

# Fitting Instructions

## Revo Stage 3 LPFP Upgrade Kit MQB

Fitting Difficulty



Dealer Fit Recommended

### Contents

Description	Quantity
Walbro 450 Fuel Pump	1
Fuel Filter	1
Fuel Pump Adaptor	1
Mount Adaptor 1	3
Mount Adaptor 2	1
Top Spacer	1
Bottom Pump Spacer	1
8.5mm ID Viton O-ring	1
16-14AWG Crimp Terminal	2
M5 x 16mm Button Head Bolt	6
6.5mm Drill Bit	1
7.5mm Drill Bit	1

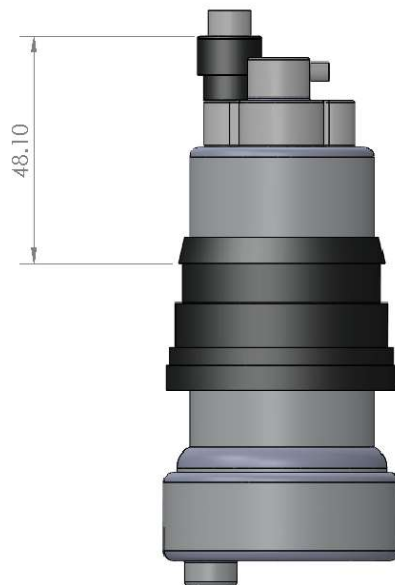
### Recommended Tools

Tools	Size
Flat Head Screw Driver	Small, Medium, Large
Hex Key	3mm
Club Hammer	
Long Nosed Pliers	
Wire Strippers	
Terminal Crimpers	
Side Cutters	
Air Drill	
Rotary Tool/Dremmel (or Sharp Blade)	



Before starting, please ensure that the battery is disconnected and the engine is cool. Engine temperatures can remain high for a substantial amount of time after use.

\*Before installation, please check the below dimension to ensure correct positioning and sealing of the O-ring. Please note that there will be a level of tolerance with the OE basket and as such some minor adjustments may be required to install the pump correctly, without issues. Below measurement of 48.10mm is +/-0.15mm.



<b>revo</b>		
TITLE: RV581M900700 Fuel pump dimension check		
SIZE	DWG. NO.	REV
<b>A</b>		
SCALE: 1:1	SHEET 1 OF 1	

5 4 3 2 1

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Installation was performed on a UK-spec. Mk7 Golf R 2.0TSI. Installation on other vehicles will be similar but may not be exact.

- 1 Remove the base of the seats from the rear of the vehicle by lifting the front of the seats and then unhooking the 2 x hooks that hold the rear seat in place.

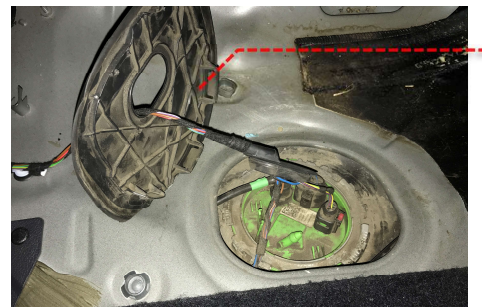
Note: this may vary slightly depending on the vehicle, refer to the workshop manual if unsure.



- 2 Remove the rubber grommet that protects the wiring going to the fuel pump.

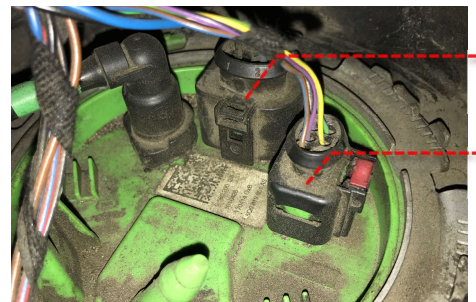


- 3 Now remove the hard-plastic cover by pulling up and sliding it towards the rear of the vehicle.



- 4 Remove the 2 x plugs from the fuel pump lid. The red tab will need to be pulled upwards to release the plug.

Note: you may need to use a screwdriver to release the red tab but be careful not to damage it.



