



Lethal Performance SN95 Dual Pump Return Style Fuel System Installation Instructions

Tools Needed:

3/8" Fuel Disconnect Tool
3/8" Ratchet and 8" Extension
1/2" and 8mm Sockets
Klien crimpers
Flat blade screwdriver

Fuel System Installation- These are to be used in conjunction with the directions you received with the DivisionX SN016 Fuel Hat Manifold and Lethal Performance Dual Relay Return Style Wiring Harness

IMPORTANT NOTES:

- The installation of this fuel system should be done by a professional only.**
- The supplied metal crimp clamps should be used to secure the hose onto the barb fittings. Keep in mind that they can't be installed after fittings have been installed on each end. So install 1 fitting at a time and then secure it with the clamp once you've verified the hose is at the length you'd like it to be.**
- Be careful installing the fuel hat into the tank as the level sender is very fragile. It's also expensive to replace so take your time and be cautious.**
- Installing the hose ends on the hose can sometimes be difficult. It helps to use some wd40 on the hose and the barb fitting as well as to warm up the hose with either boiling water or a heat gun. If you use a heat gun make sure not to burn the hose. Only use it to warm/soften the hose. If you burn the hose it will get brittle and crack once it cools and can leak fuel if not done right.**

Watch this Youtube video to see how it's done.

<http://www.youtube.com/watch?v=iPTTX11IORK>

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.

**If you happen to break the switch replacements are available from Lethal Performance.com.

14. Assuming you have already received your DivisionX fuel assembly you can assemble the DivisionX hat with the 2 pumps and level sender .

15. Wiring Instructions- **Please refer to the Dual Return Style Wiring Harness instructions located in the installation instructions section on www.lethalperformance.com**

Now follow the rest of the instructions that came with the DivisionX SN016 hat to finish installing the fuel hat manifold into the tank.

A good method in putting the hat in is to put the level sender float in first. Use one hand to hold the rest of the assembly above the tank and use your other hand to work the float and arm through the clearance portion of the baffle. Once the float and arm are through the section of the baffle you can then start dropping the rest of the fuel hat assembly into the tank. Remember to follow the steps that came with the fuel hat to ensure you don't forget the gasket that goes in between the hat and the tank.

Remove the factory fuel filter. This can easily be done by taking loose the hose clamp with a 8mm or flat blade screwdriver. After you have took the unit loose go ahead and remove the other side of the fuel line feeding the front of the car with the fuel line disconnect tool. You can discard the filter and line coming from the hat to the filter. These will no longer be used.

For the next few steps we recommend measuring and mocking up the lines before cutting the hose. Once you've got the lengths correct you can then cut the hose to the appropriate lengths.

21. Run the -10an hose from feed on the fuel hat using a -10an straight hose end. Run the hose along the drivers side of the car. You'll then pick a location on the drivers subframe where you want to mount the fuel filter. Assemble the fuel filter with the (2) FPS-495106 fittings. Attach the feed line to and from the filter with the -10an straight hose ends.

22. With a friend helping you, feed the remaining -10an hose from the top of the engine behind the drivers side strut tower down through the same hole where the throttle/cruise control cable is run. The other person should be looking for that hose under the car where the plastic wheel well cover meets the subframe. Once the hose is fed to the underside of the car you can install a straight -10an hose end onto the hose.

Assemble the fuel pressure regulator and fuel rails.

NOTE: Once the regulator , y-block assembly, and the feed lines that feed the rails have been assembled and positioned then drill the hole in the engine bay to mount the regulator. Until then you don't want the regulator mounted as it will make positioning it and running the lines to and from it more difficult.

Install the DivisionX fuel rails on the vehicle plugging each rear rail with the XRP-981408 fittings. On the drivers side rail you can use one of the 1/8" NPT port plugs to plug one of the ports on the rail. The other port is for the CHM 0-100psi mechanical fuel pressure gauge. Use Teflon paste on both the port plug and gauge to ensure a proper seal and prevent leaks. On the front of each rail you'll install the -8an 90deg fittings by XRP (XRP-989008). When installed you'll want the flared end of these fittings facing each fenderwell. So for the drivers side rail face the flare towards the drivers side fender and for the passenger side rail face it towards the passenger side fenderwell. Use the SN95 fuel system diagram we provide in our installation instruction download section to help.

ASSEMBLE REGULATOR-USE DIAGRAM BELOW TO HELP

CONFIGURE REGULATOR Use the supplied Fragola 495104 (10an O-Ring x -8an Male Flare) on the bottom of the regulator. Looking at the regulator with the Aeromotive logo facing you use the -8 plug * on the far right port. Use a 10an plug * on the middle port. Use the -8an oring x -8an male flare fitting * on the port just to the left of that. Lastly install the XRP-989009 (-8an O-ring 90deg 10an male flare) on the far left port. You'll want the fitting facing down when installed. You can now run the -10an feed line to the XRP-989009 fitting on the regulator. This is what will be feeding the fuel from the tank to the regulator.

