

Shrouded Fan for Plus 8 and Plus 4

By Win Muehling

When I purchased my 1986 Plus 8 a few years ago it was plagued with chronic overheating. I had the radiator checked and cleaned and replaced the unpressurised radiator cap with the correct pressurised one. The radiator no longer boiled over, but an overheating problem still persisted. Someone suggested I try "Water-wetter", but still only a minor improvement. I even installed an oil temperature gauge to verify that the water temperature readings were correct.

I talked to a Morgan shop and they recommended that I replace the original 6-bladed electric fan with an up-rated 8-bladed electric fan. Again, it helped a bit, but it didn't solve the problem. I did more research and it seemed that there were three options left: install an oil cooler, replace the original rad with a larger aluminium rad, or install a shrouded fan.

Custom aluminium radiators are expensive and fragile, so that would be my last choice. I liked the idea of a shrouded fan, which is much more efficient in moving air through a radiator rather than just stirring up the air. Unfortunately there is very little room behind the radiator and if a suitable fan had been available, the factory probably would have installed one. I discounted the option of installing a pusher fan in front of the rad since it obstructs the airflow at speed, and only helps at low speed. The easiest solution thus appeared to be installing an oil cooler, which was readily available from the U.K., complete with all fittings for the Plus 8.

The oil cooler kit arrived from the UK, but unfortunately the oil filter adapter didn't fit. "No problem", said the dealer, "we will send you the right one".

While I am waiting for the correct adapter to arrive, I happen to be in the local auto supply store, and quite by chance stumbled upon a sales promotion for shrouded after-market fans for Honda Civics. The fan on display immediately caught my eye since it was very thin (2 5/8") and appeared to be about the same size as a Plus 8 radiator. I took some measurements, went back home, and sure enough, not only was it thin enough to fit between the rad and the inner-wing brace, but it was the exact size of the finned area of the Plus 8 rad! To boot, it was actually cheaper than the up-rated fan I had purchased the year before from the Morgan Dealer. The only modification needed was a notch to be cut at the bottom of the shroud to accommodate the lower hose spigot. The fan and shroud are simply attached to the radiator by four nylon zip ties.

While I had the radiator out, I also had a new screw-type socket soldered on to take a standard threaded Japanese temperature switch rather than the archaic push-fit switch the rad came with. (One less source of leaks and a choice of on/off temperatures). I also used a Bosch relay to make life easier on the fan switch. A little extra work with the wiring but always a good investment.

I have had four summers with the shrouded fan and no more over heating problems. The oil cooler is still sitting on the shelf.

When I purchased my 1966 Plus 4, 4-seater a couple of years ago, it came with an oil cooler and a large ugly fan mounted in front of the radiator. Lots of oil all over the radiator from previous oil leaks in the oil cooler plumbing. The car wasn't overheating, but when the weather started cooling off, I couldn't get the engine to warm up since there was no thermostatic by-pass for the oil-cooler, plus a 160 degree thermostat. Possibly a great set-up for a hot summer, but not for fall or winter motoring. I didn't like the looks of the oil-cooler and fan in front of the radiator, plus by going to a more efficient fan, I figured the oil cooler would become unnecessary and one more possible source of oil leaks could be eliminated. If it worked on my Plus 8, why wouldn't it work on the Plus 4? Although the Plus 8 has a much thicker core, the finned area on the Plus 4 rad is the same as on the Plus 8.

I obtained another Honda Civic fan at my auto supply store (It seems that the FAL brand is now part of Flex-a-lite) and figured that this was going to be a piece of cake. At first glance there appeared to be plenty of room on the Plus 4, but in reality it was a tighter fit than on the Plus 8. The only way I could get the fan and radiator back in was to lower the radiator and move it forward by

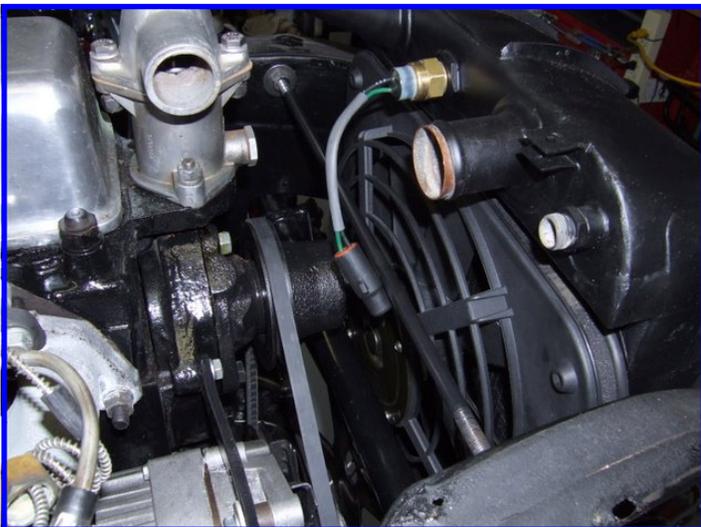
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about an inch. (Without lowering it, the radiator would no longer clear the cowl). Couldn't move it too far forward as otherwise the filler extension would be inaccessible. (Since I had to remove the radiator recently to do some bodywork, I actually did move the filler extension to make it more accessible). I tried several home-made bracket ideas, but finally settled on a very simple bracket extension that utilised the original radiator mounting brackets (see photo). Since the rad was moved forward, the two rods steadying the radiator also needed to be replaced with longer ones.

I should add that the Plus 4 rad came with a temperature sensor, but no built-in on/off switch. A temperature sensor probe was tucked into the hose, which actuated a separate on/off switch. While I had the rad out I had a screw type socket soldered into the header tank to take the same type of switch I had fitted to my Plus 8. I could have omitted this modification since the Honda fan also came with a temperature probe and switch that could have been attached to the core. I chose not to go with that set-up since a permanent arrangement is more reliable and accurate.

The Plus 4 has now seen extensive use in all types of weather during the past two years and the temperature gauge needle always sits where it should. The modification is unobtrusive and should anyone ever wish to reverse it, it could easily be done.



THE 2009 MOGNW CALENDAR OF EVENTS

Jan 25: Robbie Burns Run - Mike Powley
 Feb 15: Hearts and Tarts Run - Steve Hutchens
 Feb 28: MOGNW Banquet (sold out) - Kay Jones
 May 16: Van Dusen ABFM
 May 29-31: Morgan Sports Car Club of Northern California event at Infineon Raceway, Sonoma city.
 Jun 19-21: Devil's Punch Bowl XIV - Heinz Stromquist
 Jun 20-21: Father's Day Weekend - Kit Raetsen
 Jul ??: Proposed Centenary Tour
 Jul 25: Bellevue ABFM - Mike Amos
 Aug 14-16: Oregon High Desert Tour - Doug Barofsky
 Sep??: Possible Centenary Tour
 Sep 5: Portland ABFM - Wayne Harris

Second Sunday - Island Pod N&N
 Third Tuesday - Southern Pod Social
 Third Saturday - Midlands Pod Social

Send additions/corrections to mognw@mognw.com.
 Contact your Pod Rep (see pg. 2) for more info



Hello my name is Brad Davis and I moved here from Conn. 22 years ago. I have thirty years of experience in custom cabinet making and wooden automotive coach work which has enabled me to meet virtually any automotive woodworking project, from a small repair to designing and constructing the framing for an entire body where no patterns exist.

My highly satisfied clients have included Robert Couch the Morgan restorer, Sam Posey the race car driver, John Peckum the automotive illustrator/artist and many others.

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