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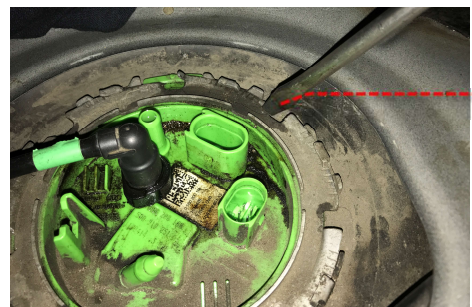
5 Now start the vehicle and allow it to idle until it stalls due to a lack of fuel, this may take a few minutes.

6 Disconnect the fuel line on top of the pump assembly by pressing down on the fitting, squeezing the release tabs and then pulling upwards.

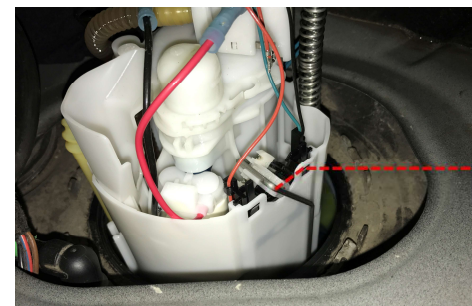
Note: the fuel line will still be pressurised so place a clean cloth around the fitting during removal, to absorb any excess fuel.



7 Using a large, flat head screwdriver tap the locking ring in a counter clockwise direction and remove the ring from the vehicle.



8 Using a small screwdriver, disconnect the float arm from the sender unit mechanism and remove the float from the vehicle.



# Fitting Instructions

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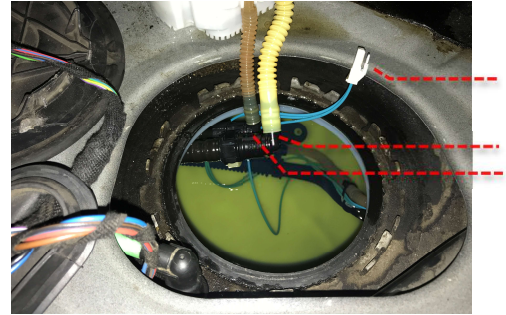
Fitting Difficulty



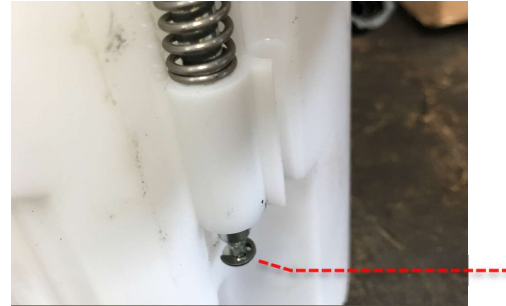
Dealer Fit Recommended

- 9 Remove the fuel pump assembly from the fuel tank and disconnect the 2 x fuel lines by pressing down on the fitting, squeezing the release tabs and then pulling upwards. Then disconnect the terminal at the bottom of the unit. The fuel pump assembly can now be moved to a suitable workspace for modification and assembly.

Note: it is advisable to allow the pump assembly to drain back into the fuel tank before moving it to a workspace.



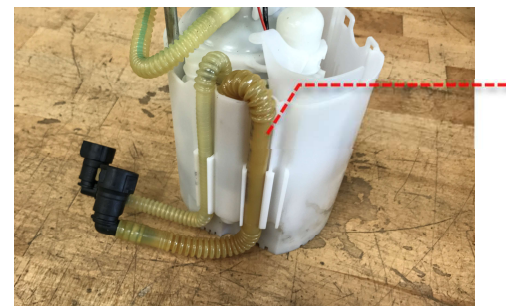
- 10 Press down the lid of the assembly and remove the C-clip that secures the lid in place using long nosed pliers.



- 11 Remove the sender unit from the basket by pushing in on the 2 x release clips and pulling the unit up.



- 12 Remove the plastic tube from the side of the assembly by carefully pulling it away from its clips and place the hose out of the workspace.



