

## UPDATED INFORMATIVE DIGEST

### AMENDMENTS TO THE CURRENT SPARK-IGNITION MARINE ENGINE AND BOAT REGULATIONS

**Sections Affected:** Amendment of sections 2111, 2112, and Appendix A, within Chapter 2, Article 2.1, Title 13, California Code of Regulations (13 CCR); section 2139 within Chapter 2, Article 2.3, 13 CCR, section 2147 within Chapter 2, Article 2.4, 13 CCR; sections 2440, 2441, 2442, 2443.1, 2443.2, 2443.3, 2444.1, 2444.2, and 2445, and repeal of Section 2448, within Chapter 9, Article 4.7, 13 CCR; and amendments to the following documents incorporated by reference in Section 2447, 13 CCR: “California Exhaust Emission Standards and Test Procedures for 2001 Model Year and Later Spark-Ignition Marine Engines,” as last amended September 22, 2006, and in Section 2474, 13 CCR: “Procedures for Exemption of Add-On and Modified Parts for Off-Road Categories,” as adopted July 14, 2000.

**Background:** Health and Safety Code sections 43013 and 43018 direct the Air Resources Board (Board or ARB) to achieve the maximum feasible and cost effective emission reductions from all mobile source categories, including marine pleasurecraft engines, through the setting of emission control and other requirements.

On December 10, 1998, the Board adopted exhaust emission standards for outboard engines and personal watercraft that exceeded the stringency of existing U.S. EPA standards for the same engine types. On July 26, 2001, the Board amended the regulations to include exhaust emission standards and other requirements for sterndrive and inboard (SD/I) engines. According to those requirements, all SD/I engine manufacturers, including high performance engine manufacturers, would have been required to comply with a 5.0 grams per kilowatt-hour (g/kW-hr) catalyst-based standard for combined emissions of hydrocarbon and oxides of nitrogen (HC+NO<sub>x</sub>).

On November 17, 2005, the Board amended the original SD/I regulations by providing engine manufacturers with an emissions neutral option to delay the introduction of engines meeting the catalyst-based second tier standards by one year in exchange for full product line compliance in 2008 and limited evaporative permeation control. The Board also provided a temporary reprieve for high performance engine manufacturers by delaying the second tier standard (5.0 g/kW-hr HC+NO<sub>x</sub>) for these engines until 2009, and by allowing them to meet the standard through averaging. Finally, the Board directed staff to investigate additional relief for small volume manufacturers of high performance engines, the incorporation of future carbon monoxide (CO) standards for spark-ignition marine engines and the harmonization of requirements that were under development by U.S. EPA.

**Description of Regulatory Action:** On July 24, 2008, the Board amended the regulations and test procedures for spark-ignition marine engines by relaxing the HC+NO<sub>x</sub> exhaust standard for small volume manufacturers of high performance engines from 5.0 g/kW-hr to 16.0 g/kW-hr. This new exhaust standard can be met

without the use of catalytic converters, which have not been successfully developed for use on high performance engines as anticipated. To partially offset the higher tailpipe emissions from relaxing the 5.0 g/kW-hr HC+NOx standard, small volume manufacturers are required to incorporate carbon canister-based evaporative control systems on all boats in which high performance engines are installed beginning in 2009.

The regulatory amendments require large volume manufacturers of high performance engines to continue to comply with the 5.0 g/kW-hr HC+NOx exhaust standard beginning in 2009, but additionally to install canister-based evaporative controls on all boats equipped with their high performance engines to ensure that the revised regulation results in no loss of emission reductions of HC+NOx as a result of the relaxed exhaust standard for small volume manufacturers. The large volume manufacturer may still average emission levels between its high and standard performance engines to meet the 5.0 g/kW-hr standard or it may petition the executive officer to employ other equivalent and verifiable measures for reducing emissions.

The Board also adopted other amendments to streamline the regulations including: 1) Total Hydrocarbon Standards (all spark-ignition marine categories), 2) Not-To-Exceed Limits (all spark-ignition marine, except SD/I > 373 kW), 3) Revised Definitions for OB/PWC and SD/I Engines, 4) Revised Jet Boat Engine Standards, 5) Standardized Engine Rebuilding Practices (all spark-ignition marine categories), 6) Carbon Monoxide Standards (all spark-ignition marine categories), 7) Revised High Performance Testing Requirements (SD/I >373 kW), 8) Revised OBD-M Requirements (SD/I engines), 9) Hardship Allowance Provisions (SD/I engines), 10) Voluntary Five-Star Standards (all spark-ignition marine categories), 11) Replacement Engine Provisions (all spark-ignition marine categories), and 12) Clarifications and Miscellaneous Requirements. A full description of the amendments can be found in the "Staff Report: Initial Statement of Reasons," with the other regulatory documents for this rulemaking, at <http://www.arb.ca.gov/regact/boatregs/boatregs.htm>.

