

## VE-VF/HSV COMMODORE 800HP / 1000HP FUEL MODULE

Com 800



Com 1000





## Important! Must Read First

Congratulations on the purchase of a KPM Fuel System for your [2006-onwards Holden/HSV V8 Commodore](#).

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 unclear in the instructions provided.

Email: [enquiries@kpmfuelsystems.com.au](mailto:enquiries@kpmfuelsystems.com.au)

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 x 1 - Primary (for increased flow and capacity)
  - 2) [Early Model Commodore Retrofit Kit \(2006-2009 models only\)](#).
- KPM Fuel Systems will take NO responsibility for the operation of this fuelsystem if any of the components listed are not utilised *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 Petrol 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) 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, take extra care in not crimping/damaging the fuel line on removal). Remove the electrical connectors from the module. [FIGURE 1](#)
- 4) Remove the retaining ring holding the fuel module to the tank with the correct tool. [FIGURE 2](#)
- 5) Lift the fuel module from the tank until you can access and remove the crossover pipe connector at the base of the canister.
- 6) Carefully lift the fuel module completely from the fuel tank. [FIGURE 3](#)

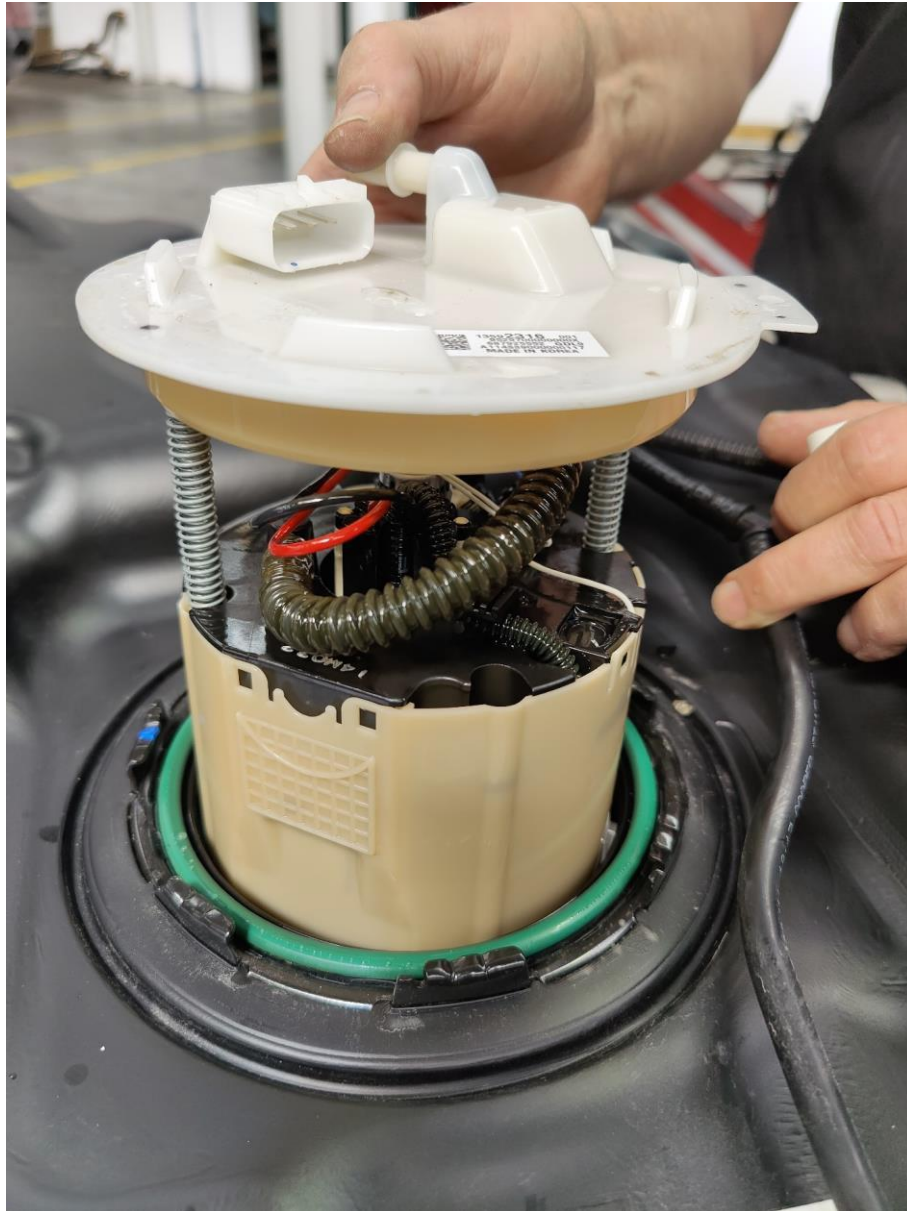
FIGURE 1



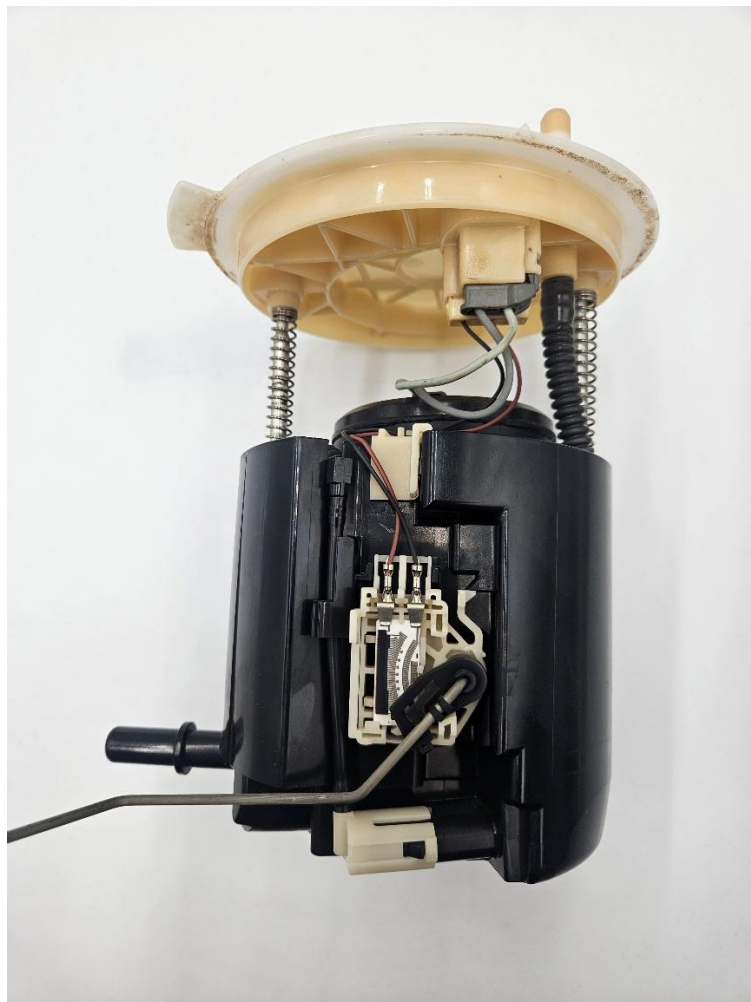
FIGURE 2



FIGURE 3



**IF YOU HAVE THIS FUEL PUMP PICTURED BELOW It is very rare and has a different diameter crossover tube. You will need to contact KPM Fuel Systems for part #UNICROSSOVER.**



## **KPM Primary Fuel Module Fitment**

### **800HP/1000HP**

If your vehicle is a 2006-2009 (early model) Commodore, you will need to fit the Retrofit Kit supplied as per the supplementary instructions provided.