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## Revo Stage 3 LPFP Upgrade Kit MQB

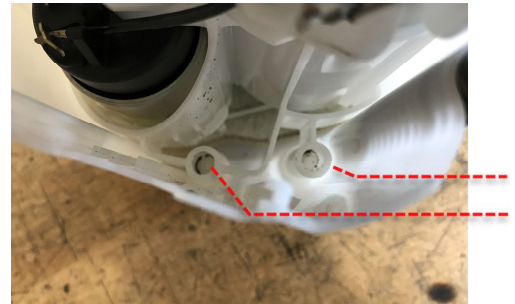
Fitting Difficulty



Dealer Fit Recommended

- 13 Using the 6.5mm drill bit supplied, drill through the 3 x plastic welds holding the internal assembly into the basket. See the picture in step 14 for the location of the third hole. Turn the basket upside down and repeat the process by drilling back up through the plastic welds.

Note: the basket plastic is extremely fragile and great care should be taken not to damage the basket. Make sure the drill bit goes through square and use a slow speed setting on the drill, taking time to clear any swarf at regular intervals.



- 14 Repeat step 13 but now using the 7.5mm drill bit supplied.



- 15 The internal assembly can now be removed from the basket and any excess material can be removed from around the drilled holes using a sharp blade. Now clean out the basket using an airline and a clean cloth.



- 16 Remove the fuel line from the side of the basket by pulling it away gently. Now remove the venturi assembly by gently pulling upwards and remove from the basket.



# Fitting Instructions

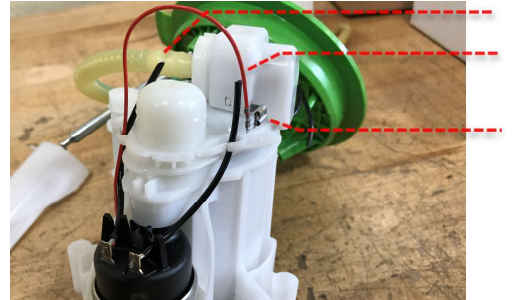
## Revo Stage 3 LPFP Upgrade Kit MQB

Fitting Difficulty

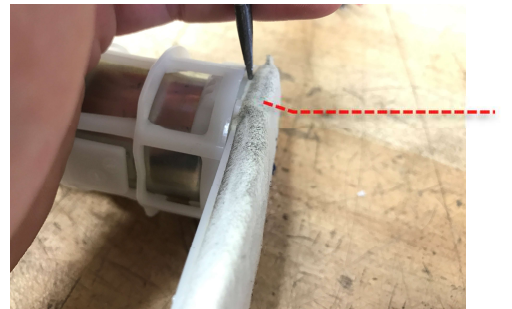


Dealer Fit Recommended

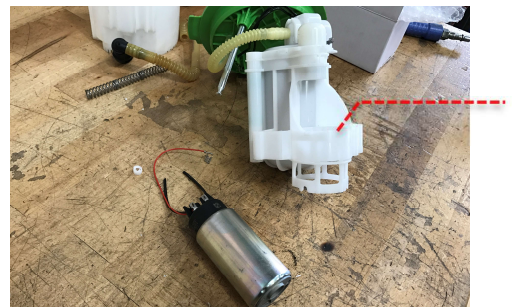
- 17 Using a pair of side cutters, cut the 2 x black wires that connect to the fuel pump. Next, remove the spade terminal as shown in the picture.



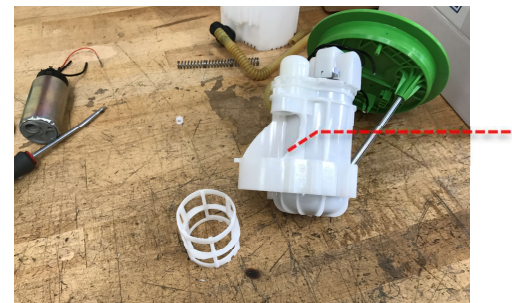
- 18 Using a small flat head screwdriver, remove the fuel filter from the bottom of the fuel pump.



- 19 Remove the fuel pump from the assembly by pulling it downwards.



- 20 Remove the plastic fuel pump holder from the assembly by unclipping the 3 x clips using a small flat head screwdriver, be sure not to damage the clips as they will hold the pump in later on.



