

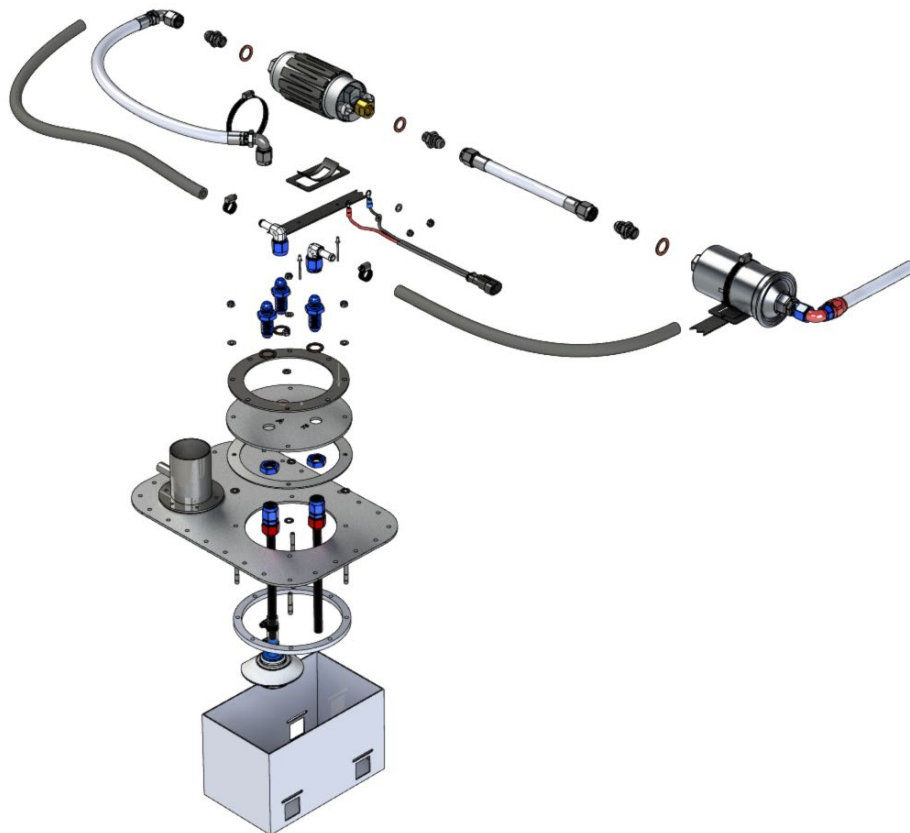
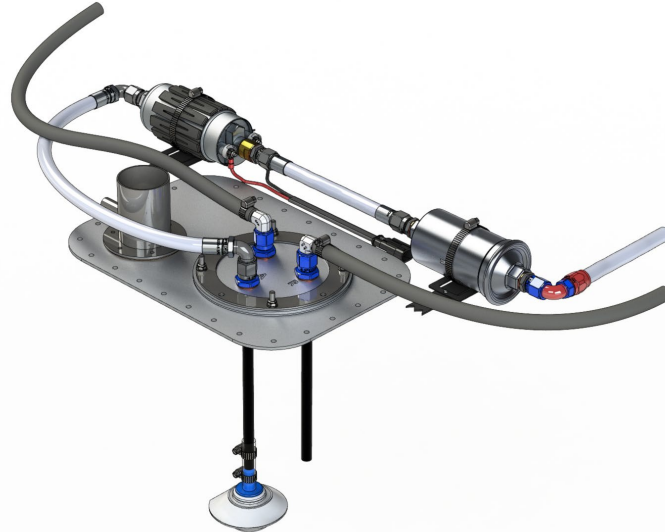


MANUEL

EXTERNAL FUEL PUMP KIT

MITJET 2L

Version 1.0 – February 19, 2024



Introduction

The enhancement of Mitjet 2L performance, attributed to tires, ZF shock absorbers, rear camber shims, brake pads, etc., can cause some vehicles to experience fuel starvation issues when the fuel level becomes low in the tank.

We have analysed this issue and found that its main cause is the original fuel pump, part number RE201, which is an OEM product and may no longer be 100% suited to the new performance levels of the Mitjet 2L.

