



## 2011-2017 Mustang GT Level 1 Return Style Fuel System Installation Instructions

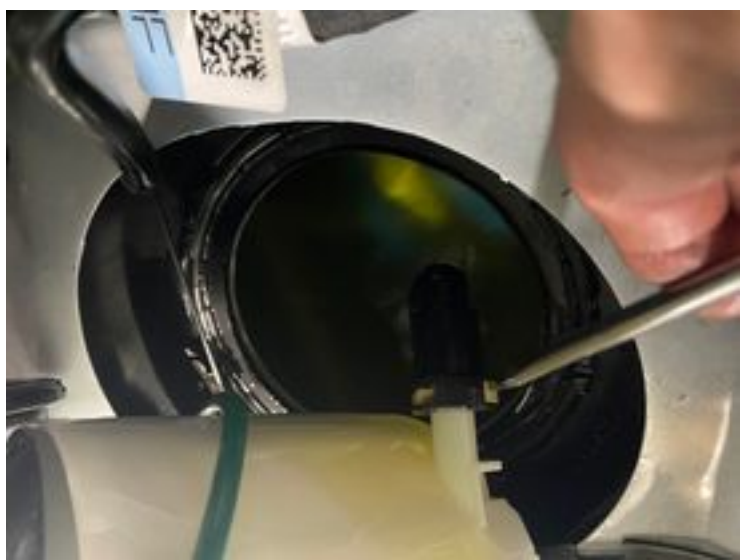
*The installation of this fuel system should be done by a professional only.*

### **Part I - Factory Parts Removal**

1. **IMPORTANT:** Disconnect the battery.
2. Disconnect the fuel rail line and remove the (4) 10mm bolts securing the fuel rails.
3. Remove the lower portion of the rear seat.
4. Once the seat is removed you will see the fuel hat assembly on the drivers' side. Remove the access panel cover.



5. Next, disconnect both the factory fuel line and power supply from the top of the fuel hat.
6. Remove the retaining ring from the factory fuel pump.
7. Disconnect the line from the fuel pump and remove the old fuel pump.
8. All that is required from factory fuel pump is the fuel level sending unit. Cut the two purple wires with leaving enough access to splice to new fuel hat in later instructions.



## Part II - Fuel Hat Assembly

1. Begin by locating the fuel pump basket o-rings provided in the system and place them in the grooves located where the two pumps will be installed onto the fuel hat.
2. Install the caps for the dual pump setup (*circled in the image below*).



3. Next you will install the fuel pumps into the fuel hat. There are two supplied hoses and 4 hose crimps to secure the hose. The lengths can vary so measure where the hose will need to be cut. These need to be accurate cuts so that when the pumps are set into the hat they are far enough down and will not bottom out when installing the fuel hat back into the fuel tank.



4. After securing the two pumps to fuel hat and plugging them securely to their connectors, install the fuel level sender (*removed from the factory fuel pump*). The two purple wires will need to be connected to the two yellow wires—these are OHM ref so it doesn't matter which goes to which.



5. Install fittings to top of fuel hat for both return and feed.



6. The fuel hat is ready to be installed back into the car. Be sure to connect the factory fuel feed inside the gas tank to the new fuel hat and ensure its securely connected.



7. Once the fuel hat is installed, reinstall the fuel hat retaining ring.

### ***Part III - Power supply***

1. First we will install "The Box" by Division X. This can be mounted in the rear trunk by pulling back the carpet for a nice clean install.



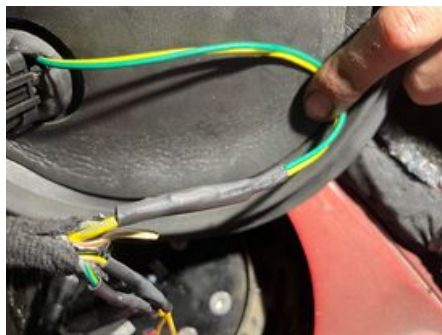
2. Next, find the power/ground wiring harness that has the three connectors into one and the harness with the yellow and green wires. Plug them into the box and route them to the fuel hat.



3. Cut the factory plug connector that went to the fuel hat (*this will not be reused*). Pull back the taping to access the wires. 3 of the 4 wires need to be reused.
4. The two yellow wires coming out of the fuel hat need to be spliced—one to the Green/Blue wire and the other to Yellow/Purple wire.



5. The, the one yellow and one green wire coming from "The Box" need to both be spliced into the larger Yellow/Grey wire from the harness.



