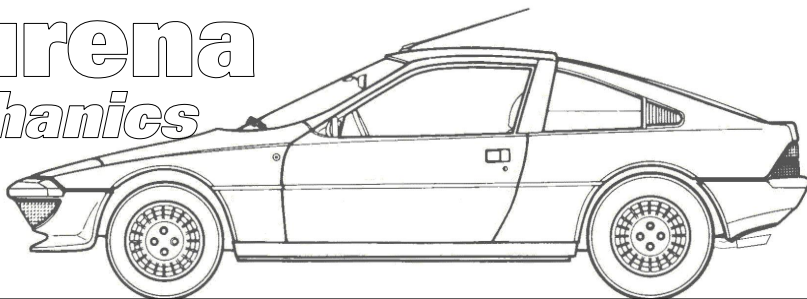


# Murena *mechanics*

Roy Gillard



## **Puzzle solved!**

For many years I have been puzzled by the fact that many German Murena that have been registered here show a capacity of 2128 cc which is incorrect. All standard 2.2 Murena (i.e. not rebored) are 2156cc to the nearest cc. (2155.86 cc) Anyone can calculate this from the bore 91.7 mm and stroke 81.6 mm.

Ironically if you mistype 80.6 in your calculation for the stroke, you get 2129 cc. I thought that may have been the mistake. It was the nearest I could get to the 2128 figure, but it seemed unlikely. Now I have finally found where the figure came from. It is the **Fiscal rating** of the Murena 2.2 engine in Germany. (much like the 12 CV Fiscal rating of a Murena 2.2 in France) So it has no real bearing on the actual capacity especially here in the U.K. and all Murena 2.2 recorded on DVLA documents with a capacity of 2128 cc are definitely wrong.

## **Ramblings...**

I know I have said this before, at club meetings, and in the magazine, but when shopping on the Internet you cannot trust what many sellers advertise as being correct or whether they really have the stock they state. Sometimes what they say is for a certain car is actually from another model and they don't understand the subtle differences or the significance.

Some things you may get from a general motor factor as many parts will fit lots of vehicles. All the manufacturers, big and small, use third parties to supply them items, and to a great extent a manufacturer is more an assembler of parts rather than a true manufacturer. They get their electrics from one company, their fuel systems from another, rubber from another, glass from another, brakes from another, and so on.

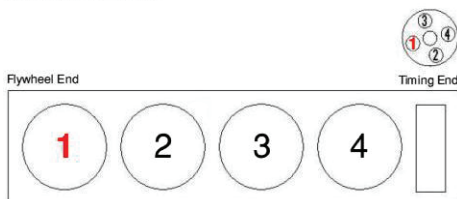
Small companies like Matra probably made more of their cars than any of the big manufacturers, partly because of economies of scale. The problem this leaves us is that once the original stocks have gone, you cannot just go to a general supplier and expect to get replacement. I have never seen correct length plug lead sets for a 2.2 Murena for instance. Using the single leads you will end up with some far too long.

The other problem now is that with many cars having individual coils directly over each plug, there are many places no longer stocking H.T. Leads at all!

Consequently I've made up my own H.T. Leads sets for some time, and can supply these (currently £26 + P&P) with the correct lengths for all cylinders and king lead (which is very short). The shortest king lead I could find in the motor factors was **twice** the length actually required!

Since I make the H.T. Leads just the correct lengths, there is no excess to droop or the possibility of touching very hot parts like the head or exhaust shield for instance, but this means that your distributor must be in the position as originally set and measured. (see sketch) and the leads fitted in the cam cover clips. If these are missing, or your distributor and the skew drive gear has been out and fitted in a slightly different position, the lengths may be different.

Simca Type 180 Engine



When ordering a set of my leads, make sure your engine is as above or let me know if it is different, so I can make them to suit.

Similarly I keep seal kits and can overhaul brake and clutch items, and have recently obtained my first 2.2 water pump repair kits so I can overhaul these too. These are now very rare and difficult to obtain, and the cost of a new one can be £250 or more.

Tail glass pressure struts are again slightly different to what are generally stocked, and one company who boasted they could supply for **any** car, had to admit when I challenged them, that they neither stocked or even knew what the Murena required.

Overhauling items (as we used to do) is the way to go as long as the basic part is good and repairable, so never throw those old ones away. Even if they are beyond repair, they often have some items which can be re-used and can be a source of spares.

There are certain items that I usually get made in the U.K. since they work out cheaper and I can include improvements to the originals, so hand brake cables for instance, I get them made with a grease nipple on each outer section, so they can be greased regularly.

When I started over 40 years ago, we had lots of grease points on vehicles, all ball joints and steering, hand brake cables, and even water pumps, and provided these were lubricated as per their schedules they would last a long time.

Why did grease nipples disappear? Partly because manufacturers wanted to cut costs, and worn or seized items generate more repair work, but also because people were too lazy to do the servicing correctly and greasing was very often missed or done poorly. To some extent owners have only themselves to blame.

Now you know (or certainly should by now) that with rear caliper type used on Matra cars (esp. Bagheera, Murena, and Espace with rear discs) the hand brake cables must really be free because you don't want any additional friction stopping the caliper levers from returning to their stops. Once water and maybe some dirt gets inside the outer cables the hand brake cable will deteriorate. The outer cable cover often cracks with age and flexing, also allowing water ingress, and any water means corrosion which means seized cables.

