

**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 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.**

(a) *General*

\* \* \* \*

(3) *Definitions.*

The definitions applicable to these rules include those set forth in Health and Safety Code section 39010 et seq. and in title 13, CCR sections 1900(b) and 1968.2(c), which are incorporated by reference herein. The following definitions are specifically applicable to section 1968.5 and take precedence over any contrary definitions.

\* \* \* \*

“*Major Monitor*” means those monitors covered by the requirements set forth in title 13, CCR sections 1968.2(e)(1.0) through (e)(8.0), (e)(11.0) through (e)(14.0), (e)(16.0), (f)(1.0) through (f)(9), (f)(12), (f)(13), (f)(14), and (f)(16).

\* \* \* \*

(b) *Testing Procedures*

\* \* \* \*

(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:

\* \* \* \*

(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 ~~2018~~ 2021 model year vehicles certified to a ratio of 0.100 in accordance with title 13, CCR section 1968.2(d)(3.2.1)(D),  
\* \* \* \*

(ii) For monitors that are certified to the ratios in title 13, CCR sections 1968.2(d)(3.2.1)(A) through (C) 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 of less than the required minimum ratio defined in title 13, CCR section 1968.2(d)(3.2.1) for the same monitor, or (2) ~~that the average in-use monitor performance ratio for one or more of the monitors in the motor vehicle class is less than the required minimum ratio defined in title 13, CCR section 1968.2(d)(3.2.1) as defined by determining 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. 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) *Remedial Action*

\* \* \* \*

(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~~ 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 ~~on 2004 through 2018 model year vehicles certified to the 0.100 ratio in title 13, CCR section 1968.2(d)(3.2.1)(D)~~ 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.
- (ii) Except as provided in section (c)(3)(A)(ii)a. through e. below, ~~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~~ except for monitors with malfunction criteria that are not tied to emission thresholds such as for misfire causing catalyst damage and the evaporative system monitor) 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).
- a. Additionally, ~~f~~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).
- b. Except as provided for gasoline air-fuel ratio cylinder imbalance monitors in section (c)(3)(A)(ii)d. below, for the first three years a vehicle is certified to the Low Emission Vehicle III ULEV70 and ULEV50 standards but no later than the 2019 model year,

the Executive Officer shall use 2.5 times the malfunction criteria (e.g., if the malfunction criterion is 2.0 times the applicable FTP standard, recall would be required when emissions exceed 5.0 times the applicable FTP standard).

- c. For the gasoline air-fuel ratio cylinder imbalance monitor (required in title 13, CCR section 1968.2(e)(6.2.1)(C)) on 2015 through 2016 model year non-Low Emission Vehicle III applications, the Executive Officer shall use 8.0 times any of the applicable FTP standards for PC/LDT SULEV II vehicles and 6.0 times any of the applicable FTP standards for all other vehicles in lieu of two times the malfunction criteria.
  - d. For the gasoline air-fuel ratio cylinder imbalance monitor (required in title 13, CCR section 1968.2(e)(6.2.1)(C)) on 2019 through 2022 model year Low Emission Vehicle III ULEV70, ULEV50, SULEV30, and SULEV20 applications, the Executive Officer shall use 6.0 times any of the applicable FTP NMOG+NO<sub>x</sub> or CO standards for ULEV70 and ULEV50 vehicles and 8.0 times any of the applicable FTP NMOG+NO<sub>x</sub> or CO standards for SULEV30 and SULEV20 vehicles in lieu of two times the NMOG+NO<sub>x</sub> or CO malfunction criteria. The Executive Officer shall use twice the malfunction criteria for PM emissions.
  - e. Additionally, fFor 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).
  - f. For purposes of the emission exceedance determination, carbon monoxide (CO) emissions are not considered.
- (iii) For misfire monitors not covered under section (c)(3)(A)(ii) above:
- 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. Gasoline plug-in hybrid electric vehicle misfire monitor: For vehicles certified to the malfunction criteria in title 13, CCR section 1968.2(e)(3.2.3)(A), the misfire monitor is unable to properly detect and illuminate the MIL for misfire rates that are equal to or more than 5 percent. For vehicles certified to the

malfunction criteria in title 13, CCR section 1968.2(e)(3.2.3)(B), the criteria under section (c)(3)(A)(ii) shall apply.

b.c. Diesel misfire monitor: For 2022 and subsequent model year passenger cars, light-duty trucks, and MDPVs certified to a chassis dynamometer tailpipe emission standard, and for 2019 and subsequent model year medium-duty diesel vehicles (except MDPVs certified to a chassis dynamometer tailpipe emission standard), 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).

\* \* \* \*

(vi) For 2013 and subsequent model year medium-duty diesel vehicles (except MDPVs certified to a chassis dynamometer tailpipe emission standard) and 2016 and subsequent model year passenger cars, light-duty trucks, and MDPVs certified to a chassis dynamometer tailpipe emission standard, 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.

\* \* \* \*

(B) A motor vehicle class shall not be subject to mandatory recall if the Executive Officer determines that any of the following conditions are met, even though a monitor meets a criterion set forth in section (c)(3)(A)(i)-(vi) for mandatory recall:

- (i) The OBD II system can still detect and illuminate the MIL for all malfunctions monitored by the nonconforming monitor (e.g., monitor "A" is non-functional but monitor "B" is able to detect all malfunctions of the component(s) monitored by monitor "A").
- (ii) The monitor meets the criterion solely due to a failure or deterioration mode of a monitored component or system that could not have been reasonably foreseen to occur by the manufacturer.
- (iii) The failure or deterioration of the monitored component or system that cannot be properly detected causes the vehicle to be undriveable (e.g., vehicle stalls continuously or the transmission will not shift out of first gear, etc.) or causes an overt indication such

that the driver is certain to respond and have the problem corrected (e.g., illumination of an over-temperature warning light or charging system light that uncorrected will result in an undriveable vehicle, etc.).

\* \* \* \*

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.