JEEP GRAND CHEROKEE & DODGE DURANGO 2012 -2021
800HP/1000HP FUEL MODULE

Important! Must Read First

Congratulations on the purchase of a KPM Fuel System for your 2012-2021 Jeep Grand Cherokee and Dodge Durango.

To ensure your fuel system is fitted correctly and operates perfectly and reliably we advise that this kit is 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

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 Fuel Module x1 - Primary (for increased flow and capacity)
2) KPM wiring loom and connector (for easy fitment of wiring to your factory loom)

- 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.

Standard Fuel Module Removal

1) Drain fuel tank.

2) The vehicles fuel tank needs to be removed to access the in-tank fuel module.
   a. You will need to remove the fuel tank from your vehicle as per the manufacturer's instructions.

3) Remove the fuel lines from the fuel module (a quick disconnect tool is recommended for disconnecting fuel lines. You can discard the OE fuel line as it will be replaced by the new #KPMFHJD4.
   a. Remove the electrical connectors from the module.

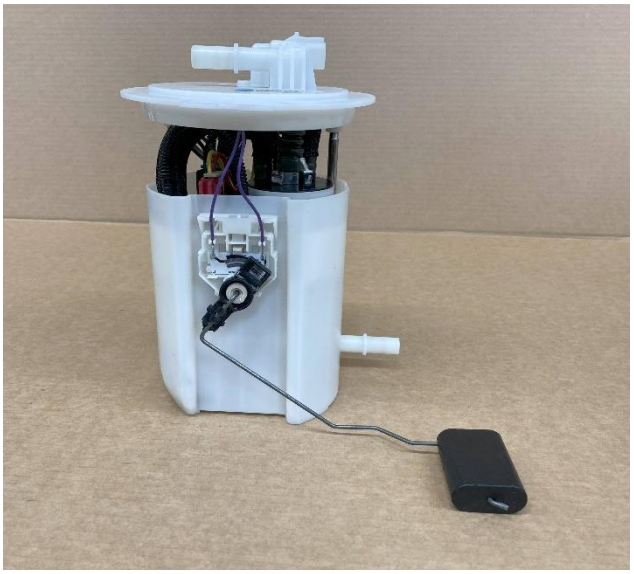
4) Remove the retaining ring holding the fuel module to the tank with the correct tool.

5) Lift the module from the tank until you can access and remove the crossover pipe connector at the canister base.

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

Float and Fuel Sender Electrical Connector adjustments.

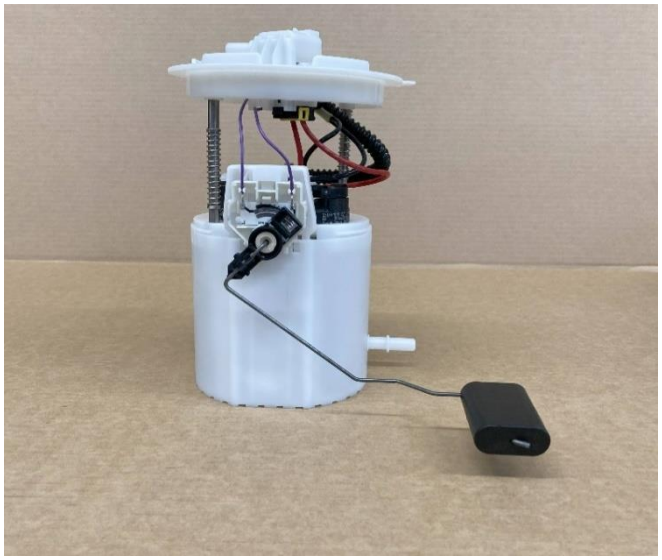
1) Place the OE factory fuel module on a bench allowing the float to swing freely. You will find the float travel should stop level with the bench.



2) Remove the fuel sender unit from the standard fuel module.

