

## **Attachment B**

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

**§ 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**

(1) Applicability.

(A) These procedures shall be used to assure compliance with the requirements of title 13, California Code of Regulations (CCR) section 1968.2 for all 2004 and subsequent model year vehicles equipped with OBD II systems that have been certified for sale in California.

(B) Vehicles manufactured prior to the 2004 model year are covered by the general enforcement and penalty provisions of the Health and Safety Code, and the specific provisions of title 13, CCR sections 1968.1 and 2111 through 2149.

(2) Purpose.

The purpose of this section is to establish the enforcement protocol that shall be used by the ARB to assure that vehicles certified for sale in California are equipped with OBD II systems that properly function and meet the purposes and requirements of title 13, CCR section 1968.2.

(3) Definitions.

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

(A) "Days", when computing any period of time, unless otherwise noted, mean calendar days, but the Executive Officer when considering any request for extension of time shall consider the days that a manufacturer is open for business.

(B) "Executive Officer" means the Executive Officer of the Air Resources Board or his or her authorized representative.

(C) "Influenced OBD II-Related Recall" means an inspection, repair, adjustment, or modification program initiated and conducted by a manufacturer as a result of enforcement testing conducted by the ARB for the purpose of correcting any nonconforming OBD II system for which direct notification of vehicle or engine owners is necessary.

(D) "Major Monitor" means those monitors covered by the requirements set forth in title 13, CCR section 1968.2(e)(1.0) through (e)(8.0), (e)(11.0) through (e)(15.0), and (e)(17.0).

(E) "Motor Vehicle Class" means a group or set of vehicles or engines subject to enforcement testing that have been determined by the Executive Officer to share common or similar hardware, software, OBD II monitoring strategy, or emission control strategy.

(F) "Motor Vehicle Manufacturer" means the manufacturer granted certification to sell motor vehicles in the State of California.

- (G) “Nonconforming OBD II System” means an OBD II system on a production vehicle that has been determined not to comply with the requirements of title 13, CCR section 1968.2. For purposes of section 1968.5, a motor vehicle class shall be considered nonconforming irrespective of whether vehicles in the motor vehicle class, on average, meet applicable tailpipe or evaporative emission standards.
- (H) “OBD II Emission Testing” refers to testing conducted to determine compliance with the malfunction criteria in title 13, CCR section 1968.2(e) that are based on a multiple of a tailpipe emission standard (e.g., 1.5 times the applicable FTP emission standards).
- (I) “OBD II Ratio Testing” refers to testing conducted to determine compliance with the required in-use monitor performance ratio in title 13, CCR section 1968.2(d)(3.2.1).
- (J) “Ordered OBD II-Related Recall” means an inspection, repair, adjustment, or modification program required by the ARB to be conducted by the manufacturer to correct any nonconforming OBD II system for which direct notification of vehicle owners is necessary.
- (K) “Quarterly Reports” refer to the following calendar periods: January 1 – March 31; April 1 – June 30; July 1 – September 30; October 1 – December 31.
- (L) “Test Sample Group” means a group of production vehicles in a designated motor vehicle class that are equipped with OBD II systems and are selected and tested as part of the ARB enforcement testing program set forth in section (b).
- (M) “Voluntary OBD II-Related Recall” means an inspection, repair, adjustment, or modification program voluntarily initiated and conducted by a manufacturer to correct any nonconforming OBD II system for which direct notification of vehicle owners is necessary.

**(b) Testing Procedures**

(1) Purpose.

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

(2) Preliminary Testing and Evaluation.

(A) As part of his or her evaluation of vehicles to determine compliance with the requirements of title 13, CCR section 1968.2, the Executive Officer may routinely conduct testing on any production vehicles that have been sold and operated in California.

(B) Based upon such testing or any other information, including data from California or other State Inspection and Maintenance (I&M) stations, warranty information reports, and field information reports, the Executive Officer may conduct enforcement testing pursuant to sections (b)(3) through (5) below.

(3) Vehicle Selection for Enforcement Testing.

(A) Determining the Motor Vehicle Class.

