

BRERA 2.2JTS FUEL PUMP REMOVAL

Note other models may differ slightly

Safety first - Disconnect the battery first! you will be working with exposed fuel and electric connections you don't want to blow yourself or you pride and joy to bits.

Make sure you have enough room, you will need both doors to be wide open not only for access but for ventilation.

Give yourself time - this took me approx 30mins using the tools below and with no added complications.



These are the tools you need-

- 17mm socket
- Short extension
- Ratchet
- 1/2" breaker bar*
- Lock ring removal tool*
- Philips screwdriver
- Small flat blade screwdriver
- Hammer
- Trim removal tools*

Theoretically the tools marked * are optional but i would recommend using them.



This is the start point the fuel pump is located under the plastic console between the two rear seats.

1) Open both doors, pull both front seats forward and then tip the seat backs forward



2) This is the hard bit. To remove the rear seat squab you have to release the clips that hold it in place. Pull up on the front corners of the seat. The clips are steel so you won't break them. It takes a LOT of force. If they won't budge and you find yourself thinking that this bloke doesn't know what he is talking about pull harder. If one corner does not release try the other corner.



This is a view of the heavy duty metal clip under the front corners of the seat squab.

If when trying to pull the seat up the front just flexes try and jam your hand down the side of the seat about 5" from the front this is where the clip is located and the seat is more rigid at this point.



3) When the seat is released at the front you can pull it forward to release it from the rear retainer.

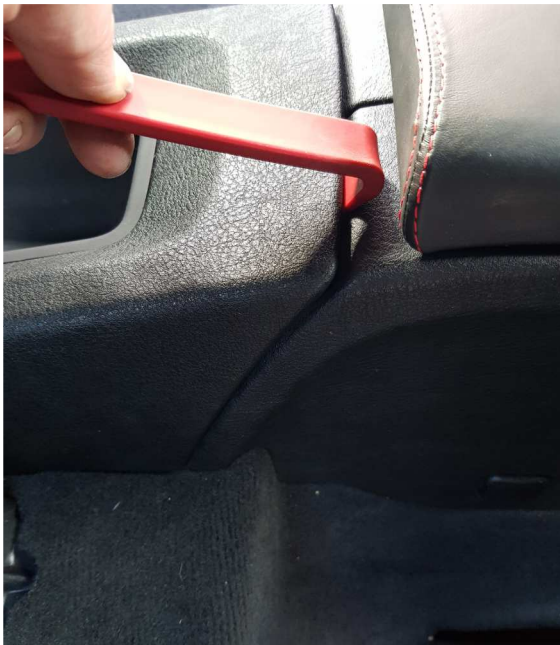


With both seats removed you now have access to the center console fixings.

4) Slacken both seat belt mountings using the 17mm socket. There is no need to remove them they just need to be loose enough to fold down giving access to the screw behind them.



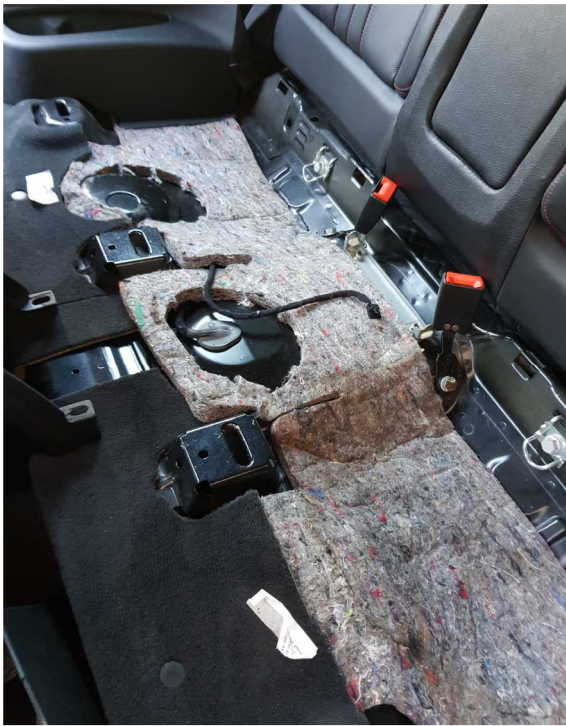
5) With the seat belt retainer out of the way you can remove the Phillips head screw from each side



6) The front of the console is held by two rather fragile clips. Don't lift the console up from the rear or they will break off. Try and lever the front upwards.



