UPDATED INFORMATIVE DIGEST

PUBLIC HEARING TO CONSIDER AMENDMENTS TO THE CURRENT REGULATIONS FOR LARGE SPARK-IGNITION ENGINES WITH AN ENGINE DISPLACEMENT LESS THAN OR EQUAL TO ONE LITER

Sections Affected: This action amends section 2433, chapter 9, article 4.5, title 13, California Code of Regulations (CCR), and the incorporated "California Exhaust and Evaporative Emission Standards and Test Procedures For New 2010 and Later Off-Road Large Spark-Ignition Engines," as adopted March 2, 2007.

Background: In 1998, the Air Resources Board (ARB or Board) adopted regulations for large spark-ignition (LSI) engines and equipment, including provisions for exhaust emission standards and test procedures, labeling requirements, warranty, in-use compliance testing, and production line testing. For the larger displacement engines, those greater than one liter in size (> 1.0 L), the emission control requirements began with the 2001 model year (MY). This engine size category is almost exclusively made up of automotive-derived engines which are readily adapted to use existing automotive emission controls. The smaller displacement engines, LSI engines with displacements less than or equal to one liter (≤ 1.0 L), are typically used in such applications as portable generators (about 40 percent), large turf care equipment (about 30 percent), and industrial equipment (about 30 percent). In 2003, the Board approved more stringent emission standards for the small off-road engines, without any consideration to maintain the alignment of LSI engine emission standards with those for small off-road engines. Thus, LSI engines ≤ 1.0 L remained subject to the less stringent emission standards adopted initially in 1998. In 2006, the Board approved the current 0.8 grams per kilowatt-hour of hydrocarbons and oxides of nitrogen (g/kW-hr of $HC+NO_x$) emission standard for the LSI engines > 1.0 L category. However, LSI engines ≤ 1.0 L were not affected by this emission standard change and, again, remained subject to the emission standards adopted in 1998.

Description of Regulatory Action: At the November 21, 2008 public hearing for the proposed regulations, the Board adopted the amended regulations, summarized below, as they were noticed on October 3, 2008, in the California Notice Register (Notice File No. Z2008-0923-06), and as set forth in the Staff Report: Initial Statement of Reasons, released on October 3, 2008.

The regulations for LSI engines are amended to include two new subcategories: LSI engines with a displacement less than or equal to 825 cubic centimeters (≤ 825 cc), and LSI engines with a displacement greater than 825 cc but less than or equal to one liter (> 825 cc - ≤ 1.0 L). The exhaust emission standards for both subcategories would begin in the 2011 MY, and the more stringent exhaust emission standards for LSI engines > 825 cc - ≤ 1.0 L would begin in the 2015 MY.

The Board also adopted evaporative emission standards which require 2011 and

subsequent MY equipment with LSI engines ≤ 1.0 L to meet the same evaporative emission standards as do small off-road engines. Additionally, the adopted regulations allow manufacturers of LSI engines used in vehicles similar to off-highway recreational vehicles (OHRV) the option to use the OHRV test and certification procedures.

During the Board hearing, no substantive modifications to the proposed amendments were directed by the Board. Pursuant to Government Code section 11346.8(c) and section 40, title 1 of the CCR and to Board Resolution 08-42 directing appropriate revisions, staff has made a non-substantial change. The change is described in the Final Statement of Reasons.

Comparable Federal Regulations: LSI engines are regulated federally under title 40, Code of Federal Regulations, part 1048, which is generally harmonized with the California emission standards until 2010, when more stringent California standards go into effect for LSI engines > 1.0 L. The federal program requires manufacturers of LSI engines ≤ 1.0 L, up to a 30 kW cap, to certify their engines under the nonroad spark-ignition regulation, which is the federal equivalent of ARB's small off-road engine regulation. The federal Phase 3 standards are less stringent than ARB newly adopted exhaust and evaporative emission standards.