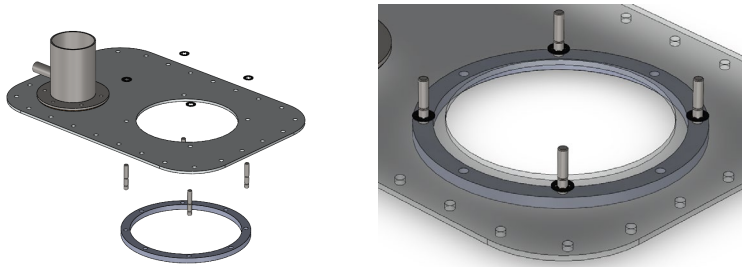
Therefore, we propose an external fuel pump kit to replace the original in-tank fuel pump with a high-performance competition pump of 200L/min, which will be placed outside the tank.

This kit does not change the car's performance; its purpose is simply to eliminate fuel starvation issues that may arise with the original fuel pump.

Principle

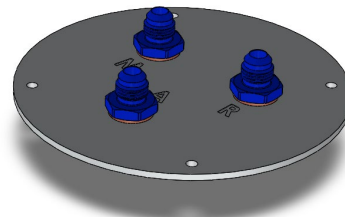
The additional aluminium plate RE256 is screwed onto the original main plate of the tank RE206 in place of the original pump well.

It is held in place by the original threaded flange (RE204) onto which studs will be mounted and which will sit below the main plate RE206. It can thus be removed if necessary without having to completely remove the main plate RE206.

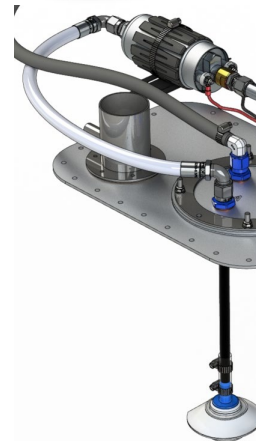


The additional plate RE256 has 3 outlets:

- 1 for fuel suction using a dip tube equipped with a strainer filter at the bottom of the anti-surge box,
- 1 for fuel return, through a tube next to the suction tube, which brings the fuel very close to the suction point,
- 1 for tank venting.



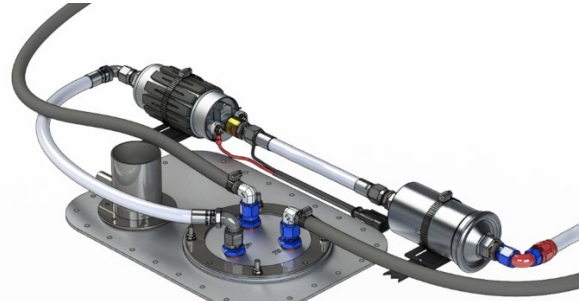
From the suction tube equipped with a pre-filter strainer, a hose runs to the external fuel pump, fixed on the left tank strap, exactly as the fuel filter is on the right strap, with the same riveted support. The pump connects electrically to the harness in the same location as the original pump.



A straight hose then connects the pump to the original fuel filter. From the filter, the car's original fuel supply circuit remains the same.



The black rubber (Nitrile) return hose, instead of connecting to the clip-on fitting of the original pump, is connected, still with a clamp, to the additional plate by a 90° adapter with an 8mm diameter outlet. The black rubber (Nitrile) vent hose connects in exactly the same manner to the second adapter, identical to the first one.

