

State of California
AIR RESOURCES BOARD

**Final Statement of Reasons for Rulemaking,
Including Summary of Comments and Agency Response**

PUBLIC HEARING TO CONSIDER AMENDMENTS TO THE CALIFORNIA
OFF-ROAD EMISSIONS REGULATION FOR COMPRESSION-IGNITION
ENGINES AND EQUIPMENT

Public Hearing Date: December 9, 2004
Agenda Item No.: 04-11-4

I. GENERAL

In this rulemaking, the Air Resources Board (ARB or Board) is amending California's exhaust emission regulations for off-road compression-ignition engines and equipment. These amendments would largely harmonize the requirements of California's off-road diesel program with those of the United States Environmental Protection Agency (U.S. EPA) regarding exhaust emission standards, compliance procedures, and test methods. Manufacturers, remanufacturers, and rebuilders of off-road compression-ignition engines and equipment would be subject to, and have responsibilities under, the regulation.

This rulemaking was initiated by the October 22, 2004, publication of a notice for a public hearing scheduled on December 9, 2004. The Staff Report: Initial Statement of Reasons, entitled "Public Hearing to Consider Amendments to the California Off-Road Emissions Regulation for Compression-Ignition Engines and Equipment" (Staff Report or ISOR) was also made available for public review and comment starting October 22, 2004. The Staff Report, which is incorporated by reference herein, described the rationale for the proposal.

The proposed amended text of title 13, California Code of Regulations (CCR), sections 2420, 2421, 2423, 2424, 2425, 2426, and 2427, along with the incorporated documents "California Exhaust Emission Standards and Test Procedures for New 2000 and Later Tier 1, Tier 2, and Tier 3 Off-Road Compression-Ignition Engines, Part I-B" (formerly "California Exhaust Emission Standards and Test Procedures for New 2000 and Later Off-Road Compression-Ignition Engines, Part I-B," adopted January 28, 2000), and "California Exhaust Emission Standards and Test Procedures for New 1996 and Later Tier 1, Tier 2, and Tier 3 Off-Road Compression-Ignition Engines, Part II" (formerly "California Exhaust Emission Standards and Test Procedures for New 1996 and Later Off-Road Compression-Ignition Engines, Part II," adopted May 12, 1993) were included as attachments to the Staff Report. The proposed adopted text of title 13, CCR, section 2425.1, and the incorporated document "California Exhaust Emission Standards and Test Procedures for New 2008 and Later Tier 4 Off-Road Compression-Ignition Engines, Part I-C" were also included as an attachment to the Staff Report.

These modifications and additions to the regulations and test procedures require manufacturers to comply with more stringent exhaust emission standards and enhanced certification and compliance procedures. The modifications and additions also harmonize California's regulations with the federal nonroad requirements. A copy of Board Resolution 04-43 approving the regulatory action described above and the regulatory documents for this rulemaking were also posted on the ARB's internet site for this rulemaking at <http://www.arb.ca.gov/regact/offrdcie/offrdcie.htm> ("ARB's internet site").

On Friday, November 5, 2004, ARB published an errata in the California Regulatory Notice Register, which we mailed to ARB's general public information mailing list on October 28, 2004. The errata notified the public of two corrections to the notice published on October 22, 2004. First, the title of the original notice incorrectly indicated that only 2005 and later model years were the subject of the proposal. The errata corrected the title of the proposed action to reflect the fact that the proposal affected all model years. Second, the original notice incorrectly referred only to manufacturers being subject to the proposal. The errata corrected the reference to reflect the fact that the proposal applied to all manufacturers, remanufacturers, and rebuilders of the affected engines and equipment.

On December 9, 2004, the Board conducted a public hearing to consider the staff's proposal as described in the Staff Report. At the hearing, staff proposed to amend California's existing off-road diesel regulations to harmonize with the U.S. EPA requirements for nonroad diesel engines and equipment as set forth on June 29, 2004, in Title 40, Code of Federal Regulations, Part 1039 (40 CFR 1039). This would ensure a greater degree of emission reductions from non-preempted off-road diesel engines in California (i.e., those which the ARB has authority to regulate under the federal Clean Air Act), by enabling the ARB to independently enforce compliance with the regulations, as necessary. Staff also proposed various editorial corrections and several modifications to the proposed regulatory action. Written and oral comments were received at the hearing concerning staff's proposal.

At the conclusion of the hearing, the Board adopted Resolution 04-43, in which the Board approved the adoption of the originally proposed regulations with the modifications presented by staff at the hearing and directed staff to work with commenters to finalize the regulatory proposal. The staff's proposed modifications were identified in a document appended to Resolution 04-43 as Attachment B. Attachment B showed the originally proposed regulatory text and incorporated documents, with the text of all suggested modifications clearly identified. In accordance with section 11346.8 of the Government Code, the Board in Resolution 04-43 directed the Executive Officer to incorporate the modifications to the proposed regulatory text approved by the Board, with such other conforming modifications as may be appropriate, and to make the modified text available to the public for a period of at least forty-five days. The Executive Officer was then directed either to adopt the amendments with such additional modifications as may be appropriate in light of the comments received, or to

present the regulations to the Board for further consideration if warranted in light of the comments.

The revised regulations and test procedures, with the modified text clearly indicated, were made available to the public for a supplemental 45-day comment period by issuance of a "Notice of Public Availability of Modified Text" ("1st Notice of Modified Text"). The 1st Notice of Modified Text, a copy of Resolution 04-43, and the Attachment B document (relabeled as Attachment B-1 when appended to the 1st Notice of Modified Text) were mailed on July 14, 2005, to all parties identified in title1, CCR, section 44(a), and to other persons generally interested in ARB's rulemaking concerning off-road compression-ignition engines and equipment. These documents were also published on ARB's internet site on July 14, 2005.

Several written comments were received during the 45-day supplemental comment period. In response to these comments, a second "Notice of Public Availability of Modified Text" was issued on September 29, 2005 ("2nd Notice of Modified Text"). The originally proposed regulations, the text of the modifications published with the 1st Notice of Modified Text, and the text of the modifications published with the 2nd Notice of Modified Text were mailed on September 29, 2005, to all parties identified in title1, CCR, section 44(a), and to other persons generally interested in ARB's rulemaking concerning off-road compression-ignition engines and equipment. One written comment was received in response to the 2nd Notice of Modified Text.

There is one typographical correction that we should note. After publication of the 2nd Notice of Modified Text, we discovered that we inadvertently omitted the adoption date of the Omnibus Technical Amendments in the "SOURCE" notation for one part in one of the incorporated test procedures. On page 1 of the incorporated document titled "CALIFORNIA EXHAUST EMISSION STANDARDS AND TEST PROCEDURES FOR NEW 2008 AND LATER TIER 4 OFF-ROAD COMPRESSION-IGNITION ENGINES," the line "SOURCE: 69 FR 38957, June 29, 2004, unless otherwise noted" was left unmodified, rather than reflecting "70 FR 40420, July 13, 2005" as the new applicable reference for California's Part 1039 test procedures. As clearly noted in this Final Statement of Reasons (FSOR), it was our intent to incorporate virtually all of U.S. EPA's Omnibus Technical Amendments; all of the other parts in this test procedure document reflect the technical amendments' adoption date. We received no adverse comments on this inadvertent omission.