- (i) Upon deciding to conduct enforcement testing, the Executive Officer shall determine the motor vehicle class to be tested. In determining the scope of the motor vehicle class to be tested, the Executive Officer shall consider the similarities and differences in the OBD II systems of potentially affected vehicles. Among other things, the Executive Officer shall consider whether vehicles share similar computer hardware and software, calibrations, or OBD II monitoring and emission control strategies.
- (ii) The default motor vehicle class is the test group or OBD II group used by the manufacturer to certify the vehicles to be tested. However, upon concluding that a subgroup of vehicles differs from other vehicles in the identified test group or OBD II group and that a reasonable basis exists to believe that the differences may directly impact the type of testing that will be performed, the Executive Officer may determine that a subgroup of the test group or OBD II group is the appropriate motor vehicle class for testing.
- (iii) Similarly, upon concluding that vehicles from several OBD II groups share such common characteristics that a reasonable basis exists to believe that results of enforcement testing may be applicable to a motor vehicle class larger than a specific test group or OBD II group, the Executive Officer may determine that the appropriate motor vehicle class includes more than one test group or OBD II group.
- (iv) The Executive Officer may not conduct testing of a motor vehicle class whose vehicles, on average, exceed the defined full useful life of the motor vehicle class. For purposes of the determination of this average, the Executive Officer shall use the accrual rates appropriate for vehicles in the motor vehicle class as defined in Section 7.1, "Accrual Rates", EMFAC2000 Technical Support Documentation, incorporated by reference.

(B) Size of Test Sample Group.

After determining the motor vehicle class to be tested, the Executive Officer shall determine the appropriate number of vehicles to include in the test sample group for enforcement testing in accordance with the following guidelines:

- (i) For OBD II emission testing, the Executive Officer shall follow the procedures regarding sample size established in title 13, CCR section 2137 (e.g., using a sample size of at least 10 vehicles).
- (ii) For OBD II ratio testing, the Executive Officer shall collect data from a test sample group of at least 30 vehicles.
- (iii) In determining compliance with any other requirements of title 13, CCR section 1968.2 (e.g., diagnostic connector location, communication protocol standards, MIL illumination protocol, evaporative system diagnostics, etc.), the Executive Officer shall

determine the number of vehicles to be included in the test sample group based upon the nature of the noncompliance and the scope of the motor vehicle class. The test sample group could be as few as two test vehicles.

(C) Protocol for Procuring Vehicles for Test Sample Group

- (i) For OBD II emission testing, the Executive Officer shall follow the same procurement policies used by the Executive Officer in accordance with title 13, CCR section 2137 to procure vehicles for in-use testing of vehicles for compliance with exhaust emission standards, with the exception that the Executive Officer shall modify the selection process (if necessary) to ensure proper selection of vehicles in accord with section (b)(3)(D)(i) below in lieu of the criteria in title 13, CCR section 2137.
- (ii) For OBD II ratio testing, the Executive Officer shall follow the same procurement policies used by the Executive Officer in accordance with title 13, CCR section 2137 to procure vehicles for in-use testing of vehicles for compliance with exhaust emission standards, with the exception that the Executive Officer shall modify the selection process (if necessary) to ensure proper selection of vehicles in accord with section (b)(3)(D)(ii) below in lieu of the criteria in title 13, CCR section 2137.
- (iii) For all other testing, the Executive Officer shall determine the appropriate procurement policy to be used in procuring vehicles for the test sample group based upon the nature of the noncompliance and the scope of the motor vehicle class. If the Executive Officer concludes that a reasonable basis exists to believe that a vehicle operator's driving or maintenance habits would not substantially impact test results to determine noncompliance, he or she may procure vehicle(s) by any means that assures effective collection and testing of vehicles (e.g., rental car agencies, fleet vehicles, etc.). In all cases, however, the selection process must ensure proper selection of vehicles in accord with section (b)(3)(D)(iii) below.

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

- (i) In selecting vehicles to be included in a test sample group for enforcement OBD II emission testing, the Executive Officer shall include only vehicles that:
  - a. Are certified to the requirements of title 13, CCR section 1968.2 and California exhaust emission standards.
  - b. Are registered for operation in California.
  - c. Have an odometer reading and age that are less than the certified full useful life mileage and age for the subject vehicles.
  - d. Have no reasonably apparent evidence of tampering or being equipped with add-on or modified parts that would cause the OBD II system not to comply with the requirements of title 13, CCR section 1968.2.