**Fit supplied fuel level sender.**

**MAKE SURE SENDER IS IN THE CORRECT LOCATION or fuel level will NOT read correctly and or damage sender.**

**AS SHOWN BELOW**



# **KPM FUEL SYSTEMS**

The fuel level sender and crossover tube will be oriented like this **ONLY** inside the tank. If fuel level sender is mounted to the wrong/other side of the module it will foul on the crossover tube and not have full range causing incorrect operation.



- 1) Carefully lower the new fuel module into the tank taking care not to damage the fuel sender and float mechanism while doing so.
- 2) Ensure that you can access the crossover pipe connector in the fuel tank with plenty of room to reconnect to the base of the canister.
- 3) Ensure the crossover pipe connector clicks fully onto the fuel pump module canister.
- 4) Retention the retaining ring to secure the fuel module into the tank with the correct tool.
  - Ensure module is sitting square and flush on the seal prior to tensioning.
- 5) Refit fuel lines ensuring they have clicked on properly.
  - Take extra care in not crimping/damaging the fuel line on removal or replacement.
- 6) **IMPORTANT:** Fit fuel tank insulators to stop excess rubbing and contact between tank and the body of the vehicle. This will provide more clearance for the module, wiring and fittings as well as help to reduce vibration. [FIGURE 4](#)
- 7) Proceed to refit the remainder of your fuel tank as per manufacturer's instructions.

