

Hilux Mk6-Mk7-Mk8 Diff Breather Extension Kit

PACKAGE CONTENTS

- 1X 10m length of 8mmOD Nylon Tubing
- 1X Pneumatic Stud Coupling, 1/8"BSPT (Taper) -8 mm Push Fit
- 1X Pneumatic Stud Coupling, 1/8"BSPP (Parallel) - 8mm Push Fit
- 1X Stainless Steel Socket, 1/8"BSPP
- 1X Brass & Bronze Cone Silencer, 1/8"BSPP
- 5x Pneumatic Tee, 8mm Push Fit
- 3x 5mm-8mm Nylon Hose Joiner
- 4x Jubilee Clip
- 3x 5cm length 5/16"(8mm)ID Clear Hose

OPERATING LIMITS

The kit will prevent water ingress providing it has been installed correctly, and that the silencer is located in a place where water cannot get into it.

WHY EXTEND THE DIFF BREATHERS?

By removing the original breather valves you are protecting the differentials from water entering through the oil seals in the ends of the axle, from faulty breather valves, or from unvalved breather caps, of which there are up to 3 on the Hilux. On older vehicles, even if the original valve is clean and working, the oil seals in the ends of the axles may have worn and when the diff cools through submersion, the original valve would close, preventing air/water ingress, but the vacuum created by the rapid reduction in temperature inside the diff could draw water in through the oil seals.

FITTING INSTRUCTIONS

Fitting of the kit is a straightforward job, and does not require the use of 'special' tools. All you need is a spanner of 13mm, Blade / Pipe Cutter, Some Cable Ties, and patience.

Rear Diff Breather Tube (1)

1 Run a 6m length of nylon tube from the rear axle to a very high point in the engine bay, leaving 0.5m free at each end, cable tie the tube along the bottom of the vehicle to secure it, try and route it where there are other hoses to protect it. Take care to stop dirt entering the cut ends of the tube, perhaps wrap tape around them before you route it.

2 Clean the area around the axle breather valve with a wire brush or similar to remove any dirt that might otherwise get into the diff when the breather is removed, the valve is a small capped stud located on the NS of the vehicle on the rear axle.

3 Using a spanner, undo the breather valve.

4 Clean the area around the thread, being careful not to push any dirt into the diff.

5 Take the BSPT (Taper) stud coupling, this is identified by its longer thread and lack of o-ring. Put a spot of studlock on the thread, screw the stud coupling into the axle carefully, ensure you do not apply so much force as to shear it off.

6 Plug the nylon tube into the stud, make sure the tube goes in fully, pull on the tube to make sure it is gripped in properly.

Below; Completed Rear Diff Breather Tube (1)



Front Diff Breather Tubes (2)

7 The front diff breather tubes can be found under the fuel filter, these appear as 2 hoses, held in clips, and pointing upwards, each with a similar looking valve to that on the rear axle, pushed into the ends of the hoses.

8 Pull out the 2 front diff breather valves.

9 Into the 5mmID rubber hose insert a hose joiner.

10 Onto the other end of the hose joiner push a 5cm 8mmID clear hose.

11 Take 1m of nylon tube, and push this into the 5cm 8mmID clear hose, lightly tighten a jubilee clip around this joint until it will not pull out.

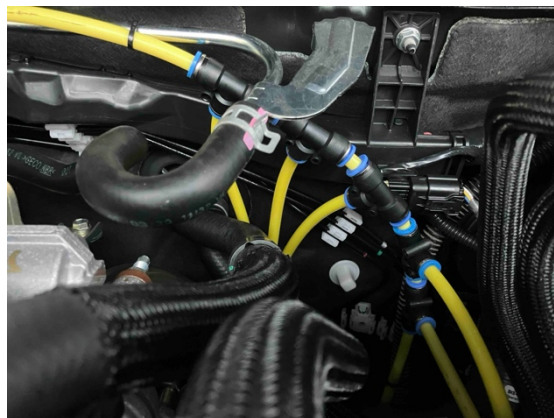
12 Into the 8mmID rubber hose, directly insert a nylon tube, it should be a tight fit, if it is not, tighten a jubilee clip around this joint.

13 Cut into the nylon tube coming from the rear diff, and use the 2x 8mm Tees to connect the 2 protruding nylon tubes into this line.

Below; Completed Front Diff Breather Tubes (2)



Below; Completed Tee Junctions (5, Mk8 Auto)

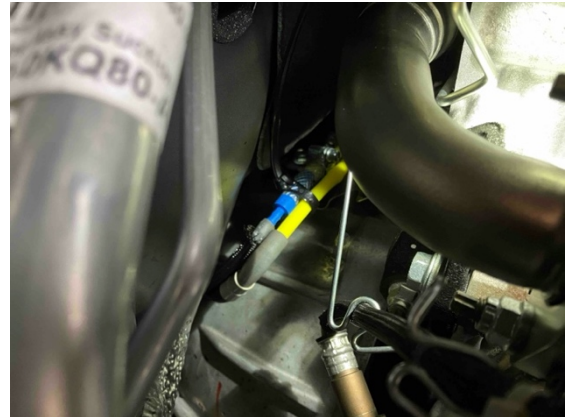
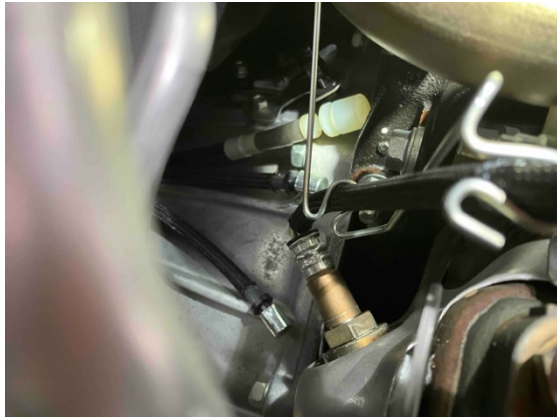


Gearbox Breather Tubes (number varies, e.g. 1 on Manual MK7, 3 on Auto Mk8)

14 MANUAL: Repeat process 8-11 with the Gearbox breather tube which can be found held in a clip on the bulkhead behind the head (very difficult to access). Use another 8mm Tee to connect into the line from the rear diff.

14 AUTO: There are 2x 5mm hoses and 1x 8mm hose. Repeat process 8-13 with the Gearbox breather tubes which can be found held in a clip just above the gearbox, behind the DPF (very difficult to access). Use 3x 8mm Tee to connect into the line from the rear diff.

Below; Before, and Completed Gearbox Breather Tubes (3, Mk8 Auto)



15 In the engine bay, make a final cut to length for the silencer, push the BSPP (Parallel) Pneumatic Stud Coupling on to the nylon tube, pull on the tube to make sure it is gripped in properly, screw on the Stainless Steel Socket, and finally the silencer with a spot of studlock.

Below; Completed Silencer