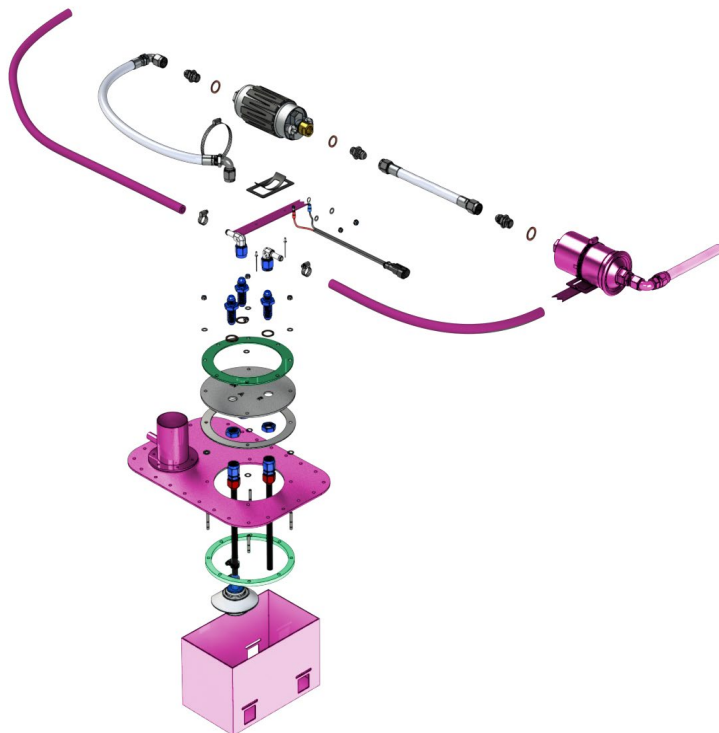


Inside the tank, the original anti-surge box remains in place.



On this exploded view:

- in pink: original car parts that remain in place,
- in green: original car parts kept because they are used in the kit assembly, but in a different way than the original assembly,
- the rest: parts provided in the kit.



Composition du kit

KIT PART NUMBER : RE250

Composition of the kit:

Part number	Description	Quantity
ES204	COPPER WASHER D14	5
RE3014	MALE/MALE ADAPTER INLET PUMP AND FUEL FILTER	2
ES251	PUMP TO FILTER FLEXIBLE HOSE	1
ES202	MALE/MALE ADAPTER OUTLET PUMP AND FUEL FILTER	1
ES214	COPPER WASHER D12 D18 EP1.5	1
ES252	WIRED EXTERNAL FUEL PUMP FOR KIT RE250	1
RE220	PUMP AND FILTER SUPPORT	1
RE216	RIVET D3.2x8 COUNTERSUNK HEAD	2
EQ3022	JUBILEE CLAMP D40-D60	1
ES250	ADDITIONAL PLATE TO PUMP FLEXIVBLE HOSE	1
RE253	FEMALE FITTING 90DEG DASH-6 TO HOSE D8	2
ES210	JUBILEE CLAMP D8 D16 LG 9	2
RE252	SHORT STRAIGHT BULKHEAD FITTING DASH-6	3
RE3019	COUNTER-NUT 9/16X18	3
RE256	ADDITIONAL FUEL TANK PLATE FOR EXTERNAL PUMP ON MITJET 2L	1
RE257	GASKET FOR ADDITIONAL FUEL TANK PLATE FOR EXTERNAL PUMP	1
EQ233	NYLOCK NUT M5	4
P233	WASHER D5 FLAT ZINC PLATED	4
RE258	STAINLESS STEEL STUD M5 FOR ADDITIONAL PLATE EXTERNAL PUMP KIT	4
RE259	RETAINING WASHER D5	4
RE260	ALU. TUBE D10 EXT. L=190MM FOR FUEL RETURN EXTERNAL PUMP KIT	1
RE251	STRAIGHT FITTING ALUMINUM TUBE D10 - DASH6 FEM	1
RE255	RIGID DIP TUBE KIT WITH STRAINER AND FITTING - L=214MM	1

All these parts are available as individual spare parts for maintenance or eventual repairs.

Additionally, available separately are:

Part number	Description
RE261	FILTER STRAINER D80 FOR EXTERNAL FUEL PUMP DIP TUBE KIT MITJET 2L
RE262	FITTING D10-D22 FOR JUNCTION ALUMINUM TUBE DIP TUBE-STRAINER
OPT3022-O	10mm OLIVE FOR RIGID ALUMINUM TUBE FITTING
ELC254	EXTERNAL FUEL PUMP WIRING HARNESS FOR MITJET 2L

Assembly

Note: all positions are given while looking at the car in the forward direction.

Preparation

Remove the reservoir protective cover RE222.

