CAMARO GEN 6 / CADILLAC CTS-V
2016-2024
2200 HP / 2700 HP FUEL SYSTEM

Important! Must Read First

Congratulations on the purchase of the KPM Fuel System for your 2016-2024 Camaro Gen 6 and Cadillac CTS-V.

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: 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 Fuel Module x1 – Secondary (for ultimate flow and capacity)
3) 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 & Secondary Fuel Sender Module Removal

1) Drain fuel tank.

2) The vehicles fuel tank needs to be removed to access the in-tank fuel modules.
    a. 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).

4) Remove the electrical connectors from the module.

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

6) Lift the PRIMARY module from the tank until you can access and remove the large vent fitting under the lid.

7) Continue to lift the PRIMARY module out, until you can access and remove the crossover pipe fitting from the elbow connector on the canister.

8) Continue to lift the PRIMARY module out, until you can access and remove the crossover feed fitting from the T-Piece connector.

9) Carefully lift the PRIMARY module completely from the fuel tank.

10) Remove the electrical connector from the SECONDARY fuel sender module.

11) Remove the retaining ring holding the SECONDARY fuel sender module to the tank with the correct tool.

12) Lift the SECONDARY fuel sender module from the tank, until you can access and remove the crossover feed connector and crossover pipe connector at the base of the sender unit.

13) Carefully lift the SECONDARY fuel sender module completely from the fuel tank.

14) Reach into the fuel tank and completely remove and discard the two plastic pipes, crossover pipe and crossover feed pipe.

15) DO NOT remove or discard the fuel vent pipe.

Primary & Secondary Internal Crossover Pipe Fitment

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

KPM have designed a 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 added insurance ensures the KPM Fuel System 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 are installed correctly and carefully as per the instructions below.

1) Fit the new internal crossover hose (#KPMFHCAM6-4) into the fuel tank from the PRIMARY fuel module access hole on the Left Hand (LH) side of the tank. Ensure that the fuel pick up sock end is fed through towards the SECONDARY side.

2) Fit the second new internal crossover hose (#KPMFHCAM6-4) into the fuel tank from the SECONDARY fuel module access hole on the Right Hand (RH) side of the tank.
    a. Ensure that the fuel pick up sock end is fed through towards the PRIMARY side.

3) Pull both hose ends out of the SECONDARY fuel module opening to gain access to both the fuel sock end (#KPMFHCAM6-4) and the connector fitting end (#KPMFHCAM6-4).

4) You will need to pull the hoses out far enough to gain access to fit the supplied (#SM-

CAM6-2) hose separator.

a. Fit both the fuel sock and connector fitting together on the separator as shown, securing with the cable ties supplied.

5) Place the secondary side hose and separator assembly back down into the fuel tank.

6) Pull both the hose ends out of the PRIMARY fuel module hole to gain access to both the fuel sock end (#KPMFHCAM6-4) and the connector fitting end (#KPMFHCAM6-4).

7) You will need to pull the hoses out far enough to gain access to fit the supplied (#SM-CAM6-1) hose separator.

a. Fit both the fuel sock and connector fitting together on the separator as shown, securing with the cable ties supplied.

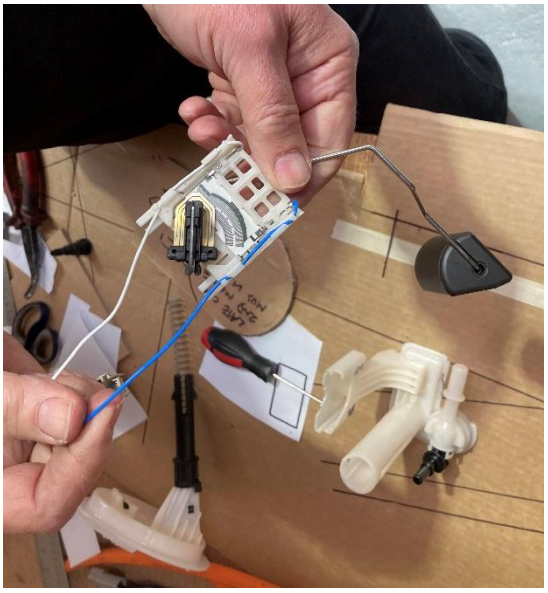
8) Place the PRIMARY side hose and separator assembly back down into the fuel tank.

