

Alternative Fuel Injection System For Diesel Engines

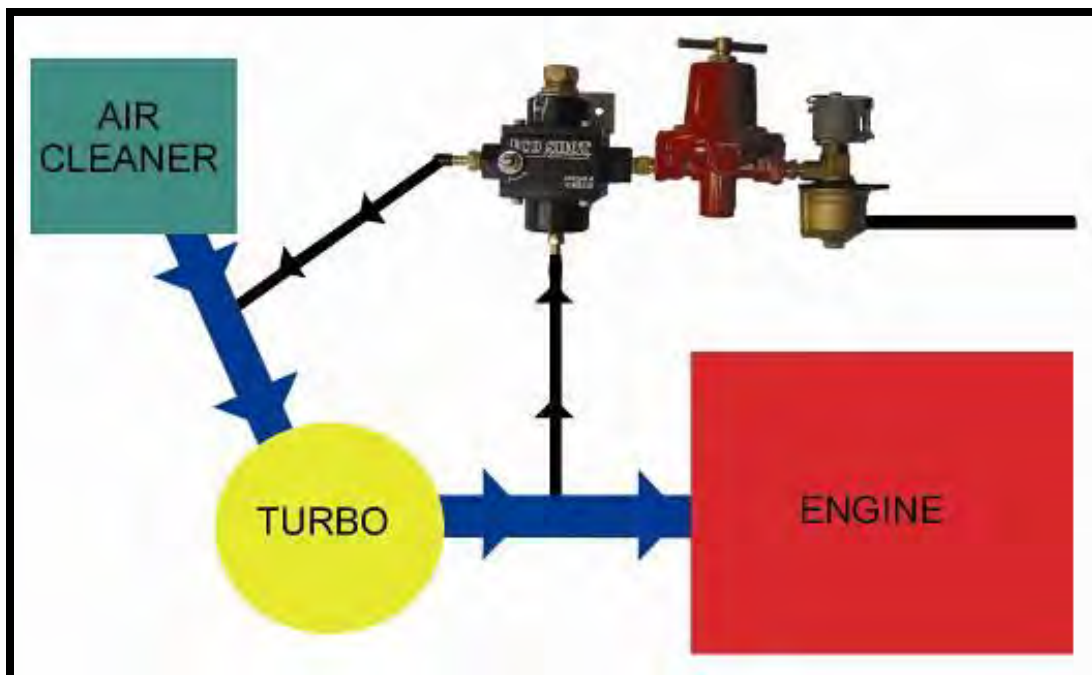
Basic Overview

The propane diesel injection system is installed next to the motor fuel tank.

Two lines enter the engine compartment.

The vapor fuel tank is mounted on the vehicle.

For safety, a control switch is installed on the dash and must be activated each time the vehicle is started.



STEP 1: Mounting of the ASME/DOT propane tank:

Mount the vapor propane tank in the proper orientation on the vehicle according to tank manufacturer's specifications. The tank labeling "TOP" must be facing to the top.

STEP 2: Mounting of the propane regulator unit assembly

Mount propane injection unit assembly on bracket. The unit can be mounted in any orientation desired.



Other Examples of installation orientations:





STEP 2: (continued) Using the cloth covered NFPA approved motor fuel and reusable steel hose ends, screw one end into the vapor feed outlet of the tank. Attach the other end to the lock off valve



STEP 3: Attach High pressure LP hose with the left handed threaded fitting on the end of the propane injection assembly (black regulator / Powershot).



Then run this high pressure LP hose from the propane injection unit assembly (black regulator / Powershot) to the air intake. Install approximately 4-8 inches ahead of and away from the turbo air inlet. Important- Do not install the propane hose ahead of any sensors in front of the inlet side of the turbo, such as an air temp or mass air flow sensor



STEP 4: Tee into the best source of boost pressure available. This will generally be between the turbo outlet, and the engine intake manifold.



If the vehicle is equipped with a boost gauge, you may tee into it, with the fittings provided.



Some vehicles have predrilled and plugged factory boost ports. Remove the factory hex plug and replace with the proper supplied fitting.



If neither of the above options are available, locate a proper boost source or determine intercooler entry points. Drill and tap 1/8 inch pipe threads into intercooler, approximately one inch forward of boost tube and hose clamp assembly.



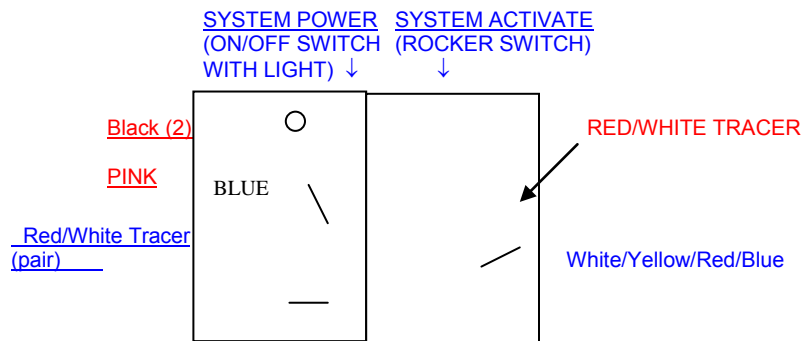
IMPORTANT install the fitting on the top or side, of the boost pressure source, not underneath, to avoid moisture.

Install 1/8 inch pipe to 1/4 inch hose fitting (included), Attach 1/4 in low pressure fuel line hose to this fitting and run back to the propane injection assembly. Attach this low pressure hose to the bottom of the black regulator. Use hose clamps to secure at both ends. *****IMPORTANT*** Remove boost tube and clean to remove any metal particles from drilling and tapping before proceeding ******

******Vehicles without intercooler, determine best boost source and drill and tap 1/8" pipe threads.**

STEP 5: Idle Circuit or Auto On units, see attached.

STEP 5: Run wire from under the dash to the fuel lock off solenoid valve. Ground the black wire under the dash. Hook yellow wire to yellow wire on switch harness. Hook ground wire from dual propane switch harness to ground. Hook the red wire to the fuse panel using the fuse taps provided



****Screws are provided for switch mounting****

STEP 6: Secure all lines to frame rail keeping them clear of any moving parts. Leave a slight amount of slack in the hoses and wires leading from the bed of the truck to under the cab area. Truck beds are independent of cabs and can and do move.



VERY IMPORTANT!!!!

ALWAYS SECURE TANK IN THE PROPER ORIENTATION. MOUNTING THE TANK IN THE INCORRECT ORIENTATION COULD ALLOW FOR THE FEED OF LIQUID PROPANE DIRECTLY TO THE ENGINE. DAMAGE CAN OCCUR. CHECK SYSTEM FOR ANY LEAKS BEFORE INITIAL VEHICLE OPERATION AND CHECK HOSES AND WIRES REGULARLY USE CAUTION WHEN REFILLING YOUR TANK TO AVOID OVERFILLING WHICH COULD LEAD TO LIQUID PROPANE ENTERING THE REGULATOR



****NOTE****

**THE RED TEE HANDLE REGULATOR IS PRESET AT 40 PSI AND
REQUIRES NO ADJUSTMENTS**

**IT IS NORMAL FOR THE LOCKOFF VALVE /FUEL SOLENOID TO BECOME
VERY HOT WHEN IN OPERATION**