

Appendix D

PROPOSED REGULATION ORDER

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

Note: The amendments that were approved by the Board at the January 23, 2012 board hearing are shown in single underline to indicate additions and ~~single strikeout~~ to indicate deletions from the existing regulatory text, while the amendments proposed during this rulemaking are shown in double underline to indicate additions and ~~double 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 by “ * * * * ”.

§ 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

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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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- (ii) In selecting vehicles to be included in a test sample group for enforcement OBD II ratio testing, the Executive Officer shall include only vehicles that:
 - a. Are certified to the requirements of title 13, CCR section 1968.2.
 - b. Have collected sufficient vehicle operation data for the monitor to be tested. For monitors required to meet the in-use monitor performance ratio and to track and report ratio data pursuant to title 13, CCR section 1968.2(d)(3.2), sufficient vehicle operation data shall mean the denominator meets the criteria set forth in sections (b)(3)(D)(ii)1. through 3. below. For monitors required to meet the in-use monitor performance ratio but not required to track and report ratio data pursuant to title 13, CCR section 1968.2(d)(3.2), sufficient vehicle operation data shall mean that vehicles that have a denominator that meets the criteria set forth in sections (b)(3)(D)(ii)1. through 3. below after undergoing testing as set forth in section (b)(4)(C)(ii) below. Specifically, the denominator, as defined in title 13, CCR section 1968.2(d)(4.3), for the monitor to be tested must have a value equal to or greater than:
 - 1. 150 for evaporative system monitors, secondary air system monitors, and monitors utilizing a denominator incremented in accordance with title 13, CCR sections 1968.2(d)(4.3.2)(E) or (F)

- (e.g., cold start monitors, air conditioning system monitors, etc.)
and not covered in section (b)(3)(D)(ii)2. below, or
2. 50 for PM filter monitors, ~~and NMHC converting oxidation-catalyst monitors, PM sensor monitors, and PM sensor heater monitors~~ utilizing a denominator incremented in accordance with title 13, CCR section 1968.2(d)(4.3.2)(F), (G), (H), or (I), or
 3. 300 for catalyst, oxygen sensor, EGR, VVT, and all other component monitors not covered in sections (b)(3)(D)(ii)1. and 2. above.

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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:

(A) *OBD II Emission Testing.*

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(ii) *Intermediate In-Use Diesel Thresholds.*

- a. For 2007 through 2012 model year vehicles subject to diesel/compression-ignition monitoring requirements in title 13, CCR section 1968.2(f), the results of the OBD II emission tests indicate that 50 percent or more of the vehicles in the test sample do not properly illuminate the MIL when emissions exceed:

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- d. For 2013 through 2015 model year medium-duty vehicles, with respect to the NOx malfunction criteria for the NOx converting catalyst conversion efficiency monitor (title 13, CCR section 1968.2(f)(2.2.2)), reductant delivery performance monitor (title 13, CCR section 1968.2(f)(2.2.3)(A)), and NOx sensor monitor (title 13, CCR section 1968.2(f)(5.2.2)(A)), the Executive Officer shall make a finding of nonconformance of the OBD II system if the results of the OBD II emission tests indicate that 50 percent or more of the vehicles in the test sample do not properly illuminate the MIL when emissions exceed an additional 0.2 g/bhp-hr above the NOx malfunction criteria defined in title 13, CCR section 1968.2(f)(2.2.2)(A)(ii)c. or 1968.2(f)(5.2.2)(A)(ii)c.
- e. For 2013 through 2015 model year medium-duty vehicles, for the PM filter filtering performance monitor (title 13, CCR section 1968.2(f)(9.2.1)), the Executive Officer shall make a finding of nonconformance of the OBD II system if the results of the OBD II emission tests indicate that 50 percent or more of the vehicles in the test sample do not properly illuminate the MIL when emissions exceed 0.05 g/bhp-hr.

- (iii) *Final In-Use Thresholds.* For 2009 and subsequent model year vehicles subject to the gasoline/spark-ignited requirements of title 13, CCR section 1968.2(e) and, except as provided in sections (b)(6)(A)(ii)d. and e. above, for 2013 and subsequent model year vehicles subject to the

diesel/compression-ignition requirements of title 13, CCR section 1968.2(f), the results of the OBD II emission tests indicate that 50 percent or more of the vehicles in the test sample do not properly illuminate the MIL when the emission malfunction criteria defined in title 13, CCR sections 1968.2(e) or (f) are exceeded.