Disconnect all hoses from the original pump well RE201 (supply, return, venting), and the electrical connection.

If there is an endurance kit (remote fuel filling cap), disconnect the filling flexible hose ES216 from the lower fillet neck RE235, as well as the vent hose.

Remove the hose from the original pump to the fuel filter by unscrewing the banjo fitting from the filter inlet, leaving its threaded inlet open.

Remove the tank strap RE219 and remove the reservoir casing cover RE221.

Completely remove the main plate RE206 held by the 26 studs on the fuel tank.

Remove the original fuel pump well RE201.

Set aside the threaded flange RE204 and the counter flange RE207 which will be reused.



RE204



RE207

Installation

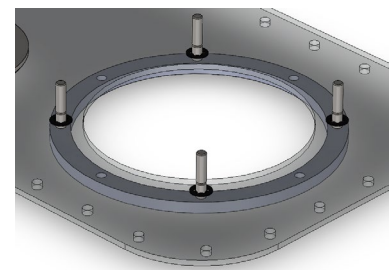
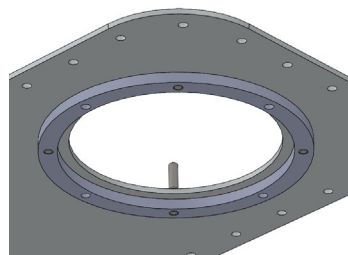
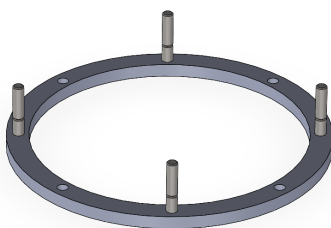
Screw the four M5 studs RE258 onto the original threaded flange RE204, every other hole, so that the studs are arranged in a square.

→ **IMPORTANT: fit the studs with Loctite "Tube Sealant 577".**



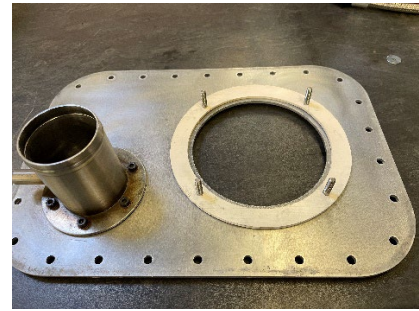
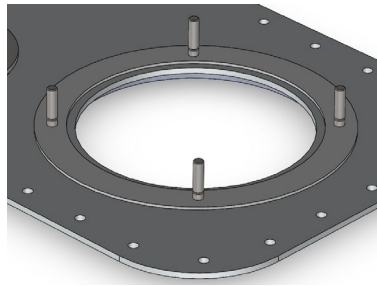
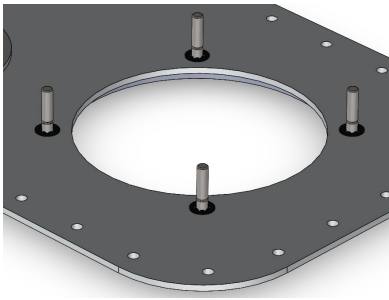
Install the threaded flange RE204 on the main plate of the reservoir RE206, from underneath.

Secure the 4 studs RE258 with the 4 retaining washers RE259 over the main plate. Once the plate is in position, this will stop the threaded flange from falling, which will allow to open the additional plate RE256 without dismantling the main plate RE206 if needed in the future.

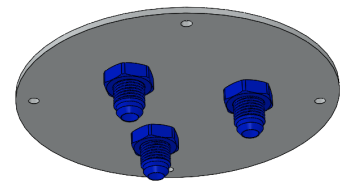
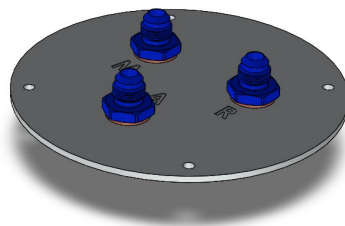
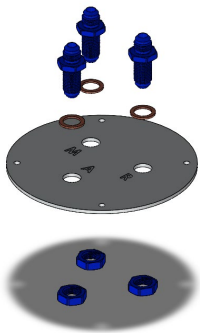


(plate RE206 in transparency)

Place the nitrile gasket RE257 over the main plate RE206.

