 10MM 2 BOLTS 2 NUTS 4
WASHERS
6mm Spring Washer
8MM X 17MM ZINC
9.89 ELBOW 8MM BARB BOLT - 6X25MM ZINC
BRACKET - VW AMAROK
DFL10 - FUEL LINE RUBBER (10MM)
DP733-04 - 1/4 ''NPT PLUG
ELEMENT ASSEMBLY 30M - 3.6""
END 9.89 STR 10MM BARB
FM ENGINE BAY LABEL
FM100 30 MICRON FILTER ASSY
HAND PRIMER KIT
HOSE CLAMP - 10MM
LOCTITE 567 THREAD SEALANT - 6ML
NUT - NYLOC 6MM
NYLOC NUT M8
PUSH ON STRAIGHT - 10MM
WASHER - 6MM
WINDSCREEN LABEL



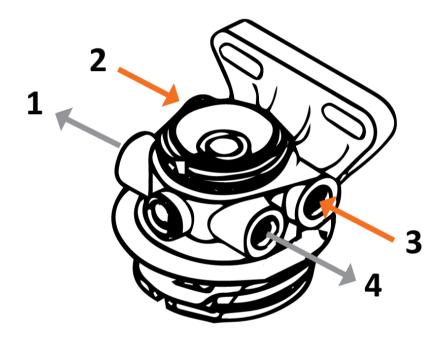
Pre-filter mounting location

\*Kit contents are subject to change based on

component availability and/or refinement



# Fuel Manager Pre-Filter Normal Flow Header Connection



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

FM603DPK



#### <u>Note</u>

The Amarok fuel supply system cannot be primed or bled in the usual manner, VW dealers use a scan tool to activate the tank mounted electric supply pump when changing a filter. Included with the kit for the Amarok is a hand primer kit, that will allow to prime the fuel system without the factory scan tool.

## Installation Guide

- 1. The pre-filter assembly will be installed in the area behind the headlight on the passenger side of the vehicle
- 2. Temporarily position the mounting bracket in place so you can see where it fits and to locate the points that will be used to secure the bracket in location
- 3. The Bracket is secured in place by 3 bolts; two 6mm bolts on the forward side, occupied by plastic wiring harness clips and one bolt on the rear side through the inner guard.
- 4. When installing the bracket **do not** tighten the fasteners until all have been loosely installed first
- 5. Once you have identified the mounting points, remove the mounting bracket.
- 6. Using side cutters or other appropriate tool, remove the tips from the two plastic wiring harness clips.
- 7. Push the harness clips from their locating holes, these holes will be used to secure the mounting bracket
- 8. Refit the mounting bracket back into the vehicle
- 9. Using two of each of the supplied 6mm bolts, nyloc nuts and 4 flat washers. Secure the front two points of the mounting bracket to the vehicle, placing the bolts through the bracket and the holes previously used by the plastic harness clips.
- 10. The rear mounting point can be either a 6mm captivated nut or a hexagonal hole, roughly 8mm in diameter.
- 11. Once determining the type of rear mounting point, secure the rear mounting point of the bracket. Either using the supplied 6mm bolt, 6mm spring washer and 6mm x 25mm flat washer or with the supplied 8mm bolt, 8mm flat washers and 8mm nyloc nut.
- 12. Once the bracket is in place and all fasteners have been fitted, firmly tight all three mounting points
- 13. Using the two, supplied harness retention cable ties, re-secure the wiring harness to the backside of the bracket to the holes provided in the bracket
- 14. Fit the 29578, hand primer kit to the pre-filter assembly, buy unscrewing the cap ring located on top of the filter head and remove the plastic center cap. (save this cap in event if the hand primer is ever removed)
- 15. Remove and retain the O-ring with the previously removed center cap



