

Fitting Oil Temperature Gauge in the GT 86

For normal road use, a temperature gauge is not really necessary, but I decided that it was probably a good idea to see what was happening to the oil temperature when the car is subjected to "spirited" driving on the odd track day.

I did not want to install a gauge that was permanent, or could not be reversed for every day use.

The requirement was to have a gauge that was easy to read and placed in a position that did not require more than a small eye movement to check the oil status.

Fortunately, the 86 has an easily removable speaker grill on top of the dash that does not require the removal of screws, bolts or rivets. A gauge in this position satisfies the above requirements perfectly!

This document details what I have done thus far, but will be either updated later when I install the wiring, or continued in another document when the oil cooler is installed.



The kit chosen is a inexpensive 52mm Gauge complete with sensor made by ProSport. Pictured above is what's in the box and less than \$100.

First of all, remove the RH speaker grill. You might need a small screwdriver to initially lift a corner of the grill until you can grab enough of it and then just pull it straight up and out. It is all soft materials up there and personally I was able to get it out without the need for any tools.

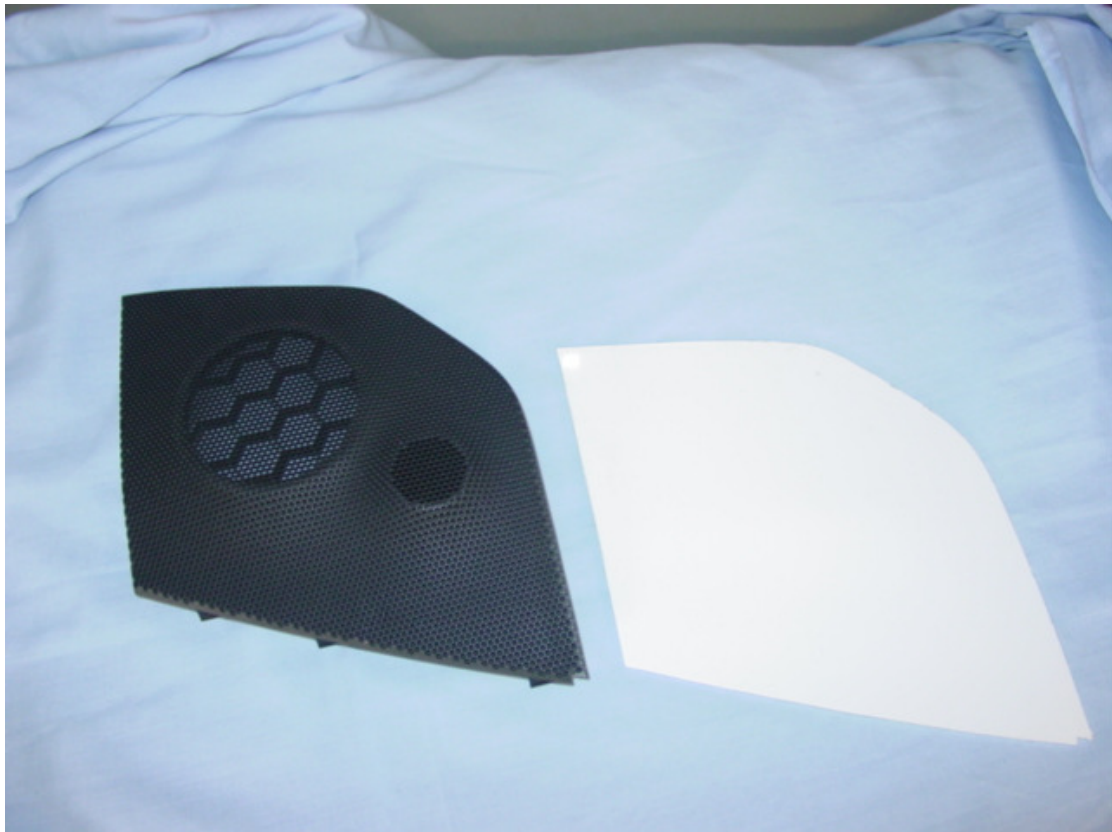
Unplug the tweeter by removing the 4 way connector block. There is a small locking tab on one side of the connector which just needs to be depressed and the connector will release. Remove the grill with the tweeter still attached.

There is plenty of open space under the grill, so just tuck the speaker wiring out of the way.

I used a piece of white 3mm thick ABS plastic sheet (pity it wasn't black and then I wouldn't of needed to paint it)

Place the speaker grill upside down on the sheet of ABS and draw around the grill. I had to roll with the curves in the grill to get an accurate trace onto the ABS. It is better to err on the slightly bigger side, as ABS is very easy material to work with and can be trimmed down to the exact size later.

Cut out the traced shape. I just used a shape knife to make a deep score of the shape and then flexed the plastic a side at a time (score each side to the edge of the sheet). The sheet will break away cleanly even curved edges!