9) Check both the Primary and Secondary side crossover pipes and separator assemblies sit properly on the bottom of the fuel tank and are ready to be fitted to the respective fuel modules.
   a. Primary pickup sock filter facing downwards while the secondary pickup sock filter facing upwards.

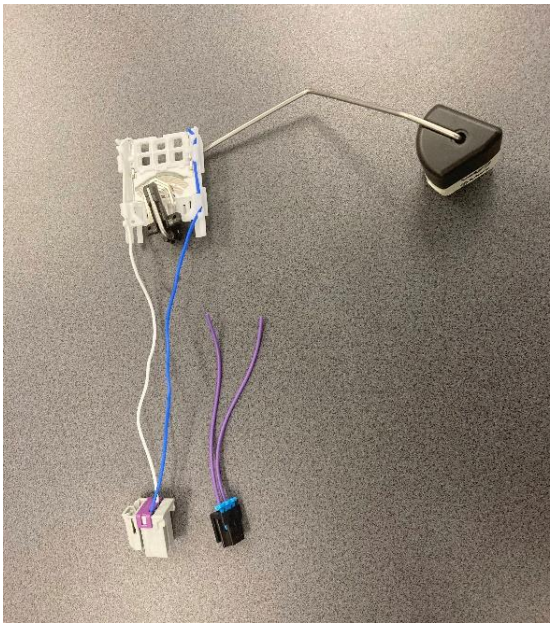
KPM Secondary Fuel Module Fitment

1) Remove the fuel sender and float assembly from the OE fuel sender canister.

2) Re-thread the fuel sender wires along the sender cartridge as pictured below.

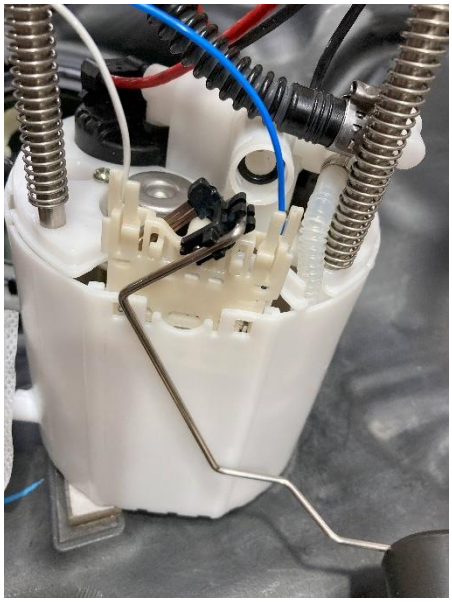


3) Cut the standard wire connector off the fuel sender using the new wire and connector section as a template for length.

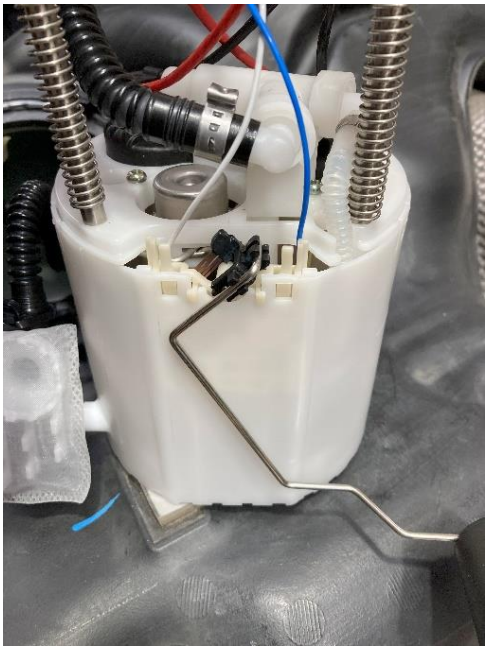


4) Crimp new section of wire and connector supplied, onto the previously cut sender wire.

