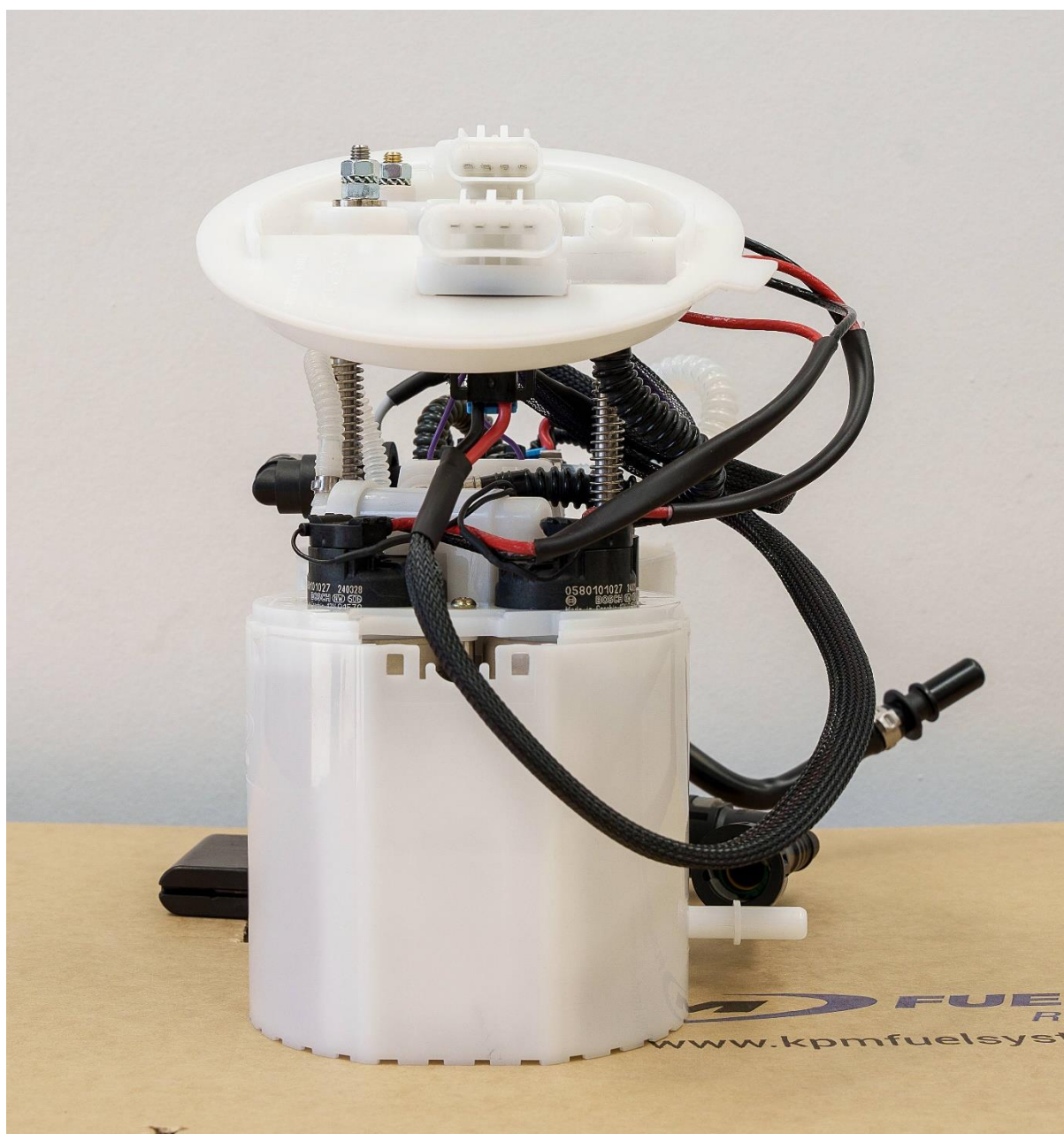


## **SRT Challenger/Charger/Demon 170 2022-2025 2200/2700HP Fuel System (Retaining OE Primary Fuel Module)**





## Important! Must Read First

Congratulations on the purchase of a KPM Fuel System for your 2022- [SRT Challenger/Charger/Demon 170](#) To ensure your fuel system is fitted correctly and operates perfectly and reliably we advise that this kit is to be fitted by a KPM Fuel Systems Dealer workshop.

If you are unable to access a KPM Fuel Systems dealer, we strongly recommend a professional and experienced fully qualified technician to install your new fuel system.

Ask your qualified installer to contact KPM Fuel Systems on any aspect not clear in the instructions provided.

Email: [support@kpmfuelsystems.com](mailto:support@kpmfuelsystems.com)

As a wide variety of skills, procedures, special tools, and workshop equipment is needed to install this kit:

- KPM will take NO responsibility or give NO guarantees on the operation of this product for fitment not carried out by a KPM Fuel Systems dealer or experienced qualified technician.
- KPM will take NO responsibility or give NO guarantees on the operation of this product due to not fitting this kit exactly as per the instructions provided.
- Ensure correct workshop safety procedures are carried out in fitment of this kit.
- Please read ALL instructions before commencing fitment

## Guarantee

On satisfaction that ALL instructions have been followed as per this document KPM will warrant this KPM Fuel System against any defects or faults for 12 months from the date of purchase.



## Important

This fuel system is engineered to operate perfectly as a complete system, when used with all components as supplied only by KPM Fuel Systems.

Depending on the level of KPM Fuel System you have purchased, included in the kit will be the following;

- 1) KPM 800hp Fuel Module x1 – 2200HP Kit Secondary (for ultimate flow and capacity)  
or
- 2) KPM 1500hp Fuel Module x1 – 2700HP Kit Secondary (for ultimate flow and capacity)
- 3) KPM PWM Controller and wiring kit
- 4) KPM High flow Fuel Hose kit

- KPM Fuel Systems will take NO responsibility for the operation of this fuel system if any of the components listed are not utilized with this package.
- KPM Fuel Systems will take NO responsibility for the operation of this fuel system if any of the components listed are replaced with a non-KPM approved component.
- KPM will take NO responsibility for the operation of this fuel system if used on a vehicle NOT fully retrofitted for E85 Ethanol or flex fuel.

