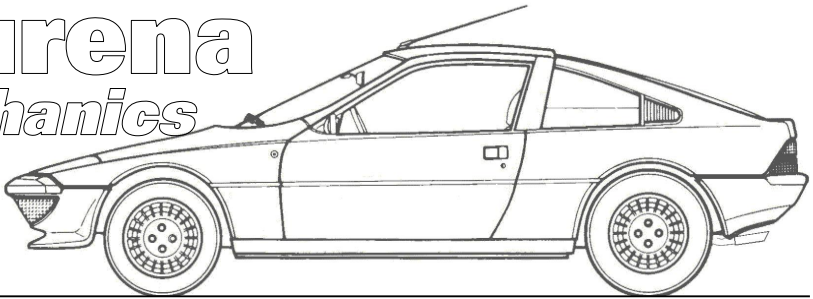


Murena mechanics

Roy Gillard



Heater Fan

I have said this many times before but the heater fan is an essential item and I don't understand why it is not included in an M.o.T. The M.o.T. is concerned with anything relating to safety, yet if a heater fan does not work, then you cannot clear the windows and cannot therefore see out properly, which surely constitutes a serious safety hazard. So why is it not included? If you have air conditioning then once the fan stops working, the air con. is not allowed to work (otherwise you would end up with the matrix becoming a block of ice) so you cannot use that either.

Recently during all this heavy rain and cold weather I got the Murena out of the relatively warm garage, and within minutes all the windows were misted up. I switched the heater fan on to clear them, only to find the fan would not work. I did a quick check to find that there was electricity being supplied to the plug at the bulkhead where the wiring goes inside to the motor, so it appeared the motor must be at fault. Now anyone that knows the Murena, knows that this means you need to remove two riveted panels to gain access to the motor assembly, so it was not going to be a quick job to fix. I had to abandon any idea of using the car at that moment, so put it back in the garage, and even that was difficult with the reduced visibility!

Removing the heater fan and motor

To remove the fan assembly you need to drill out the rivets holding the small panel at the back of the RH inner wing panel and remove that first as it overlaps the bulkhead panel covering access to the housing, motor and fan assembly. The side repeater wiring loom will be clipped to these panels so unclip it before you remove the panels. You may also find it easier to move the windscreen washer bottle temporarily.



Once the first panel is off then drill out the rivets holding the bulkhead panel and remove that. (*the washer pump in the lower photo is an extra - it should be in the bottle*)



Remove the fan wiring plug from its socket so you have room to slide the panel across. Note the panel has two rivets in the scuttle too just below the screen. You can now see the fan assembly.

There are two 6mm bolts in the scuttle near the stamped chassis number, holding this in place and the wiring loom is fastened in the bulkhead. Unclip the socket and remove it from the inside. Undo the two vertical 6mm bolts, and then you can ease the assembly out. The square vent end will be a snug fit in the gasket to the interior.

Once you get the assembly to the bench, you will see that it is riveted together. Note the alignment of the wiring exit from the motor to the main housing, which is important so that when fitted the socket can reach its hole in the bulkhead panel. Drill out the three rivets holding the motor plastic flange to the main housing and lift

out the motor, flange and fan. The motor is held to the plastic flange by the two long bolts through the motor casing.

In my case, applying power directly to the motor had no effect so the motor needed to be replaced. I later opened up the old motor out of curiosity and found the brushes were totally worn out, but the motor was also a little tight in its bearings.

To get the motor off the flange you first need to remove the fan which is only a tight push fit on the shaft. It should come off quite easily whilst holding the fan gently, by tapping on the end of the shaft with a punch, with the motor hanging down. Have something soft underneath for the motor to drop on to. Please note the bush on the shaft between the motor and fan. You can push the fan on to the shaft of the new motor after first fitting the plastic flange, and placing the bush on the shaft.