## Fitting Instructions

### Revo Stage 3 LPFP Upgrade Kit MQB

Fitting Difficulty



Dealer Fit Recommended

- 21 Fit the new Revo mount adaptor 2 to the plastic piece on the venturi assembly.



- 22 Refit the venturi assembly back into the basket, gently press it back into place and check it is secure.



- 23 Refit the plastic hose back to the outside of the basket by pressing it into its clip.



- 24 Refit the second plastic fuel hose to the outside of the basket in the same method as the first hose.



## Fitting Instructions

### Revo Stage 3 LPFP Upgrade Kit MQB

Fitting Difficulty



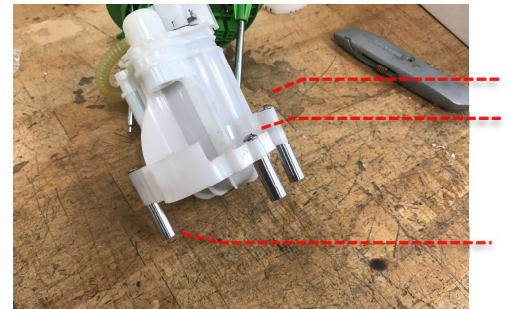
Dealer Fit Recommended

- 25 Using a marker pen and the picture to the right, mark up the basket and use a rotary tool or sharp blade to cut away the plastic, as indicated.

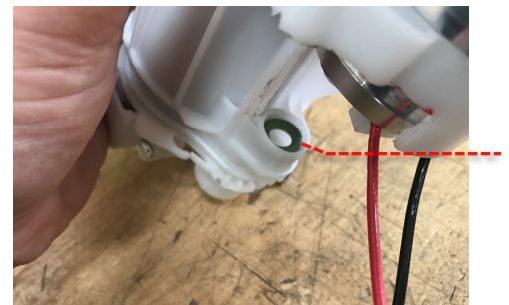


- 26 Fit the 3 x new Revo mount adaptors to the basket and secure with the 3 x M5 bolts.

Note: the bolts do not need to be very tight, screw them in by hand and then use a 3mm hex key to tighten ¼ turn.



- 27 Using a small flat head screwdriver, remove the OE O-ring from the assembly and place to one side. Failure to remove this O-ring will result in incorrect seating of the new pump.



- 28 Fit the Revo fuel pump with the adapter installed, as shown, into the housing, pushing it in until it clicks into position, see step 29.





# Fitting Instructions

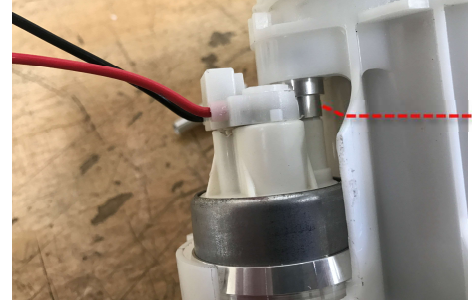
## Revo Stage 3 LPFP Upgrade Kit MQB

Fitting Difficulty



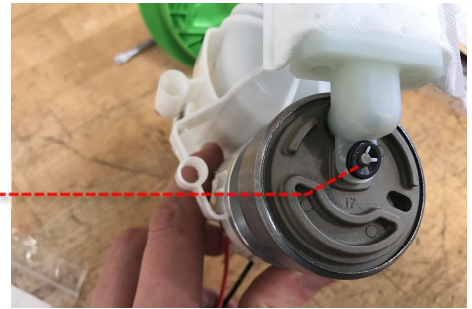
Dealer Fit Recommended

29 Make sure the new O-ring fits tightly into the top of the housing, as shown in the next picture. As highlighted at the start of the instructions this may take some minor adjustments to seat perfectly due to tolerances on the OE housing.