5) Fit the fuel sender and float assembly to the new KPM Secondary Fuel Module as pictured below.



6) Be sure it clips all the way into the canister, and plug the fuel sender wire to the connector under the module lid.



7) Pull the crossover hose separator assembly out of the tank far enough to fit to the new KPM Secondary Fuel Module.

8) Place the secondary fuel module as close as possible to the separator assembly, and securely connect the (#KPMFHCAM6-4) hose connector fitting onto the connector at the base of the fuel module.

9) Carefully lower the fuel module into the tank, slowly working the float arm, hosing assembly and wiring down into the correct resting position.

10) Ensure that the crossover separator assembly is sitting correctly at the base of the fuel tank with the filter sock facing upwards.

11) Proceed to fit the O-Ring new seal and re-tension the lock ring to the secondary module lid.
    a. Ensure module is sitting square and flush on the seal prior to tensioning.

KPM Primary Fuel Module Fitment

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

1) Fit the new supplied 3/8 blanking plug to the T-Piece connector on the KPM Primary Fuel Module. (The T-piece is only used on single fuel module systems).

2) Pull the crossover hose separator assembly out of the tank far enough to fit to the new KPM primary module.

3) Place the fuel module as close as possible to the separator assembly, and securely connect the (#KPMCAM6-4) hose connector fitting onto the connector at the base of the fuel module.

4) Ensure the crossover pipe connector clicks fully onto the fuel pump module canister.

5) Carefully lower the new primary fuel module into the tank, taking care not to damage the fuel sender and float mechanism while doing so.

6) Lower the PRIMARY module into the tank until you can access and re-fit the large vent fitting under the lid.

7) Ensure that the crossover separator assembly is sitting correctly at the base of the fuel tank with the filter sock facing downwards.

8) Fit the new O-Ring seal and retention the retaining ring to secure the fuel module into the tank with the correct tool.
    a. Ensure module is sitting square and flush on the seal prior to tensioning.

Fuel Tank Plumbing & Wiring

1) Refit the standard nylon fuel line to the new KPM primary fuel module as per standard fitment.

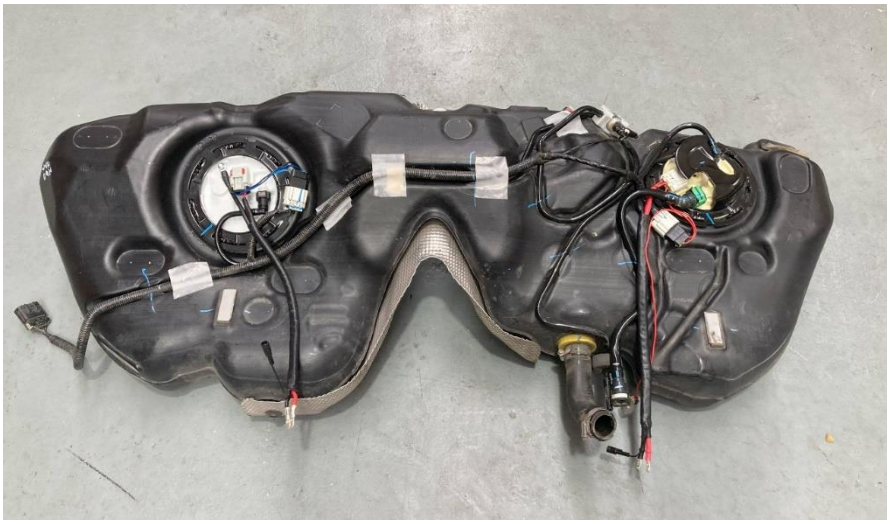
2) Fit the new KPM fuel line #KPMFHCAM6-1 on the KPM secondary module as per the routing pictured below.

3) It is very important that the fuel lines are routed exactly as shown on the tank, firmly clicked together and securely held in position with the provided adhesive tape.

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

5) Fit the standard wiring loom sections to the tank.

