



Olson-EcoLogic

Engine Testing Laboratories, LLC

ISO 9001:2000 Registered

Large Spark Ignition Engines
EPA 2007 Emission Testing Requirements

May 18, 2006

Re: Changes and special requirements for 2007 EPA Large Spark (LSI) new engine certifications compared to previous years

There are several new requirements for 2007 that did not exist for earlier model years and these can have an effect on the emission testing requirements. Those specifically related to emission testing are as follows:

- 2007 testing can be done under steady-state conditions or by the new transient cycle testing protocol. The emission standards are the same for both protocols, but the actual emission test results may be quite different between the two methods. If EPA themselves do any testing of LSI engines they will use the new transient cycle test protocol. Both test protocols are available at Olson-EcoLogic.
- Evaporative testing is also required, but there is an option for the manufacturer to provide adequate engineering evidence of proper design to satisfy the 0.2 gram/gallon for volatile liquid fuel (gasoline).
- On-Board diagnostics are required for all engines
- Engine life is specified as 5000 hours or 7 years, whichever comes first. The emissions must not exceed the standards for the useful life.
- Small volume manufacturer exemptions may not exist for determination of deterioration factors.
- Field emission testing is also required and engines must be equipped to accommodate measurements in the field

Other Requirements:

In addition to the above items that specifically affect emissions there are numerous other requirements that engine manufacturers, importers and engine users must satisfy. So far CARB has not promulgated any new requirements for 2007, but several changes are under consideration (**read: <http://www.arb.ca.gov/regact/lore/appc1.pdf>**)

It is strongly recommended that any engine manufacturers or importers obtain, read and understand the Code of Federal Regulations that covers the certification and import of large spark ignition engines before committing to any certification testing. The EPA reference is: 40CFR Parts 1048 and 1065 (Title 40 – Protection of the Environment).

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