

## **LaBella's Auto Repair**

### **Map/MAF Sensor Enhancer DEMSE or (Map Enhancer)**

This device is experimental and worked on OBDII and OBDI systems. Use of this device may void your warranty. It can easily be removed if need be, however. This device is considered experimental and no warranty is implied as to its performance or intended use or misuse.

It is not intended to be used as a stand alone device but used in conjunction with supplemental hydrogen (Brown's) gas generator or an H<sub>2</sub>O water injection system.

When the term computer is used herein, it refers to the vehicle's ECU or ECM (Engine Control Module or Environmental Control Unit or engine's computer). Some vehicles may have more than one computer but the one that controls the fuel system is the one we are speaking about. OBD (On Board Diagnostics) OBD I is pre-1996 and all newer cars have OBD II.

Hydrogen generator installation without the DEMSE (Dual Edge Map Sensor Enhancer) or map enhancer device will result in no fuel mileage increase because your car will sense the increased oxygen level produced by the HHO hydrogen into the engine and the computer will calculate that the engine is running too lean—not enough fuel—and it will increase the fuel injected into the engine, sending it into a rich mixture. This could result in even less fuel mileage than previous.

The MAP (Manifold Absolute Pressure) sensor and/or the MAF (Mass Air Flow) sensor are tied into the intake manifold so that they can calculate pressure. In the case of the MAF sensor, it calculates intake air volume passing into the throat of the throttle body, which is also connected to the intake manifold. These sensors simply vary voltage that the computer sees so it knows how much or how little fuel to put into the engine. It uses voltage between 1-12 volts depending on the vehicle. The enhancer map enhancer can be used on either the MAP sensor or MAF sensor. If you have both on your vehicle, use the map enhancer on the MAP sensor only. If you have no MAP sensor but have a MAF sensor, use the map enhancer on the MAF sensor. See illustrations for use below. The arrangement of resistors in the DEMSE enhancer (map enhancer) simply takes the already normally low voltage signal and weakens it more to lean out the engine. It can be leaned out enough to kill the engine in some cases, starve it for fuel. You can control the factory mixture of fuel/air ratio of 14.7 to 1 (which equates to 14.7 parts of air to one part gasoline) down to 20 to 1 or even down to 50 to 1 or even 100 to 1.

### ***INSTALLATION***

Locate the 3 wires connected to your MAP (manifold absolute pressure) or MAF (mass air flow) sensor. There will be one for positive voltage supply input, usually 5 or 12 volts steady. The signal wire will be the one with the weaker voltage output and will vary with the RPM's of the engine. The ground wire will be the one that grounds to the vehicles ground or chassis. You can solder or crimp the connection so that you can easily remove the device if need be. If you have trouble locating the MAP sensor, check with a good mechanic or go to Auto Zone and purchase the Haynes shop manual. If you purchased the map enhancer from

us, we can let you know where it is located if the vehicle is USA made and available.

**COLOR CODE FOR THE DEMSE (Map Enhancer) (Map/Maf Sensor Enhancer)**

The color codes on the DEMSE have nothing to do with the vehicle's color codes as these will vary.

**RED** wire: attaches to your MAP/MAF signal output wire at the sensor after identifying it and cutting it at least 4 inches away from the sensor.

**WHITE (green or other in some cases)** wire: attaches to the other cut end of your MAP/MAF sensor output wire going to the ECU.

**BLACK** wire is a common ground attached to any ground near the unit.

It's advisable to also use an O2 sensor isolator or o2 sensor EFIE on the O2 sensor(s) before catalytic converters for mileage gain purposes.

Gains with the MAP/MAF sensor enhancer DEMSE can be as high as 52.4% when installed properly.

Once installed, turn the on/off switch (where applicable) to the off position all the way to the left (factory setting) and rotate the knobs (or knob) all the way to their stops- counter clockwise. Now start the engine and let it reach normal running temperature. Do this next step in an area where there's no traffic in case the adjustment kills the engine. Now turn the switch to on position and then with the engine idling, turn the city knob clockwise until you start to hear the engine lower in speed. If the engine tries to kill, back the knob off slowly- counter clockwise- until it stabilizes. The ideal setting should be somewhere between all the way off (counter clockwise) to midway to the stalling point. This setting will be good to speeds up to 45 mph. If the check engine light comes on, turn the knob more toward off. Now set the highway side of the switch (or single knob enhancer) the same way but you'll need to do this at speeds above 50 mph. Use the same traffic caution mentioned earlier. If you are going up high inclines or towing heavy loads, you may have to switch the map enhancer to the off position temporarily- back to factory setting. **Note:** on single knob map enhancers you can place a mark on the face of the enhancer to designate the highway and city settings with the use of a paint pen.

***KEEP DANGER OF OVERHEATING IN MIND***

If your HHO generator is non-operational for any reason, set the map enhancer to the factory position (off position). In some cases you may want to install a cylinder head temperature gauge to monitor heat and try to keep it within 10 degrees of its normal operating temperature range for safety.

**NOTE:** Use of this device may turn your check engine light on and thus the use of a ScanGauge will aid in turning the light off as you may have to reset the adjustments on the map enhancer until it is set right.

***WARNING:***

It is possible to lean the engine too much and cause damage to it. Since I'm not installing it or adjusting it, no responsibility is assumed by me. The installation is easy and the adjustments are not complicated but they have to be correct. The device is sold as is with no warranty unless the device has a defect in workmanship. This warranty is for 30 days and is not warranted against burnt wires or damage due to incorrect hookup.

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LaBella's Auto Repair  
504 469 9986  
<http://labellasautorepair.com>