Final Regulation Order

HD OBD Enforcement Regulation
Title 13, California Code of Regulations, Section 1971.5, Enforcement of Malfunction and Diagnostic System Requirements for 2010 and Subsequent Model-Year Heavy-Duty Engines

Final Regulation Order

Note: The proposed amendments are shown in underline to indicate additions and ~~strikeout~~ to indicate deletions from the existing regulatory text. Various portions of the regulations that are not modified by the proposed amendments are omitted from the text shown and indicated with "* * * *."

Amend Section 1971.5 of title 13, California Code of Regulations, to read as follows:

§ 1971.5. Enforcement of Malfunction and Diagnostic System Requirements for 2010 and Subsequent Model-Year Heavy-Duty Engines.

(a) *General.*

(1) *Applicability.*

(A) These procedures shall be used to assure compliance with the requirements of California Code of Regulations (Cal. Code Regs.), title 13, section 1971.1 for all 2010 and subsequent model year heavy-duty engines equipped with OBD systems that have been certified for sale in California.

(B) Engines manufactured prior to the 2010 model year are covered by the general enforcement and penalty provisions of the Health and Safety Code, and the specific provisions of Cal. Code Regs., title 13, section 1971 and section 2111 through section 2149.

(C) For 2024 and 2025 model year engines certified to the provisions of title 13, CCR section 1956.8(a)(2)(C)3 and with OBD systems meeting the requirements of title 13, CCR section 1971.1 applicable to a 2023 model year engine, a manufacturer shall use the provisions of section 1971.5 applicable to a 2023 model year engine.

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(b) *Testing Procedures for ARB-Conducted Testing.*

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(6) *Finding of Nonconformance after Enforcement Testing.*

After conducting enforcement testing pursuant to section (b)(4) above, the Executive Officer shall make a finding of nonconformance of the OBD system in the identified engine class under the respective tests for the applicable model year(s) as follows:

* * * *

(B) OBD Ratio Testing.

* * * *

(iv) 2028 and subsequent model year engines with monitors certified to a ratio of 0.300 in accordance with Cal. Code Regs., title 13, section

1971.1(d)(3.2.2) shall be considered nonconforming if the data collected from the engines in the test sample group indicate either that the average in-use monitor performance ratio for one or more of the monitors in the test sample group is less than 0.265 or that 66.0 percent or more of the engines in the test sample group have an in-use monitor performance ratio of less than 0.300 for the same monitor.

(v) Engines with monitors certified to a ratio of 0.500 in accordance with Cal. Code Regs., title 13, section 1971.1(d)(3.2.2) shall be considered nonconforming if the data collected from the engines in the test sample group indicate either that the average in-use monitor performance ratio for one or more of the monitors in the test sample group is less than 0.441 or that 66.0 percent or more of the engines in the test sample group have an in-use monitor performance ratio of less than 0.500 for the same monitor.

(C) All Other OBD Testing.

(i) Engines shall be considered nonconforming if the results of the testing indicate that at least 30 percent of the engines in the test sample group do not comply with the same requirement of Cal. Code Regs., title 13, section 1971.1.

(ii) Engines shall be considered nonconforming if the results of the testing indicate that at least 30 percent of the engines in the test sample group do not comply with one or more of the requirements of Cal. Code Regs., title 13, section 1971.1 while the engine is running and while in the key on, engine off position such that off-board equipment designed to access the following parameters via the standards referenced in Cal. Code Regs., title 13, section 1971.1 for 2013 and subsequent model year engines cannot obtain valid and correct data for the following parameters:

a. The current readiness status from all on-board computers required to support readiness status in accordance with SAE International (SAE) J1979 (SAE J1979), J1979-2 (SAE J1979-2), or J1939 (SAE J1939) as incorporated by reference in Cal. Code Regs., title 13, section 1971.1(h)(1) and section 1971.1(h)(4.1);

b. The current MIL command status while the MIL is commanded off and while the MIL is commanded on in accordance with SAE J1979/J1979-2/J1939 and Cal. Code Regs., title 13, section 1971.1(h)(4.2), and in accordance with SAE J1979/J1979-2/J1939 and Cal. Code Regs., title 13, section 1971.1(d)(2.1.2) during the MIL functional check and, if applicable Cal. Code Regs., title 13, section 1971.1(h)(4.1.~~6~~1)(G) or (h)(4.1.2)(E) during the MIL readiness status check;

c. The current permanent fault code(s) in accordance with SAE J1979/J1979-2/J1939 and Cal. Code Regs., title 13, section 1971.1(h)(4.4);

d. The data stream parameters for: engine speed and OBD requirements to which the engine is certified as required in Cal. Code Regs., title 13, section 1971.1(h)(4.2) and in accordance with SAE J1979/J1979-2/J1939;

e. The CAL ID, CVN, ESN, and VIN as required in Cal. Code Regs., title 13, sections 1971.1(h)(4.6), (h)(4.7), and (h)(4.8) and in accordance with SAE J1979/J1979-2/J1939; or

f. The proper identification of all data identified in (b)(6)(C)(ii)a. through (b)(6)(C)(ii)e. as supported or unsupported as required in Cal. Code Regs., title 13, section 1971.1(h)(4) and in accordance with SAE J1979/J1979-2/J1939.