After considering the comments received during the two supplemental comment periods, the Executive Officer issued Executive Order R-05-006, adopting the amendments, new regulatory text, and incorporated documents.

This FSOR updates the Staff Report by identifying and providing the rationale for the modifications made to the originally proposed regulatory text. The FSOR also contains a summary of the comments received on the proposed regulatory amendments during the formal regulatory process and ARB's responses to those comments.

Incorporation of Test Procedures and Federal Regulations. The amended exhaust emission test procedures are incorporated by reference in title 13, CCR, section 2421. The test procedures incorporate, with revisions, the regulations promulgated by the U.S. EPA in 40 CFR Parts 89, 1039, 1065, and 1068.

The ARB documents are readily available from the ARB upon request and were made available in the context of this rulemaking in the manner specified in Government Code section 11346.5(b). The test procedures are available online at ARB's internet site. The CFR is published by the Office of the Federal Registrar, National Archives and Records Administration, and is therefore reasonably available to the affected public from a commonly known source.

The test procedures incorporate portions of the CFR because ARB's requirements are substantially based on the federal emission regulations. Manufacturers typically certify engines to a version of the federal emission standards and test procedures, which has been modified by state requirements. Incorporation of the federal regulations by reference makes it easier for manufacturers to know when the two sets of regulations are identical and when they differ. Each of the incorporated CFR provisions is identified by date in ARB's test procedure documents.

The test procedures are incorporated by reference because it would be cumbersome, unduly expensive, and otherwise impractical to print them in the CCR. Existing ARB administrative practice has been to have the test procedures incorporated by reference rather than printed in the CCR because these procedures are highly technical and complex. They include the "nuts and bolts" engineering protocols, computer modeling, and laboratory practices required for certification of the regulated engines and equipment and have a very limited audience. Because ARB has never printed complete test procedures in the CCR, the directly affected public is accustomed to the incorporation format used therein. The ARB's test procedures as a whole are extensive, and it would be both cumbersome and expensive to print these lengthy, technically complex procedures for a limited audience in the CCR. Printing portions of ARB's test procedures that are incorporated by reference would be unnecessarily confusing to the affected public.

Of special note regarding the incorporation of provisions from the recently finalized U.S. EPA Omnibus Technical Amendments found in Volume 70 of the Federal Register starting on page 40465 (70 FR 40465) are the additional labeling specifications for new replacement engines. Sections 89.1003(b)(7)(iv) and 1068.240(d) of the 2000 Plus Limited Test Procedures and the 2008 and Later Test Procedures, respectively, specify additional labeling content for new replacement engines that have been certified to emission standards less stringent than those currently in effect. Although the California test procedures incorporate these additional labeling specifications, the California specific regulations in title 13, CCR, §2423(j)(D) do not directly reflect this change. Rather, §2423(j)(D) continues to specify the existing labeling text as the preferred content for all new replacement engines. However, the section does permit the use of alternate language approved in advance by the Executive Officer, which in effect

permits the use of the content specified in the test procedures mentioned above. Because it may not be as obvious as intended to an uninformed reader of the regulation, staff wishes to clarify that manufacturers of new replacement engines may therefore use the alternate labeling provisions of the referenced California test procedures above without providing supplemental notification to ARB as otherwise required in §2423(j)(D).

Fiscal Impacts. The Board has determined that this regulatory action will not create costs or savings, as defined in Government Code section 11346.5(a)(5) and 11346.5(a)(6), 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 non-discretionary costs or savings to local agencies.

Consideration of Alternatives. The amendments and new regulatory language proposed in this rulemaking were the result of extensive discussions and meetings involving staff and the affected engine and equipment manufacturers, remanufacturers, and rebuilders, and consultation with U.S. EPA. In the Staff Report, staff evaluated and rejected three potential alternatives to the proposed regulations: (1) maintain current California regulations, (2) adopt more stringent emission standards, and (3) accelerate the implementation schedule of the standards.

The first alternative to the proposal would be to simply maintain the current California off-road diesel engine emission standards. Prior to U.S. EPA's adoption of the Tier 4 standards for off-road diesel engines, current California and federal standards were the same. However, with the passage of U.S. EPA's Tier 4 standards, the current California regulations have become less stringent than the federal program. Pursuant to the federal Clean Air Act (CAA), in order for California to enforce its own emissions reduction program the Board must adopt regulations that are, in the aggregate, at least as protective of public health and welfare as applicable federal standards (CAA §209(e)(2)(A)). Therefore, this alternative was rejected.

The second alternative would be to adopt more stringent emission standards than proposed. The degree of emissions control proposed by staff is already technology forcing for most of the engines being regulated and should result in dramatic emission reductions over time. Staff recognizes that more stringent standards may be necessary in the future, especially for engines rated less than 19 kW. However, data are not yet available to suggest a more cost effective way to achieve greater emission benefits. Therefore, staff is not recommending the adoption of standards more stringent than those already proposed. Harmonization with the federal program will spare the industry unnecessary costs and administrative burdens, allowing a greater focus on the technical issues of emissions control. Therefore, this second alternative was rejected.

The third alternative would be to accelerate the implementation schedule of the standards to get cleaner engines into California earlier. While this alternative would provide emission benefits sooner, manufacturers would have less lead time to develop

the necessary technologies because standards for many of the power groups would be changing simultaneously, and manufacturers would have fewer years over which to spread out and recoup the development expenses. This would also make the proposal far less cost effective. Therefore, this third alternative was rejected.

Additional proposed alternatives were submitted by commenters during the rulemaking process and considered by the Board. For the reasons set forth in the Staff Report, in staff's comments and responses at the hearing, and in this FSOR, the Board has determined that none of the alternatives considered by the agency would be more effective in carrying out the purpose for which the regulatory action was proposed or would be as effective and less burdensome to affected private persons than the action taken by the Board.

II. MODIFICATIONS MADE TO THE ORIGINAL PROPOSAL

At the December 9, 2004 hearing, the Board approved the adoption of the staff's proposed regulatory action. Further, the Board directed staff to work with stakeholders regarding modifications or clarifications to the approved regulations. The following is a description of the modifications and clarifications, by section number.

TITLE 13, CCR

§ 2421 – Definitions

The definition of "Certified (emissions) configuration" was modified to clarify the sufficiency of engine assembly with direct replacement parts.

The definition of "Constant-speed engine" was bifurcated into segments representing Pre-Tier 4 engines and Tier 4 engines. The Tier 4 segment was added for consistency with the federal definition. Examples of the intended relationship of reference speed to load were provided to provide clarity.

The definition of "Marine diesel engine" was modified to clarify the scope of applicability for the different categories of marine diesel engines and for better consistency with the federal definition. It was also modified for clarity by restating the criteria under which a portable auxiliary engine or generator is considered to be a marine diesel engine.

The definition of "Maximum Engine Power" was modified to be more consistent with the federal definition and to limit its scope of applicability to Tier 4 requirements.

The definition of "Maximum Rated Power" was modified to limit its scope of applicability to Pre-Tier 4 requirements and to include the phrase "at rated speed" for specifying the reference point at which the parameter should be measured.

The definition of "Maximum Test Speed" was modified by redirecting the incorporated reference to Part 1065.1001 of the recently revised 2008 and Later Test Procedures.

