

# **Lethal Performance 99-04 Mustang Budget Return Fuel System Installation Instructions.**

**Fuel System Installation- These are to be used in conjunction with the directions you received with the DivisionX Fuel Hat and Lethal Performance Dual Relay Return Style Wiring Harness**

- 1.Remove negative battery line from the battery using and 8mm socket.
- 2.Relieve fuel pressure by releasing excess fuel from the fuel rails throughout the schrader valve located on the passenger side of the fuel rail.
- 3.Either using jack stands or a lift raise the car so that there is enough room to work under the car.
- 4.Removal of the Fuel Tank-
  - \*Removal of the passengers side cat back before removing the tank, it makes the job alot easier.
  - a. Make sure when lowering the fuel tank you have less than 1/8th of fuel.
  - b. This will lessen the chances of spilling fuel and making the tank lighter and easier to handle.
- 5.Remove bolts that hold the fuel tank brackets to the frame using the 1/2" socket and extension.
- 6.Pull the strap on the drivers side of the fuel tank to the side.
- 7.Lower the fuel tank carefully- The fuel tank will drop from the drivers side. At this point you will need to start removing the metal fuel lines from their brackets. They should pop out of their brackets easily.
- 8.Disconnect the fuel line from the fuel tank at the point where the line meets the hat.

You will 1st have to pop the safety bracket off by pulling it up toward the trunk. Then you will need to disconnect the line from the tank.

The best way to do this is with a 3/8" Fuel Line Disconnect tool.

Put the tool in place and push the line towards the rear of the car allowing the disconnect tool to work its way all the way into the line which will allow the

connection to release.

If you have problems doing so you may want to push the tank towards the front of the car in order to

shimmy the disconnect tool all the way into the connection.

**9.** Disconnect the wiring that goes from the hat to the wiring harness. There is a clip on the wire connection that will allow the wire to come loose.

**10.** Using an 8mm socket remove the bolt that holds the fuel tank to the line where the fuel gets added to the car. This is on the passenger side of the tank.

**11.** With drivers side of the tank down, pull the tank toward the drivers side and you will work it off of the hose that it used to add fuel to the tank.

**12.** With the fuel tank out of the car using an 8mm socket remove the bolts that hold the hat/pump housing to the tank.

**13.** Carefully pull the housing and pumps out of the car making sure not to break the float or the plastic switch which is your fuel level sensor.

**14.** Assuming you have already received your DivisionX fuel hat assembly you'll want to follow their instructions on how to assemble the hat with the pumps and level sender. At this point you'll also want to install the DX-022 hat to stock line adapter. This is a o-ring style fitting so no Teflon paste/tape is needed. Then install the -8an O-ring x -6an reducer on the return port of the fuel hat.

**15.** Once the hat is assembled you'll want to reinstall it into the tank using the supplied hardware which came with the hat.

**16.** Installing the fuel pressure regulator- The first part of installing the regulator will be assembling it. You'll want to use the supplied -8an plug and plug the far left port if you're looking at the regulator from the front. Then you'll install the -6an oring x -6an male flare on the bottom port of the regulator. Install the barbed stem used for the vacuum hose as well as the mechanical fuel pressure gauge with some Teflon paste.

**17.** Remove the stock fuel rail pressure sensor from the fuel rail.

**18.** Install the DivisionX by Magnafuel regulator onto the fuel rail using the regulator to rail adapter supplied in the kit.

19. Remove the vacuum hose that went to the stock FRPS (fuel rail pressure sensor) and install it onto the barbed fitting on the regulator. Use the small zip ties to secure the hose to the fitting on the regulator. This is how you're regulator will monitor boost and adjust fuel pressure.

20. Running the return line- Using the supplied -6an hose and hose ends you'll want to run the return line from the bottom of the regulator to the fuel tank. The best way to route the line would be running the line to the firewall from the regulator. Then down under the frame just behind the drivers side strut. Once under the car route the line along the subframe to the rear of the car onto the fuel hat. Use the supplied hose clamps, screws and zip ties to safely secure the hose to the underside of the car.

21. Wiring- Please refer to the Lethal Performance Dual Return Style Wiring Harness Instructions located at the bottom of the home page on [www.lethalperformance.com](http://www.lethalperformance.com) in the installation instruction section.

27. Once all connections are secure go back and recheck that all of the fuel fittings at the tank, rails and regulator are all secure.

28. Reinstall the tank to the frame.

29. TUNE- It's very important when switching from a returnless system to a return system for your tuner to make the appropriate changes to the tune. He will need to go into the tune and let the computer know that it's no longer using a returnless system. If this isn't done the car will not function properly.

30. Checking for leaks- With the key in the on position so the pumps are running you'll want to go around and check all of the fittings to make sure there's no leaks. If a leak is detected turn the key off, re-tighten the fitting and then check the fitting again with the key in the on position. Once you've made sure there's no leaks you can proceed to setting the base fuel pressure.

31. Setting the fuel pressure- With someone helping you'll key the car to the on position but without starting it. This will cause the pumps to run and pressurize the system. You'll be able to read the fuel pressure on the mechanical gauge located on the regulator. Using a allen key and wrench you'll either loosen or tighten the stem

at the top of the regulator. This will either raise or lower the fuel pressure. Your tuner will recommend what base pressure to start with so go off of their recommendation. Have the person inside the car continually key on and key off the car again without actually starting the car and adjust the stem until the desired base fuel pressure is achieved. Then tighten the nut which locks the stem in place. Key on one or two more times just to make sure the pressure is where it should be and you're all set.



