

EPA Evaluation of Aftermarket Gas-Saving Products

The U.S. Environmental Protection Agency (EPA) conducts a program to evaluate aftermarket retrofit devices that are intended to improve vehicle fuel economy and/or reduce exhaust emissions. Through engineering, scientific, and statistical analysis of data obtained from independent and EPA laboratory testing, the evaluation program objectively determines the effects a device may have on fuel economy and exhaust emissions; when necessary, durability and drivability testing may be evaluated as well.

Purpose of the Program

The purpose of the program is to generate, analyze and disseminate technical data in a public document. Participation in the program is voluntary unless ordered by the EPA Administrator or the Federal Trade Commission. All voluntary testing is paid for by the applicant. The program is restricted to four-wheeled highway vehicles weighing 6,000 pounds or less.

Fuel additives are included in this program; however, oil additives and lubricants are not. A complete report is issued for any product evaluated by EPA. There is no approval, certification, endorsement, nor registration of any product tested in this program. Furthermore, EPA does not certify, approve, register, or endorse any independent laboratory or the results of any independent laboratory testing. Any claims of EPA certification in this program are false.

Overview of Testing

The EPA device evaluation program employs the same scientific laboratory test methods used to certify vehicles in the United States. The specific tests are the Federal Test Procedure (FTP) and the Highway Fuel Economy Test (HFET). Each of these involve placing the test vehicle on a dynamometer (a laboratory test apparatus which simulates road conditions) and driving through a specified trace simulating

city and highway driving in consecutive test sequences. Exhaust gases are captured, analyzed, and used to determine the rate of each criteria pollutant emission in grams per mile (gms/mi) and to calculate fuel economy in miles per gallon (mpg).

The controlled laboratory conditions and use of a standard test fuel in this evaluation program minimizes variables one would have to address when using actual outdoor driving on roadways. Laboratory testing assures that the test results' comparisons, with and without the device, are not influenced by outside, uncontrollable factors.

EPA conducts tests on at least two different vehicles which are representative of the fleet. Each vehicle is thoroughly inspected and maintained as it was originally certified by EPA before testing. A minimum of three tests using each test vehicle without the device are conducted to establish a base line. The device is then installed on the vehicle as instructed by the manufacturer and the same three test series are conducted once again. When completed, the device is removed and the initial series of tests are conducted once again to determine whether the vehicle has been affected by using the device.

The data obtained from testing are analyzed for statistically significant differences, either positive or negative. Emission results for each of the criteria pollutants, carbon monoxide, hydrocarbons, and nitrogen oxides are compared for these differences. If use of a device results in a statistically significant increase of any of the criteria pollutants, EPA would consider installation of the device as **tampering** with the emission control system even though fuel economy might be improved.

Applicants for this voluntary program are invited to be present during installation and testing of the device at [EPA's test laboratory](#) located in Ann Arbor, Michigan.

For More Information

For further details on the evaluation program, go to:

www.epa.gov/otaq/consumer/b00003.pdf

Available reports may be viewed from this Web site by selecting the link associated with the alphabetical listing of evaluated product names.