(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 ~~2014~~2016-2018 model year vehicles certified to a ratio of 0.100 in accordance with title 13, CCR section 1968.2(d)(3.2.1)-(D),

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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 that:

- (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), 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 on 2004 through ~~2014~~2016-2018 model year vehicles certified to the 0.100 ratio in title 13, CCR section 1968.2(d)(3.2.1)(D), the Executive Officer shall determine the remedial action for nonconformances regarding the in-use monitor performance ratio in accordance with section (c)(4) below.
- (ii) When the vehicle is tested on-road and driven so as to reasonably encounter all monitoring conditions disclosed in the manufacturer's certification application, the OBD II system is unable to detect and illuminate the MIL for a malfunction of a component/system monitored by a major monitor (other than the monitors for misfire causing catalyst damage and the evaporative system) prior to emissions exceeding two times the malfunction criteria of title 13, CCR sections 1968.2(e) and (f)

(e.g., if the malfunction criteria is 1.75 times the applicable FTP standard, recall would be required when emissions exceed 3.5 times the applicable FTP standard or if the malfunction criteria is the PM standard plus 0.02 g/bhp-hr and the PM standard is 0.01 g/bhp-hr, recall would be required when emissions exceed 0.06 g/bhp-hr). Additionally, for the first two years that a new major monitor is required in title 13, CCR section 1968.2(e) (e.g., 2006 and 2007 model year for cold start strategy monitoring in title 13, CCR section 1968.2(e)(11)), the Executive Officer shall use three times the malfunction criteria in lieu of two times the malfunction criteria (e.g., if the malfunction criterion is 1.5 times the applicable FTP standard, recall would be required when emissions exceed 4.5 times the applicable FTP standard). Additionally, for major monitors on 2007 through 2009 model year vehicles certified to the monitoring requirements in title 13, CCR section 1968.2(f) and for the PM filter filtering performance monitor (title 13, CCR section 1968.2(f)(9.2.1)) on 2013 model year medium-duty vehicles, the Executive Officer shall determine the remedial action for nonconformances regarding emission exceedance in accordance with section (c)(4) below in lieu of the criteria in section (c)(3)(ii). For purposes of the emission exceedance determination, carbon monoxide (CO) emissions are not considered.

(iii) For misfire monitors:

a. Gasoline misfire monitor: The monitor for misfire causing catalyst damage is unable to properly detect and illuminate the MIL for misfire rates that are more than 20 percentage points greater than the misfire rates disclosed by the manufacturer in its certification application as causing catalyst damage (e.g., if the disclosed misfire rate is 12 percent, recall would be required if the misfire rate is greater than 32 percent without proper detection).

b. Diesel misfire monitor: For 2019 and subsequent model year medium-duty diesel vehicles, the misfire monitor is unable to properly detect and illuminate the MIL for misfire rates that are more than 10 percentage points greater than the misfire malfunction criteria specified in title 13, CCR section 1968.2(f)(3.2.2) (e.g., misfire rate more than 15 percent if the misfire malfunction criteria is 5 percent).

(iv) When the vehicle is tested on-road and driven so as to reasonably encounter all monitoring conditions disclosed in the manufacturer's certification application, the evaporative system monitor is unable to detect and illuminate the MIL for a cumulative leak or leaks in the evaporative system equivalent to that caused by an orifice with a diameter of at least 1.5 times the diameter of the required orifice in title 13, CCR section 1968.2(e)(4.2.2)(C).

(v) When the vehicle is tested on-road and driven so as to reasonably encounter all monitoring conditions disclosed in the manufacturer's certification application, the OBD II system cannot detect and illuminate the MIL for a malfunction of a component that effectively disables a major monitor and the major monitor, by being disabled, meets the criteria for

recall identified in sections (c)(3)(A)(ii) or (iv) above (e.g. is unable to detect and illuminate the MIL for malfunctions that cause FTP emissions to exceed two times the malfunction criteria).

(vi) For 2013 and subsequent model year medium-duty diesel vehicles, when the vehicle is tested on-road and driven so as to reasonably encounter all monitoring conditions disclosed in the manufacturer's certification application, the PM filter monitor is unable to detect and illuminate the MIL for any of the following:

a. a missing substrate fault in accordance with title 13, CCR section 1968.2(f)(9.2.5); or

b. a malfunction of the PM filter that causes PM emissions to be equal to or greater than the emission level of the engine or vehicle, as measured from an applicable emission test cycle (i.e., FTP or SET), with the PM filter substrate completely removed.

~~(vi)~~ (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.

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NOTE: Authority cited: Sections 39010, 39600, 39601, 43000.5, 43013, 43016, 43018, 43100, 43101, 43104, 43105, 43105.5, 43106, 43154, 43211, and 43212, Health and Safety Code. 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, 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.