7) Underneath the rear of the console is an alarm control module. Disconnect the electrical connection to this before removing the console.



8) This is what you should be left with after removing the seats and the console. Don't feel bad if yours isn't as clean as this. This shot was taken after I hoovered up all the bits of Barbie doll and Smarties the kids had lost down the back of the seats.



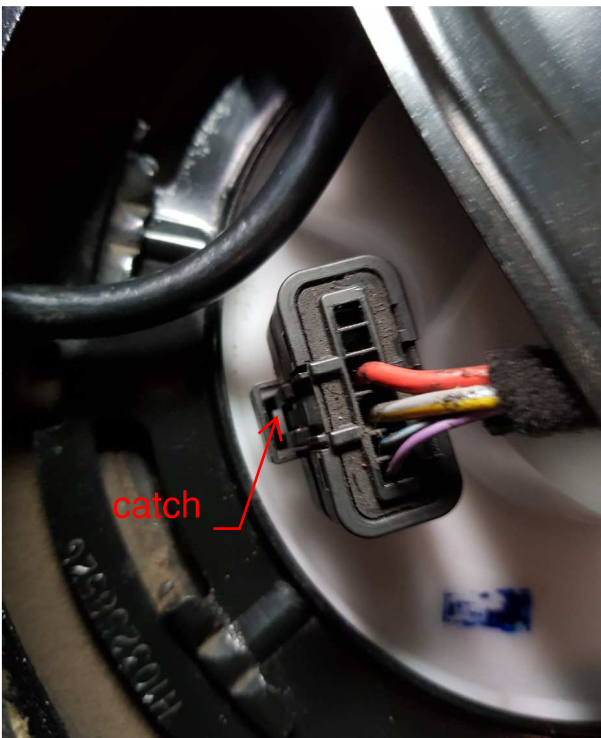
9) Pull back the insulation to reveal the cover over the fuel pump.



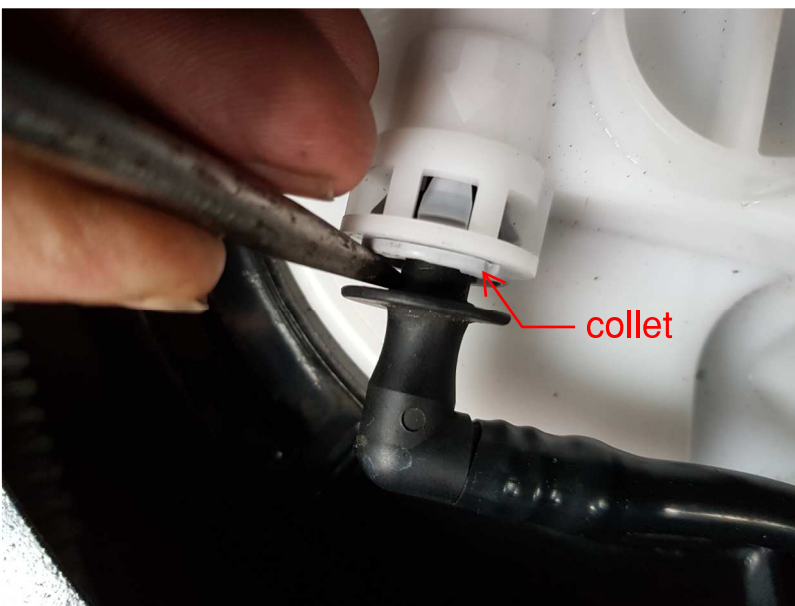
10) Remove the 3 off Phillips head screws that hold the cover in place.