**Note: E85 Ethanol is highly corrosive on many components.**

Please be aware that if your car is NOT built for E85 Ethanol from manufacturer, it may be possible that components **NOT** supplied by KPM Fuel Systems will also need to be replaced or suited for E85 Ethanol. (Examples of some possible non-compatible components - are fuel injectors, fuel filters, fuel lines, rubber hoses, fittings etc.)

**All KPM Fuel System components are 100% Ethanol and Gasoline compatible.**



## Before Dismantling

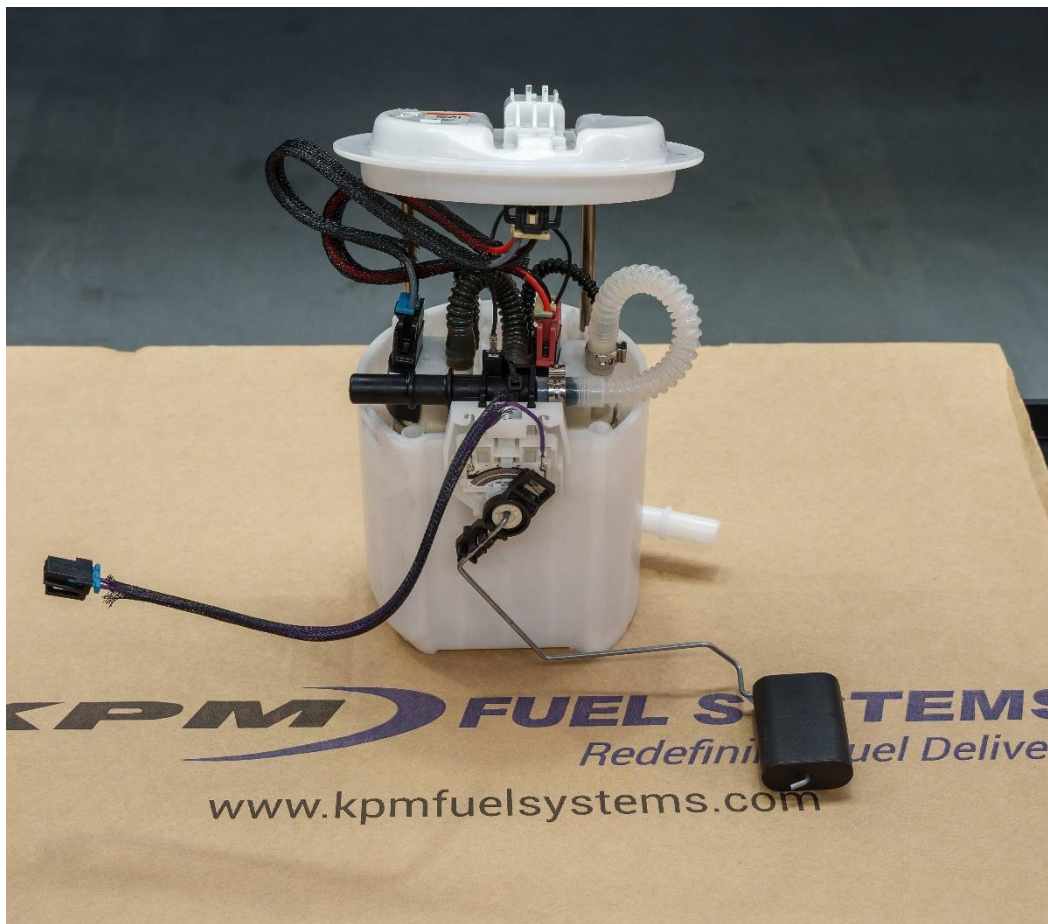
- You will need to reduce residual fuel pressure in the fuel system to 0 kPa to enable disconnection of fuel lines.
- You can do this by removing the fuel pump fuse and running the engine until fuel pressure drops to 0 kPa.
- Disconnect the Battery.

## Primary Fuel Module Removal

- 1) Drain the fuel tank.
- 2) The vehicles fuel tank needs to be removed to access the in-tank fuel modules. You will need to remove the fuel tank from your vehicle as per the manufacturer's instructions.
- 3) Remove the fuel lines from the **PRIMARY** fuel module (a quick disconnect tool is recommended for disconnecting fuel lines, take extra care in not crimping/damaging the fuel line on removal). Remove the electrical connectors from the module.
- 4) Remove the **PRIMARY** retaining ring holding the fuel module to the tank with the correct tool.
- 5) Lift the **PRIMARY** fuel module from the tank until you can access and remove the 1 crossover pipe fitting from the bottom of the canister and the 1 fuel feed pipe fitting from the fuel module outlet.



6) Carefully lift the **PRIMARY** fuel module completely from the fuel tank.



## OE Primary Module Disassembly and Retrofit

The KPM 2200/2700HP fuel systems are designed to correctly scavenge fuel from both sides of the SRT saddle style fuel tank as per the OE system.

KPM have designed an ingenious internal crossover system that links both the primary and secondary modules together ensuring that the fuel modules are always full of fuel even when the fuel tank is near empty.

This requires the OE Primary module to be partially dis-assembled and to be retrofitted and linked together with the KPM Secondary 1500HP fuel module.

The OE module working together with the KPM module can supply up to 2700HP of fuel safely even with a near empty fuel tank. For correct operation it is important that the crossover pipes, fuel sender and link-bar are installed correctly and carefully as per the instructions below.

- 1) Disconnect the 2 wiring connectors from the OE fuel pumps.
- 2) Remove the OE module lid from the rest of the module assembly.
- 3) Discard the OE lid and wiring connectors
- 4) Disconnect the fuel sender connector from under the OE fuel module lid, and remove the fuel sender assembly from the module pot. Do not discard.



- 5) Cut the cable tie that holds the fuel feed connector to the fuel sender bracket.



- 6) Slide in and fit the new KPM extension bracket on to the OE fuel sender bracket as pictured.