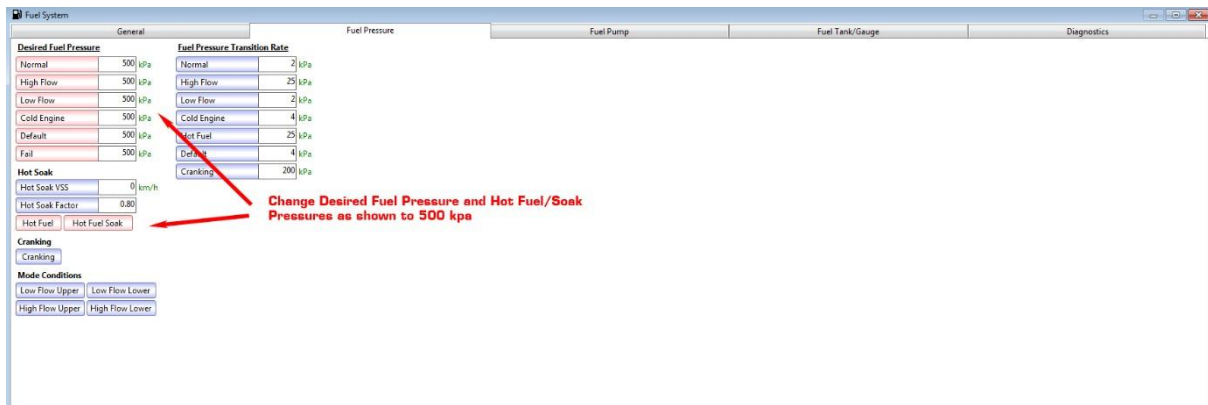
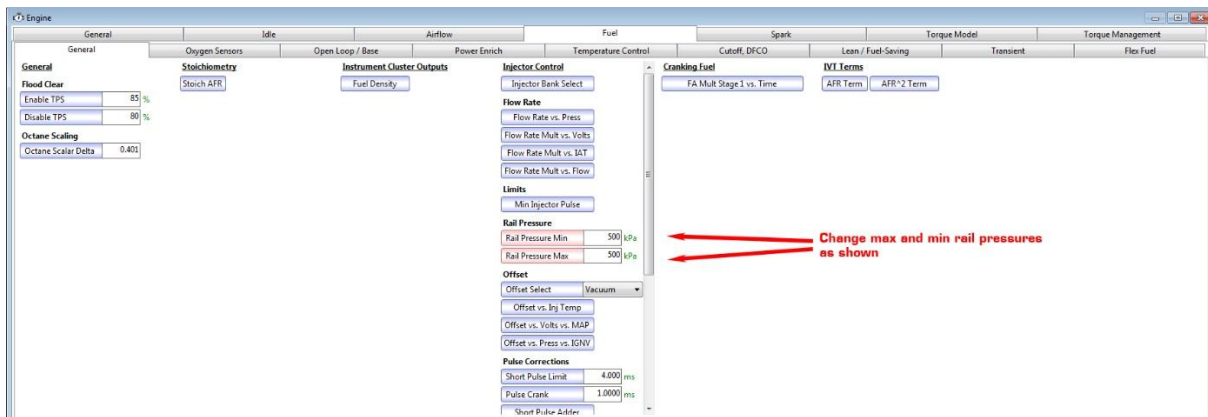
FIGURE 4



## System Software Re-Calibration

### 2006-2009 VE Commodore models

For 2006-2009 ('early') VE model Commodores, you will need to have a tuning professional adjust the following tables in your software to run the system correctly.



## System Software Re-Calibration (cont'd)

### 2010-2017 VE-VF Commodore Models

Note - Late model Commodore systems run a Fuel System Control Module (FSCM) to run the fuel pumps. No Adjustment necessary.



## 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 your 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.

**2006-2009 Models - Fuel Pressure engine idling 500-520 Kpa**

**2010-2017 Models – Controlled by the FSCM**

- 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.

## IMPORTANT INFORMATION

2006-2009 Model Commodores – NON FSCM controlled

As we test every module before it is shipped, we have operating pressures recorded for each specific part number.

| Part number       | Idle Pressure<br>(max pressure) | Full Load Pressure<br>(min pressure) |
|-------------------|---------------------------------|--------------------------------------|
| <b>KPMCOM800</b>  | 520 kPa                         | 350 kPa                              |
| <b>KPMCOM1000</b> | 520 kPa                         | 350 kPa                              |

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. These 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 350kpa 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 fuelling and engine safety and reliability.