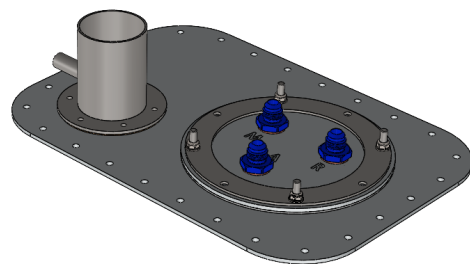
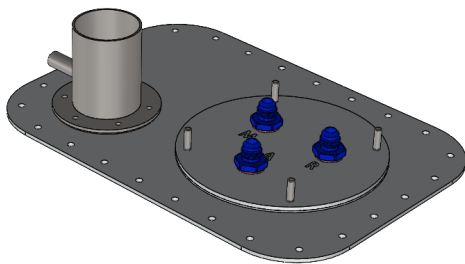


Take the additional plate RE256 and place it so that the markings A, R, and M outlets are on its upper face. Install the 3 bulkhead adapters RE252, each time with a copper washer diameter 14 ES204 above the plate, and the counter-nut RE3019 below.



Place the equipped additional plate RE256 on the main plate RE206, over the nitrile gasket RE257.

Place the counter flange RE207 over the additional plate RE256 and secure everything with 4 washers D5 P233 and 4 nuts M5 Nylock ES233.

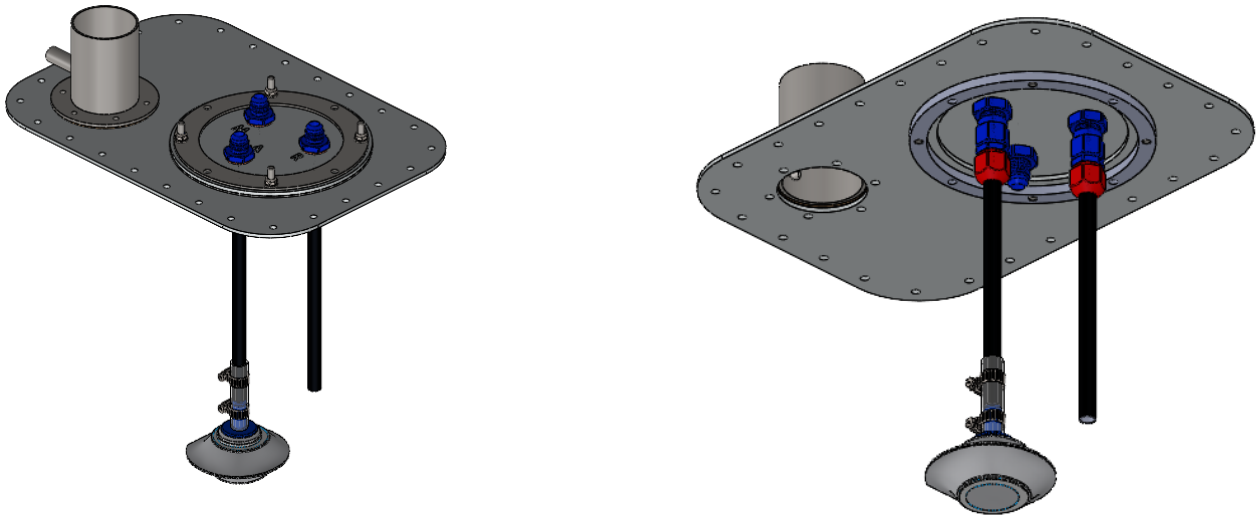


The counter flange RE207 prevents the aluminum plate RE256 from being deformed when tightening the M5 nuts on it.

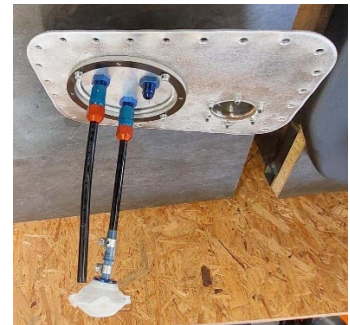
→ **CAUTION:** the position of the suction, return, and vent once the plate is positioned is important: suction "A" ("Aspiration" in French) should be at the rear of the plate, return "R" should be at the front right, and venting "M" ("Mise à l'air" in French) should be at the front left.