Of course the original grill is curved to suit the dash and the Plastic is dead flat, so we need to shape it. The grill essentially is a gentle curve and it is not necessary to duplicate it exactly. We are just looking for a similar shape.

This is easily achieved and there is probably more than one way to do it. Personally I used a hair dryer and heated one side of the ABS while bending the ABS away from the heat by hand. This particular dryer also had a cold shot button, so once you have the plastic in shape, hit the cold shot to cool it down. Keep pressure on the plastic until it is cooled. Once you let go the shape will remain. It really is easier than it may sound and again the shape does not have to be exact.



Do a quick test fit to make sure the size and general shape looks good. Trim the edges of the plastic until it fits firmly into the hole. Take your time!

At this stage, it is just a nice push fit. Next we need to add a couple of clips to add a bit more stability.

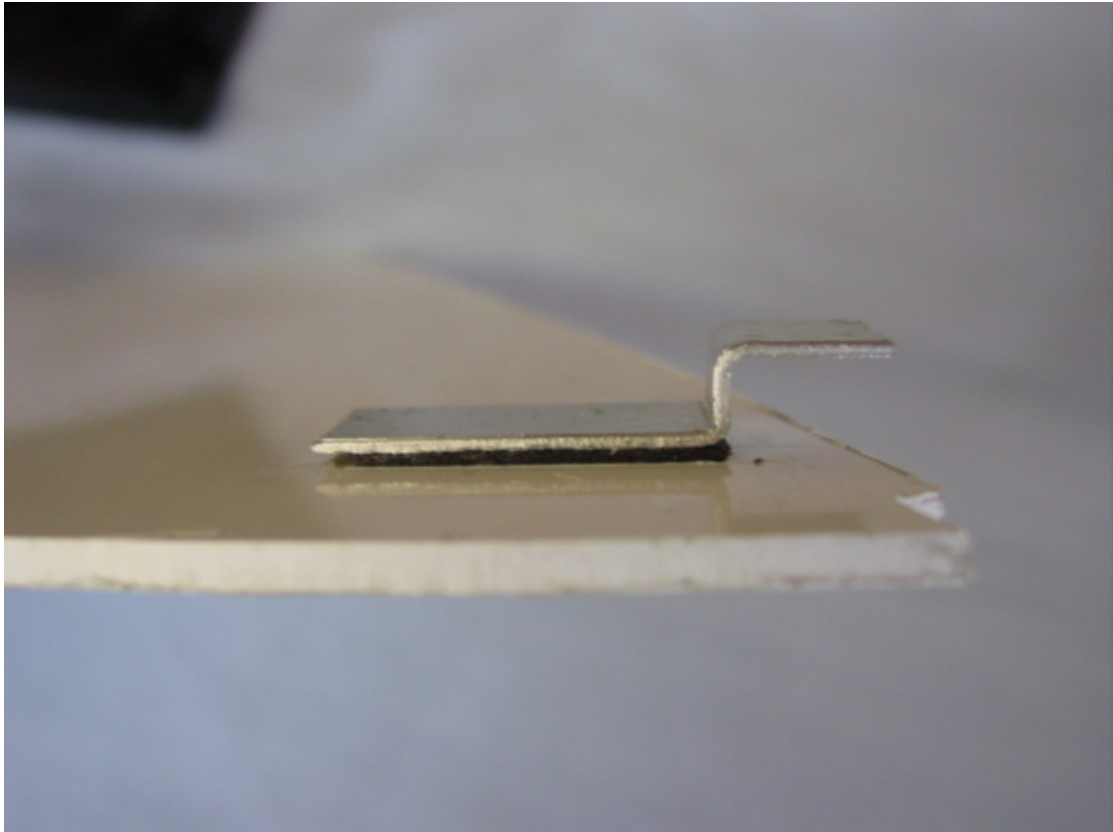


Remove the plate and put a pen mark on the underside of the plate. That way you know you will be working on the correct side in the next step.

Lay the plate underside up on a bench and then place the original grill (underside up) on top. You will see the original grill has several plastic clips that engage into the dash. Just draw a centreline on the plate mimicking the position and angle of the two clips that engage into the 2 outer slots closest to the windscreen. (Sorry I did not photograph this).

I cut 2 strips of 1.5mm thick aluminium 42mm long. Study the picture below. The section that is the highest is 10mm long. the short vertical section is 5mm long and the bit sitting on the plate is 25mm long.

I used some thin double sided adhesive foam to stick the clip to the plate over the centreline. Do not use double sided sticky tape, as this let go and you will lose the clip in the dashboard. It is important to note that we are not going to just rely on adhesive foam to hold these clips in place. It allows us to fine tune the final position of the clips. The clips come off easy enough for repositioning.