The Board also adopted other non-substantive modifications to the recreational marine regulations and test procedures to clarify or simplify existing language.

## **COMPARABLE FEDERAL REGULATIONS**

On October 4, 1996, the United States Environmental Protection Agency (U.S. EPA) promulgated regulations for spark-ignition outboard and personal watercraft marine engines. SD/I engines were not included in that rulemaking and are currently still exempt from federal emission requirements.

On May 18, 2007, U.S. EPA published a Notice of Proposed Rulemaking (NPRM) in the Federal Register for nonroad spark-ignition engines and equipment that would institute a federal regulation for SD/I engines and that would generally harmonize with the existing California HC+NOx exhaust standards for outboard/personal watercraft engines and SD/I engines. The NPRM also proposed the adoption of carbon monoxide standards and evaporative control requirements for outboard/personal watercraft and

SD/I engines and boats. On October 8, 2008, U.S. EPA promulgated a final rulemaking for outboard engines, personal watercraft, and sterndrive/inboard engines in accordance with the NPRM and in virtual harmonization with California's existing requirements and those adopted by the Board on July 24, 2008.

### **BENEFITS OF THE PROPOSAL**

The regulatory amendments are intended to provide limited relief while maintaining reductions of ozone precursor emissions assumed in the current regulations. The adopted amendments do not require manufacturers to generate additional emission benefits, nor do they permit a decrease overall from existing benefits. An additional consideration is the impact that the proposed amendments may have on both ambient and localized concentrations of carbon monoxide in the environment. In consideration of the data analyses performed in the staff report, staff has determined that no significant adverse environmental impacts should occur as a result of these amendments.

### **COSTS TO PUBLIC AGENCIES AND TO BUSINESSES AND PERSONS AFFECTED**

The regulatory amendments are not expected to result in net additional costs above the costs to comply with the existing regulation or for manufacturers to comply with federal requirements. The evaporative control technology to be incorporated is readily available, generally inexpensive compared to catalytic converters, and would not require special expertise. The proposed amendments are likely to benefit manufacturers because they generally facilitate compliance and are a potentially less expensive alternative for complying with the regulation. Additionally, the adopted carbon monoxide standards, Not-To-Exceed limits, and jet boat requirements are nearly identical to those adopted federally and would not necessitate additional costs or efforts above those required to comply with the federal requirements. Therefore, staff maintains that the regulatory amendments will have no adverse impacts on business competitiveness, California employment, or on business creation, elimination, and expansion. The amendments benefit manufacturers by providing additional flexibility, and may benefit consumers if the flexibility results in reduced prices.

The determinations of the Board's Executive Officer concerning the costs or savings necessarily incurred by public agencies and private persons and businesses in reasonable compliance with the amended regulations are presented below.

Pursuant to Government Code sections 11346.5(a)(5) and 11346.5(a)(6), the Executive Officer has determined that the amended regulations will not create costs or savings to any state agency or in federal funding to the state, costs or mandate to any local agency or school district whether or not reimbursable by the state pursuant to part 7 (commencing with section 17500), division 4, title 2 of the Government Code, or other nondiscretionary costs or savings to state or local agencies.

In developing this regulatory proposal, the ARB staff evaluated the potential economic impacts on representative private persons or businesses. The ARB is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

The Executive Officer has made an initial determination that the amended regulations will not have a significant statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states, or on representative private persons.

In accordance with Government Code section 11346.3, the Executive Officer has determined that the amended regulations will not affect the creation or elimination of jobs within the State of California, the creation of new businesses or elimination of existing businesses within the State of California, or the expansion of businesses currently doing business within the State of California.

The Executive Officer has also determined, pursuant to title 1, CCR, section 4, that the amended regulations will not affect small businesses because there will be no incremental cost, or an insignificant cost, associated with staff's proposal in addition to those already needed to comply with the federal regulation.

In accordance with Government Code sections 11346.3(c) and 11346.5(a)(11), the Executive Officer has found that the reporting requirements of the regulation that apply to businesses are necessary for the health, safety, and welfare of the people of the State of California.

The Board has determined that no reasonable alternative considered by the board, or that has otherwise been identified and brought to the attention of the board, would be more effective in carrying out the purpose for which the amendments were intended, or would be as effective as and less burdensome to affected private persons, than the amended regulation. A detailed assessment of the economic impacts of the proposed regulatory action can be found in the Staff Report.