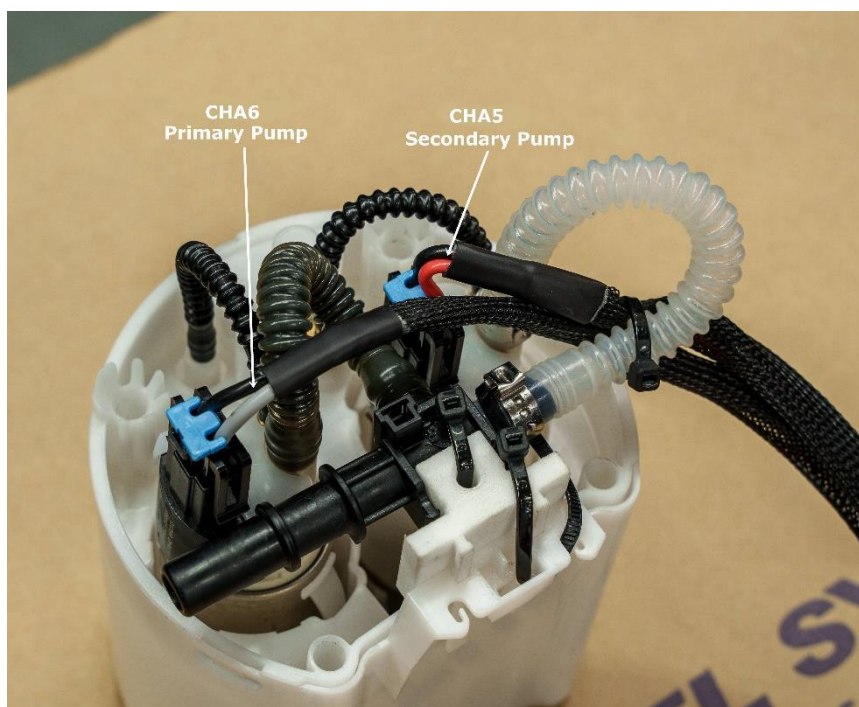


- 7) Support the OE fuel feed connector to the KPM extension brackets with 2 cable ties.



- 8) The KPM fuel module will be assembled with the following looms. Remove them and fit as follows. Connect the supplied CHA6 (primary fuel pump) and CHA5 (secondary fuel pump) wiring looms to the OE pumps as pictured. Cable tie to the fuel hose as pictured.

**PUMPS WILL NOT WORK CORRECTLY IF PLUGS ARE ON THE WRONG PUMP.**

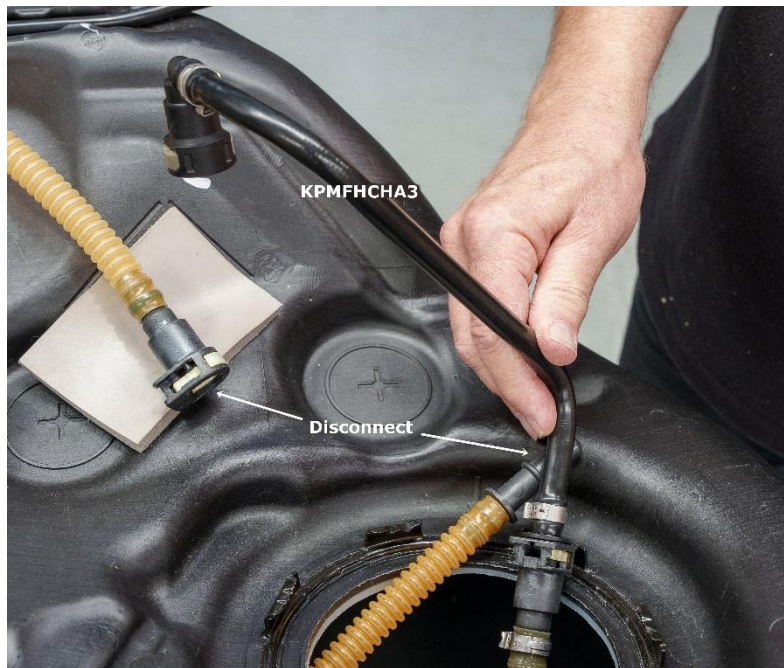


## **OE Primary Module and KPM Secondary Module Fitment**

- 1) Pull both the internal hoses out from the tank opening for access.
  - a) Yellow hose = siphon hose
  - b) Black hose = fuel supply/feed hose

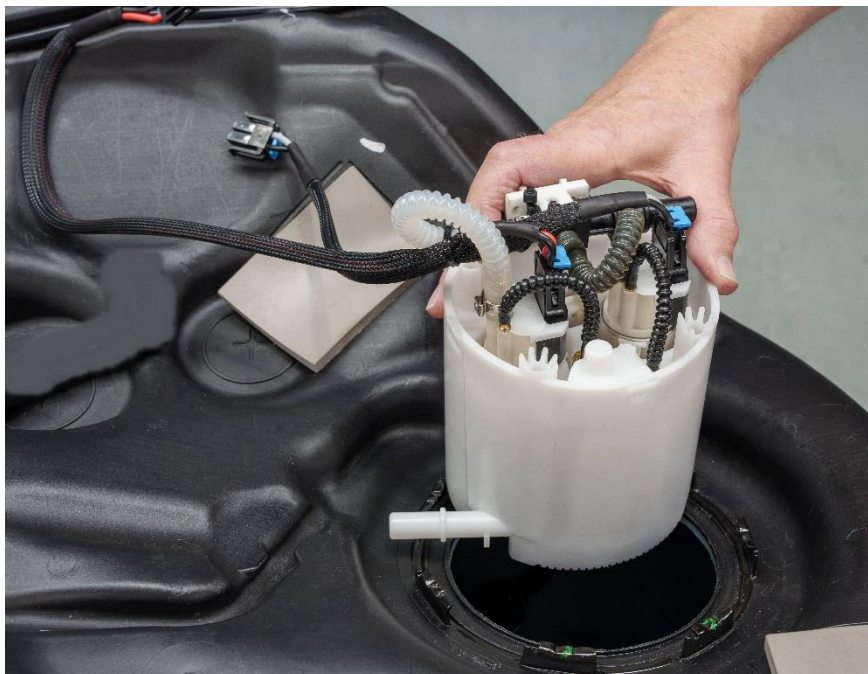


- 2) Disconnect the siphon hose extension at the fitting and discard the end that was removed.
- 3) Fit the supplied KPMFHCHA3 to the black hose connector as pictured.



- 4) Refit the both the siphon and supply hoses back into the tank loosely.

Proceed to fit the retro-fitted OE fuel module into the fuel tank ensure it sit flat on the tank floor.

