

From Revd. Peter Low:

Auxiliary Oil Cooler Controlled By Thermostat

This is a modification that originally came to mind after my 223, fitted with twin Bing carbs., showed a tendency to run badly when overheated in heavy traffic. At the time, I was planning to take the car to Portugal where one could only expect the problems to be greater.

I fitted the extra cooler under the gearbox and a little to one side. It was attached to the cross-member of the Lomax chassis. This required a fair length of hose (Aeroquip high pressure), but placed the cooler well into the air flow and meant that the thermostat could be fitted wherever there was space. The thermostat was made by Mocal with $\frac{1}{2}$ " push-on connections, and cost £12.50 from 'Hobbsport' at South Brent in Devon. It came complete with instructions for fitting. The system works as standard, passing oil only through the forward-mounted cooler until its temperature reaches 80° . The thermostat then allows the oil to flow through both coolers, one after the other.

To see what the effects were, it was essential to fit an oil temperature gauge. This was more expensive than I had anticipated, but was easy to fit with the sender mounted in a replacement drain plug obtained from 'Europa'. First fitted in chilly February, even in South Devon it took fifteen miles on the A38 for the gauge to show 30° . Sustained dual carriageway or motorway use at 70 or 80mph showed that the second cooler was being used. More gentle use on 'A' roads seldom brought the needle near 80° at all. The trip to Portugal occurred in June '95. Very different from England in February, but the system worked well. To be more accurate, it worked erratically! Some days we could pound along at 70mph in sweltering conditions, the needle would sit rock steady at 80° , and even big hills made little difference. At other times even level running, and big hills in particular, registered 90, 100 and even 110° ! Conclusion, the thermostat was not always bringing the second cooler into action.

As to whether the set-up helps in heavy traffic is, of course, debatable. Bad running in such circumstances is far more related to cylinder head and carb. temperatures than that of the oil in the sump. However, as the oil is said to be so important to the overall cooling of the engine, the set-up must help to some degree. As to the erratic reading, I shall have to try another thermostat and see what happens. But what is beyond doubt is that the wide range of temperatures recorded is evidence of what you can inflict on the oil, and consequently the engine, by using a Lomax hard, without a fan and with only one cooler.

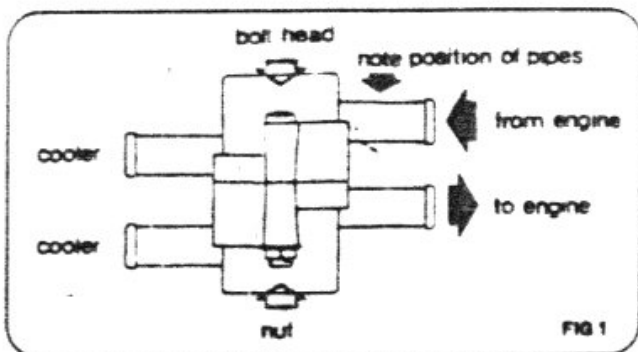
P.S. This modification relates in no small way to Peter Crawford's article on an oil-cooler based heater system.

*I have now fitted a replacement Thermostat
and the system now works with
no problem RL.*

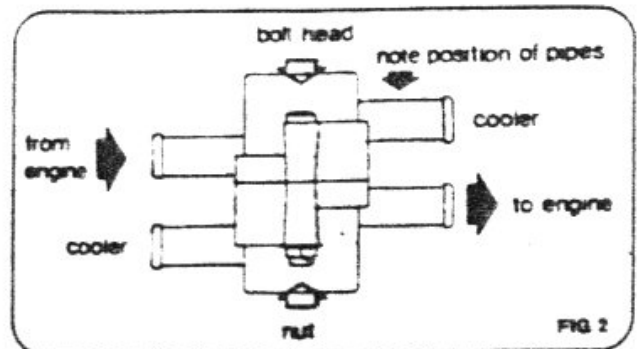
FITTING INSTRUCTIONS

It is recommended that the oil cooler kit be fitted before the oilstat is installed.

1. Select suitable place for fitting the oilstat away from moving parts and at a place where hoses run parallel.
2. Cut both oil cooler hoses with a sharp knife that has been wetted.
3. Turn engine over on starter, but prevent from firing, eg disconnect high tension lead, and note which pipe carries the oil supply from the engine.
4. Connect up hoses as shown on Fig. 1



On some cars, especially BMC front wheel drive vehicles, the hoses do not run parallel for sufficient length for the oilstat to be fitted. In these cases the oilstat may be fitted diagonally as in Fig. 2.



The oilstat is set to operate at 74°C and provides a positive stop to circulation below this temperature. The cooler will remain under pressure at all times when the engine is running. No adjustment of the oilstat is possible and it will give years of trouble free operation without service of any kind.