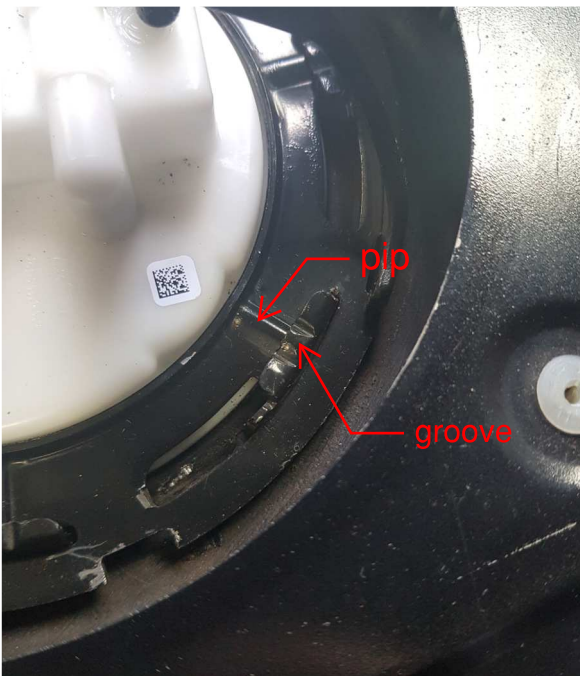
11) With the cover removed you have visibility of the pump. First disconnect the electrical connector, the orange latch on the side releases the plug. I can't tell you if you push it up or down to release the plug as mine was broken. As no one has ever touched this since it was built i assume it was broken during installation at the factory.



If your plug is broken you will need to release the latch by some other means. With the orange part removed at the bottom of the plug you will see a small rectangular hole in a catch, using a small screwdriver in this hole you can lever the catch outwards and release the plug

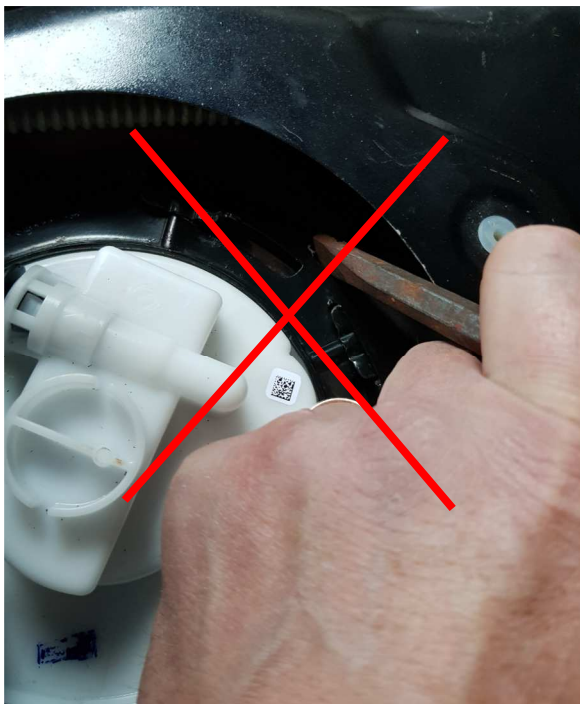


12) Next remove the fuel line connection. Have a cloth available as there will be a small amount of fuel released. To remove the fuel pipe you need to push the white plastic collet inwards then pull the pipe out. I used a fork tool from my trim removal kit which worked a treat but you can use a screwdriver as shown in the picture. If you are using a screwdriver on one side make sure the collet is pushed back square or the pipe won't release. Using a fork tool solves this problem.



13) Having successfully removed the electrical connection and fuel pipe you are ready for the next challenge of removing the locking ring.

There are generally two types of locking ring for fuel pumps on modern cars. One uses a large plastic ring that threads on like a nut the other uses a steel ring that has a pip that locates in a groove and can be released with a 5deg turn. While i had a generic tool to undo the plastic ring type i did not have one suitable for a steel locking ring.



14) While it is possible to remove the ring using a punch or chisel I don't recommend it.

a) you are likely to damage the ring or worse the plastic fuel tank which is just below it.

b) While you may remove the pump this way it is highly unlikely you will be able to replace the ring using the same technique. Especially if you are working on your own.

Trust me i tried!



15) Because of difficulties replacing the locking ring I ended up purchasing the proper 3 leg tool for the job. Locking and unlocking required the same technique.

To use the tool first lock it into the ring then while applying a turning moment on the breaker bar (with your leg)and pressing down on top give the side of the tool a tap with a hammer.

The reason for pressing down is that this fuel pump is spring loaded and pops up about 20mm when the ring unlocks.