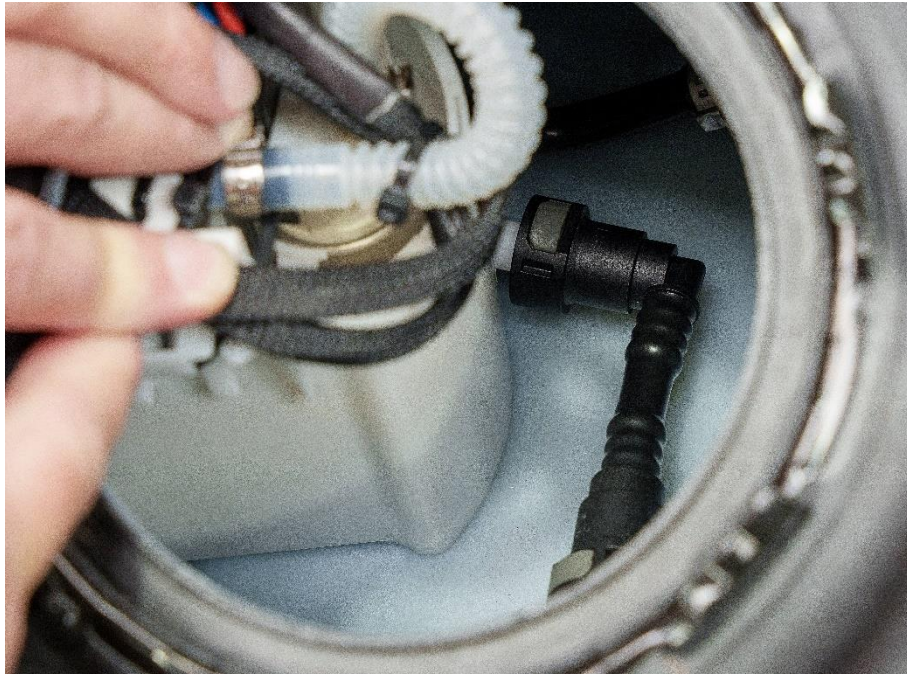


- 5) Refit the black supply hose onto the top feed connector of the fuel module.

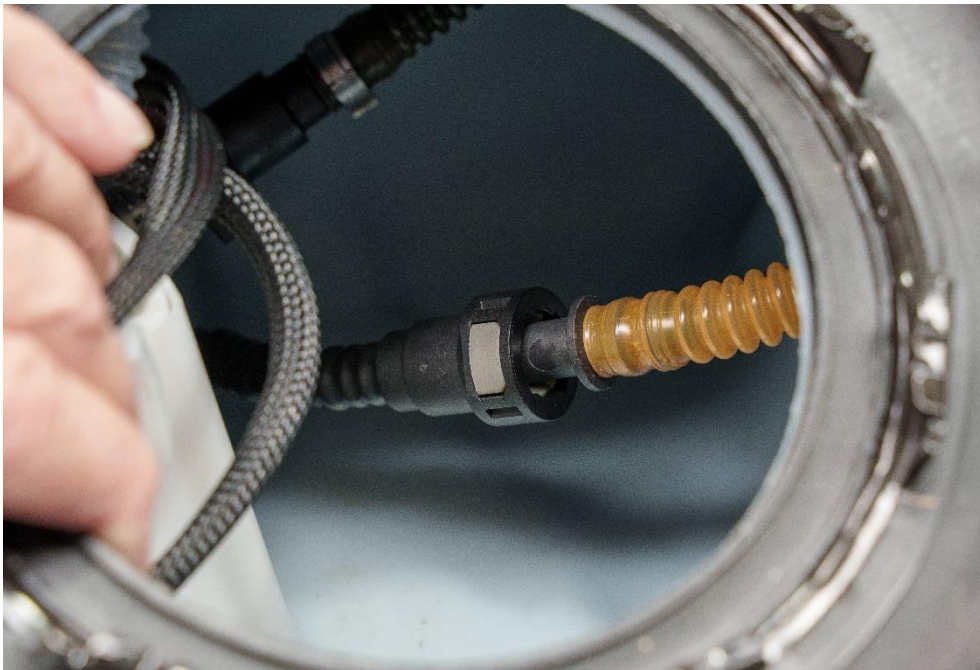


- 6) Fit the KPMFHCHA2 siphon hose adaptor onto the bottom outlet of the fuel module pot.





- 7) Fit the other end of the KPMFHCHA2 siphon hose adaptor onto the yellow siphon hose connector.



- 8) Move the OE fuel module towards the front of the fuel tank to allow access for the KPM Fuel module.

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9) Fit the KPM Fuel Module into the tank opening, while positioning it as pictured.

The following photos are shown with the top components removed for easier explanation



10) Replace the sender unit float and arm with the new supplied float and arm.



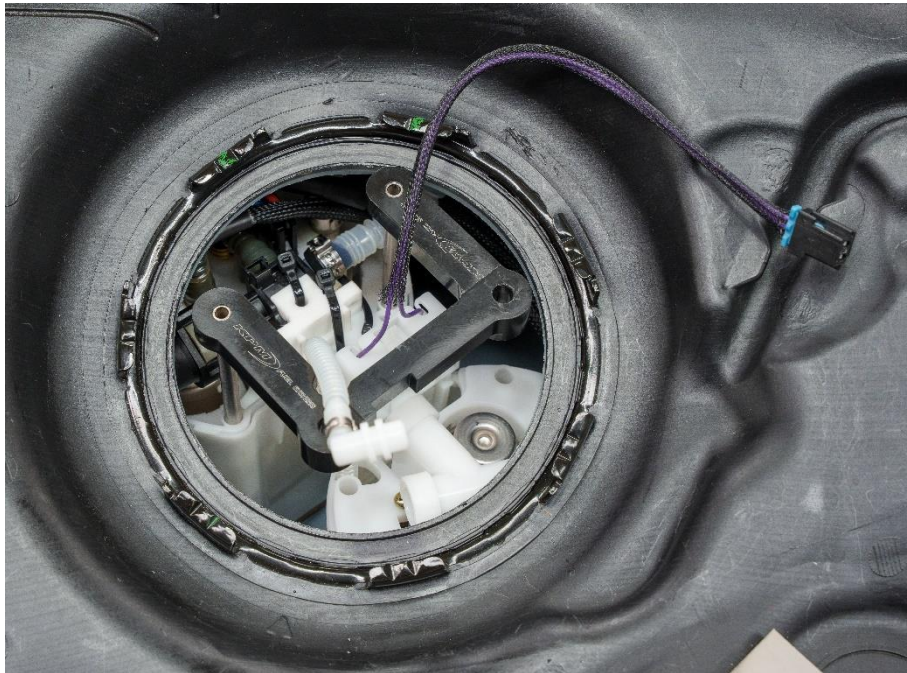
11) Ensure both the OE fuel Module and the KPM fuel modules are positioned in the tank as picture. Proceed to fit the fuel level sender assembly to the KPM fuel module.



