

Fitting the Smiths heater in an MGB

This job is generally acknowledged to be one to avoid if at all possible, and in warmer climates (California?) the heater is sometimes left out once removed. In the UK though you are likely to need a functioning heater, and one that works with reasonable efficiency. You may also wish to tidy up the appearance of the heater box if you are engaged in a restoration and the pressed tin box looks a little tatty. Either way you will be faced with replacing the item once you have derusted, painted, and perhaps improved its performance.

The main problems with the re-installation are two-fold: firstly there is a solid rubber seal (fitted apparently from 1970 onwards, although my 1972 BGT did not have one when dismantled) which has to share a narrow space with the flap box, and which seems impossible to compress, and secondly there is a wire control cable which has to be connected to the aforementioned flap box and which is deep within the bulkhead when fitted. Both of these problems can be overcome quite easily as described below, but of course there are other solutions which are possible.

The main components of the Smiths heater are as follows:

- The heater matrix which resides inside the tin box.
- The pressed tin box stamped "Smiths" (a fine piece of British Engineering).
- A flap box which is screwed onto the base of the heater box.
- The fan motor and fan which bolt onto the front face of the tin box
- A control cable which attaches to the flap box and operates the flaps
- Sundry bits of foam which attempt to seal the box and matrix
- The solid rubber seal (see illustration below)
- Two air tubes which push into the flap box to receive air for the demisters.

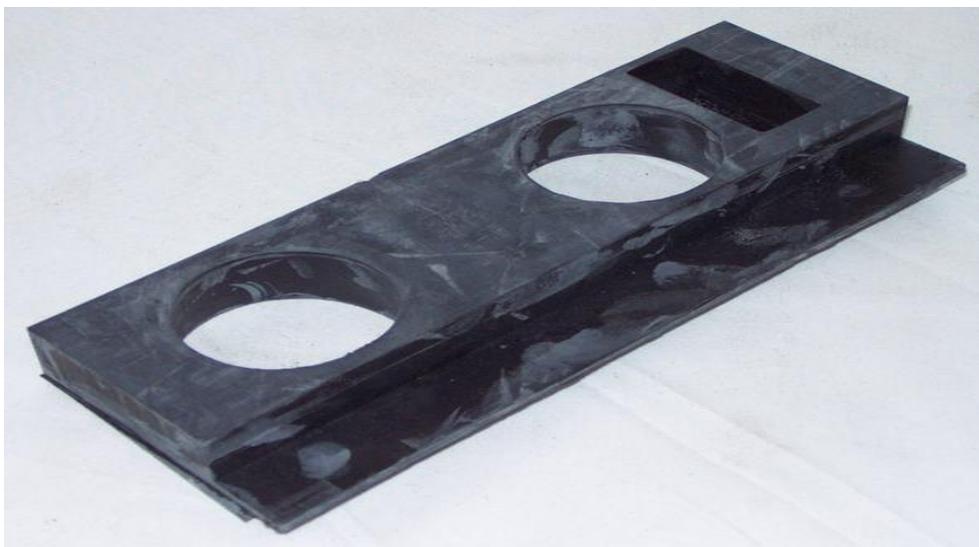


Fig 1 The solid rubber seal showing holes for tubes and square recess for the flap controls

Some solutions

- It is possible just to leave out the rubber seal altogether and simply push the air tubes into the flap box apertures. This seems like the easy way out though and is not recommended. You still may have the problem of connecting up the cable of course, even if you discard the rubber seal.
- You can consult various pieces of guidance published on the internet which can provide many hours of entertainment. Two of the sites are as follows:

<http://www.mgb-stuff.org.uk/heatertext.htm>

http://www.chicagolandmgclub.com/photos/b_heater/

Having read through much of this internet guidance and having bought the solid rubber seal I determined to get the thing fitted whatever the cost. In practice it turned out to be relatively straightforward, but this could have been simply due to having tried some of the other truly impossible solutions beforehand.

No liability taken for this advice of course, but here is what I eventually did (and it seems to work fine):

- Do not attempt to fit the cable to the flap box before installation – this will make things very difficult and there is a simpler solution. Just put the cable (inner and outer) outside the box where the heater sits, just on the cabin side of the hole through which they pass.
- Do not attempt to fit the solid rubber seal and the heater box/flap box as one unit – no matter how much lubricant and what type of lubricant you use it will be a very hard job to squeeze it in.
- Whilst off the car you should offer up the seal to the assembled heater box/flap box and see how much of the seal you need to cut away to get clear access to the flap control cable attachment points (on the RHS of the flap box). You will also note that to slide the heater box/flap box down into position on the seal you will need to cut the top off the square recess and remove a cube of rubber. These cuts are indicated on figure 2 below:

Fig 2 seal modification



- When you have removed the two cubes of rubber and you are satisfied that you will be able to slide the heater/flap box down into the rubber seal and also see the control cable attachment points, apply adhesive to the cabin side of the rubber seal (the rear facing side) and fix firmly in place in the well in the bulkhead. The positioning should be checked from the cabin side (I am assuming that you have removed the trim and the centre console and that you can see the two circular holes in the metal bulkhead through which the air tubes pass, and the small hole through which the control cable passes). Make sure the holes line up and leave the adhesive to set. I used Evo-stick Serious Glue.
- Using the same adhesive glue the mesh and annular foam to the inlet aperture of the heater box and the foam strips to seal around the base of the heater box. Leave the fan motor off at this stage
- When all dry, apply some lubricant to the rubber seal and the lower regions of the heater box/flap box (I used waxoyl which lubricates well and also will prevent rust on the inevitable scratches and chips on your newly painted steel). Then simply slide the heater/flap box down into place – it should go in very easily – and check the alignment etc. from the cabin side. You may need to manipulate the final position with fingers through the two holes in the metal bulkhead. Insert the fasteners to hold the box in place.
- Fitting the control cable to the flap box is next, but this is now out of sight inside the bulkhead! So, you need to get your head down to the level of the clutch pedal (on RHD cars, and probably having the seat removed is a good idea) and you will see a small plastic shroud over the heater outlet (I believe fitted from 1970 onwards). Remove this by taking out the 4 small screws and you should be able to see the flap control attachments as shown below in Fig 3.



- With your left hand take the control cable, feed through the hole in the metal bulkhead and simultaneously through the hole in the rubber seal and you should see the cable end emerge adjacent to the flap control attachments as in Fig 3. By judicious jiggling of the inner and outer cables you should be able to get them threaded through the holding clamp for the outer cable and the trunnion for the inner cable. The screws can be tightened with box spanners or with small sockets on extension bars (4BA I think for the trunnion screw).
- Next you need to check the adjustment by turning the knob on the dash and ensuring that the flap moves through the complete arc of movement. Making adjustments is easily done by loosening either the outer clamp or the trunnion as required.
- When all done replace the plastic shroud.
- One further thing you may wish to consider: the original annular foam on the heater box inlet appears to be closed cell foam, whereas the replacement I was supplied with is open cell and therefore prone to water absorption. Given the proximity of this foam to the open air vent and the likelihood of it getting very wet, I decided to waterproof mine with Dinitrol wax (3125). This can be easily done through the top air vent and through the fan motor aperture using the straw extension on the can of 3125.

And that's it finished, just need to insert the fan motor with fan and connect up the wiring.

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