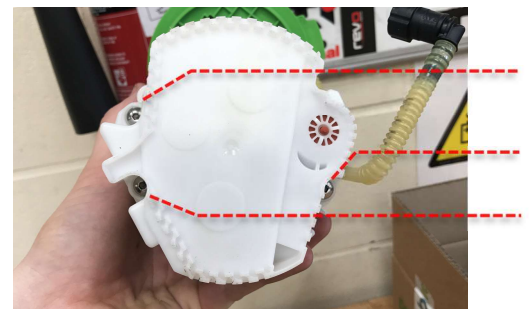


30 Fit the new fuel filter to the bottom of the fuel pump and secure in place with the supplied clip.

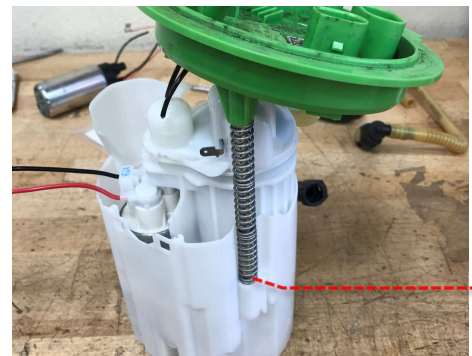
Next, place the spacer plate into the base of the pump housing in the orientation shown. As you reassemble the pump the new LPFP unit will locate in the slot.



31 Fit the internal assembly back inside the bucket and secure from the underside using the remaining 3 x M5 bolts. Once again tighten by hand and then use a 3mm hex key to tighten a ¼ turn. You should feel the pump assembly clamping down on the spacer plate, it is designed to apply pressure to the fitting on the O-ring so ensure it is tight, but don't over tighten.



32 Refit the top of the unit, making sure the spring is reinstalled. Secure in place using the C-clip.



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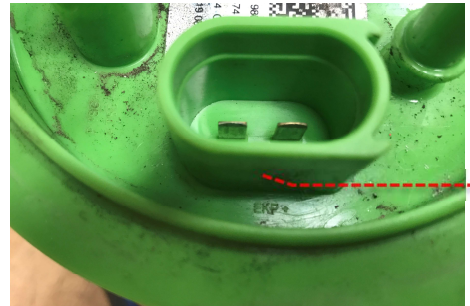
Dealer Fit Recommended

- 33 Refit the sender unit making sure it clicks securely into place and that the arm can move freely with no interference.

Note: if the sender unit is tight going back in or the arm cannot move freely, more of the bucket may need to be trimmed off. If this is the case reverse the last steps and remove some more of the bucket, reassemble and check the fitment again.



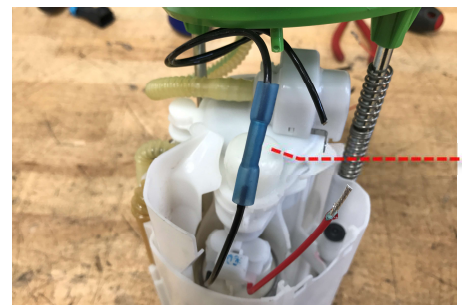
- 34 Inspect the fuel pump assembly lid to identify which wire is positive and which is negative that lead to the plug.



- 35 Strip around 10mm of coating from the end of the 4 x wires on the unit (2 from the lid and 2 from the new fuel pump).

- 36 Using the terminals provided, connect and crimp the positive (red) from the fuel pump to the positive wire from the lid. Repeat for the negative (black) from the fuel pump to the negative from the lid.

Note: the male spade terminal that was used for the old fuel pump is no longer used for the Revo fuel pump upgrade.



## Fitting Instructions

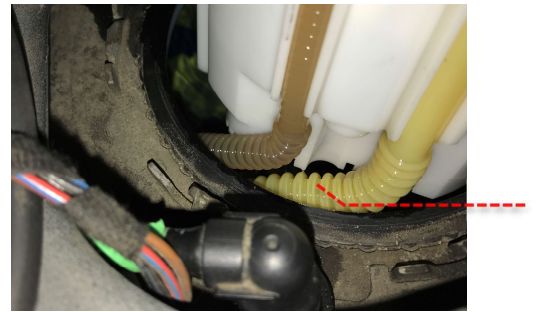
### Revo Stage 3 LPFP Upgrade Kit MQB

Fitting Difficulty



Dealer Fit Recommended

- 37 Place the pump assembly next to the opening for the fuel tank and reconnect the fuel lines and connector in reverse of removal. Make sure the connections are secure.