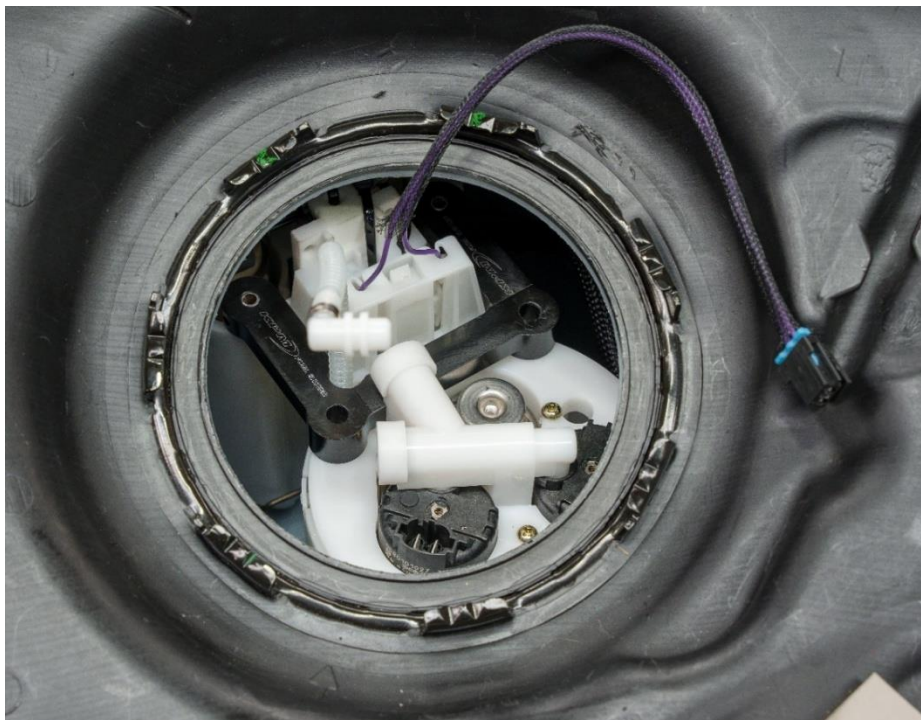
- 12) Ensure the fuel sender is clicked into the module sender bracket fully as shown.
- 13) Proceed to feed the KPM link-bar into the OE fuel module as shown.



- 14) Ensure the KPM module white feed hose is routed over the top of the link-bar as shown.



- 15) Push the link-bar firmly down all the way into the OE fuel module while lining up the holes on the KPM Fuel module.

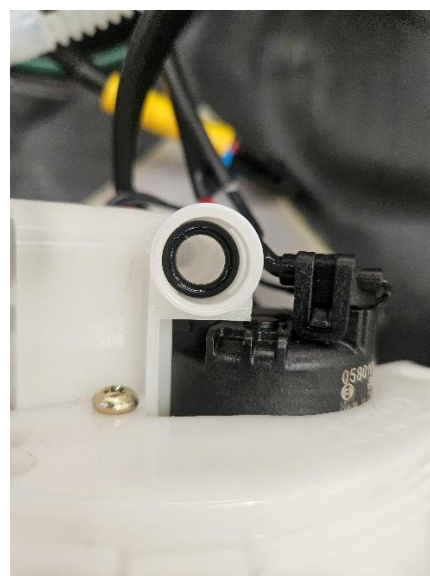
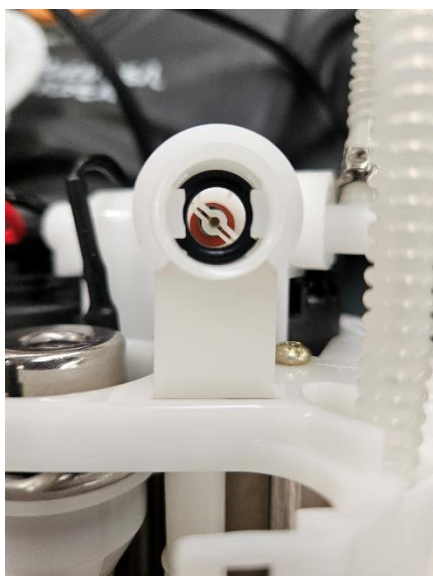


- 16) Remove the plastic clip from BOTH feed hose outlets.
- a) Main Feed Outlet
  - b) Siphon Feed Outlet



LEFT is the **MAIN FEED OUTLET** the check valve and 'o' ring should be assembled like this.

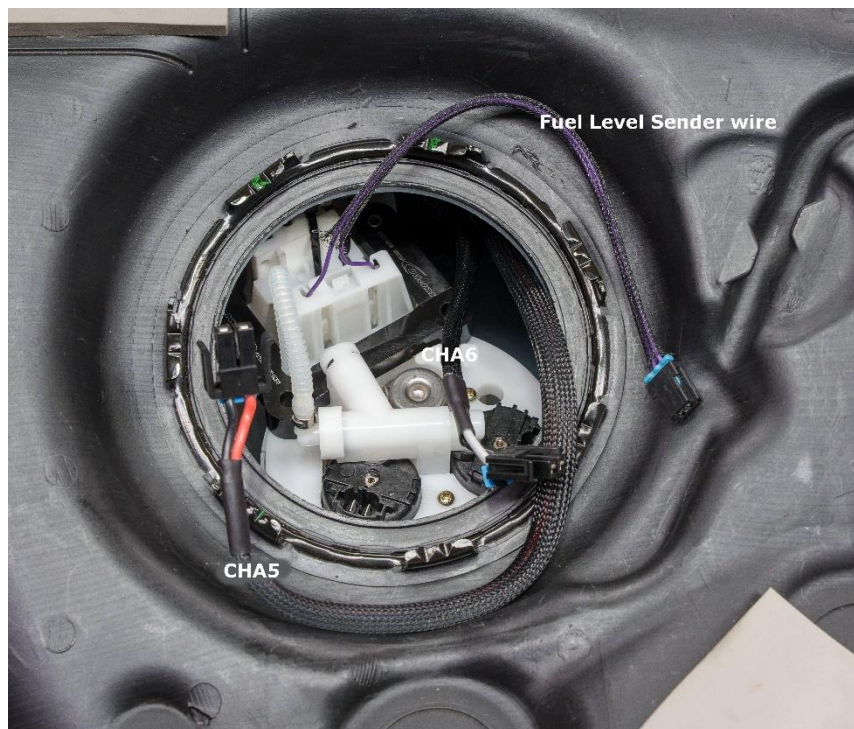
RIGHT is the **SIPHON FEED OUTLET** 'o' ring and behind it is a spacer.