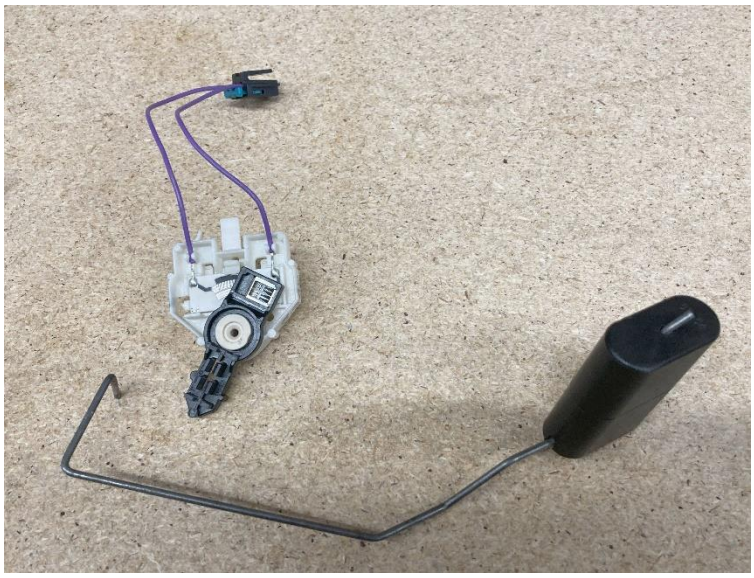
3) Fit the fuel sender and float assembly to the new KPM fuel module. Do not plug the fuel sender wire to the connector under the module lid as yet.

4) Make sure the KPM Fuel module is on a flat bench allowing the float to swing freely to its lowest position of travel.



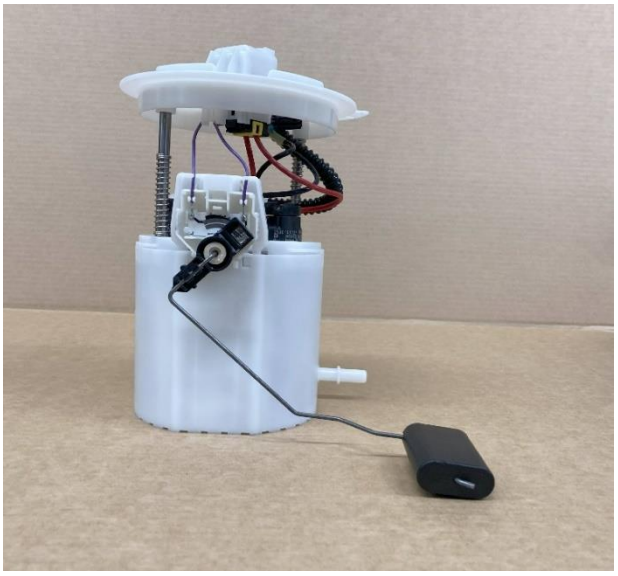
5) You will find that fitted to the KPM fuel module, the float travel stops slightly higher above the flat surface.

6) Carefully remove the float arm from the sender unit circuit board.



7) Bend the float arm in a vice by hand at the position shown.

8) Continue to re-check on the KPM Fuel Module until you set the float level with the bench as per the OE module.

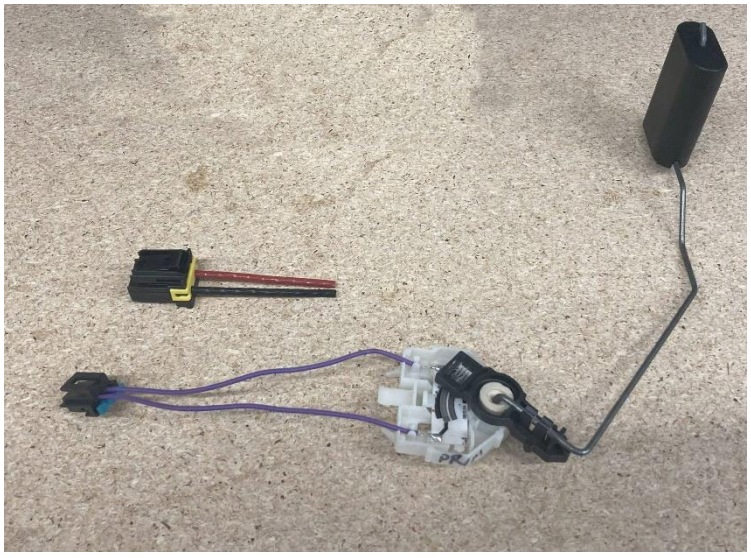


9) This position will allow your fuel sender to read from an empty tank all the way up to a full tank perfectly when fitted with your KPM Fuel Module.