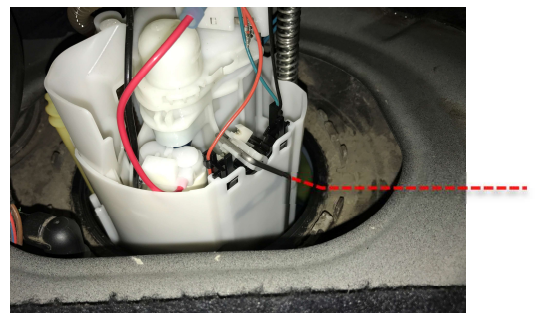
- 38 Refit the O-ring over the fuel lines and secure in place around the opening to the fuel tank.



- 39 Place the fuel pump assembly into the fuel tank, aligning the connector to the rear of the vehicle.

Note: refer to the photos at the beginning of these instructions for reference of pump orientation.

- 40 Insert the fuel float into the fuel tank and reconnect to the pump assembly.



## Fitting Instructions

### Revo Stage 3 LPFP Upgrade Kit MQB

Fitting Difficulty



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- 41 Make sure the pump is seated correctly in the tank and the tab is aligned in the correct position.



- 42 Reinstall the locking ring, using a large flat head screwdriver tap it into place.



- 43 Reconnect the top fuel line and electrical plugs making sure they are secure. Refit the cover and wiring grommet.



- 44 Refit the rear bench seat. Check over the installation making sure that everything is secure before you test drive. The vehicle may be slow to start the first time after installation as the fuel lines pressurise. Once the vehicle has started, leave it to idle until it reaches temperature and inspect under the vehicle for any leaks. Check for any engine management fault codes or warning lights on the dashboard, if all clear then perform a test drive. Your installation is now complete!

# Fitting Instructions

## Revo Stage 3 LPFP Upgrade Kit MQB

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### LPFP - LOW PRESSURE OR SPEED TOO LOW FAULT

If after installation of the updated LPFP there are any fuel pressure issues, the following guidance may assist with diagnosis.

**ISSUE – ENGINE LIGHT OR FAULT IN MEMORY:**

*14998 - fuel pump*

*P308D 00 [039] - Speed too low*

**ISSUE - LOW FUEL PRESSURE:**

*Fuel pressure drops under load*

*Fuel pressure isn't stable at idle and vehicle cuts out*

*NOTE: Fuel pressure shouldn't drop much below 5 bar at the low pump under full load/peak rpm*

**POTENTIAL SOLUTIONS:**

If there is a physical lack of fuel pressure then there is likely to be a fitting issue; make sure the fuel pump is seated and sealing correctly.

The most common cause for low fuel pressure and this fault are sealing issues.

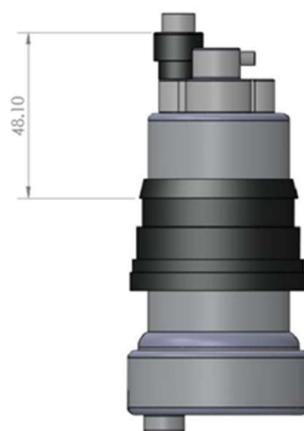
Make sure you removed the old O-ring from the pump housing before installing the new one supplied with the LPFP Kit and that the pump is correctly clipped into the housing and not loose.

Double check the pre-installed press fit bracket/sleeve against the dimensions in the installation instructions (and below) to see if it needs moving slightly on the pump body. These sleeves can be slightly 'off' due to tolerance issues with the pump body diameter and shape; make sure the measurements of the pump housing bracket are correct, if not you might need to knock the bracket up/down to suit.

If the pump installation and seal is correct the issue could be caused by the fuel pump controller.