- 17) Insert the Siphon Feed pipe fitting into the outlet and ensure it slides correctly and securely into the outlet and internal 'o'ring. Re-clip the feed pipe securely with the previously removed plastic clip.

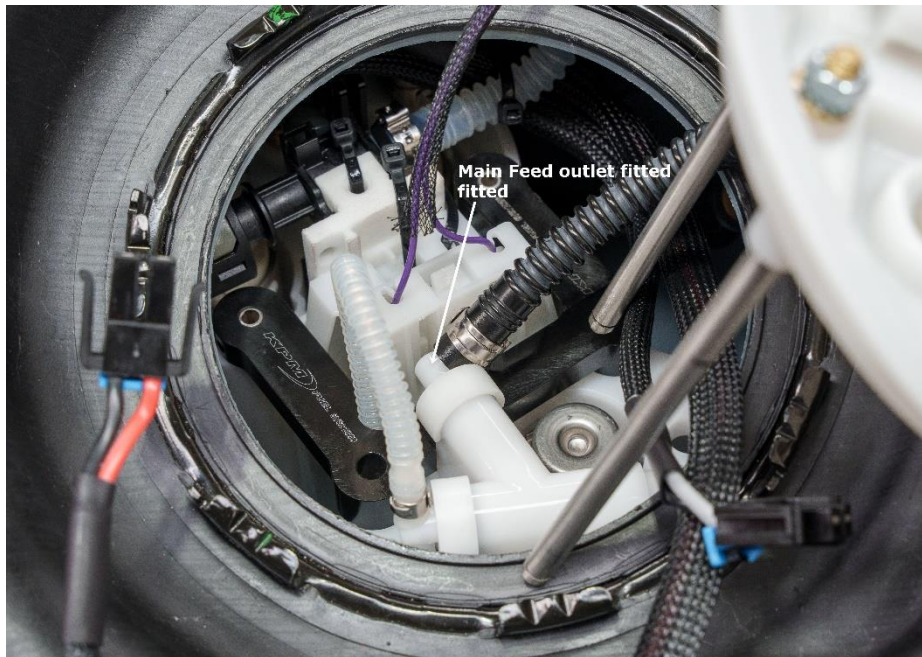


- 18) Pull the fuel level sender, CHA5 and CHA6 wiring loom connector ends out from inside the fuel tank before proceeding to fit to the underside of the new KPM fuel module lid.