(iii) If the finding of nonconformance under section (b)(6)(C)(i) above concerns engines that do not comply with the requirements of Cal. Code Regs., title 13, section 1971.1(d)(4) or (d)(5.1) through (d)(5.6) (e.g., numerators or denominators are not properly being incremented), it shall be presumed that the nonconformance would result in an OBD ratio enforcement test result that would be subject to an ordered OBD-related recall in accord with the criterion in section (d)(3)(A)(i). The manufacturer may rebut such a presumption by presenting evidence in accord with section (b)(7)(C)(iii) below that demonstrates to the satisfaction of the Executive Officer that the identified nonconformance would not result in an ordered OBD- related recall under section (d)(3)(A)(i).

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(c) *Manufacturer Self-Testing*.

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(6) *Manufacturer Reporting of Self-Testing Results to the Executive Officer*.

(A) Within 30 days after completing the testing under section (c)(3), the manufacturer shall submit a report of the results of all the testing to the Executive Officer for review. If further testing is required under section (c)(4), an additional report shall be submitted within 30 days of completing the additional testing. The report(s) must include the following:

(i) A description of each test engine and the engine family and engine rating to which the test engine belongs to;

(ii) A description of the test sequence (e.g., the number and types of preconditioning cycles) used for each testing;

(iii) A description of the modified or deteriorated components used for fault simulation with respect to each testing; and

(iv) The test results of all testing done under sections (c)(3) and (c)(4) for each test engine, consisting of:

a. the weighted emission test results and adjusted emission values, if applicable, for all measured pollutants for each test; and

b. the OBD data specified by Cal. Code Regs., title 13, section 1971.1(i)(4.3.2) collected prior to (or immediately after) each engine shut-down during the testing of sections (c)(3) and (c)(4) including the preconditioning cycles.

(v) Report of the results filename

(vi) Manufacturer

(vii) Engine Model year

(viii) Fuel type (i.e., gasoline, diesel, or alternate fuel)

(ix) OBD system calibration used on the test engine (e.g., running change number or field fix number)

(x) List of deficient emission threshold monitors as defined in section (a)(3)

(xi) During testing conducted under section (c)(3), the number of monitors that do not properly illuminate the MIL before emissions exceed any of the applicable levels specified in sections (c)(4)(A)(i) and (ii)

(xii) During additional testing conducted under section (c)(4), the number of monitors that do not properly illuminate the MIL before emissions exceed any of the applicable levels specified in sections (c)(4)(A)(i) and (ii)

(xiii) For each failure identified during testing conducted under sections (c)(3) and (c)(4):

a. Fault code (SAE J2012, SAE J1939, or manufacturer-defined)

b. Fault code description

c. Method used to induce malfunction

d. Description/explanation of failure

e. If manufacturer elects to waive the additional testing requirements described under sections (c)(4)(B) and/or (c)(4)(D) for the associated monitor in accordance with section (c)(4)(F)

(xiv) For each failure identified during testing conducted under sections (c)(3) and (c)(4), any additional notes, including but not limited to corrective actions taken (e.g., running changes, field fixes, recalls, future model year updates) and titles and dates of presentations describing the issues/failures for a test.

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(d) *Remedial Action.*

* * * *

(3) *Ordered Remedial Action-Mandatory Recall.*

(A) Except as provided in sections (d)(3)(B) below, the Executive Officer shall order the recall and repair of all engines in an engine class that have been determined to be equipped with a nonconforming OBD system if enforcement testing conducted pursuant to sections (b) or (c) above or information received from the manufacturer indicates that:

(i) For major monitors required to meet the in-use performance ratio pursuant to Cal. Code Regs., title 13, section 1971.1(d)(3.2) on 2016 and subsequent model year engines:

a. For monitors subject to the nonconformance criteria of sections (b)(6)(B)(ii), ~~and~~ (b)(6)(B)(iv), and (b)(6)(B)(v), the average in-use monitor performance ratio for one or more of the major monitors in the test sample group is less than or equal to 33.0 percent of the applicable required minimum ratio established in Cal. Code Regs., title 13, section 1971.1(d)(3.2.2) (e.g., if the required ratio is 0.100, less than or equal to a ratio of 0.033) or 66.0 percent or more of the vehicles in the test sample group have an in-use monitor performance ratio of less than or equal to 33.0 percent of the applicable required minimum ratio established in Cal. Code Regs., title 13, section 1971.1(d)(3.2.2) for the same major monitor.

b. For monitors subject to the nonconformance criteria of section (b)(6)(B)(iii), the average in-use monitor performance ratio for one or more of the major monitors in the test sample group is less than or equal to 0.066 or 66.0 percent or more of the vehicles in the test sample group have an in-use monitor performance ratio of less than or equal to 0.066.