Under the plate, under the outlet marked A (suction), screw the straight fitting of the dip tube with strainer RE255 onto the bulkhead adapter RE252.

Under the plate, under the outlet marked R (return), screw the straight fitting RE251 assembled on the aluminium tube RE260 onto the bulkhead adapter RE252.



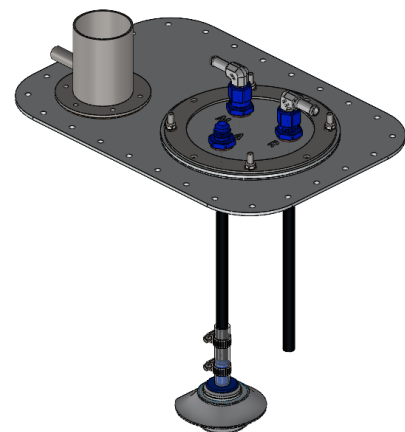
Note: the black aluminium tube being quite malleable, it can be bent by hand to orient its outlet so that the fuel flows very close to (or onto) the strainer to be immediately re-sucked.



Note: under the plate, nothing is screwed under the outlet marked "M" (vent).

Above the plate, on the outlets marked R (Return) and M (Vent), screw the two 90° female dash-6/8mm push-on fittings RE253. The 8mm outlet of the return should point to the right, the 8mm outlet of the vent should point to the left.

NB: do not tighten them immediately to be able to correctly position the 8mm outlets when connecting the hoses to them.



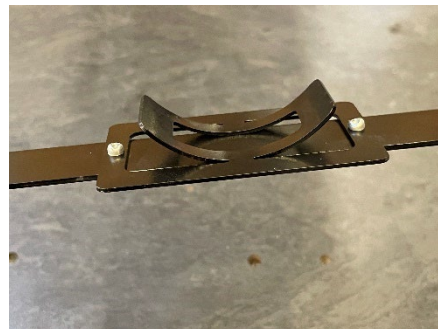
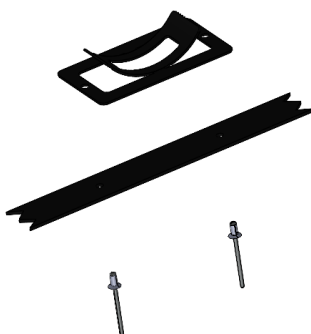
Before refitting the main plate RE206 thus equipped to the tank:

- Ensure that the 2 tubes fall correctly into the ant-surge box of the tank,
 - Ensure that the strainer filter does not touch any of the vertical walls of the buffer box,
 - The spring inside the strainer filter should be slightly compressed so that the suction is as close to the bottom of the tank as possible,
- ➔ It may be necessary to readjust the position of the anti-surge box in the tank.

- The dip tube has been delivered to you at the correct length, but if necessary, it is possible to adjust the height of the strainer filter on the tube by a few mm by reasonably adjusting the position of the translucent tube held by a clamp on the aluminium tube.

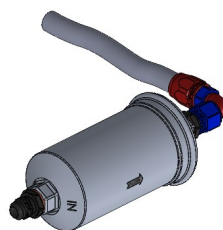
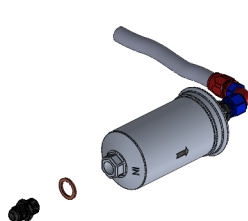
Once all this has been checked, re-fit the main plate RE206 to the tank.

On the left tank strap, rivet from below the pump bracket RE220 using the two rivets D3.2x8 RE216 provided, into the existing holes, exactly like the filter support is originally riveted on the right strap.