The definition of “Power category” was modified to generalize the usage of “maximum power” so that it could be read to apply to both Pre-Tier 4 and Tier 4 requirements. In providing the example of Tier 4 power categories, maximum engine power is now specified as a specific case.

§ 2423 – Exhaust Emission Standards and Test Procedures

Footnote 4 of Table 1b - “Tier 4 Exhaust Emission Standards” following paragraph (b)(1)(B) was modified with the addition of the phrase “Tier 2” to clarify the specific exclusion of only Tier 2 credits when utilizing the optional three year phase-in provision.

Paragraph (d)(1)(A) was modified to clarify “cumulative yearly percentage increments” as the basis for calculating the expenditure of a manufacturer’s flexibility allowances for new equipment rated equal to or greater than 37 kilowatts under the Tier 2/3 flexibility program. The paragraph was further modified to restate in absolute terms the two categories of engines (Tier 1 or Tier 2) that may be used in equipment rated at or above 37 kilowatts.

Paragraph (d)(1)(B) was modified to clarify “cumulative yearly percentage increments” as the basis for calculating the expenditure of a manufacturer’s flexibility allowances for new equipment rated less than 37 kilowatts under the Tier 2/3 flexibility program.

Paragraph (d)(1)(C) was modified to clarify “cumulative yearly percentage increments” as the basis for calculating the expenditure of a manufacturer’s flexibility allowances for new equipment under the Tier 4 flexibility program.

Paragraph (d)(5)(A) was modified to recognize the applicability of uncertified engines under 37 kW in the California Tier 2/3 equipment manufacturer flexibility program and to establish labeling requirements for those engines. The modifications also allow for an alternative simplified label in cases of undue hardship or cost for the Tier 2/3 program. Paragraph (d)(5)(A) was also modified to change the starting date of the labeling requirement for flexibility engines to January 1, 2007.

Paragraph (d)(7)(A)(6) was modified by removing the notification requirement for equipment manufacturers to submit a tabulation of California-directed flexibility allowances sold in previous years as a prerequisite for being able to use Tier 4 flexibility allowances.

Paragraph (d)(7)(B) was modified by removing the reporting requirement for equipment manufacturers to provide total end-of-year California-directed equipment sales and percentages of flexibility allowances claimed. If available, however, California-specific sales and/or percentages must also be provided.

Paragraph (h) was modified such that engine manufacturers are now required to obtain a current Executive Order for all engines produced after December 31, 2005, for sale in California under the equipment manufacturer flexibility provisions. Guidelines for obtaining an Executive Order for this purpose are provided and conditions are imposed governing the selection of a valid engine family name. Paragraph (h) was also modified to clarify the reporting of “volumes” to mean the reporting of “estimated national flexibility engine production volumes.” Additionally, the requirement for engine manufacturers to submit copies of the “written assurance” correspondences from equipment manufacturers requesting the production of Tier 4 flexibility engines has been commuted to an eight year record keeping requirement. The paragraph was further modified to change the starting date of the requirement for engine manufacturers to obtain Executive Orders for the flexibility engines they produce to January 1, 2007.

Paragraph (l) was reconstructed to reference the practices for rebuilding engines as described in the incorporated test procedures, to clarify the distinction between original and replacement rebuilt engines, and to provide alternative methods of complying with the labeling requirements. Paragraph (l) introductory text was modified to change the starting date of the labeling requirement for rebuilt engines to “after December 31, 2006.”

Paragraph (l)(1)(B) was modified to limit the categorization of rebuilt replacement engines to those which are modified more extensively than just the replacement of a few components.

Paragraph (l)(2)(A)1. was modified to change the citation within the labeling text for a rebuilt original engine to read “13 CCR 2423(l)” where the subsection designator (l) is now lowercase. The paragraph was further modified to simplify the task of determining the “reference engine” for a rebuilt engine by eliminating the association of the reference engine to the source engine with the most stringent emissions configuration.

Paragraph (l)(2)(B)3. was modified to change the citation within the labeling text for an incomplete rebuilt replacement engine to read “13 CCR 2423(l)” where the subsection designator (l) is now lowercase. The labeling text was further modified to remove instructional language related to the final assembly and placement of the engine and to allow the listing of multiple tiers should more than one be applicable to the completed engine. The requirement for the rebuilder to provide instructions to the final assembler regarding the placement of the completed engine was withdrawn and a reference to the existing rebuild provisions that already limits the replacement of rebuilt engines based on equipment emissions specifications is provided in its stead.

§ 2425.1 - Defect Investigation and Reporting Requirements

Paragraph (b) was modified to clarify that the thresholds for triggering a defect report are to be based on federal levels only. If available, however, California-specific incidence rates must be provided in the defect report.

2000 PLUS LIMITED TEST PROCEDURES

§ 89.2 - Definitions

The definition for “Certified (emissions) configuration” was added to provide clarification of its usage in § 89.130 pertaining to the requirements for rebuilt engines.

The definitions in Parts 1039, 1065, and 1068 of the “2008 and Later Test Procedures” were incorporated by reference.

The definition of “Certified (emissions) configuration” was modified to clarify the sufficiency of engine assembly with direct replacement parts.

§ 89.102 - Effective dates, optional inclusion, flexibility for equipment manufacturers

Paragraph (a) was modified to limit the scope of applicability for flexibility provisions under this part to pre-Tier 4 engines.

Paragraph (d)(1)(i) was modified to clarify “cumulative yearly percentage increments” as the basis for calculating the expenditure of a manufacturer’s flexibility allowances for new equipment rated equal to or greater than 37 kilowatts under the Tier 2/3 flexibility program. The paragraph was further modified to restate in absolute terms the two categories of engines (Tier 1 or Tier 2) that may be used in equipment rated at or above 37 kilowatts.

Paragraph (d)(1)(ii) was modified to clarify “cumulative yearly percentage increments” as the basis for calculating the expenditure of a manufacturer’s flexibility allowances for new equipment rated less than 37 kilowatts under the Tier 2/3 flexibility program.

Paragraph (g) was modified to remove the requirement for equipment manufacturers to petition the engine manufacturer in writing prior to the production of flexibility engines. This provision was only meant to be applicable to Tier 4 flexibility engines. Further, the paragraph now also requires engine manufacturers to obtain a current Executive Order for all engines produced after December 31, 2005, for sale in California under the equipment manufacturer flexibility provisions. Guidelines for obtaining an Executive Order for this purpose are provided and conditions are imposed governing the selection of a valid engine family name. Also, paragraph (g) was modified to clarify the reporting of “volumes” to mean the reporting of “estimated national flexibility engine production volumes.” The paragraph was further modified to change the starting date of the requirement for engine manufacturers to obtain Executive Orders for the flexibility engines they produce to January 1, 2007.

§ 89.110 - Emission control information label

Paragraph (e) was modified to recognize the applicability of uncertified engines under 37 kW in the California Tier 2/3 equipment manufacturer flexibility program and to establish labeling requirements for those engines. The modifications also allow for an alternative simplified label in cases of undue hardship or cost for the Tier 2/3 program. Paragraph (e) was further modified to change the starting date of the labeling requirement for flexibility engines to January 1, 2007.

§ 89.112 – Oxides of nitrogen, carbon monoxide, hydrocarbon, and particulate matter exhaust emission standards.