If you grease them at the start and continue to grease them say once a year, the cables should remain free of moisture and deterioration and the hand brake will continue to function properly. (provided the calipers have been overhauled properly!)

In the case of our hand brake cables, the company can no longer get one of the parts necessary, so I always send the old cable that needs to be replaced and they utilise the parts from it in making up the new one.

Speedo cables are another thing I get made here and they are cheaper and equally as good if not better than the original. I'm not sure if a LHD Bagheera speedo cable is exactly the same length as the Murena one, but the head fitting is different anyway, with a screw-on connection rather than the clip-in Murena type. However, the company could make them for a Bagheera too, and even make the extra length one for a RHD Bagheera as one unit rather than the two sections of the original, which would probably make it more reliable as well. With both of these all we need is a pattern to start and once it has been copied we can get them made to order.

Sump gaskets for the 2.2 Murena engine are special and stocks of the original ran out a long time ago. Initially I had Cooper Payne in Slough make me some up but I had to pay quite a bit for the tooling costs and then except for the individual private sales, none of the businesses or European clubs (except Matramania) supported me in buying stocks so now you have to buy them from the continent at almost five times my price.

Beware anyone selling 2.2 sump gaskets at around £25 because they will be Tagora sump gaskets and these are no good for the Murena. The Tagora engine is mounted in its chassis with rubber mounts to the block, and its sump is a tin plate unstressed item simply bolted on the bottom. The Murena version of the engine is mounted in its chassis with a mounting on the alloy sump one end and the gearbox the other end.

This means that the engine has to be held rigid to the alloy sump so they move as one unit and that means the gasket must have metal inserts so the bolts can be torqued up solid. You cannot do that with the Tagora sump gasket as it has no inserts, and would just get destroyed if you try to tighten the bolts up solid. Furthermore the engine vibrations will quickly cause leaks with the movement between the engine and sump. Since it is such a big job to change a sump gasket on these engines you don't want to have to do this job over, so NEVER fit a Tagora sump gasket.

The oversize pistons for the 2.2 engine have always seemed very expensive, but this is really down to the limited numbers because I have investigated getting them made here and in the States (where they often make things cheaper) but in both cases the costs were going to work out very similar overall, so it is best to support the European suppliers if we want to keep these engines alive. In my opinion, for the limited mileage that is generally done, it is best to stick to the original 2.2 because changing it for a non-standard engine is a big project which the average owner is probably incapable of doing properly and the costs anyway outweigh the benefit\*.

Too much emphasis is often made about having to repair the engine but in reality it should only have to be done once in the life of a car. Similarly the rear discs of the 2.2 which are unique and therefore expensive, and a pain to replace. However, they should only need to be replaced once or possibly twice in the life of a car over say 50 years with the limited mileage these cars cover. Thus these repairs are not done that often and the problems of doing them many times over are usually exaggerated.

\* If you want a bigger engine you have the option of the Carjoy Alfa V6 conversion but personally I think it is over the top. You totally change the character of the car, and there is almost no access room for maintenance, which should be one of the criteria considered when changing to something else. It is bad enough if you do your own work, but imagine asking a mechanic to work on it for you when it has no room to work. I also assume they have changed the transmission and I would also want to see what the new ratios are, and how well they suit the car, since with a more powerful engine and lots more torque I would want at least 40 kph/1000 rpm in top gear otherwise it is pointless.

**If you need parts for your Murena (or a few things on Espace 1 or Bagheera) then try me first.**

I stock some Murena speedo cables; I can get hand brake cables made that are better than original but I need your original first; I can overhaul calipers; master cylinders; slave cylinders; and 2.2 water pumps. I have correct H.T. Lead sets for the 2.2 engine and can make any set to pattern as I have all the parts and make them myself. I have a few brake discs left. I can supply wheel bearings and front ball joints, often at less than they cost elsewhere. I can supply re-gassed rear struts for the Murena tail glass much cheaper than buying new ones.

Over the years I have found companies here that can do things for us, so even if I don't have stock myself, I can sometimes offer advise on where you can get things done. Buying from the continent means paying in Euros, and extra shipping costs. Sometimes you have to accept that, but many times it is not necessary.

Simon Auto provides a good service and although his prices may be expensive at times, he does put some of his profits back into getting new parts made, which keeps us going. When you get new parts made, the initial outlay can be hugely expensive, as I know from doing this myself, so we should be grateful that someone is prepared to keep having out-of-stock items remade, for such a low volume car. Look how H.B.Pieces have finally closed down. For a company to support such a low volume marque they have to remain profitable.

I buy quite a lot from Simon particularly because he can supply things no others can, so whilst I am not his agent, check with me if you are considering a purchase from him at any time. It may be I already have some of what you want, or I may be about to submit another order for parts, and if your parts are included the carriage costs will be less as it will be spread over all the parts obtained.

*Roy Gillard*

## **Murena Wiring Diagrams**

My wiring diagrams are accurate, coloured, A4 size and laminated. I have early or late Murena 1.6, 2.2 or 'S', with speakers in footwells or doors, and even German spec. versions so please specify exactly which you require.

*Roy Gillard.*