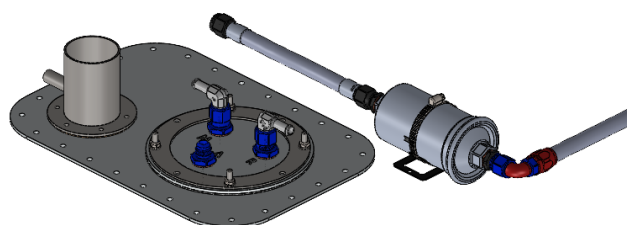


Re-fit the fuel tank casing cover RE221 as well as the fuel tank straps RE219.

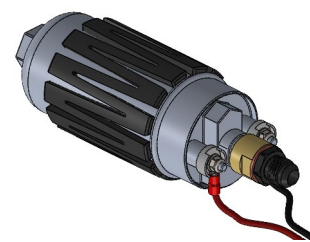
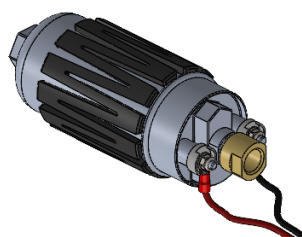
On the inlet of the fuel filter from which the banjo fitting from the original hose has been removed, screw-in the adapter RE3014 with a copper seal D14 ES204 to ensure sealing between the adapter and the filter.



Screw the hose RE251 onto it, which connects the pump to the filter.

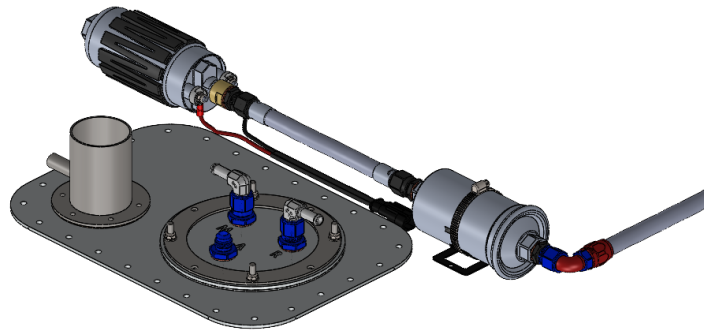


Take the fuel pump. In its box, there is a male/female adapter in yellow brass or zinc-plated steel, and a copper washer. If not already done, screw this adapter into the pump outlet using the copper washer for sealing. Then, screw the adapter ES202 from the kit into the female thread of this adapter, using the copper washer D12 ES214 for sealing.

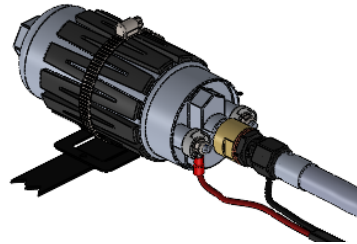


Screw the other fitting of the hose RE251 onto this ES202 adapter. Once this is done, the pump can be positioned on the pump support. If necessary, readjust the position of the filter on its bracket.

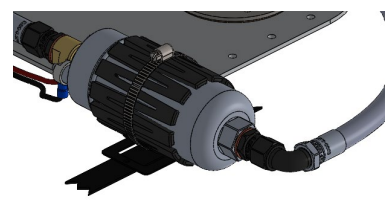
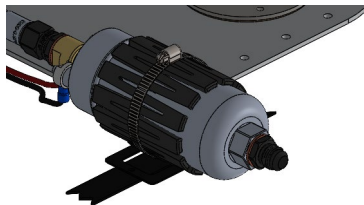
NB: Keep the rubber protection around the pump; it absorbs vibrations and thus will preserve the pump over time.



Once the pump is in place, secure it to its bracket with the Jubilee clamp D40-60 EQ3022.

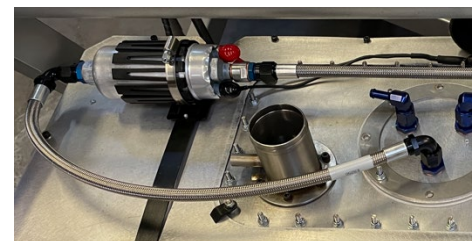
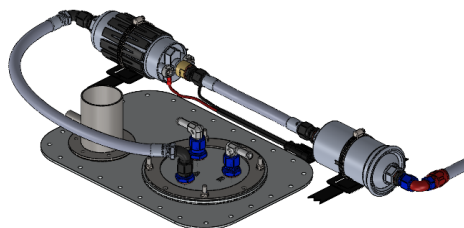


Screw an adapter RE3014 with a copper washer D14 ES204 for sealing into the inlet of the fuel pump, then screw the hose ES250 onto this adapter without tightening the fitting to be able to position the hose once connected to the fuel tank plate.