Paragraph (f)(3) was modified by redirecting the incorporated references to Part 1065 of the recently revised 2008 and Later Test Procedures

§ 89.130 Rebuild practices.

This subpart was modified by deleting existing language and referencing the rebuilding practices in title 13, CCR, Section 2423(b)(1)(A) and §1068.120 of the 2008 and Later Test Procedures, with exemptions for Tier 1 engines with rated power equal to or greater than 37 kilowatts. The labeling provisions in title 13, CCR, 2423(l) are also referenced.

2008 AND LATER TEST PROCEDURES

PART 1039

§ 1039.104 - Are there interim provisions that apply only for a limited time?

Paragraph (a)(4)(iii) was modified to reference California regulations and to require the citing of 13 CCR 2423(b)(6) on the statement of compliance portion of the label for some engines produced under the engine manufacturer early incentive program, whereas only federal references had been required previously. Language was also added to allow similar federal references in addition to the California references. Paragraph (a)(4)(iii) was also modified to change the incorporated reference to 1068.265 of the recently revised 2008 and Later Test Procedures.

§ 1039.135 - How must I label and identify the engines I produce?

Paragraph (h) was reconstructed to remove references to remanufacturers and remanufactured engines, to clarify the distinction between original and replacement rebuilt engines, and to provide alternative methods of complying with the labeling requirements for rebuilt engines. It was also modified by deleting existing language and replacing with a reference to the rebuilt engine labeling requirements in title 13, CCR, 2423(l).

§ 1039.225 How do I amend my application for certification to include new or modified engines or to change an FEL?

The title of this section was modified to include the phrase “ or to change an FEL.”

§ 1039.260 What provisions apply to engines that are conditionally exempted from certification?

This section was deleted in accordance with the Omnibus Technical Amendments.

§ 1039.510 Which duty cycles do I use for transient testing?

Paragraph (c) was deleted.

Paragraph (d) was deleted.

§ 1039.625 - What requirements apply under the program for equipment-manufacturer flexibility?

“Table 1—General Availability of Allowances” was modified to be consistent with the Omnibus Technical Amendments.

Paragraph (b)(1) was modified to clarify “cumulative yearly percentage increments” as the basis for calculating the expenditure of a manufacturer’s flexibility allowances for new equipment under the Tier 4 flexibility program.

Paragraph (g)(1)(vi) was modified by removing the notification requirement for equipment manufacturers to submit a tabulation of California-directed flexibility allowances sold in previous years as a prerequisite for being able to use Tier 4 flexibility allowances.

Paragraph (g)(2) was modified by removing the reporting requirement for equipment manufacturers to provide total end-of-year California-directed equipment sales and percentages of flexibility allowances claimed.

Paragraph (j)(1) was modified such that engine manufacturers are now required to obtain a current Executive Order for all engines produced after December 31, 2005, for sale in California under the equipment manufacturer flexibility provisions. Guidelines for obtaining an Executive Order for this purpose are provided and conditions are imposed governing the selection of a valid engine family name. Paragraph (j)(1) was also modified to clarify the reporting of “volumes” to mean the reporting of “estimated national flexibility engine production volumes.” Additionally, the requirement for engine manufacturers to submit copies of the “written assurance” correspondences from equipment manufacturers requesting the production of Tier 4 flexibility engines has been commuted to an eight year record keeping requirement.

Paragraph (j)(2) was modified to simplify the statement of compliance required for flexibility engine labels and to more accurately reflect the level of compliance of these engines with the regulation.

§ 1039.801 - What definitions apply to this part?

The definition for “Certified (emissions) configuration” was added to provide clarification of its usage in § 1039.135(h) pertaining to the requirements for rebuilt engines and to clarify the sufficiency of engine assembly with direct replacement parts.

The Table in Appendix IV to Part 1039 – Steady-state Duty Cycles for Variable-Speed Engines with Maximum Power at or above 19 kW was modified to be consistent with the Omnibus Technical Amendments.

PART 1065 – ENGINE-TESTING PROCEDURES

§ 1065.1 Applicability.

Paragraph (g) was deleted because it only serves to direct the public seeking additional information to the U.S. EPA website.

§ 1065.2 Submitting information to ARB under this part.

The title of this section was modified by replacing the agency acronym “EPA” with “ARB.”

§ 1065.701 General requirements for test fuels.

Paragraph (b) was modified to allow the Executive Officer to approve other certification test fuels so long as they do not affect the demonstration of compliance.

Paragraph (d) was modified to allow the Executive officer to approve alternate fuel specifications.

§ 1065.1001 Definitions.

The definition of “Designation Officer” was modified to “Designated Compliance Officer,” but the meaning has not changed (i.e., the Executive Officer of the Air Resources Board, or a designee of the Executive Officer).

PART 1068 – GENERAL COMPLIANCE PROVISIONS FOR NONROAD PROGRAMS

§ 1068.30 - What definitions apply to this part?

The definition for “Certified (emissions) configuration” was added to provide clarification of its usage in § 1068.120 pertaining to the requirements for rebuilt engines and to clarify the sufficiency of engine assembly with direct replacement parts.

§ 1068.240 - What are the provisions for exempting new replacement engines?

Paragraph (c) was modified by enclosing the labeling text with parentheses to avoid potential confusion regarding the required label content.

Paragraph (d) was modified by enclosing the labeling text with parentheses to avoid potential confusion regarding the required label content. Paragraph (d) was also modified by incorporating the labeling text for new replacement engines from the Omnibus Technical Amendments using California specific regulatory citations. The referencing of federal citations in combination with California citations is permitted.

§ 1068.330 How do I import engines requiring further assembly?

The title of this section was modified by replacing the text "... to modify for applications" with "... requiring further assembly."

§ 1068.540 What terms do I need to know for this subpart?

This section was deleted.

In addition to the modifications noted above, various paragraphs, sections, preambles, and provisions were incorporated from the Omnibus Technical Amendments without contextual revision, with revised references to California regulations and test procedures, or with other revisions as noted in the 2nd Supplemental Notice.

In addition to the modifications detailed in this FSOR, staff made other minor modifications throughout the regulatory text and test procedures to improve clarity; to correct spelling, typographical, and grammatical errors; to make numbering adjustments; and to correct citations and references.

III. SUMMARY OF COMMENTS AND AGENCY RESPONSES TO THE ORIGINAL PROPOSAL AND FIRST NOTICE OF MODIFIED TEXT

At the December 9, 2004 hearing, there were two organizations represented that provided oral and written comments. Additional written comments were received by the hearing date. Written comments were also received subsequent to the 1st Notice of Modified Text. A list of commenters is set forth below, identifying the date and form of all comments that were timely submitted.

Organization and Person Providing Comments	Written testimony	Oral testimony
Richard Dressler, Association of Equipment Manufacturers (AEM)	12/8/2004	
Steve Neva, Ingersoll-Rand (IR)	12/8/2004	
Dale McKinnon, Manufacturers of Emission Controls Association (MECA)	12/8/2004 (MECA1)	
Joseph Kubsh, MECA		12/9/2004 (MECA2)
Jed Mandel and Tim French, Engine Manufacturers Association (EMA)	12/9/2004 (EMA1)	12/9/2004 (EMA2)
Michael Conlon, Automotive Engine Rebuilders Association (AERA) and the Heavy Vehicle Maintenance Group (HVMG)	8/30/2005 (AERA/HVMG)	
Jed Mandel & Kevin Kokrda, EMA	8/31/2005 (EMA3)	

Set forth below is a summary of each objection or recommendation made regarding the proposed action together with an explanation of how the proposed action was changed to accommodate each objection or recommendation, or the reasons for making no change. The comments have been grouped by topic whenever possible. Comments not involving objections or recommendations specifically directed toward the rulemaking or to the procedures followed by the ARB in this rulemaking are not summarized below.

