

S550/S650 Ford Mustang GT V8 800HP / 1000HP Fuel Module





Important! Must Read First

Congratulations on the purchase of a KPM Fuel System for your [S550/S650 Mustang GT V8](#).

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 only as supplied by KPM Fuel Systems.

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

KPM Fuel Module x 1 - Primary (for increased flow and capacity)

- 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 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) Remove the rear seat base to access the fuel module opening on the LH rear seat floor.
- 3) Remove and place to the side the large rubber grommet covering the fuel module.
- 4) 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.
- 5) Remove the retaining ring holding the fuel module to the tank with the correct tool.
- 6) Lift the module from the tank until you can access and remove the crossover pipe connector at the base of the canister.
- 7) Carefully lift the module completely from the fuel tank.

Fitting kit revision 130525

If you have part #MUSXPIPEADAPT in your fitting kit “as pictured below” **USE THIS PART.**



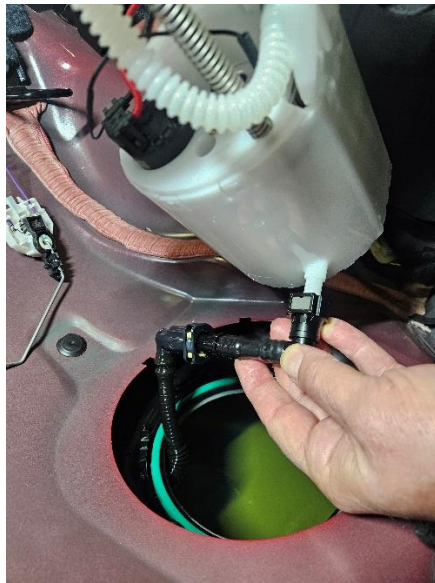
The right angle quick connect fitting “as pictured below” and ear clamp can be disregarded.



KPM Primary Fuel Module Fitment 800HP/1000HP

You will need to remove the fuel sender unit from the standard fuel module for fitment to the upgraded KPM Fuel Module.

- 1) Attach the fuel tank crossover connector #MUSXPIPEADAPT to the fuel module canister.



- 2) Carefully lower the fuel module into the fuel tank.



- 3) With the fuel pump module sitting in the tank, slide it toward the rear of the opening to allow access for the sender unit to be placed in.



- 4) Lower sender unit into available space alongside the bracket.



- 5) Plug the sender unit connector into the lid next to the fuel pump connector and then slide the sender unit base up the bracket and clip into position. Ensure wires are clipped into bracket.



- 6) Ensure tank O ring and sealing surfaces are clean of debris. Compress fuel pump module lid and attach retaining ring. Use suitable tool to lock retaining ring.
- 7) Re fit fuel line and electrical connector.
- 8) Start engine and check for leaks.
- 9) Refit the rubber floor grommet and rear seat base.



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 the 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.

2015-2017 Mustang – 72-75 PSI
2018 - Onwards Mustang – Factory Specifications

- 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.

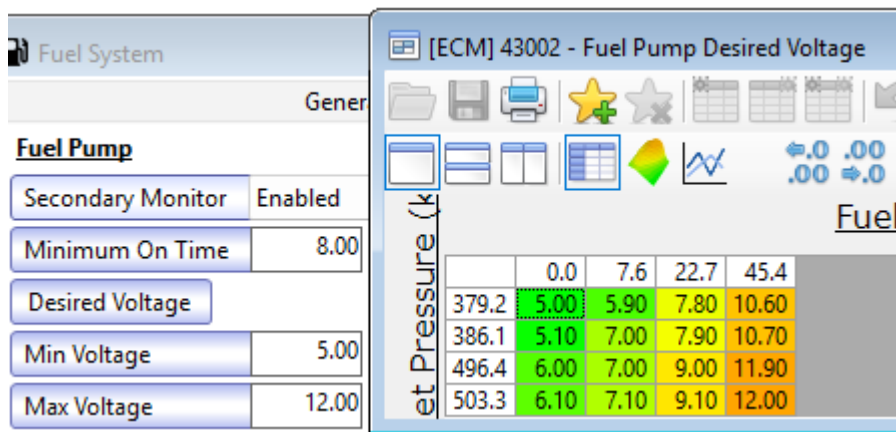
For 2024 + vehicles with Whipple or Roush supercharger calibrations.

The 2024+ range of Mustang vehicles have been fitted with a revised FPDM (fuel pump driver module) which has an overcurrent protection built in.

The Whipple and Roush calibrations set the allowed voltage to the fuel pump much higher than stock levels to squeeze the most out of the factory fuel pump.

The KPM1000 fuel pump module runs 2 fuel pumps that draw slightly higher amperage than the single factory pump.

We recommend putting the following fuel pump control settings back to stock.



IMPORTANT INFORMATION

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.