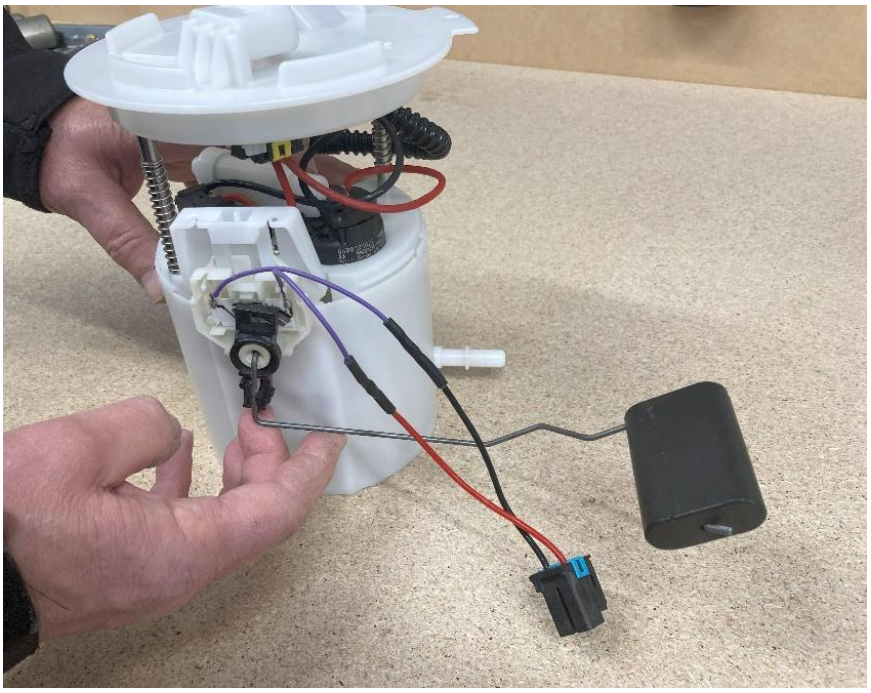
10) Remove the sender unit and float assembly from the KPM Fuel Module.

11) You will need to change the sender unit electrical connector to fit to the new KPM Fuel Module connection.

12) Using the new supplied connector and wire section as a template, cut the sender wire connector at the appropriate length.



13) Using the crimp connectors supplied, securely crimp the new wire section to the sender wires.
    a. It makes no difference on which purple OE sender wires you crimp the new section black or red wires to.



14) Do not fit your sender unit to the KPM fuel module as yet.

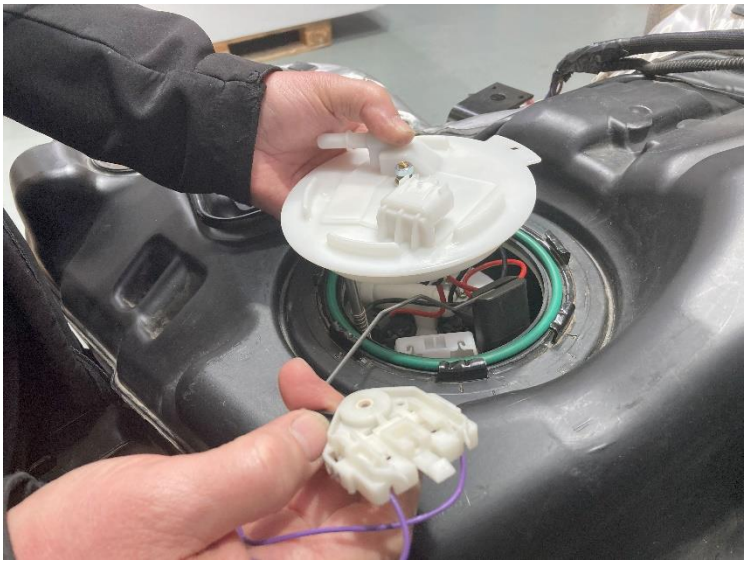
KPM Primary Fuel Module Fitment
800/1000 HP