In general, the off-road engine and equipment industry supported the adoption of the regulations in order to harmonize with the federal requirements. EMA and other industry organizations had some specific comments and recommendations for modification on portions of the proposed regulations which are discussed in further detail below. The comments by MECA supported the adoption of the regulations with no request for modification. Comments in support of the regulatory actions proposed are generally not summarized below, unless the comment has relevance to another comment or response.

A. General Comments -- Incorporation of the Full Text of the EPA Tier 4 Rule and Omnibus Technical Amendments

- 1. Comment:** To fully harmonize with the federal Tier 4 rule as written, ARB should incorporate the entire text of U.S. EPA's Tier 4 Rule to ensure that there are no technical inaccuracies or errors that could prohibit the Executive Officer from issuing an Executive Order for an engine that all parties would otherwise concede ought to be certified. (EMA1, EMA2, AEM, IR)

Comment: The requirements of the Tier 4 Rule are so manifold, varied, and complex that the California version of the regulatory language may end up

including some technical inaccuracy or error that could prohibit the Executive Officer from issuing an Executive Order (EO) for an engine that all parties would otherwise concede ought to be certified. We recommend a simple sentence that preserves all of ARB's authority and discretion, while at the same time assuring that an EPA compliant engine, not somehow "technically complying" with ARB's regulations, would still be eligible for an EO. (EMA1, EMA2)

Agency Response: We agree that harmonization should be a goal, but disagree that incorporation of the entire text of the federal rule would accomplish all of our goals for independent State enforcement of these requirements. One of staff's primary objectives in amending the regulations for California's non-preempt off-road diesel engines was to harmonize, as appropriate, with the requirements promulgated by the U.S. EPA for nonroad diesel engines on June 29, 2004, and as subsequently revised. We believe we have succeeded in incorporating the overwhelming majority of provisions contained in the federal regulations including all emission standards and implementation schedules.

However, in order to preserve California's independent enforcement authority over diesel engines within the state, specific modifications to the regulatory language have been made, such as the referencing of California regulations and test procedures whenever necessary. Furthermore, to achieve California's air quality goals and attainment with federal ambient air quality standards, which are challenging due to the ozone-friendly climate and topography in the state, some additional requirements were necessary. For example, California's amended regulations now require engines sold under the equipment manufacturer flexibility provisions to be covered by executive orders beginning in 2007 to ensure enforceability. Additionally, flexibility engines and rebuilt engines sold in California must possess labels beginning in 2007 that provide comprehensive emissions information, which will be used to verify in-use engine identities and for possible future emission control programs.

We disagree with the second comment. Given the regulation's existing language, we believe the suggested modification is unnecessary. This is because the Executive Officer is already authorized to certify an engine as having met the requirements of the regulations (see § 2421(12), "Certification"). Through her power to certify engines for sale in California, the Executive Officer already has discretion to determine if all substantive requirements of the California regulations have been met. These determinations would need to be made on a case-by-case basis as the need arises.

While apparently phrased in permissive language, the suggested modification could arguably be interpreted as being mandatory, thereby requiring automatic approval of an EO for an engine that has met the U.S. EPA's rules but not California's. As we noted in the ISOR and this FSOR, our goal was to harmonize with the federal Tier 4 rule to the extent feasible, but we also had to adopt certain provisions different from the federal rule to ensure our independent enforceability

of the regulations. This goal of independent enforceability would not be served if we are required to automatically approve all U.S. EPA certified engines irrespective of any noncompliance with the proposal's requirements.

Also, in the unlikely event differences between the federal and California regulations arise that cannot be addressed within the Executive Officer's existing discretion, relief can be provided through a new rulemaking. Depending on the circumstances, an emergency hearing may be appropriate, provided the statutorily mandated findings for such hearings can be made.

For the reasons described above, we believe the commenter's suggested language, while seemingly benign, is unnecessary and potentially problematic. We therefore did not make the suggested modification.

- 2. Comment:** ARB should adopt the U.S. EPA's technical amendments to ensure harmonization of the Tier 4 Rule. (EMA1, EMA2, EMA3)

Agency Response: We agree and have incorporated, as applicable, virtually all of the "Test Procedures for Testing Highway and Nonroad Engines and Omnibus Technical Amendments (70 FR 40420)," which were finalized by U.S. EPA on July 13, 2005, into the off-road diesel regulations and test procedures. Those provisions that were not incorporated were inapplicable.

B. Comments Related to the Labeling Requirements for Rebuilt Engines

- 3. Comment:** ARB's proposal to require labeling of remanufactured engines would require huge changes for the remanufacturing industry in the way they currently rebuild engines. EMA recommends that ARB delete the applicable sections from the proposed ARB Tier 4 Rule relating to the labeling of remanufactured engines, and that, if necessary, ARB work to develop appropriate regulatory guidance for the various affected participants in the nonroad engine remanufacturing business. (EMA1)

Agency Response: We disagree. We discussed this issue at length in the Staff Report, section 5.1.1, "Flexibility Engine Labeling." To reiterate, the primary purpose of requiring a standardized label for rebuilt engines is to facilitate the ability of ARB field inspectors to readily verify in-use that these engines have been assembled in a manner indicative of performance at an emissions level that is at least equal to that of the engines they replace. It would be detrimental to California's emission goals should a large number of controlled engines be replaced with uncontrolled engines or otherwise controlled engines of lesser emissions stringency. As advanced exhaust after-treatment (i.e., particulate filters, NOx adsorbers, and selective catalyst reduction) becomes prevalent in the years ahead, the need to ensure that the after-treatment components continue to be part of the rebuilt engine's rebuilt configuration will be extremely important for preventing the regression of emission benefits.

Staff's proposal is strictly a "labeling" requirement and does not redefine existing rebuild practices. The labeling requirement contains provisions for the three types of rebuilt engines that staff has concluded can be legally reintroduced into commerce under the existing regulations found in 40 CFR, Part 89.130 and Part 1068.120, which have been incorporated in the "2000 Plus Limited Test Procedures" and the "2008 and Later Test Procedures," respectively. Those three types of rebuilt engines are: 1) original, 2) replacement, and 3) new. Rebuilt engines that do not conform to any of these subtypes should not be labeled.

"Rebuilt Original Engine" is the term used to describe an engine that is either rebuilt while remaining in the equipment it powers or which will be returned to the same equipment after it has been reassembled. "Rebuilt Replacement Engine" is the term used to describe an engine that is used to replace the engine originally installed in a piece of equipment. A rebuilt replacement engine may be an engine in its originally certified configuration or one that is assembled from a collection of engine parts originally belonging to one or more other engines. Rebuilt replacement engines include the category of engines commonly referred to as "Remanufactured" by the diesel industry. "Rebuilt New Engine" is the term used to describe an engine that contains at least some used parts, but which is certified to the same requirements as a brand new engine including warranty and durability coverage.