(The tool description is at the end)



This picture shows the ring removed. You can just see the pump has lifted up on its spring. Underneath the pump is the green seal. Take care with this it cost nearly £60 if you have to replace it!



16) You can now lift the pump clear of the tank. Note the swirl pot at the bottom of the pump is full of petrol. Have a container handy to put the pump in.

Eat the chocolates first!



You will need to tip the pump slightly as you withdraw it so the sender can clear the tank. Fuel will come out of the swirl pot as you do this but if your careful it will run into the tank.



17) With the pump removed you can clean around the lip of the tank trying not to let any crud fall in.

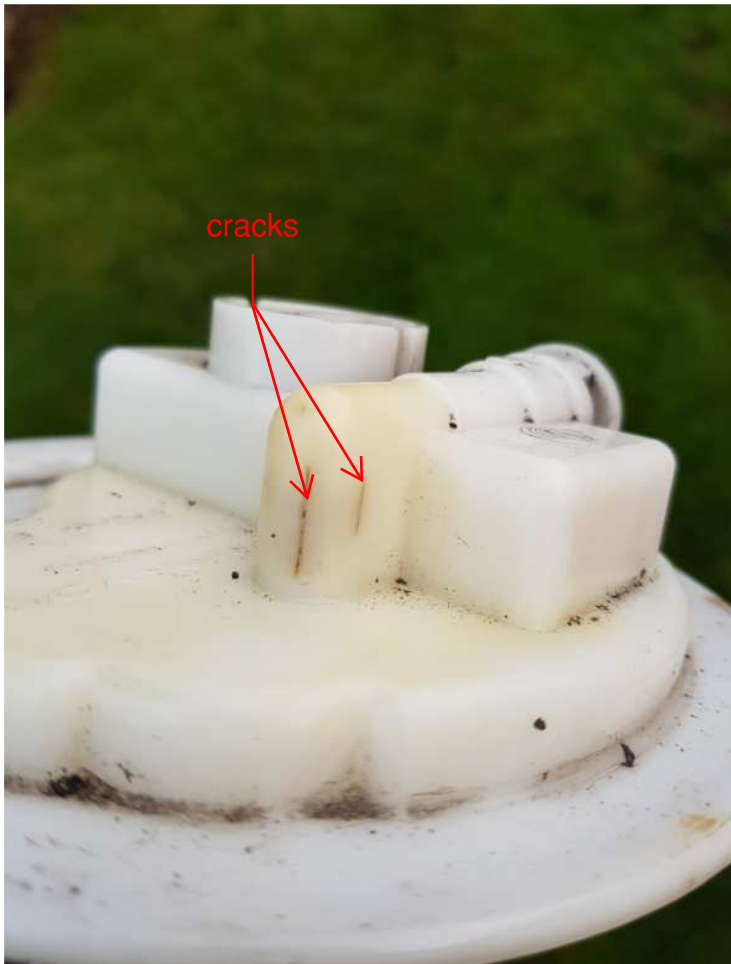
Obviously don't celebrate successful removal of the pump by lighting up a fag, and don't use a vacuum cleaner to have a clean up. There is a lot of petrol vapours about with the tank open and you will turn it into a rocket.



18) Check your old pump against the new to make sure you have the correct one. There is nothing salvageable on the old assembly except perhaps the sender.



The new pump will have a plug in the fuel pipe connection. Remove the plug by pushing on the collet. If the plug has a flange against the collet make sure you are pushing on the collet and not on the plug.



You can clearly see the cracks in the old pump that were the cause of the petrol smell at the rear of the car. Large amounts of fuel were being sprayed out without my knowledge. This is a really common problem on this Brera/159's.

In the words of the old Haynes manual assembly is reverse procedure. When you reconnect battery you will need to reset your windows, hold the drivers side up switch for 10s then down 10s repeat for other side. Good luck!



[Fuel Tank Lock Ring
Tool Wrench Gas...](#)

£16.80

[eBay](#)

This is the tool i bought on ebay. This came from China and took about 14days it was a really good quality. You can buy exactly the same Laser branded tool from Machine Mart but it will cost you nearly £60 but i guess you could have it in a couple of days.