- 16. Remove the white large volume plug, located in the upper cavity directly under the center cap.
- 17. Apply a thin film of oil O-ring on the black valve plate assembly
- 18. Insert the valve plate into the upper cavity O-ring end first, the orange/brown valve should be facing down. Make certain that the extended center rubber valve is piloted through the center hole of the filter head and pushed firmly into place.
- 19. Install the coil spring into the top of the valve plate and place the flat plastic spring cap on top of the spring.
- 20. Place the hand primer button assembly over the spring cap.
- 21. Install the previously removed cap ring the hand primer button assembly. With one hand placed on the plunger, depress the hand primer button assembly down until the diaphragm is seated firmly on the filter head. With the other hand screw the cap ring down, tighten hand tight.
- 22. Temporally position the pre-filter assembly on the mounting bracket as if it were installed to the mounting bracket
- 23. On the pre-filter housing, identify the two ports that are facing the front of the vehicle. Mark those positions with a permanent marker if necessary.
- 24. Remove the pre-filter assembly from the vehicle. Using a small amount of Loctite thread sealant, install the two ¼ NPT blanking plugs into the previously identified ports that face towards the front of the vehicle.
- 25. The ports located on the opposite side from where the ¼ NPT blanking plugs were installed, using a small amount of the Loctite thread sealant, install the ¼ NPT male adapters.
- 26. Take note of the inlet and out let ports, as indicated by the arrows molded into the housing above each port.
- 27. Mount the pre-filter assembly to the mounting bracket already fitted to the vehicle using the two supplied 10mm bolts, nyloc nuts and flat washers. Ensure the pre-filter assembly is firmly secured in place
- 28. Measure and cut the supplied 10mm fuel hose into two lengths. One length will be 2 meters and the 1.6 meters in length
- 29. Using the 1.6-meter length of 10mm fuel hose Lubricate the inside portion of one end using diesel fuel or WD40
- 30. Using one of the 10mm straight push-lock fittings, lubricate the barbed end with diesel fuel or WD40
- 31. Insert the barbed end of the pre-lubricated push-lock fitting into the pre-lubricated end of the 1.6-meter hose, ensuring that the hose stops firmly against the inside of the bell cover.
- 32. With the other end of the 1.6-meter length of hose insert the supplied female quick disconnect fitting and secure with a supplied 10mm hose clamp
- 33. Connect the straight 10mm push-lock fitting to the inlet port of the pre-filter assembly.



- 34. Using the 2-meter length of 10mm fuel hose Lubricate the inside portion of one end using diesel fuel or WD40
- 35. Using the last 10mm straight push-lock fittings, lubricate the barbed end with diesel fuel or WD40.
- 36. Insert the barbed end of the pre-lubricated push-lock fitting into the pre-lubricated end of the 1.6-meter hose, ensuring that the hose stops firmly against the inside of the bell cover.
- 37. With the other end of the 2-meter length of hose insert the supplied male quick disconnect fitting and secure with a supplied 10mm hose clamp.
- 38. With the assembled hose, screw the 90° push-lock fitting on to the inlet of the pre-filter as indicated with the directional arrows located on the top of the ports.
- 39. Connect the straight 10mm push-lock fitting to the outlet port of the pre-filter assembly.
- 40. Run both lengths of the fuel hose along the chassis and underneath towards the factory fuel filter that is located on the passenger side of the vehicle, under the front passenger foot well.
- 41. Located near the factory filter on the passenger side, under the front passenger foot well, locate the connection in the fuel line that comes from the fuel tank. This will be the one that is towards the outside of the vehicle closest to the chassis.
- 42. Disconnect the flexible line from the hard line and then connect the fuel hoses coming from the pre-filter.
- 43. The nylon female quick disconnect fitting will connect to the male end of the hard fuel line.
- 44. The nylon male quick disconnect fitting will connect to the female fitting on the flexible fuel line
- 45. Ensure that your connections are correct regarding to direction of flow.
- 46. Using the supplied nylon cable ties secure the 10mm fuel hose as to prevent kinking and/or abrasion.
- 47. Prime the fuel system by using the hand primer on top of the pre-filter assembly, pump the primer button until hard.
- 48. Start the engine, it should take approximately 5 seconds for the engine to start and run
- 49. Allow the engine to run for 2-3 minutes, whilst checking all connections for possible fuel leaks

### END OF INSTRUCTION