In the Staff Report, the proposed labeling requirement initially required all rebuilt engines to retain the emission control label of the original engine as proof, and a means to verify, that the engine was "rebuilt to a certified configuration of the same or later model year as the original engine" as required by the existing rebuild provisions. Under §§1068.101(a)(1) and (b)(1) of the "2008 and Later Test Procedures" document, removing a permanent emissions control label is normally considered to be a violation of the provisions for delivering an engine into commerce and tampering; however, removal of the original emissions control label is common practice on rebuilt replacement engines assembled from a collection of parts originally belonging to one or more engines.

In recognition of this common practice, staff revised its proposal to allow the removal of the original emissions control label on some rebuilt replacement engines so long as a more descriptive permanent replacement label was affixed afterwards by the rebuilder. In this way, the proposal could provide significant regulatory relief to the segment of the off-road diesel industry that produces rebuilt replacement engines while still providing field inspectors and others with an established means of verifying that the resulting product conforms to a California-certified emissions configuration.

Based on recent discussions with the off-road diesel industry, including OEM and independent rebuilders' associations, staff is satisfied that the regulated entities'

previous labeling concerns have been addressed. However, should the need arise for further clarification on the labeling of rebuilt engines or regarding the modification of existing rebuild practices, staff would be pleased to work with industry and the federal government in developing guidance documents and/or otherwise resolving such issues.

4. **Comment:** We strongly urge the Board to postpone the effective date for rebuilt replacement engine provisions to after December 31, 2006, including those engines that were originally produced on, or prior to, December 31, 2006. (EMA3)

Agency Response: We agree. Although we believe that the originally proposed effective date of the labeling requirements for rebuilt engines provided sufficient lead time for compliance, significant changes have been made to the proposal since the Board considered the proposal on December 9, 2004. Therefore, staff agrees that a revised starting date of "... after December 31, 2006, including those engines that were originally produced on, or prior to, December 31, 2006," is reasonable. We have modified the regulations accordingly.

5. **Comment:** The definition of "matched components [reference engine]" must not include the reference to the most stringent emissions configuration" as the basis for remanufacturing an engine. The original configuration(s) of the various parts used in assembly is simply not known. Second, it is not possible to label incomplete rebuilt replacement engines with the tier level and engine family name of the final engine assembly as required by 2423(I)(2)(B)3. This information is not known at the time the incomplete engine is built. (EMA3)

Comment: There is a problem with ARB's proposal that an engine being rebuilt must use matched components. The proposed language would require that any engine which is rebuilt by using parts from one or more other engines must be rebuilt to the engine configuration from which any of the parts have been taken which has the most stringent emissions requirements. This has the unintentional effect of requiring a rebuilder to rebuild an engine to more stringent standards than the used engine with which he started with because of the interchangeability of parts among engines with different emissions standards. The language in the proposed regulation would unnecessarily restrict the ability to put newer parts, which are dimensionally identical to the old ones, in older engines. (AERA/HVMG)

Agency Response: We agree that the proposal's language regarding matched components was unclear and have modified the language to address the commenters' concerns. The purpose of specifying "matched components" in the standardized text of the rebuilt engine's emissions control label is to provide assurance that the rebuilt engine was assembled using a complete set of emission-related components associated with a certified configuration rather than components from engines of a similar tier, but from different configurations. The

synergistic effect from such a practice is unknown and could negatively impact emissions; furthermore, it could result in a violation of existing rebuild practices. Therefore, the indication of the phrase “matched components” and the inclusion of the reference engine designation in the label is an acknowledgement by the rebuilders that the engine was assembled in accordance with the existing rebuilt engine practices and requirements.

In the case of rebuilt engines assembled from components originally belonging to one or more engines, staff’s intent was to establish a basis for determining the emissions configuration of the final assembled engine by referencing the configuration of the engine with the most stringent emissions configuration from which any of the parts had been obtained. Although this clarification of existing rebuild practices makes sense conceptually, staff believes that it could have practical limitations such that relatively inconsequential components (e.g., glow plug) could end up determining the emissions configuration of the engine.

Therefore, staff has removed the reference “... most stringent configuration ...” from the definition of a reference engine and replaced it with the phrase “... the engine family name corresponding to the certified emissions configuration to which the engine has been rebuilt.” This change removes any inference of a requirement to modify rebuild practices and puts the burden on the rebuilders for ensuring that the intent of the existing rebuild practice requirement has been satisfied.

6. **Comment:** It is not possible to label incomplete rebuilt engines with the Tier and Engine Family name of the final engine assembly. (EMA1, EMA3)

Comment: ARB should make two changes to the proposal. First, ARB should modify the definition of “matched” by deleting the following sentence: “The reference engine is either the originally certified engine or, in the case of assembly from parts originally belonging to one or more engines, the engine from which any of the parts are obtained with the most stringent emissions configuration.” Second, ARB should eliminate the requirements of including the tier level and engine family name for labels on incomplete rebuilt replacement engines, as this information is not known for remanufacturing operations. (EMA3)

Comment: A better way to proceed would be for ARB to implement the voluntary labeling program for complete remanufactured engines that remanufacturers already use. (EMA1)

Agency Response: We agree with the comments for the most part. With regard to the labeling of incomplete rebuilt engines, staff has removed all instructional references in the labeling text to the final assembler. These instructions were to provide assurance that the final assembly of the engine would be to a certified configuration; however, this is implicit according to the existing rebuild requirements and not necessary for the contents of a label. Staff has also

deleted the requirement to provide a reference engine designation on the incomplete rebuilt engine's label. However, we disagree that tier level information should be deleted. Instead, we modified the tier listing requirement to permit the listing of multiple tiers if more than one is possible. This should address the commenter's contention that it is not possible to know exactly which tier the engine will meet in final assembly, because the label would be permitted to list all possible tiers the engine can meet.

Based on these reasons, we do not believe it is necessary or desirable (from an enforceability standpoint) to implement a voluntary labeling program for complete rebuilt/remanufactured engines, as suggested.

C. Comments Related to Flexibility Engines

7. **Comment:** ARB should not propose a retroactive mandate for the labeling of pre-Tier 4 "flex" engines. (EMA1, EMA2)

Agency Response: We disagree with the characterization that the proposal is a retroactive mandate. The ARB is not requiring engines to be taken out of service in order to be labeled. Only new flexibility engines are required to be labeled before they are introduced into commerce, as with any new engine. This would be required following the effective date of the regulation; thus, the requirement is not retroactive.

Because off-road diesel engine standards have staggered implementation schedules based on engine power, off-road diesel equipment manufacturers will still be eligible to use pre-Tier 4 flexibility engines for many years beyond the start dates of the first Tier 4 standards. The flexibility engine labeling requirements are designed to ensure that all engines used in California can be readily identified by Air Resources Board investigators and confirmed to be legal for use in California in a timely manner. The labels may also be used to verify eligibility for a future Carl Moyer or retrofit program.

The federal labeling requirements are insufficient to meet the needs of the ARB program since they do not specify the relative emissions performance of the flexibility engine. In addition, voluntary labeling of these engines would not ensure the full enforceability that is crucial to maintaining California's progress toward cleaner air.