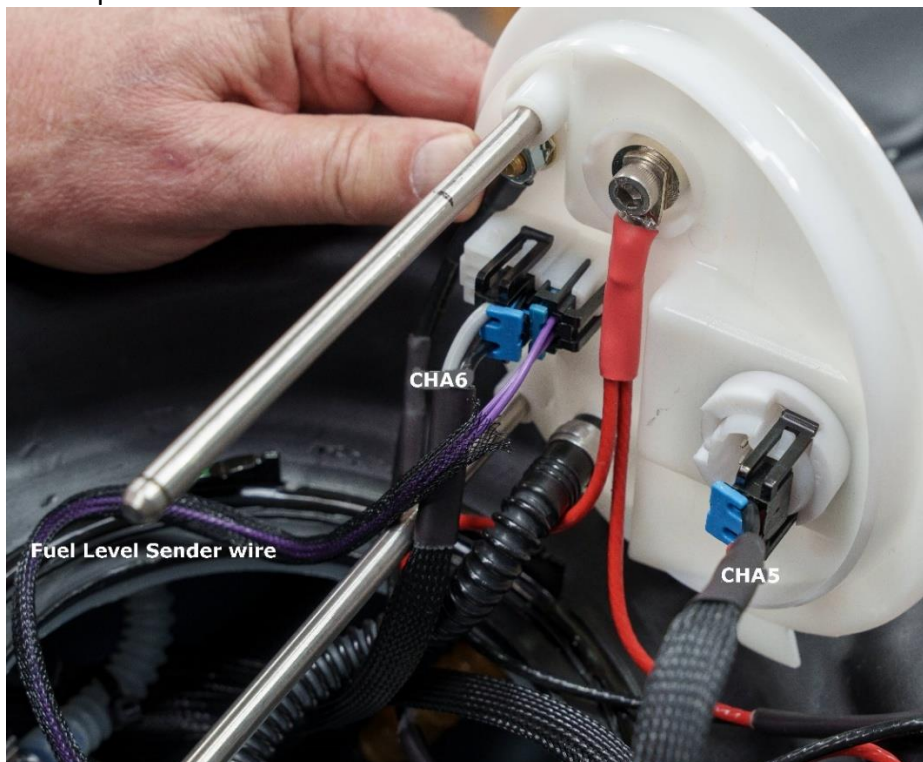


# KPM FUEL SYSTEMS

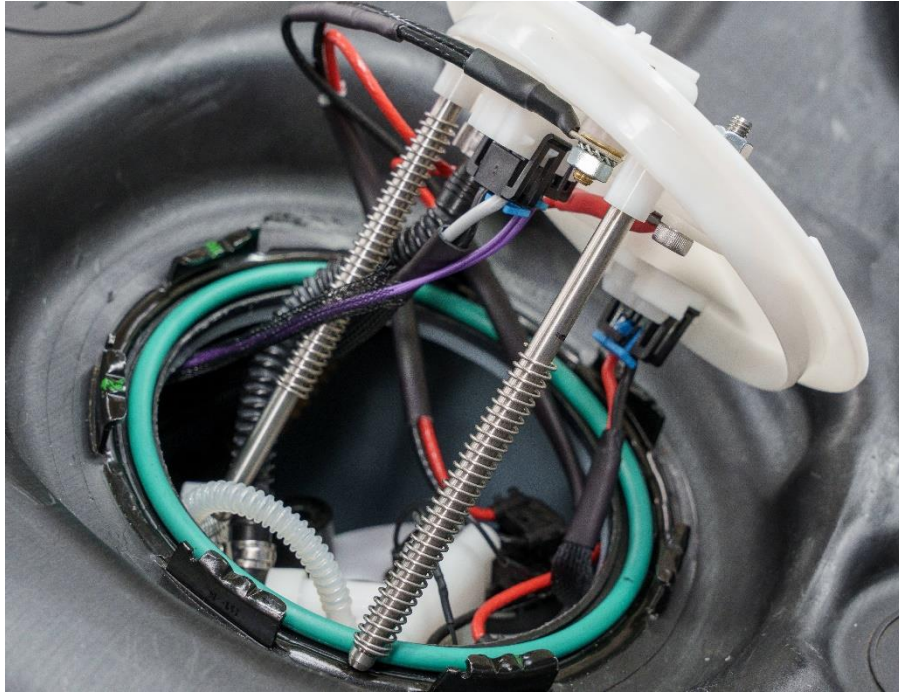
- 19) Fit the Main Feed pipe fitting from under the module lid to the Main Feed outlet at the module. Insert the Main Feed pipe fitting into the outlet and ensure it slides correctly and securely into the outlet and internal 'o'ring. Re-clip the feed pipe securely with the previously removed plastic clip.



- 20) Connect the Fuel Sender Wire , CHA6 and CHA5 to the underside of the module lid as pictured.



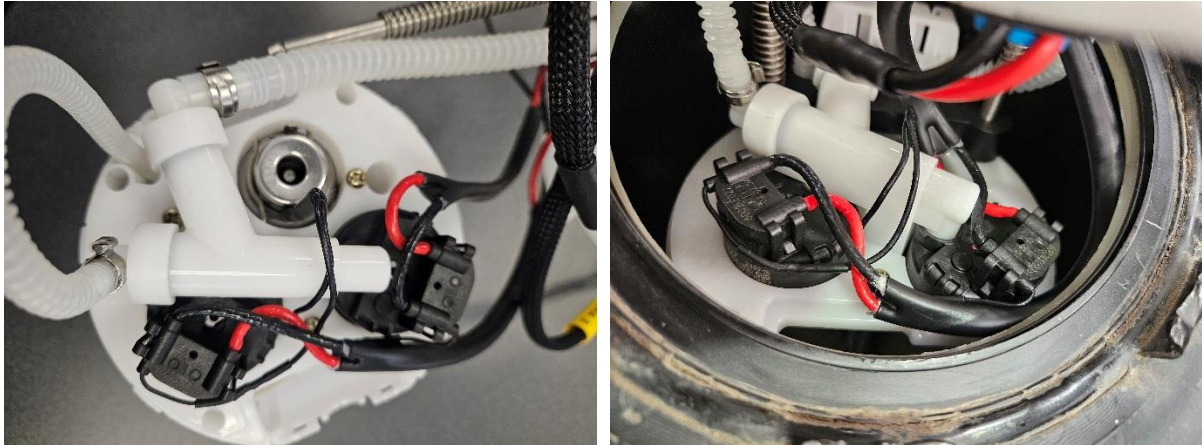
21) Place the tank 'o'ring on to the tank



Pictured below is the correct orientation of the hoses around the legs of the module.

