

Appendix B

**Proposed Regulation Order,
OBD II Enforcement Regulation
Title 13, California Code of Regulations,
Section 1968.5, Enforcement of Malfunction and
Diagnostic System Requirements for 2004 and
Subsequent Model-Year Passenger Cars,
Light-Duty Trucks, and Medium-Duty Vehicles
and Engines**

**Proposed Revisions to the On-Board Diagnostic System
Requirements and Associated Enforcement Provisions
for Passenger Cars, Light-Duty Trucks, Medium-Duty
Vehicles and Engines, and Heavy-Duty Engines**

Date of Release: June 1, 2021

Date of Hearing: July 22, 2021

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Appendix B

Proposed Regulation Order

Amend section 1968.5, title 13, California Code of Regulations, to read as follows:

(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 “* * * *”.)

§1968.5. Enforcement of Malfunction and Diagnostic System Requirements for 2004 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles and Engines.

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(b) *Testing Procedures*

(1) *Purpose.*

To assure that OBD II systems on production motor vehicles comply with the requirements of title 13, CCR section 1968.2, the ARB may periodically evaluate vehicles from a motor vehicle class.

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(3) *Vehicle Selection for Enforcement Testing.*

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(D) *Vehicles to be included in a Test Sample Group.*

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(iii) In selecting vehicles to be included in a test sample group for enforcement testing of any other requirement of title 13, CCR section 1968.2 (not covered by sections (b)(3)(D)(i) or (ii) above), the Executive Officer shall include only vehicles that:

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d. Except for testing to determine if an OBD II system has been designed to deactivate based on age and/or mileage (Cal. Code Regs., title 13, section 1968.2(d)(1.3)), Hhave mileage and age that are less than or equal to the certified full useful life mileage and age for the subject vehicles.

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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 II system in the identified motor vehicle class if:

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(B) *OBD II Ratio Testing.*

- (i) For monitors specified in sections (b)(6)(B)(i)a. through e. below, the data collected from the vehicles in the test sample 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 0.100 or that 66.0 percent or more of the vehicles in the test sample group have an in-use monitor performance ratio of less than 0.100 for the same monitor:
 - a. monitors on 2004 through 2027 model year vehicles certified to a ratio of 0.100 in accordance with title 13, CCR section 1968.2(d)(3.2.1)(~~DE~~),
 - b. monitors specified in title 13, CCR section 1968.2(e) on 2007 through 2012 model year vehicles for the first three model years the monitor is certified to the in-use performance ratio monitoring requirements of title 13, CCR sections 1968.2(d)(3.2.1)(A) ~~through (C), (B), and (E)~~
 - c. the fuel system air-fuel ratio cylinder imbalance monitor specified in title 13, CCR section 1968.2(e)(6.2.1)(C) on 2015 through 2017 model year vehicles,
 - d. the secondary exhaust gas sensor monitor specified in title 13, CCR section 1968.2(e)(7.2.2)(C) on 2012 through 2014 model year vehicles, and
 - e. monitors specified in title 13, CCR section 1968.2(f) on 2013 through 2015 model year vehicles.
- (ii) For monitors that are certified to the ratios in title 13, CCR sections 1968.2(d)(3.2.1)(A) through (~~CE~~) and are not described in sections (b)(6)(B)(i)b. through e. above, the data collected from the vehicles in the test sample indicate either that (1) 66.0 percent or more of the vehicles in the test sample group have an in-use monitor performance ratio less than the required minimum ratio defined in title 13, CCR section 1968.2(d)(3.2.1) for the same monitor, or (2) the average in-use monitor performance ratio for one or more of the monitors in the test sample group is less than:
 - a. 0.230 for secondary air system monitors and other cold start related monitors utilizing a denominator incremented in accordance with title 13, CCR section 1968.2(d)(4.3.2)(E) (e.g., cold start strategy monitors, etc.);
 - b. For evaporative system monitors:
 - 1. 0.230 for monitors designed to detect malfunctions identified in title 13, CCR section 1968.2(e)(4.2.2)(C) (i.e., 0.020 inch leak detection);
 - 2. 0.460 for monitors designed to detect malfunctions identified in title 13, CCR section 1968.2(e)(4.2.2)(A) and (B) (i.e., purge flow and 0.040 inch leak detection);
 - c. For PM filter monitors identified in title 13, CCR sections 1968.2(f)(9.2.1) and (f)(9.2.5) (i.e., filtering performance and missing substrate):
 - 1. 0.265 for monitors certified to a ratio of 0.300;

- 2. 0.177 for monitors certified to a ratio of 0.200;
- 2. 0.133 for monitors certified to a ratio of 0.150; and
- 3. 0.297 for monitors certified to a ratio of 0.336;
- d. 0.088 for the diesel catalyst warm-up system monitor identified in title 13, CCR section 1968.2(f)(12.2.2);
- e.e. 0.297 for catalyst, oxygen sensor, EGR, VVT system, and all other monitors specifically required in section title 13, CCR sections 1968.2(e) and (f) to meet the monitoring condition requirements of title 13, CCR section 1968.2(d)(3.2).

