



Hydrogen Boost Installation Procedure

Installing the Hydrogen Boost System is a matter of installing four components on gasoline vehicles and only three on diesel vehicles. The hydrogen generator also known as the electrolyzer, the fuel heater, the engine treatment, and the electronic control circuit comprise the gasoline system. The diesel system has no electronic control circuit. Here I will briefly describe the installation procedure, which is described in detail in our installation manual.

The hydrogen generator is usually installed in the engine compartment or under the front fender. It is usually placed in position where it rests on something sturdy and it is held in place with a mounting bracket that bolts to the vehicle. The wiring to the hydrogen generator is a separate circuit installed from the vehicle battery, through a fuse holder, an ammeter, and a relay, to the center electrode of the hydrogen generator, which is grounded by the mounting strap and/or a separate ground wire clamped to the outside of the unit. The relay is activated by a single wire from the fuel pump relay. The wiring kit supplies all the wire and connectors needed for installation along with the fuse holder, relay and ammeter. The wire does need to be cut to size, stripped, and terminated with various wire connectors crimped to the end of each wire. We have recently also included a multi-meter electrical tester used during installation.

The fuel heater is a simple heat exchanger that is installed in a convenient location and is plumbed to the cabin heater hose circuit and the fuel line coming to the injector rail. For some vehicle application the factory hosing will not reach, you may need to purchase a few feet of heater hose, fuel line and clamps to install the fuel heater.

The engine treatment is simply added to the oil sump and for gasoline engines we give you a free upper engine lubricant treatment that is added to the gasoline. The engine treatment is permanent and never has to be repeated. On diesel vehicles we also include a permanent transmission treatment and a permanent differential treatment that is simply added to the lubricants in each. The treatment, lubricant and the Scan gauge are not needed to get the system operational. However to improve the system and gas mileage it is included in the kit.

Synthetic oil is recommended as part of the system but due to shipping restrictions we recommend the customer purchases the synthetic oil locally. Even though we recommend the synthetic oil, it is not required. This is the reason why we include the treatment. The upper cylinder lubricant is not a permanent treatment like the engine treatment but it lasts about three months and shows the customer whether or not it is worth repeating the procedure on his particular vehicle. The treatment or the

Hydrogen Boost System will not harm the engine like many of the oil additives out there will such as PTFE, MoS₂, and halide additives. You can read more about XCEL PLUS (currently returning to its 1970's label name of Lubrilon) at www.xcelplus.com

The electronic control circuit is a simple potentiometer (variable resistor) that is installed on a couple wires run from your cabin into the engine compartment and attached to the MAF (mass air flow) sensor signal line or MAP (manifold absolute pressure) sensor signal line. The potentiometer (dial) is installed in a convenient location where the driver can adjust the air/fuel ratio to a leaner setting than normal while driving. All wire connectors and wire are included with the system. During operation the upstream oxygen sensor is unplugged. The oxygen sensor is operational, the reason it needs to be kept unplugged because otherwise it will overwrite the adjustment of the electronic control circuit by increasing the fuel injected as it senses to extra lean air/fuel mixture. If you keep it unplugged it will not overwrite anything and the system will work smooth. If you have inspections in your state, you will have to plug the oxygen sensor back in place for the initial inspection and unplug it afterwards.

On gasoline vehicles we also include the Scan gauge monitoring system, which is simply plugged into the OBD-II connector under the dash by the driver's knee. This component is not needed to run the Hydrogen Boost system but is a real nice tool to keep track of your mileage and to read and reset any engine diagnostic trouble codes that may come up.

The above is not intended to be a complete and detailed instruction manual for installation. The complete and detailed manual is included with the system on computer disk and can be printed out on your computer printer if needed in the shop.

Distilled or de-mineralized water is added to the hydrogen generator once every tank full of fuel and is usually done when checking your oil. If the water is not added no damage is done to the engine or to the hydrogen generator (electrolyzer). Mineral water should not be used because the minerals will stay behind in the electrolyzer and eventually you will have mud inside. Distilled water can be purchased at Walmart for 64 cents per gallon. Rain water can be used, as well as air conditioner drippings. It only uses 12-16 ounces of water every tan full of gasoline. If you use mineral water, it will cloud up, get muddy and cause the electrolyte to need rinsing or cleaning out in weeks or months. You can use de-mineralized tap water if your city pipeline gets filtered.

It typically is planned to take one full work day for installation (8 hours). If you are hiring a mechanic to install the Hydrogen boost system you should have the mechanic read the manual thoroughly and give you a price by the job, rather than by the hour. \$200 to \$500 should be reasonable for installation depending on the vehicle and how accessible the following components are under the hood: cabin heater hoses, fuel line, MAF sensor or MAP sensor, upstream oxygen sensor, fuel pump relay, battery and location for mounting the electrolyzer. Installation can take between two hours and eight hours depending on how much time you spend looking for the components listed above.

The Hydrogen Booster extract hydrogen from water. There are no explosive chemicals or danger materials in this system. There is no way for the Hydrogen Booster to damage your engine unless the installation is done improperly and safety pre-cautions are not taken. If water runs out from the Hydrogen Booster System, it will not damage the system or the car. The less water is in the Hydrogen Booster tank, the less the system works. The system will just eventually stop working until it is filled up with water again.

Safety issues are addressed thoroughly in the manual and must be used as pre-caution. Neutral Existence LLC or the Manufacturer for Hydrogen Booster will not take any responsibility for the following:

- Damage to engine from improper gas hose placement and overfilling the electrolyzer.
- Fire damage cause by a fuel leak from loose connections and clamps.
- Skin burns caused by handling the electrolyte and not rinsing it off.
- Blindness caused by spilling electrolyte in you eyes and not washing it out.
- Choking caused by breathing electrolyte fumes during mixing.