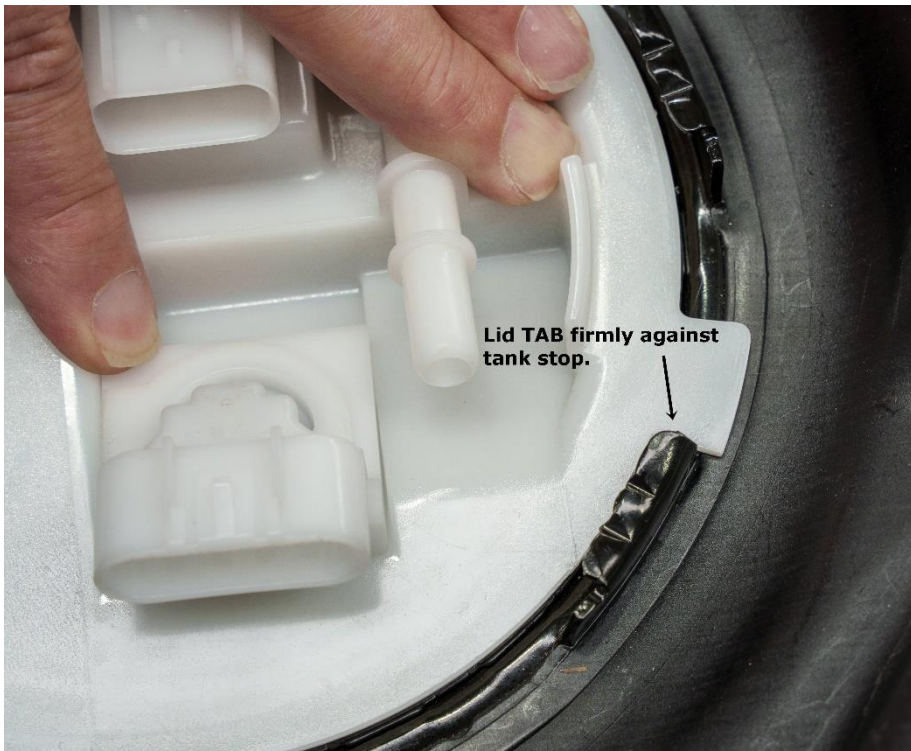


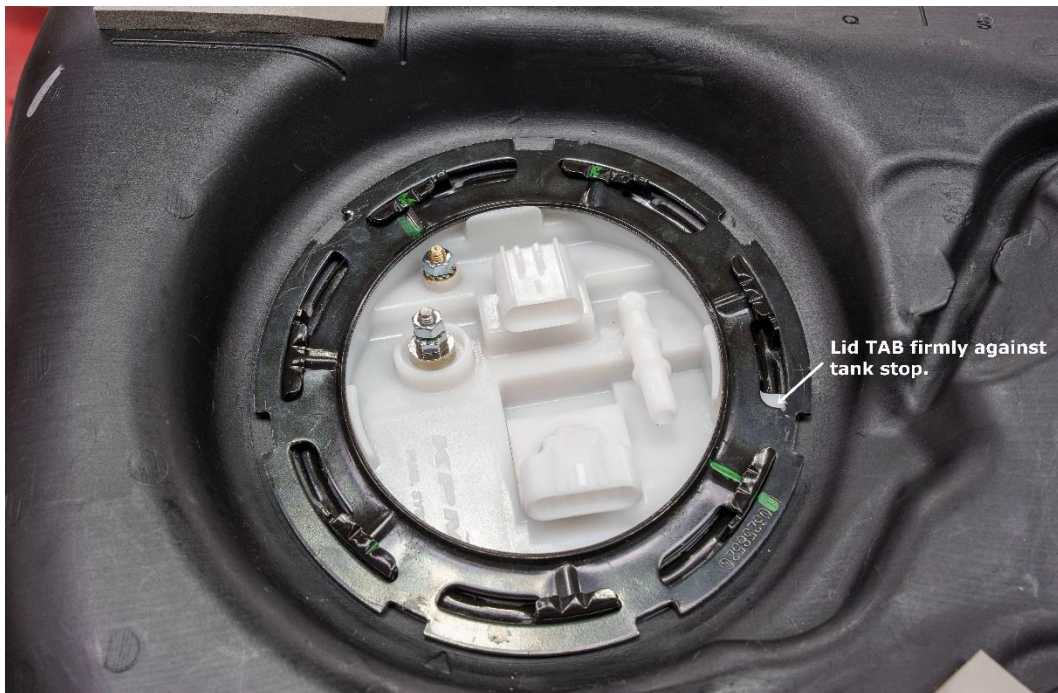
22) Ensure pump wires are routed like the following pictures to increase clearance



23) Continue installation of the module by gently compressing lid, there should be minimal resistance, if there too much resistance be sure to check fitment.

24) Refit the retaining ring with the correct tool. Ensure the KPM fuel module lid locating TAB sits in position against the tank locator stop.





## Fuel Tank fuel hoses and wiring re-connection

- 1) Disconnect the OE main fuel supply hose from the module lid and discard.



- 2) Connect the new #KPMFHCHA4 nylon fuel line on the KPM secondary fuel module and route along the fuel tank as pictured below.



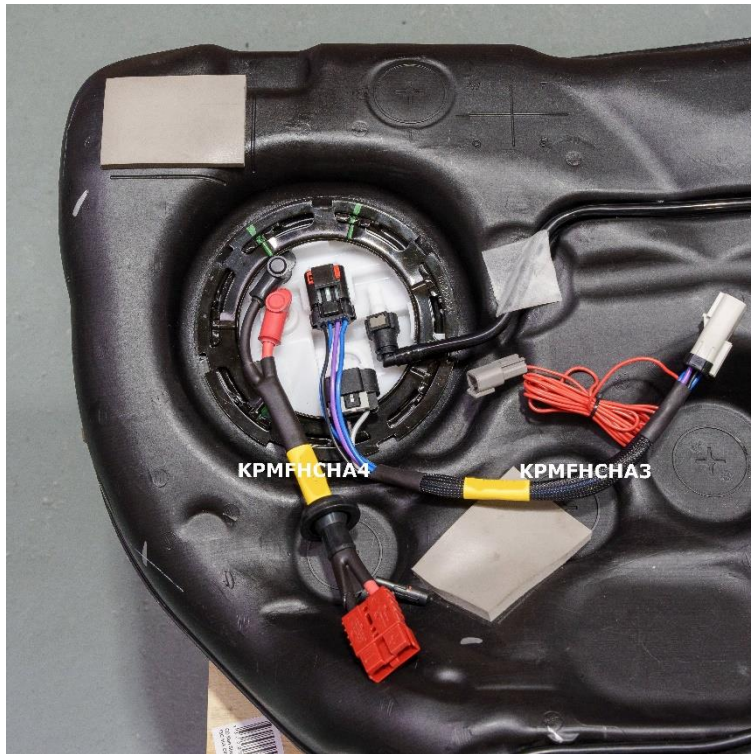
- 3) Connect the new KPMFHCHA1 primary/main fuel supply hose to the primary lid outlet as pictured.



- 4) Connect the new KPMFHCHA4 secondary supply hose to the KPMFHCHA1 primary quick connect fitting as pictured.



- 5) Connect the new CHA3 and CHA4 wiring looms to the secondary module lid as pictured.



- 6) Cut a 30mm diameter hole in the secondary side rubber floor grommet.
- 7) Remove the RED Anderson connector housing on the CHA4 wiring loom, so you can feed the 2 wires through the hole made in the secondary side rubber floor grommet.
- 8) Be sure to route the CHA4 wiring loom through the secondary side floor hole
- 9) Ensure you route the CHA3 red wire with Deutsche connector through the secondary side floor hole.
- 10) Reconnect the primary and secondary module connectors under car as standard.
- 11) Refit the fuel tank as per manufacturer's instructions



It is **VERY IMPORTANT** that the fuel lines are routed exactly as shown on the tank, firmly clicked together and securely held in the position shown with the provided adhesive tape.

Please clean the tank surface with the tank-prep supplied before adhering the adhesive.

- 12) Fit the grommet supplied to the wiring looms at the LH Rear floor and into the 30mm hole previously cut out.
- 13) Refit the RED Anderson connector housing.
- 14) When you have fully finished fitment of your fuel supply system **YOU MUST CHECK FOR ANY LEAKS BEFORE START UP**. Prime fuel lines while checking for leaks. If all ok start the vehicle and perform a thorough check under vehicle and at all fitting points. Run the vehicle until everything has been warmed and then re-check all fittings.

Congratulations! You are ready to go.



### **Further Instructions**

- 1) Please see your specific vehicle year/model **PWM and Wiring Fitting Instructions** to complete you KPM Fuel System installation.
- 2) To ensure maximum fuel supply as advertised you will require to replace the standard fuel line from the tank and all the way to the fuel rails with -8 fuel lines and fittings.