(C) *All Other OBD II Testing.*

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- (ii) The results of the testing indicate that at least 30 percent of the vehicles in the test sample do not comply with one or more of the requirements of title 13, CCR section 1968.2 while the engine is running and while in the key on, engine off position such that Inspection and Maintenance or scan tool equipment designed to access the following parameters via the standards referenced in title 13, CCR section 1968.2 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 ~~Society of Automotive Engineers~~ SAE International J1979 (SAE J1979) or SAE J1979-2 as incorporated by reference in title 13, CCR section 1968.2(g)(1) and section 1968.2(g)(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 and title 13, CCR section 1968.2(g)(4.2), and in accordance with SAE J1979/J1979-2 and title 13, CCR sections 1968.2(d)(2.1.2) during the MIL functional check and, if applicable, title 13, CCR 1968.2(g)(4.1.3)(H) or (g)(4.1.2)(F) during the MIL readiness status check;
 - c. The current permanent fault code(s) in accordance with SAE J1979/J1979-2 and section title 13, CCR 1968.2(g)(4.4);
 - d. The data stream parameters (Mode/Service \$01 for SAE J1979 or Service \$22 for SAE J1979-2) for: engine speed (PID \$0C for SAE J1979 or PID \$F40C for SAE J1979-2) and OBD requirements to which the vehicle or engine is certified (PID \$1C for SAE J1979 or PID \$F41C for SAE J1979-2); and for 2008 and subsequent model year vehicles using the ISO 15765-4 protocol that have not implemented permanent fault codes subject to (b)(6)(C)(ii)c., number of warm-up cycles since codes cleared (PID \$30 for SAE J1979 or PID \$F430 for SAE J1979-2), distance since codes cleared (PID \$31 for SAE J1979 or PID \$F431 for SAE J1979-2), and engine run time since codes cleared (PID \$4E for SAE J1979 or PID \$F44E for SAE J1979-2); as required in title 13, CCR section 1968.2(g)(4.2) and in accordance with SAE J1979/J1979-2;

- e. The CAL ID, CVN, and VIN (Mode \$09 PIDs \$01 through \$06 for SAE J1979 or Service \$22 InfoTypes \$F801 through \$F806 for SAE J1979-2) as required in title 13, CCR sections 1968.2(g)(4.6), (g)(4.7.1), (g)(4.7.3), and (g)(4.8) and in accordance with SAE J1979/J1979-2;
 - 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 title 13, CCR section 1968.2(g)(4) and in accordance with SAE J1979/J1979-2 (e.g., Mode/Service \$01, PIDs \$00, \$20, \$40; Mode/Service \$09, PID \$00 for SAE J1979, etc. Service \$22, PIDs \$F400, \$F420, \$F440; Service \$22, InfoTypes \$F800 for SAE J1979-2); or
 - g. For vehicles using an alternate connector and communication protocol (e.g., SAE J1939) as provided for in title 13, CCR section 1968.2(g)(7.1), the parameters and data identified in sections (b)(6)(C)(ii)a. through f. in accordance with title 13, CCR section 1968.2(g)(4) and with the specified alternate connector and communication protocol in lieu of in accordance with SAE J1979/J1979-2.
- (iii) If the finding of nonconformance under section (b)(6)(C)(i) above concerns vehicles that do not comply with the requirements of title 13, CCR section 1968.2(d)(4) or (5.1) through (5.6) (e.g., numerators or denominators are not properly being incremented), it shall be presumed that the nonconformance would result in an OBD II ratio enforcement test result that would be subject to an ordered OBD II-related recall in accord with the criterion in section (c)(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 II-related recall under section (c)(3)(A)(i).

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(c) Remedial Action

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(3) Ordered Remedial Action-Mandatory Recall.

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

- (i) For monitors on 2007 and subsequent model year vehicles certified to the ratios in title 13, CCR sections 1968.2(d)(3.2.1)(A) through (C) (except monitors specified in sections (b)(6)(B)(i)b. through e.), 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 title 13, CCR section 1968.2(d)(3.2.1) (e.g., if the required ratio is 0.336, less than or equal to a ratio of 0.111) 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 title 13, CCR section 1968.2(d)(3.2.1) for the same major monitor. For monitors specified in sections (b)(6)(B)(i)a. through e., the Executive Officer shall determine the remedial action for nonconformances regarding the in-use monitor performance ratio in accordance with section (c)(4) below.

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(vii) The motor vehicle class cannot be tested so as to obtain valid test results in accordance with the criteria identified in section (b)(6)(C)(ii) due to the nonconforming OBD II system.

(viii) For monitors of VVT systems with discrete operating states (e.g., two step valve train systems) that are not required to detect a malfunction prior to exceeding the threshold but are required to detect all failures that exceed the threshold, when the vehicle is operated so as to reasonably encounter all monitoring conditions disclosed in the manufacturer's certification application, the OBD system cannot detect and illuminate the MIL for a malfunction of the system.

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

(A) The Executive Officer shall immediately notify the manufacturer upon the Executive Officer determining the type of remedial action to be taken.

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

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(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 (d)(1) below, outlining the remedial action to be undertaken consistent with the Executive Officer's order. Except as provided in section (c)(7)(C) below, all plans shall be submitted to the Chief, ~~Mobile Source Operations Division~~Emissions Certification and Compliance Division, 9528 Telstar Avenue, El Monte, California 91731 ~~CA Air Resources Board, P.O. Box 55009, Riverside, California 92517,~~ within the time limit specified in the notice. The Executive Officer may grant the manufacturer an extension of time for good cause.

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(d) *Requirements for Implementing Remedial Actions*

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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, ~~Mobile Source Operations Division~~Emissions Certification and

Compliance Division, 9528 Telstar Avenue, El Monte, California 91731CA Air Resources Board, P.O. Box 55009, Riverside, California 92517. For each recall campaign, the quarterly report must contain the following:

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NOTE: Authority cited: Sections 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; and *Engine Manufacturers Association v. California Air Resources Board* (2014) 231 Cal.App.4th 1022. Reference: Sections 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.