With the clips in position, test fit the plate into the dash. these clips slide into the holds at the back of the dash under the windscreen. If the plate does not sit down properly (don't force it), remove the plate and move the clips back a

little. As a guide, I found the LH edge of the clip measured about 7mm from the edge of the plate.

Once you have determined the best fit, remove the plate and carefully drill 2 x 1/8" holes in each clip. Secure the clips with 1/8" aluminium pop rivets.



Test fit the plate and make sure it seats down fully.



In my case, I did not find it necessary to fit any further clips at the front, but it may vary depending on the snugness of the plate.

At this point, I assembled the "cup" onto the base plate. I fixed a couple of strips on double sided tape to the bottom of the base and placed it in the position I wanted.

Remember not to place it too far back, because fitting and removing of this plate is going to be done with the gauge in place, so it has to clear the windscreen.

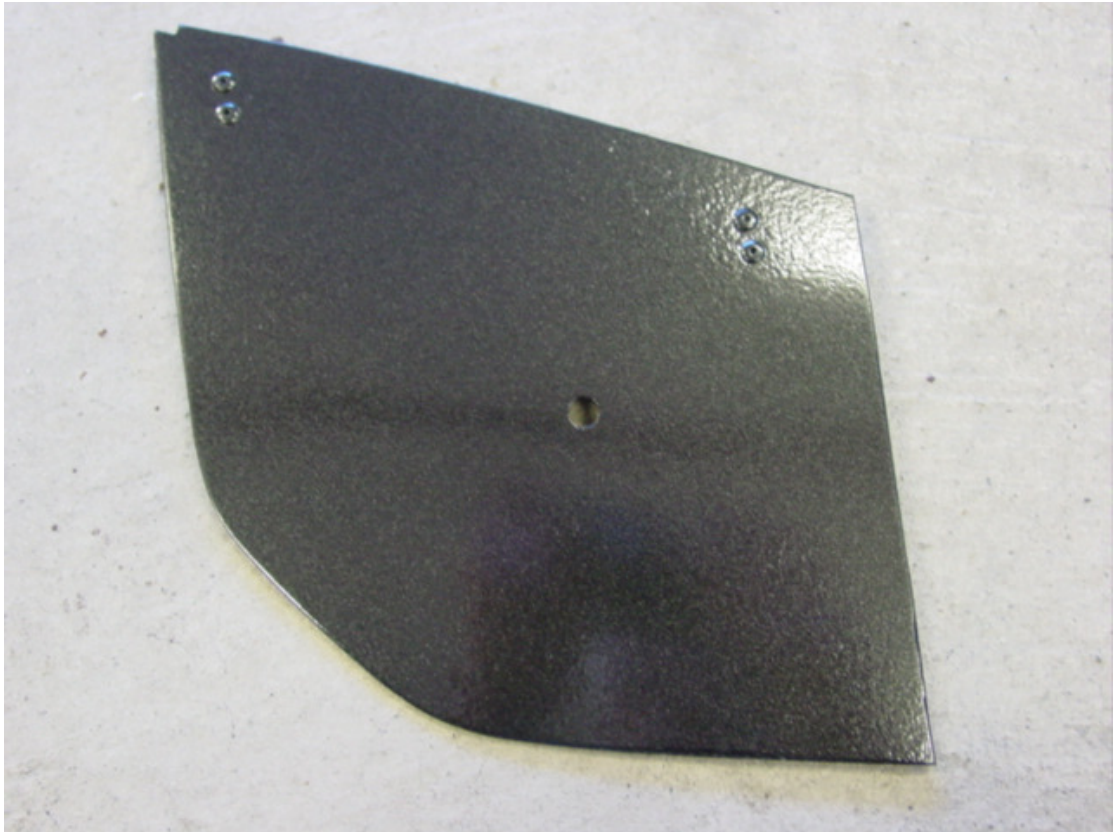


Now remove the plate and gauge assembly complete. Then mark the 3 holes that will be drilled while the base is in place. Remove the base and the tape and then drill 1mm holes where marked. Remember this is soft ABS plastic so larger holes are not required, as the "4g x 10" self tapers used later will make their own hole, ensuring a tight fit.

I also drilled an 8mm hole at a convenient place behind the cup for the wiring to go through later.

I will be adding a multi-way connector to the wiring coming out of the back of the gauge, similar to the one used to connect the tweeter in the original grill and this will be covered in a future document.

The next step is to paint the white plate. At least in my case anyway.....



This is probably the only bit I rushed, because who likes watching paint dry!!

Painted metallic black, because that's what I had on the shelf in the garage.

However, it turned out ok and it is only going to be used on track so I wasn't too bothered.

Gave it a buff and polish.

Assemble the gauge into the cup and base. Attach it to your new plate with 3 screws.

Fit it into the dash and admire your work!

As previously mentioned this is part one. There is still the fitting of the sensor and wiring which will come later. However I did hook it up to an external battery just to see what it looks like and I have included some pictures.

To be continued.....

Peter S.





