

## Fitting an oil cooler to a Roadster 2000

Over the past 3 years I have been clocking up quite a mileage with TMX and one noticeable possible problem was the oil pressure when "hot". Cold start 2000rpm 60psi and idle (600rpm) 40psi.

However, whether it is wear or the new oils I have no idea, using 20-50 UK oil gave 10psi higher than using 20-50 Spanish oil. Cruising the French motorways at a steady 50mph gave 45-50psi, it was only when I had town travel that the pressure noticeably dropped to 10-15psi at lights and stop signs. So, since no nasty noises came from the engine, and there were little or no specks of white metal in the filter at oil changes, I decided to seek the aid of Peter Mayes who had fitted an oil cooler. His description is published in the February Review 2008. I was also lucky to be parked next to him at the Annual Rally in Woburn, so was able to take photos and pick his brains.



I was informed that the piece that fits the block and holds the filter and housing was referred to and is called in TR language the "assembly". Whether correct or not this is to what "assembly" refers.

← Assembly

The first hurdle to overcome was my engine was fitted with a "reduced flow" or "bypass filter" assembly and I to source a "full flow", which I did through the TR Club website finding one from Revington TR in Hants. This arrived in a abysmal condition, assembly, filter housing including a filter (used) seized and fractured at the base by frost, old oil, and with some unknown weed attached, all for the princely sum of £60.00. After cleaning up and hack-sawing the base nut off to release the housing and old filter from the assembly, the centre rod came undone with ease. I then as thoroughly as possible cleaned the assembly and took about 30 minutes removing 2 not one, rubber seals.

Now to check I had the right bit. Photos via email to Peter and to Derek of Flexolite, the returned opinions were "yes".



But, the TR assembly has a small recess next to one of the securing holes, this needs to be welded up otherwise oil leaks out of the bolthole, I had the assembly dipped in a cleaning tank for 24 hours and the recess welded for the tidy sum of £10.00

I bought the whole "kit" from Flexolite (Derek) for £190.00 with 2.6m of hose to allow more options for fitting, also to see if I could find an alternate effective space to fit the radiator rather than under the left side front wing. The full kit below without the brackets.



As it turned out I opted for the wing fitting, but ran the hose further aft behind the jack's position, for 2 reasons, the fuel line and pump would have been in the way of the hoses and I could see no way of easily cutting through the bulkhead taking Peter's route. It was moderately simple to drill aft of the jacks position an



oval of small holes and remove the centerpiece and file smooth. To stop "chaffing" I used a piece "foot pump" rubber air hose, for length measured the circumference, cut one side of the hose open, heated then slotted like a grommet inside the cut hole and superglued the ends together.



The fitting of the radiator to the top of the wheel arch was with 2 off the shelf, right angled metal brackets. This was fitted first without hoses attached, (I removed the front wheel for easier access to drill the holes on top of the mud flap), this was the only time anything was undone/removed to facilitate the fitting, all the rest was fitted while in situ. I removed and securely attached the hoses before refitting. (Note: I have not covered the radiator with gauze as I consider stone damage that high up will be incidental, however, time will tell and I can see a very

simple solution, if necessary, in the future, to fit a cover without much ado.



With the radiator in place, the hoses "poking" through the bulkhead I set about replacing the assembly unit, this turned out to be very straightforward. The old

one off, new one on. Then, fitting to the assembly the conversion unit from “paper” to “screw-on” filter, then, the thermostatic controlled hose lead off unit, then, the screw-on filter. I then attached the hoses.



Job done, now the test!

Started engine till oil pressure up, shut down and topped up sump ( a pint approx). No leakage found on new assembly, filter etc. Restarted engine and let run at fast idle noting new pressure now 70psi, decided this was too high and adjusted half a turn backwards reducing down to 60psi, as that is what the engine has always been run at since I can remember, and that is 41 years this month! After about 30 minutes with engine fully heated, and idle now at 30psi, took off for a road test. On the road at 50 mph pressure remained a steady 60psi and idling when stopped 30psi.

I have since tested the system over 60 miles and found the oil pressure was nearer 70psi, so have adjusted another half turn to just under 60psi, I do not want to blow any seals, and idle still at 30psi.

I took as many photos as possible to help anyone contemplating the same modification in the future, however, all are not shown with this article.

Sunday 25<sup>th</sup> January with the CCCM (Classic Car Club Mallorca - <http://www.ccc-Mallorca.com>) I did the Almond Blossom Run, some 125 miles from home and back, including over the mountain trip from Palma to Calvia (for those that know the Island). Oil pressure running a steady 60ps, idle 30psi. Even with 2nd gear hairpin bend negotiation, pressure remained the same. Also learnt of a spares site <http://www.angloparts.com> and they called the part a Filter Head.