8. **Comment:** ARB should not mandate flex engine labeling to begin on January 1, 2006, which is two years in advance of the federal requirement. (EMA1)

Comment: The ARB proposal would require engine labeling as of January 1, 2006 for all engines produced under the equipment manufacturer flexibility provisions. This approach differs from the schedule for new labeling requirements in EPA's final rule. AEM requests that the labeling for these

engines be implemented in a manner that fully harmonizes with the federal rule. (AEM)

Comment: We strongly urge the Board to adopt a January 1, 2007 effect date for the new flex engine requirements, including labeling. (EMA3)

Agency Response: We agree and have modified the regulations to change the start date of the labeling requirement for flexibility engines to January 1, 2007.

9. **Comment:** ARB desires valid Executive Orders (EOs) for flex engines to enable ARB to exercise its enforcement authority. This proposal is unreasonable because flex engines by their very nature are engines that do not have, strictly speaking, "valid EOs." Instead of requiring "valid" EOs, ARB should consider issuing a one-time special EO to cover all flex engines. ARB should simply incorporate by reference the pending federal technical amendments which would provide the best means for ARB to address its concerns regarding EOs. (EMA1, EMA2)

Agency Response: We disagree. Without an Executive Order, the flexibility engine cannot be tracked, and thus, would essentially be exempt from all current requirements. This limits California's authority to enforce violations should that action ever be required. An Executive Order ensures that California has the authority to address issues of compliance in an expedient and appropriate manner. While we have incorporated the Tier 4 Omnibus Technical Amendments (see agency response to Comment 2), we believe the technical amendments are insufficient for enforcing and tracking flex engines without a valid EO.

10. **Comment:** ARB should delete its proposal to require text for the labeling of flex engines that specifically includes reference to Title 13. Manufacturers' voluntarily-provided labels already reference "California" regulations generally, and California's Title 13 regulations (for these purposes anyway) simply incorporate EPA's Part 89 regulations by reference in any event. Thus, no meaningful information will be added to the engine label under the ARB proposal to specifically reference a provision of Title 13. Instead, all that will result is an unjustified burden on engine manufacturers to engage in retroactive labeling without any corresponding air quality benefits whatsoever. (EMA1, EMA2)

Agency Response: Again, we disagree with the characterization of the proposal being retroactive. (See also Agency Response to Comment 7). Engines already in the field will not be required to be labeled as will be required for new engines. Additionally, staff's proposal permits alternate labeling language with significantly shortened verbiage for flexibility engines used in the Tier 2/3 program. Furthermore, the regulation allows the Executive Officer to permit alternative labels that satisfy the intent of the regulation for any flexibility engine.

However, the referencing of 13 CCR 2423(d) on the label is necessary because it indicates that the engine has been covered with an Executive Order. This ensures California's authority to enforce compliance with the regulation, with respect to the flexibility engine, should it ever become necessary to do so. The reference to 13 CCR 2423(d) would be used by field investigators and others to visually differentiate between an enforceable flexibility engine and one that is exempt from the requirements of California certification, as could be interpreted to be the case for a preempt engine certified only under the federal program. We believe there are tangible air quality benefits that result from improved enforceability of our regulations, which this labeling requirement is designed to achieve.

- 11. Comment:** ARB's proposed regulation contains some amendments to the federal provisions that impact flexibility options for equipment manufacturers. AEM is concerned that these proposed changes would create confusion, delay, and added cost to our members without resulting in an appreciable environmental benefit. Therefore, AEM urges ARB to fully harmonize with the federal rule. (AEM)

Agency Response: We disagree with the commenter's suggestion for full harmonization (i.e., incorporation of the full text of the federal rule and nothing else). With respect to the number of allowances and the application of relief provisions, California flexibility requirements are identical to those of the federal program. California is a full participant in the federal flexibility program and does not have separate usage or deployment provisions. However, as previously noted, the California regulation does require that flexibility engines introduced into commerce within the State be appropriately labeled and covered by an Executive Order.

Further, the California regulation requires the submission of flexibility production and usage statistics by the manufacturer, as it has since the 2000 amendments. However, we modified the requirement to permit the submission of federal volumes if California volumes are not readily available. U.S. EPA requires similar information to be submitted under the federal regulation.

Based on these reasons, we believe California's requirements should not adversely impact the way that flexibility engines are used or deployed. Furthermore, with the simplified provisions for obtaining an Executive Order specified in title 13, CCR, section 2423(h), California's requirements should not significantly increase, if at all, the cost of compliance for the manufacturer.

12. Comment: While the ARB proposal is similar in substance to EPA's Tier 4 rule, it would establish separate notification and reporting requirements in California for equipment manufacturers seeking to avail themselves of the flexibility provisions. AEM believes that ARB's redundant approach would increase the burden on equipment manufacturers without producing a meaningful environmental benefit. (AEM)

Agency Response: We disagree. Although the California regulation contains separate notification and reporting requirements for flexibility engines, the substance of the requirements are virtually identical to those of the federal regulation. Therefore, no additional generation of data is necessary, and any increase of the burden to manufacturers should be minimal. The ARB requires this information to be able to independently evaluate the impact that the Tier 2/3 and Tier 4 flexibility programs are having, or will have, on California's air quality and for ensuring that California is not getting more than its fair share of higher-emitting flexibility allowances.

13. Comment: ARB should modify the proposed regulation to include a provision that would enable an equipment manufacturer to automatically receive a presumption of qualification by the ARB for technical hardship relief in California if the manufacturer has already been granted such relief by EPA. (AEM)

Agency Response: We disagree. We understand the need to act quickly in providing relief to equipment manufacturers for reasons of valid technical hardship. The California hardship provisions, which we expect to be invoked only rarely, are not an obstacle to obtaining that sought-after relief. The California and federal criteria for granting relief are identical in substance, but the California provisions authorize ARB to evaluate manufacturers' claims of hardship prior to granting the request for additional non-preempt flexibility engines in California. (See also Agency Response to Comment 12). This is important for getting a clear picture on the impacts additional, higher-emitting, flexibility engines may have on air quality in the State. Therefore, when a manufacturer applies for hardship relief with respect to non-preempt equipment, it should file simultaneously with ARB and U.S. EPA to expedite the approval process. In so doing, staff from both agencies will collaborate to reach a decision that is equitable to all stakeholders in the shortest time possible.

14. Comment: ARB's proposed requirement that engine manufacturers annually submit a list of the equipment manufacturers requesting flex engines, and a copy of the original correspondence requesting the flexibility engines, is unreasonable and unnecessary. (EMA3)

Agency Response: We disagree. The California off-road diesel regulation has required engine manufacturers to submit a list of, and volumes for, equipment manufacturers requesting flexibility engines as part of the certification application since the regulation was amended in calendar year 2000. This requirement was

extended by staff to include Tier 4 engines in its proposal to the Board on December 9, 2004.

However, additional language has recently been appended to clarify that the submission only needs to be an accurate estimate of national production volumes for each equipment manufacturer listed. The ARB requires this information in order to cross-reference the information provided by equipment manufacturers under §1039.625(g) of the California 2008 and Later Test Procedures (federally 40 CFR 1039.625(g)). Under these sections, equipment manufacturers are required to send ARB and U.S. EPA their best estimates of future flexibility usage prior to January 1 of the year that the allowances will be used.