6. Plug your connector into "The Box" that has your main power and ground wire to it. Ensure your ground wire is secured and a good ground can be made *(IMPORTANT! This step can lead to issues if done improperly!)*
7. For the power wire to be ran in clean & out of sight, you will need to remove some interior panels along the door sill (shown below) as well as the passenger side front fender liner.



8. Route your power wire underneath the carpet in the trunk and down the passenger side of the car. Once you get up to the fuse panel in the passenger side footwell, pull the carpet back and you should see a large rubber grommet.



9. With the passenger fender liner removed you will see the other side of this same grommet. Cut the nipple off of the grommet and you will be able feed the power wire through the firewall.



10. Locate the provided fuse holder and fuse and assemble them. Cut the power wire where you wish to install the fuse holder. Make sure it is out of harms way.
11. Secure the power wire to one of the nuts on the side of the fuse box.



12. Reinstall the interior trimming and fender liner.

#### **Part IV - Fuel Lines & Regulator**

1. Assemble the Fuel Regulator. This will require the mounting bracket, fuel pressure gauge, (2) -8an 90° fittings and (1) straight -6an fitting.
2. **Use Teflon tape on the threads of the gauge before threading into regulator.**  
The (2) -8an 90° fittings will go onto the sides of the regulator while the straight -6an fitting will install into the bottom.



3. If you are installing new fuel injectors onto factory fuel rails, do so at this time.
4. Reinstall the fuel rails onto the vehicle.
5. Assemble the provided fuel filter with (2) -8an straight fittings.



6. Remove the driver's side fender liner to route your feed and return lines into the engine bay and the plastic trimming currently covering the factory lines. The lines will run down the driver's side of the underbody.



7. Begin to route your new feed and return lines down the side of the gas tank where the fuel hat is located and connect both straight hose ends lines to the fuel hat.

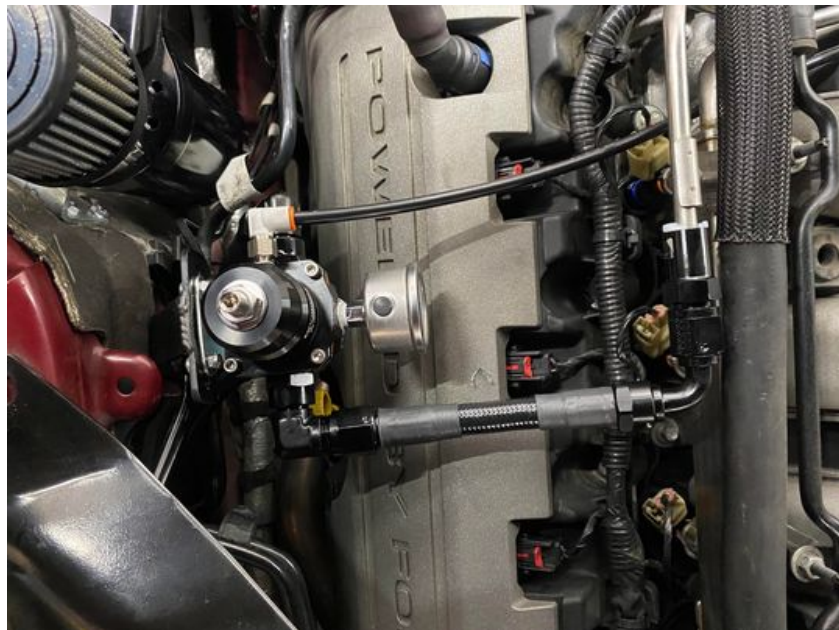


8. The feed line will be two separate lines which will connect to each side of the fuel filter. The return line will be a single long fuel hose with a 90° hose end that will connect to the regulator.

9. The fuel lines can be held up by the plastic trimming and ran up through the fender behind the black metal crash plate.



10. Mount the regulator bracket behind the brake lines on the driver side.



11. Your feed line will connect to the right side of the regulator while the return line will connect on the bottom. Next connect the line from the regulator to the factory fuel rail. This will have (1) straight hose end and (1) 90° on the other end.



12. The reference line for the regulator needs to be vac/boost referenced.
13. Once installation is complete, reconnect the battery.

**Check out our Fuel System FAQ here:**

**<https://www.lethalperformance.com/info/fuelsystemfaq>**

**If you have any questions, please call us at [561-753-8105](tel:561-753-8105) or email us at [support@lethalperformance.com](mailto:support@lethalperformance.com)!**