



Coolant bleed insert in the coolant hose

RV8 coolant bleed insert

Anyone who has done the job will know what a pain it is to refill the RV8 cooling system when changing the coolant or following work on the system. Here Stuart McGuigan describes a modification he has made which makes the job far easier.

With the original RV8 cooling system, filling has to be done very slowly and, in the final stages, you are as likely to fill the valley gasket as the cooling system, when trapped air coughs back through the filler pipe. No amount of squeezing of the top radiator hose will fully purge air locks from the system, and entrapped air will accumulate in the arch of the hose when the engine is running - leading to reduced coolant flow and possible engine overheating.

I have devised a solution in the form of a **coolant bleed insert** fitted in the top radiator hose. A prototype fitted to my car is shown alongside. My company has now made a small batch of the bleed inserts and these should be available shortly through Clive Wheatley at MG V8 Parts.

New coolant bleed procedure

The procedure to fit the bleed insert and fill the cooling system is as follows:

1. **Partially drain down the system** so that the top hose is emptied. Cut the top hose in the centre of the arched portion. Fit the bleed insert, secure with two 45mm hose clips (preferably stainless steel) and remove the bleed screw.

2. **Set the car heater control to 'hot'** in order to fill the heater matrix with coolant.
3. **Remove the coolant filler plug** located to the right (offside) of the inlet plenum chamber. You will probably already have replaced the original unreliable plastic filler plug with a metal brass one. If not, standard flanged brass plugs are readily and cheaply available from the MG V8 spares specialists, plumbers merchants or on eBay: the size is 1/2 BSP.
4. **Remove the expansion tank cap.**
5. **Fill with the correct type and strength of coolant** via the filler pipe until the correct level in the expansion tank is

reached. It is necessary to fill fairly slowly to avoid spillage from the filler pipe. A plastic funnel screwed into the pipe is helpful, as is wrapping a piece of absorbent rag or kitchen roll round the pipe to catch any spills. There should be minimal coughing back into the funnel when pouring the coolant in, and self-purging of entrapped air in the system via the bleed screw hole as the system fills up.

6. **Refit the expansion tank cap** when the level is correct and then continue to fill until coolant starts to issue from the bleed screw hole in the bleed insert. A rag placed under the insert will catch any small spillage.
7. **Refit the bleed screw**, with its sealing washer, and tighten. Continue to fill until the fluid reaches the top of the filler pipe.
8. **After a trial run** - and after allowing the system to cool, of course - depressurise the system by removing the expansion tank cap and top up the tank to the correct level, if necessary. Replace the expansion tank cap. Then remove the filler plug, check the coolant level in the filler pipe and purge any remaining entrapped air by simply 'cracking' the bleed screw. Top up the filler pipe after purging and replace the plug.
9. **You should also check the heater** is working on your trial run, which of course it should be, since the heater valve will still be open!
10. **Recheck for entrapped air** after a few more runs, as at point 8 above.

The above ten point procedure still appears fairly involved when written down step by step, but it is quick and easy to carry out in practice and - as Clive Wheatley says - it works a treat!



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