1) Fit the supplied 3/8” to 1/2” adaptor to the crossover pipe outlet at the bottom of the new KPM Fuel Module canister.

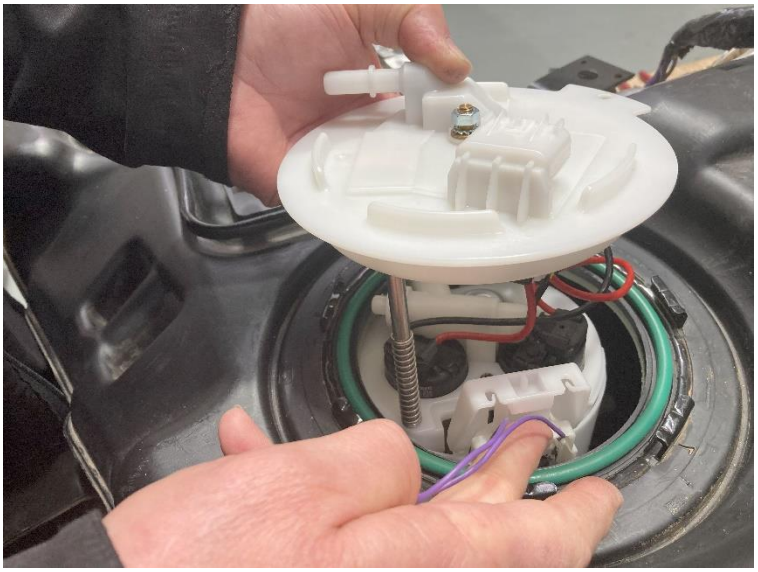
2) Ensure that you can access the crossover pipe connector in the fuel tank, with plenty of room to reconnect it to the base of the canister.

3) Ensure the Crossover Pipe Connector clicks fully onto the fuel module canister.

4) As you lower the KPM fuel module into the tank, also feed the fuel sender float assembly down into the tank as shown below.



5) While holding the KPM fuel module lid out from the tank, continue to carefully feed the float into the tank while using the fuel sender wires to guide the fuel sender into position.

