

# Oilybits

## Diff Breather Extension Kit

### Fitting Instructions

#### PACKAGE CONTENTS

- 1X 8 Metre length of 8mmOD, 6mmID Nylon Tubing
- 2X Pneumatic Stud Coupling, 1/8" BSPM-8mm Push Fit
- 1X Brass & Bronze Cone Silencer, 1/8" BSPF
- 3x Pneumatic Tee, 8mm
- 2x 5mm-8mm Hose Connector
- 3x Jubilee Clip
- 3x5cm 8mmID Hose

#### FITTING INSTRUCTIONS

Fitting of the Oilybits Diff Breather Extension kit is a simple job which should take no more than 30 minutes, and does not require the use of 'special' tools. All you need is a spanner of 13mm, and, if you have a snorkel fitted and wish to locate the breather in the air box for maximum protection, then you will need a drill bit of 10mm.

- 1 Run a 6m length of yellow tube from the rear diff to the air filter box, 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.
- 2 Clean the area around the diff breather cap 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 diff
- 3 Using a spanner, undo the diff breather valve, keep it in case of future requirement
- 4 Wipe the landing area around the stud thread clean, being careful not to push any dust/dirt into the diff
- 5 Screw into the thread one of the Pneumatic Stud Couplings, tighten with spanner
- 6 Plug the yellow tube into the stud, make sure the tube goes in fully, pull on the tube to make sure it is gripped in properly
- 7 In the engine bay, push the second Pneumatic Stud Coupling on to the Yellow tube, pull on the tube to make sure it is gripped in properly
- 8 If you do not wade with a snorkel then the Bronze Silencer can be screwed directly onto the end of the Pneumatic Stud Coupling, and secured high in the engine bay (ideally higher than the air box) with a cable tie, alternatively, if you wade or have a snorkel fitted and wish to raise the breather height to that of the snorkel, then drill a 10mm hole through the side of the air box (about 4" up from the bottom of the box to avoid water ingress), push the thread of the stud through the hole and screw the silencer on the inside, tighten with the spanner.
- 9 The front diff breather tubes can be found under the fuel filter, these appear as 2 hoses, each with a similar valve to that on the rear diff, pushed into the ends of the hoses.
- 10 Pull out, or cut off the 2 front diff breather valves.
- 11 Into the narrower of the 2 hoses, insert the hose connector.
- 12 Onto the other end of the hose connector push the 10cm hose.
- 13 Take 1m of nylon tube, and push this into the 10cm hose, use a jubilee clip around this joint.
- 14 Onto the wider of the 2 hoses, directly insert 1m of nylon tube, use a jubilee clip around this joint.
- 15 Finally, near to the front diff breathers, cut into the nylon tube coming from the rear diff, and use the 2x 8mm Tees to connect the 2 front diff breather nylon tubes into this main line.
- 16 Repeat process with the Gearbox breather tube which can be found held in a clip on the bulkhead behind the head.

#### OPERATING LIMITS

The Oilybits Diff Breather Extension operating limits are based on Temperature, and wading depth. The components of the kit itself are operational from -40 to +108 Celcius, and the kit will prevent water ingress providing the silencer is located in a place where water cannot get into it, and the Yellow tube has been pushed fully into the Pneumatic Stud Couplings.

#### 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, or through a faulty valve. On older vehicles, even if the valve is working, the oil seals in 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 could draw water in through the oil seals.