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(6) *Notice to Manufacturer for an Ordered Remedial Action.*

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(B) For remedial actions other than the assessment of monetary penalties, the notice must:

* * * *

(iv) designate a date at least 45 days from the date of receipt of such notice by which the manufacturer shall submit a plan, pursuant to section (e)(1) below, outlining the remedial action to be undertaken consistent with the Executive Officer's order. Except as provided in section (d)(7)(C) below, all plans shall be submitted to the Chief, Emissions Certification and Compliance Division, ~~9480 Telstar Avenue, Suite 4, El Monte, California~~

~~91731 (or the mailing address indicated in the notice)~~CA Air Resources Board, 4001 Iowa Avenue, Riverside, California 92507, within the time limit specified in the notice. The Executive Officer may grant the manufacturer an extension of time for good cause.

* * * *

(e) *Requirements for Implementing Remedial Actions.*

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(4) *Label Indicating that Recall Repairs Have Been Performed.*

(A) If the required remedial action involves recall of engine family(ies), OBD group(s), or subgroup(s) thereof, the manufacturer shall require those who perform inspections and/or recall repairs to affix a label to each vehicle that has been inspected and/or repaired.

(B) The label must be placed in a location approved by the Executive Officer and must be fabricated of a material suitable for such location in which it is installed and which is not readily removable.

(C) The label must contain the remedial action campaign number and a code designating the facility at which the remedial action or inspection to determine the need for remedial action was performed.

(D) Manufacturers are exempt from the label requirements of sections (e)(4)(A) through (C) if the following conditions are met

(i) The recall involves only software and/or software calibration repairs or changes and does not involve hardware repairs or changes,

(ii) The manufacturer keeps a record of the VINs of all vehicles that were inspected and/or repaired, and

(iii) Upon request from the Executive Officer, the manufacturer provides information about running changes, field fixes, service campaigns, and recalls for any given VIN from all vehicles affected by the nonconformity.

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(6) *Record Keeping and Reporting Requirements.*

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(B) Unless otherwise specified by the Executive Officer, the manufacturer shall report on the progress of the remedial action campaign by submitting reports for eight consecutive quarters commencing with the quarter immediately after the recall campaign begins. The reports shall be submitted no later than 25 days after the close of each calendar quarter to: Chief, Emissions Certification and Compliance Division, ~~9480 Telstar Avenue, Suite 4, El Monte, California 91731 (or the mailing address indicated in the notice in section (d)(6))~~CA Air Resources Board, 4001 Iowa Avenue,

Riverside, California 92507. For each recall campaign, the quarterly report must contain the following:

* * * *

(x) An initial list, using the following data elements and designated positions, indicating all vehicles or engines subject to recall that the manufacturer has not been invoiced for, or a subsequent list indicating all engines subject to the recall that the manufacturer has been invoiced for since the previous report. The list must be supplied in a standardized computer format to be specified by the Executive Officer. The data elements must be written in "ASCII" code without a comma separating each element. For example: XTY32A71234E-9456123408-25-91A. The add flag (see below) should reflect the vehicles or engines for which the manufacturer has not been invoiced and the delete flag should reflect changes since the previous report. The Executive Officer may change the frequency or format of this submittal depending on the needs of enforcement. The Executive Officer may not, however, require a frequency or format for this submittal that is different in any way from the frequency or format determined by the Executive Officer as required for reporting of data in Cal. Code Regs., title 13, section 2119(a)(10) and section 2133(a)(10).

Data Elements	Positions
• File Code (designated by DMV)	1
• License Plate Number	2-8
• Last three VIN positions	9-11
• Recall ID Number	12-17
• Mfg. ID Number (Mfg. Occupational License Number)	18-22
• Recall Start Date (mmddyyyy)	23-30
• Add or Delete Flag (A/D)	31
• Complete VIN ~~if personalized license plate~~ (File Code "L" or "S")	32-48

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NOTE: Authority cited: Sections 38501, 38510, 39010, 39600, 39601, 39602.5, 43000.5, 43013, 43016, 43018, 43100, 43101, 43104, 43105, 43105.5, 43106, 43154, 43211, and 43212, Health and Safety Code. Reference: Sections 38501, 38505, 38510, 39002, 39003, 39010, 39018, 39021.5, 39024, 39024.5, 39027, 39027.3, 39028, 39029, 39031, 39032, 39032.5, 39033, 39035, 39037.05, 39037.5, 39038, 39039, 39040, 39042, 39042.5, 39046, 39047, 39053, 39054, 39058, 39059, 39060, 39515, 39600, 39601, 39602.5, 43000, 43000.5, 43004, 43006, 43013, 43016, 43018, 43100, 43101, 43102, 43104, 43105, 43105.5, 43106, 43150, 43151, 43152, 43153, 43154, 43155, 43156, 43204, 43211, and 43212, Health and Safety Code.