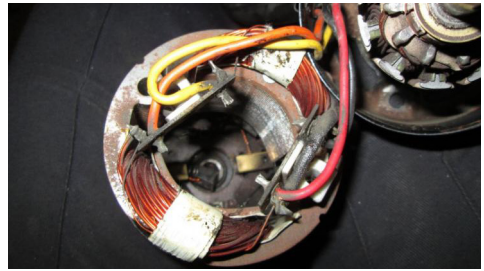
Lubricate both motor bearings with a little oil. (3-in-1 or similar) Place the motor, flange and fan back in the main housing and check the fan is not touching the inside of the housing and will spin freely. Ideally, also check the fan powers up on all three speeds - you have a black wire which is earth, and red, yellow and orange wires. Connect the black to earth and each of the others in turn, to the positive side of a battery and you should get three different speeds. Be careful of fingers or anything that could be caught in the fan. If all is fine, then rivet the flange back to the main housing making sure the wiring alignment out is correct.

Refitting the assembly

Now you can refit the housing back into the car easing the square housing into the gasket first, then bolt the assembly in place. Fit the socket back into the hole in the panel, from behind making sure it locks in place, so that when you push the plug into it, it will not simply disappear back inside! If the barbs do not spring outwards to lock it in place, you can push something like a piece of a match between the socket body and barbs to lock them out and hold the socket secure in the bulkhead panel.

Test the motor works on all speeds from the dash switch before going any further. If all is O.K. remove the plug from the socket, to allow the panel to be refitted, and then rivet that back in place. Fit the second panel and rivet that back in place. Refit the fan plug and move the repeater wiring loom back and clip it back in place. Refit the washer bottle if you moved it, and check that the motor is working.

You should now have a fully working heater fan again.



Worn out carbon brush

Overheated wiring and/or switch

If the old motor was very tight on its bearings or even seized, then you should expect the high current draw that would have caused, to have overheated the switch and/or wiring, and possible melted the wiring insulation to some extent, so you may need to remove the heater dash panel to carry out any necessary repairs.

To get this off you first need to remove the three slider knobs and for this (provided they are original and not previously broken) you need a small pick tool. The reason is that they push on to the ends of the sliders and a pip on the lever locks into a hole in the plastic knob. To pull the knob off, you have to flex the plastic down off the pip and you can only do that using a 'U' shaped pick. You pass the end of the pick through the slot in the dash panel under the slider knob, bring the end of the pick back in between the plastic knob and metal slider to ease the knob off the pip, and the knob will then pull off the slider.

Once all three knobs are off, you can unscrew the panel, held by two self tapping screws at the bottom and one on the left side by the instruments. There should be sufficient wiring to the warning lights and clock to ease the panel away enough to see the back of the switch and the condition of all the wiring to it.

If the wiring is normal with no sign of overheating or melting, and the switch works, then you can refit the panel and knobs, and the job is finished.

If however, the switch needs replacing, or the wiring repairing, it will be easier to completely remove the panel, which means you will have to disconnect the wiring to the four warning lights, the switch, the clock and the illumination bulbs. So make a note of where all the colours go. Take digital photos which often helps.

If any of the three illumination bulbs have blown, please note these should be 24 volt not twelve. This is so the illumination of the heater panel is not too bright. I often see these with 12 bulbs in and I can always tell because the panel is far too bright when you switch the lights on, and will be too bright at night. The bulb may look like a small capless 286 bulb pushed in a holder but these 24 volt ones come fixed in the holder and is a type 508T.

The holder twists anti-clockwise to release and lift out. The two contact rails are not particularly well fixed in the white plastic housing so take care when removing the wire terminals and the bulbs; and only take one bulb out at a time. The bulbs help keep the rails in place.

If you are replacing the switch, the knob is simply pushed on to the shaft of the switch. Once off you will see the nut behind holding the switch in the panel.

Refitting, as they always say, is a simple reverse procedure!

Roy Gillard

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