6) Fit the KPM section wiring looms #Cam6-3 and #Cam6-8 to the primary and secondary fuel modules. Be sure to connect the earth wire eyelet to the new fuel modules earth studs by securing the supplied nut and washer.



7) Remove the base of the rear seat from the vehicle cabin.

8) On the right hand and left-hand floor area, locate the sealed caps on the floor.

9) With a small screw driver pop the caps out to allow access to the under-car fuel tank cavity. This will allow provision to feed the new KPM fuel pump wiring looms and grommet through into the cabin.

10) Proceed to refit the fuel tank as per manufacturer's instructions.

11) Ensure that both the primary and secondary fuel module wiring looms are fed through the holes in the floor.

12) Proceed to the KPM PWM and Wiring Instructions for the relevant wiring schematics and wiring fitment instructions.

KPM High Flow Fuel Hose Kit Fitment

The KPM high flow fuel hose kit is made of high-grade stainless steel, mandrel bent to perfectly fit your 2016-2024 Camaro Gen 6 and Cadillac CTS-V.

The pipe inside diameter is 13.5mm and designed to support well over 3000hp of fuel supply. KPM also supplies aluminum heatshield sheathing that you can cut to size along the full length of the pipe.

The fuel filter is made of 40-micron stainless steel and is fully re-cleanable for lifetime usage. It is 100% Ethanol and Gasoline compatible.

1) You will need to access your fuel supply hard line at the rear of your engine. This will require removal of your intake manifold and/or supercharger assembly.

2) Remove your RH engine exhaust manifold/header section.

3) Disconnect the flexible fuel supply to mechanical fuel pump line found at the rear of your engine.

4) Moving undercar, disconnect, unclip, remove and discard the OE steel fuel supply piping that runs from the rear tank section all the way to your engine bay.

5) Fit the front section #KPMFHCAM6-3 steel pipe from undercar up into the engine bay area. Temporarily use cable ties to hold it in an approximate position.

6) Lubricate the 2x O-ring seals on the (#COMTPIECE) fitting supplied. Carefully fit to the #KPMFHCAM6-2 steel pipe and tighten the locking nut securely.

7) Fit the assembly (#KPMFHCAM6-2/#COMTPIECE) to the two quick release pipe fittings coming down the RHS of the fuel tank. Temporarily use cable ties to hold it in an approximate position.

8) Fit the fuel filter to the flared ends of both pipes. Loosely screw on the nuts until they are seated.
    a. Ensure the filter is fitted in the correct direction of fuel flow.
    b. Ensure the provisional fuel sensor boss is facing outwards.
    c. Ensure that the 2 pipe flare O-ring seals are fitted in place (as supplied) on both sides of the filter ends

9) Check the piping is in correct positions in all areas and when satisfied, test fit and mark out the positions for the final fitment of the fuel pipe clamps supplied. You will find supplied 4 x 5/8" pipe clamps.

10) With all the fuel pipes and fitting clamps mapped out, you can now measure and cut your heat shielding to be fitted for a final fitment. Be especially sure to run the heat shielding on any section of fuel line running close to a heat source e.g., headers, exhaust, cats etc.

11) Securely fit all fuel line connectors and tighten the flare nuts at the fuel filter firmly. DO NOT OVERTIGHTEN

12) You will find the KPM high flow steel fuel pipe ends behind the engine at the OE outlet position.

13) Due to the many combinations of manifolds, fuel rails, flex fuel systems, superchargers, turbo etc. positions, the user is required to manufacture their own last piece of fuel supply line to the mechanical fuel pump/rail entry. KPM have supplied a second quick

release (#COMTPIECE) to help you complete and adapt your fuel system using common fittings.

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 and if all ok, start the vehicle and perform a thorough check under the vehicle and at all fitting points. Run the vehicle until everything has been warmed, and then re-check all fittings and fuel filter nut tensions.

Congratulations! You are ready to go.

Please see your specific vehicle year/model PWM and Wiring Instructions to complete you KPM Fuel System installation.