NB: The 90° fittings of the hose ES250 can be delicately oriented relative to their ferrule crimped on the hose, to give them an ideal position for assembly.

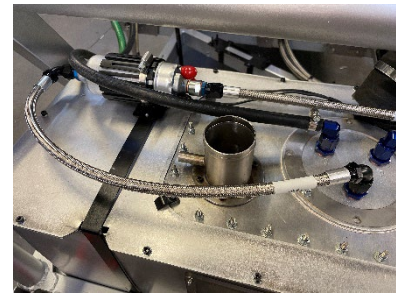
Screw the other end of the hose ES250 onto the outlet of the additional plate positioned at the rear (marked "A"). Once the hose is correctly positioned, tighten the fittings.



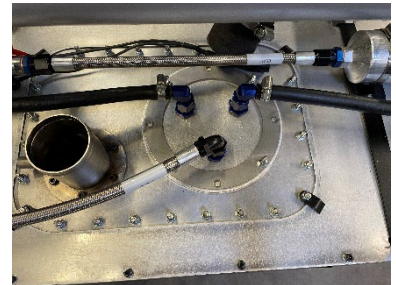
Fit the rubber (nitrile) return hose onto the 90° fitting diameter 8mm screwed onto the plate on the right hand (marked "R"), and secure it with a Jubilee clamp D8-16 ES210.



Fit the rubber (nitrile) vent hose onto the 90° fitting diameter 8mm screwed onto the plate on the left hand (marked "M"), and secure it with a Jubilee clamp D8-16 ES210.

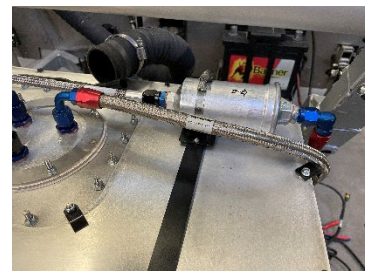


Once the return and vent hoses are connected and properly positioned, tighten the 90° fittings RE253 on the bulkhead adapters RE252.



Aparte

On some cars, depending on the available length of the original stainless steel braided return hose, it is possible to directly screw the 90° fitting of this original return hose onto the plate. Thus, the section of rubber hose, the adapter between this hose and the stainless steel braided hose, the RE253 fitting provided in the kit, and the small Jubilee clamp become unnecessary.



But be aware that this may not be possible on all cars.

Pump Connection

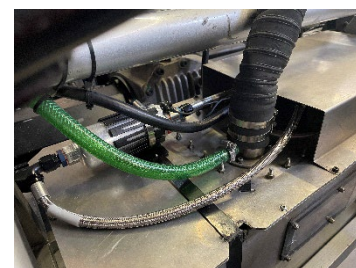
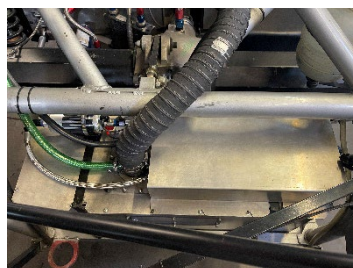
The pump is delivered already wired so that it can be directly connected to the harness of your Mitjet in place of the original pump.

If needed, the basic wiring harness ELC254 available as a spare part consists of a waterproof connector on the harness side, and 2 eyelet terminals on the pump side. The 4mm diameter terminal goes to the + of the pump, with the M4 Nylock nut D209 and washer M4 PT252, and the 5mm diameter terminal goes to the - of the pump, with the M5 Nylock nut EQ233 and washer M5 P233.

Be sure to put the protective caps on the pump terminals to avoid any risk of short circuit.

Finishing

Replace the fuel tank protective cover RE222.



➔ **The kit is installed.**