***Supplied with Aeromotive Regulator**

RUNNING THE FEED LINES FROM THE REGULATOR TO THE RAILS-

Now cut a 9" section of -8an hose. On each end you will use a -8an 45 hose end (FPS-204508). This will attach on the -8an male flare fitting coming out of the regulator. The end of the hose with the 45deg hose end will attach to the regulator. The other end with the 45deg fitting will attach to the single -8an port on the 2-into-1 y-block. This 9" section of hose when routed from the regulator will go in between the power steering lines that go to the hydro boost unit. It's a tight fit but we've found this to be the best routing. Now you'll run the feed lines from the Y-block to the fuel rails.

Y-BLOCK ASSEMBLY- The Y-block is assembled with (3) XRP-980008 -8an O-Ring x -8an male flare fittings. No Teflon paste is needed for the Y-block as it uses o-ring fittings.

Run the fuel lines from the front of each rail to the Y-block

NOTE: You must screw the o-ring boss fittings into the front of the rails and install the hose ends onto the o-ring boss fittings before securing the rails onto the manifold. You will not be able to put the hose ends onto the o-ring boss fittings if the rails have already been secured to the manifold.

Using a 90deg hose end install it on the end of a section of -8an hose and connect it to the passenger side fuel rail. Then you can run the fuel hose under the snout of the supercharger along the coolant crossover towards the drivers side looping the line back parallel to the driver side fuel rail towards the firewall. Then you'll need another 90deg -8an hose end on another section of -8 hose and attach it to the drivers side rail at the front. The drivers side hose that comes off the rail should aim in the same direction as the hose that comes off the passenger side rail. Run both of those hoses to the Y-block which feeds the regulator and connect them to the Y-block with 90deg -8an hose ends.

Now we'll be running the return line from the bottom of the regulator back to the fuel tank on the drivers side of the vehicle. With a friend helping you're going to feed the -8an hose up the subframe in between the frame and the plastic wheel well cover into the engine bay at the rear of the firewall. Pull enough line through so that you can press a 45deg -8an hose end onto it. That is the end that you'll be mounting to the bottom of the regulator.

Now you can start guiding the hose under the car on the drivers side all the way back to the tank.

Installing the Boost/Vac Hose to the regulator

Using the T-fitting you'll T into the boost vacuum line that goes to your stock fuel rail pressure sensor. From that T you'll run the supplied vacuum hose to the barbed fitting on the regulator. Use the small zip ties to secure all connections.

Now you'll want to go back and tighten all connections as well as use the supplied loom clamps to secure the hose safely to the chassis. Once you're finished, double check all connections and fittings that they are secure. Now you can raise the tank back up and secure it with the tank straps.

Re-attach the negative battery wire to the battery. Cycle the key and check for leaks. Double check again for leaks and clearance issues.

Setting the fuel pressure Loosen the nut on top of the regulator. Make sure to have the correct size allen key available as well as you'll need that to turn the screw on the top of the regulator. With someone watching the gauge on the fuel rail you'll

turn the key to the on position but do not start the car. This will pressurize the system. Once the person watching the gauge verifies the amount of pressure the gauge see's you can adjust the screw to either increase or lower pressure. Make a few turns then turn the key off and then on again. Once you've got the gauge to read the base pressure you want to start with cycle the key a few times just to make sure it continues to see the desired fuel pressure. After the desired fuel pressure is reached tighten the nut on the regulator. Key the car on again to make sure that when you tightened the nut the pressure setting stayed the same.

Once the base pressure is set you can then start the car. You can give the car some throttle to see if pressure goes up with boost. A quick blip of the throttle should increase boost over the base pressure on most applications.

NOTE: Fragola PTFE Fuel Hose Upgrade Users

If you upgraded to the Fragola PTFE fuel hose you will receive 6 pieces of hose which already have the fittings installed on them.

(2) -10an Hoses

(4) -8an Hoses

The longer -10an section goes from the fuel hat to the filter. It's run along the drivetrain tunnel towards the front of the car to where it gets re-routed towards the drivers side frame rail. The filter gets located just under the drivers side seat on the inside of the subframe.

The shorter section of -10an hose goes from the filter to the regulator and is run into the engine bay along the subframe into the engine bay just behind the drivers side strut tower where the regulator gets mounted.

The shortest section of -8an hose goes from the regulator to the Y-block which gets mounted on the firewall.

From the Y-block you'll route the (2) -8an hoses with 90deg hose ends on them to the front of each rail. The shorter of the 2 hoses goes on the drivers side. The longer piece gets routed along the drivers side coil cover and across the front of the engine/supercharger along the coolant tubes. It's then connected to the passenger side rail. Use zip ties to safely secure the fuel hose on the coolant line away from any other moving parts such as the supercharger pulley and belts.

Lastly the longest piece of -8an hose runs from the bottom of the regulator (return port) to the fuel hat following the same hose routing as the feed line did.