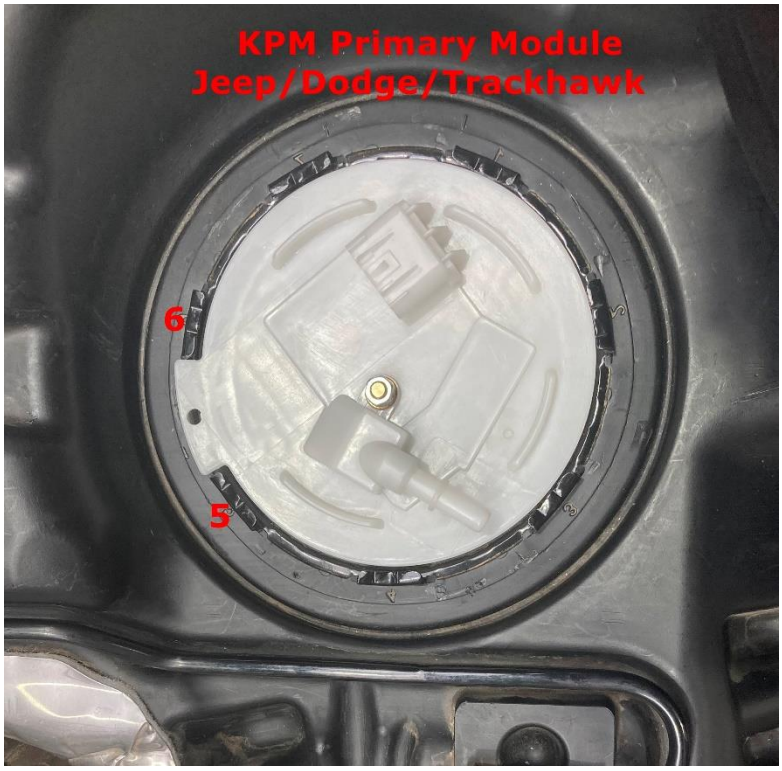


6) When the fuel sender is in position, use your fingers to firmly pull up and click the sender securely onto the fuel module.

7) Sit the fuel module O-ring seal in position on the tank.

8) You will find the numbers 1 to 7 molded into the fuel tank next to the corresponding retaining ring tab.

9) Sit the fuel module locating tab fully into the tank between locating tabs 5 and 6 as pictured below.



10) Re-tension the retaining ring to secure the fuel module into the tank with the correct tool.

11) Ensure module is sitting square and flush on the seal prior to tensioning.

12) Replace the nylon supply fuel line to the new KPM Fuel Module with the #KPMFHJD4 fuel line ensuring it has clicked on to the fuel module outlet properly.

13) Route the new #KPMFHJD4 fuel line as pictured and use the supplied tape to securely hold down unto the fuel tank.

14) Ensure you have properly cleaned the tank area with an alcohol or surface prep l prior to attaching the tape supplied.

15) Take extra care in not crimping/damaging the fuel line on fitment.

16) Fit the new patch loom #Jd4 inline patch loom between the KPM 800/1000 module and the factory loom connector.

17) Route the #Jd4 patch loom out the way as neatly as possible. so as to keep it

from fouling on any components or vehicle chassis on refitment of the fuel tank.

18) Use the supplied adhesive tape if required.

19) Proceed to fit the remainder of your fuel tank as per manufacturer's instructions

Engine start up

1) Refit the fuel pump fuse.

2) Reconnect your battery.

3) Ensure you have at least ½ tank of correct clean/fresh fuel.

4) Connect a fuel pressure gauge to the supply line at the fuel rail or read your fuel pressure on you scan tool.

5) Prime fuel system and start engine.

6) Check all fittings at pump and fuel rail for NO leaks.

7) Check pressures are within specifications below.

If not within the specifications below, you will need to check for correct fitment and take the normal course of diagnosis to rectify before proceeding.

Fuel Pressure engine idling 72-75 PSI kPa

8) Stop engine and relieve fuel pressure.

9) Remove fuel pressure gauge and refit fuel line.

10) Re-start engine and check for NO leaks.

KPM FUEL SYSTEMS

IMPORTANT INFORMATION

As these pressures are the base operating pressure in the testing station, they can be used directly into the vehicle's calibration.

However, as we have found minor variances from vehicle to vehicle, it is recommended to manually check pressures on vehicle when able to do so. Preferably at the fuel rail and use observed pressure, to populate tables in the calibration. Which should be the same or extremely close to testing pressure.

All KPM fuel modules listed have been manufactured and designed to run at the listed pressures at idle and light cruise. They have also been designed to **decrease** the fuel pressure while applying engine load for **increased** fuel demand. This is how the system is designed to perform and is absolutely what you will expect to see while logging fuel pressures on road or dyno.

All KPM Fuel Modules are designed to perfectly supply fuel down to a minimum pressure of 350 kPa at full demand for its power rating.

KPM Fuel Systems strongly recommends that you have your engine tune checked by a professional tuning workshop!

Depending on the previous fuel system your vehicle has been tuned to, your car may run differently with the new KPM Fuel System pressure and extra supply.

This can cause rich or lean fuel mixtures and possibly be detrimental to your engine!

It is your responsibility to have your vehicle checked and/or re-tuned by specialist methods to ensure correct fueling and engine safety and reliability.

It is your responsibility to have your vehicle checked and/or re-tuned by specialist methods to ensure any fault codes in the vehicles electronic management system/s are corrected.