Furthermore, §1039.625(j) of the California 2008 and Later Test Procedures (federally 40 CFR 1039.625(j)) requires written assurance from the equipment manufacturer to the engine manufacturer that “a certain number” of engines are needed for its flexibility allowances. In its initially proposed Tier 4 amendments, staff required a copy of this written assurance to be provided with the application for certification. In the 2nd Notice of Modified Text, the regulation was modified to require only that the document be maintained by the engine manufacturer under the record keeping requirements of §1039.250 of the California 2008 and Later Test Procedures (federally 40 CFR 1039.250).

Based on these reasons, we believe the described requirements are reasonable and necessary.

15. Comment: The ARB’s proposed “prior to production” requirement for flexibility engines [that engine manufacturers must receive written assurance from each equipment manufacturer, prior to production, that a certain number of engines are needed for the equipment manufacturer’s Tier 4 equipment flexibility allowances] is wholly unreasonable and unnecessary, and should be deleted. This is because manufacturers will not know that number prior to the start of production. (EMA3)

Agency Response: We disagree. The requirements at issue (specified in §1039.625(j) of the California 2008 and Later Test Procedures) are harmonized with the requirements in U.S. EPA’s 40 CFR 1039.625(j). The text of these sections pertaining to the production of flexibility engines is repeated here:

“As an engine manufacturer, you may produce exempted [flexibility] engines as needed under this section. You do not have to request this exemption for your engines, but you must have written assurance from equipment manufacturers that they need a certain number of exempted engines under this section.”

We believe that the only reasonable interpretation of this section is that the “written assurance” mentioned is a prerequisite to production (i.e., introduction into commerce).

D. Comments Related to Reporting Requirements

16. Comment: Federal reports relating to the identification and volumes of replacement engines should be sufficient to meet ARB’s regulatory concerns. Thus, ARB should simply harmonize with Section 1068.265(g) of U.S. EPA’s pending technical amendments. (EMA1)

Agency Response: We disagree. In §1068.265(g) of their (now adopted) technical amendments, U.S. EPA stipulates that it may require the submission of an annual report documenting the production of exempt [replacement] engines. By contrast, ARB continues to make mandatory the submission of this information, as it has done since the regulation was amended in 2000. In either case, the manufacturer must generate the same information, which is to be submitted under ARB regulation or to be made available upon request under U.S. EPA regulation. Therefore, the submission of replacement information does not constitute a significant additional burden upon the regulated industry.

The replacement engine reporting requirement provides ARB with the opportunity to evaluate in a routine and timely manner the impact that these replacement engines, which may be higher-emitting than the engines they replace, will have on the air quality in California. We believe this adequately justifies the reporting requirement.

17. Comment: Federal reports relating to trigger volumes and thresholds for defect investigation reporting should suffice for ARB’s regulatory concerns. Separate or unique ARB reporting requirements should not be imposed on manufacturers. (EMA1)

Agency Response: We agree. Staff recognizes that manufacturers may not always know which, or how many of their off-road diesel engines end up in California due to the absence of an off-road equipment registration program. Therefore, as noted in the 1st Notice of Modified Text, we revised the triggering thresholds and production volume requirements for defect investigation reporting to reflect national production volumes.

E. Comments Related to Definitions

18. Comment: All of the definitions in ARB’s Tier 4 Rule should be consistent with the federal Tier 4 Rule definitions, including any definitions that will be part of the pending technical amendments. That is not the case now, as certain inconsistencies have already been found. To address this issue, ARB should include a provision in its Tier 4 Rule stating that wherever an ARB definition

conflicts with a federal definition of the same term, the federal definition shall control. (EMA1)

Comment: The proposed definition of “Maximum Rated Power” must be clarified to distinguish it from ARB’s definition of “Maximum Engine Power.” (EMA1, EMA3)

Agency Response: We agree in part. Staff has revised the definitions for “constant-speed engine,” “marine diesel engine,” “maximum engine power,” “maximum rated power,” “maximum test speed,” and “power category” to provide better consistency with the U.S. EPA Tier 4 definitions. However, we disagree that, in cases where there are disagreements between California and federal definitions, the federal definitions should control.

We believe it is appropriate for some definitions to differ from their federal analogs to the extent that the ARB definitions are applicable to both Tier 4 and pre-Tier 4 requirements. In these cases, the definition has been separated for clarity into ordinal components individually referencing the applicable requirements. For example, in 13 CCR §2421(a)(15), a “constant-speed engine” is defined, in subparagraph A for engines subject to the “2000 and Later Plus Limited Test Procedures,” as an off-road compression-ignition engine that is governed to operate only at rated speed. By contrast, in subparagraph B of the same section, a “constant-speed engine” is defined for engines subject to the “2008 and Later Test Procedures” as an off-road compression-ignition engine certified to operate only at constant speed.

In the unlikely event that an unintended inconsistency in definitions arises after adoption of the proposal, the Executive Officer has discretionary authority to certify engines that meet the substantive requirements of the regulation on a case-by-case basis, even if there are de minimis differences between the California and U.S. EPA definitions (see agency response to Comment 1). Substantive differences would be addressed through revisions to the regulation, either through a standard rulemaking or through an emergency rulemaking, provided the requisite findings are made and the conditions warrant such action.

F. F. Comments Related to the Rulemaking Process

19. Comment: ARB has failed to satisfy the necessary statutory prerequisites for regulation of rebuilt or remanufactured engines. For example, the emissions impacts from that class of engines and the cost-effectiveness of regulating those engines have not been assessed. Indeed, the entire public process leading up to ARB’s last-minute proposal to include disharmonized requirements for rebuilt and remanufactured engines in a regulatory program targeting new nonroad engines was utterly deficient. (EMA1, EMA2)

Agency Response: We disagree. As noted in Section I above (“General”), the original proposal, published along with the hearing notice on Friday, October 22, 2004, contained provisions that applied to remanufacturers and rebuilders of engines. While the hearing notice erroneously referred only to manufacturers of new engines, we rectified this error with an errata published as soon as we discovered it. The errata was published in the California Regulatory Notice Register on Friday, November 5, 2004, and mailed to ARB’s general public information mailing list on October 28, 2004. Because the public had the proposal for the full 45-day comment period specified in Government Code section 11346.4, we have met all statutory requirements for providing the public with a meaningful opportunity to comment on the proposal, including engine remanufacturers and rebuilders.

Moreover, we discussed the responsibilities of remanufacturers and rebuilders in various places in the ISOR (e.g., see pp. 35 and 66-67, ISOR). Thus, our analysis of the impacts on this class of engines is already built into our overall analysis of the proposal’s regulatory impacts, as discussed in the ISOR.

III. SUMMARY OF COMMENTS AND AGENCY RESPONSES TO THE SECOND NOTICE OF MODIFIED TEXT

We received one comment letter from Mr. Tim Pohle, Air Transport Association (ATA), during the supplemental comment period specified in the 2nd Notice of Modified Text. His comment is summarized below.

G. Comments Regarding Private Individuals Rebuilding Their Own Engines/Equipment

20. Comment: Our member airlines own and service their company equipment . We would like confirmation of our understanding that, under section 2423(l) for rebuilt original engines, no new labels are required when we rebuild our own engines to original specifications and the original label remains legible. Further, any rebuild may use either original manufacturer’s equipment or replacement parts identical in specification such that the rebuilt engine meets the targeted specification.
(ATA)

Agency Response: The commenter is correct in his understanding.