

Richard Noble:

Engine Breather Modification

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ny Citroën Dyane motor, when losing the single carburettor to twin Bings, space is left to play with the engine breather. I decided to turn it about its flange and tilt it slightly backwards to miss the Lambda bonnet. I discussed the options with a local welder, including possible damage to internal components by overheating, i.e. welding/brazing. Nothing ventured, I cut the stalk of the unit with a junior hacksaw, almost halfway. At this point, the large breather pipe and drip return pipe are on the left hand side when facing the cut. I opened the 'wound' up by about 10mm, to just tilt the breather unit backwards - not too much as oil filling becomes a hassle. I bent a small 'plaster' of sheet metal in an olive type shape and curved to cover the 'wound'. This was then TIG-welded onto the stem, using a water trap for coolness - total cost, £5. Cleaned up and a coat of the ubiquitous Hammerite, its surgery all healed up. The benefit - a normal functioning, full sized engine breather. Hydraulic (high temperature) tubing feeds the drip pipe as it is now on the opposing side to the dip-stick. The breather pipe is something else.....

Using a short length (45mm) of the existing Citroën rubber tube from the breather unit, this fits snugly over a 20mm int. copper elbow (plumbing fitting) to give a neat tight bend. A few inches of 20mm copper tube soldered on the other end gives a tight (warmed up) fit for 20mm int. clear plastic tubing. (This should only contain hot gasses and not oil, so plastic seems to work satisfactorily and you can see what is going on). In an effort to retain a negative pressure in the crankcase, I have made a non-return valve which fits on to the end of the clear pipe. Again, this is a 20mm straight copper coupling with a 'U'-shaped metal casing brazed on to it. A small metal flap is hinged to this and held on light pressure with a Biro spring. On manometer checking, I have considerable negative pressure and a bonus. To date, no oil leaks! What a tale to tell if you unfortunately break down. "The Biro spring's given up!" Or when people ask, "Is that slight ticking noise coming from the tappets?", you can either explain, "It's the clock", or affectionately, "It's the old girl's heartbeat."

There have been a number of articles on dealing with a 'non-functioning' breather. This has been of interest because both my 2CV and my Lambda 3 have no crank case vacuum and seep oil enough to leave an annoying drip or two on the drive. Having dismantled one off a fairly late engine to find the top flat rubber valve broken and brittle, I began some sideways thinking in an effort to save time and trouble.

I went to the local breakers and wandered around looking for a simple one way breather valve often fitted on the rocker box outlet of the breathing system of modern cars. The answer appeared in the form of a Maestro in which the plastic tube to the brake servo contained two such valves. the diameter was such that the valve pushed tightly into the outlet from the breather with enough plastic tube to route somewhere, preferably to the air cleaner.

On starting the engine I had negative crankcase pressure and now several hundred miles later I have no oil leaks on my Lambda or my 2CV, all for a couple of pounds.

Yours sincerely

Bernard Stripp

(This is a very good idea, you have obviously used it as well as the existing breather, I wonder if it would work on its own? Perhaps someone could modify the breather to just a oil filler and have this tube with non-return valves attached to it? ed.).