



Environmental Fact Sheet

Statement of Principles for Small Nonhandheld Spark-ignited Engines

The U.S. Environmental Protection Agency (EPA) and manufacturers of small nonroad nonhandheld engines have agreed to the structure for a Phase 2 program to be proposed for small nonhandheld spark-ignited (SI) engines. These engines contribute approximately seven percent of the ozone-forming HC emissions from mobile sources. The program would achieve substantial reductions in ozone-forming pollutants in all parts of the country. It would include standards that are expected to achieve a reduction of about 40 percent in hydrocarbon (HC) + oxides of nitrogen (NOx) exhaust emissions from these engines below Phase 1 levels.

Current Standards

In July 1995, EPA finalized the first national regulations affecting small SI engines used primarily in lawn and garden equipment. The regulations, commonly known as "Phase 1," take effect for new handheld and nonhandheld engines beginning in model year 1997. The Phase 1 standards are expected to result in a 32 percent reduction in HC emissions from these engines.

Statement of Principles

In December 1996, EPA and manufacturers of small nonhandheld nonroad engines signed a Statement of Principles (SOP) which describes areas of agreement between the Signatories on many issues for the nonhandheld side of the industry. The SOP lays out a framework for a Phase 2 proposal that will lead to substantially reduced emissions from two classes of new SI engines below 19 kilowatts (25 horsepower) for use in nonhandheld applications.

Class 1 engines, which have displacement of less than 225 cubic centimeters (cc), are small engines used primarily in residential applications such as walk behind mowers and edgers. Class 2 engines, with displacement greater than or equal to 225 cc, are larger engines often used in riding mowers and lawn tractors and also in more expensive, commercial applications.

Elements of the Statement of Principles

The provisions discussed in the SOP are expected to result in a shift of engines to cleaner, more durable technology (such as over-head valve (OHV) technology), and to ensure that emission reductions are achieved for the useful life of the equipment. Highlights of this SOP that will be reflected in a future notice of proposed rulemaking include:

- ☛ Emission standards (in grams per kilowatt-hour) for HC + NO_x, and carbon monoxide (CO), to be met over the lifetime of the engines:
 - In-use HC+NO_x standard of 25 g/kW-hr for Class 1 engines effective in 2001.
 - In-use HC+NO_x standard of 12.1 g/kW-hr for Class 2 engines to be phased-in between 2001-2005 which would shift these engines completely to OHV or comparably clean and durable technology by 2005.
 - In-use CO standard of 610 g/kW-hr for Class 1 and 2 engines, effective in 2001.
- ☛ Memoranda of Understanding (MOUs) between EPA and engine manufacturers for OHV Demonstration Programs to explore the feasibility and consumer acceptance of applying OHV technology to Class 1 engines.
- ☛ A compliance program including certification, production line testing, and a field durability and in-use emission performance demonstration program for OHV engines.
- ☛ An agreement by the Signatories to work cooperatively on a voluntary Fuel Spillage Reduction Program to educate consumers about the significant contribution to air pollution from spillage, and to encourage the development and use of technology that will reduce or eliminate spills by users.
- ☛ Flexibilities for manufacturers during transition to OHV technology, and provisions for relief for engine families with less than 1000 units produced for sale in the United States.

California has unique air quality needs for emission reductions that go beyond the substantial reductions expected to be achieved by this program. Towards that end, EPA is committed to working cooperatively with the California Air Resources Board to help meet the needs of its State Implementation Plan while harmonizing regulatory programs for these engines to the greatest extent possible.

Next Steps

EPA plans to issue an Advance Notice of Proposed Rulemaking in early 1997 that will seek comment from all interested parties on the elements in this SOP. EPA will then develop the provisions of the proposed Phase 2 regulations to be issued in the Fall of 1997, based in part on the SOP and public comments on the ANPRM. The proposed rule will also include provisions for small nonroad handheld engines. Final Phase 2 regulations, following a public comment period on the proposal, will be issued in the Fall of 1998.

For More Information

The text of this SOP and other nonroad engine documents may be accessed via the EPA Internet server (<http://www.epa.gov/OMSWWW>) or via dial-up modem on the Technology Transfer Network electronic bulletin board system (TTN BBS: 919-541-5742 (1200-14400 bps, no parity, 8 data bits, 1 stop bit.)) Information is also available by calling the Office of Mobile Sources, 313-668-4333, or by writing to:

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