*NOTE: Check fitment and sealing before replacing the controller.*

**\*Before installation please check the below dimension to ensure correct positioning and sealing of the o-ring, Please note that there will be a level of tolerance with the OE basket and as such some minor adjustments may be required to install the pump correctly without issues. Below measurement of 48.10mm is +/- 0.15mm.**



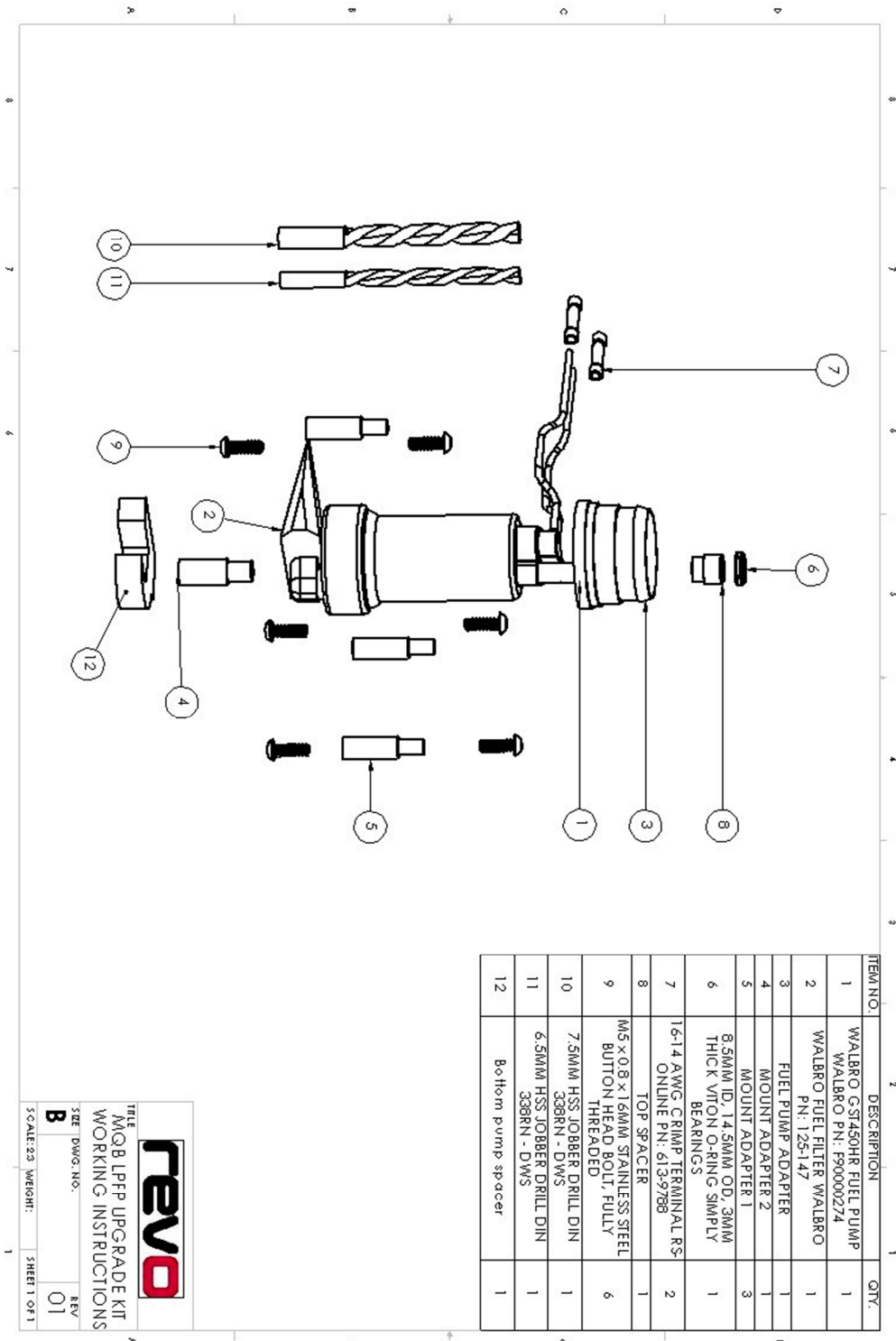
# Fitting Instructions

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**revo**

TITLE: MQB LPFP UPGRADE KIT  
WORKING INSTRUCTIONS

REV: 01

SHEET: 23 DWG. NO.: B

SCALE: 2:3 WEIGHT: SHEET 1 OF 1