- e. Have no reasonably apparent indication of abuse (e.g., racing, overloading, misfueling) neglect, improper maintenance, or other factors that would cause the OBD II system not to comply with the requirements of title 13, CCR section 1968.2 or would have a permanent effect on exhaust emission performance.
  - f. Have no reasonably apparent detected or known malfunction(s) that would affect the performance of the OBD II system and are unrelated to the monitor or system being evaluated. At its discretion, the ARB may elect to repair a vehicle with a detected or known malfunction and then include the vehicle in the test sample group.
  - g. Have no reasonably apparent evidence of a major repair to the engine or major repair of the vehicle resulting from a collision.
  - h. Have no reasonably apparent indication of a problem that might jeopardize the safety of laboratory personnel.
- (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. 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.), or
    - 2. 300 for catalyst, oxygen sensor, EGR, VVT, and all other component monitors.
  - c. Have no reasonably apparent evidence of tampering or being equipped with add-on or modified parts that would cause the OBD II system not to comply with the requirements of title 13, CCR section 1968.2.
- (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:
- a. Are certified to the requirements of title 13, CCR section 1968.2.
  - b. Have no reasonably apparent evidence of tampering or being equipped with add-on or modified parts that would cause the OBD II system not to comply with the requirements of title 13, CCR section 1968.2.
  - c. Have no reasonably apparent detected or known malfunction(s) that would affect the performance of the OBD II system and are unrelated to the monitor or system being evaluated. At its

discretion, the ARB may elect to repair a vehicle with a detected or known malfunction and then include the vehicle in the test sample group.

(4) Enforcement Testing Procedures

(A) Prior to conducting any testing under section (b)(4), the Executive Officer may replace components monitored by the OBD II system with components that are sufficiently deteriorated or simulated to cause malfunctions that exceed the malfunction criteria established pursuant to title 13, CCR section 1968.2(e) in a properly operating system. The Executive Officer may not use components deteriorated or simulated to represent failure modes that are solely caused by vehicle operator action(s) beyond the vehicle manufacturer's control and that could not have been foreseen to occur (e.g., the use of leaded gasoline in an unleaded vehicle, etc.). Upon request by the Executive Officer, the manufacturer shall make available all test equipment (e.g., malfunction simulators, deteriorated "threshold" components, etc.) necessary to duplicate testing done by the manufacturer to determine the malfunction criteria used for major monitors subject to OBD II emission testing.

(B) OBD II Emission Testing: After the test sample group has been selected and procured, the Executive Officer may perform one or more of the following tests:

(i) Emission testing in accordance with the test procedures used by the Executive Officer for in-use testing of compliance with exhaust emission standards in accordance with title 13, CCR sections 2138 and 2139.

(ii) On-road or dynamometer testing with the vehicle being driven in a manner that reasonably ensures that all of the monitoring conditions disclosed in the manufacturer's certification application for the tested monitor are encountered.

(C) OBD II Ratio Testing:

(i) For OBD II ratio testing of 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), after the test sample group has been selected and procured, the Executive Officer shall download the data from monitors required to track and report such data.

(ii) For OBD II ratio testing of 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), after the test sample group has been selected and procured, the Executive Officer shall collect data by installing instrumentation or data-logging equipment on the vehicles. After installation of the equipment, the vehicles shall be returned to the vehicle owner/operator to continue to operate the vehicle until the minimum denominator criteria (see section (b)(3)(D)(ii)b.) is satisfied. The

Executive Officer shall then calculate the ratio from the data collected in a manner that will allow the Executive Officer to effectively determine the in-use monitor performance ratio in accordance with the requirements of title 13, CCR section 1968.2(d)(3.2).

- (D) Testing for compliance with any other requirement of title 13, CCR section 1968.2: After the test sample group has been selected and procured, the Executive Officer may perform one or more of the following tests:
  - (i) Emission testing on the applicable FTP cycle or other applicable emission test cycle used for measuring exhaust or evaporative emissions.
  - (ii) On-road or dynamometer testing with the vehicle being driven in a manner that reasonably ensures that all of the monitoring conditions disclosed in the manufacturer's certification application for the tested monitor are encountered.
  - (iii) Any other testing determined to be necessary by the Executive Officer. This may include, but is not limited to, the use of special test equipment to verify compliance with standardization requirements.
- (5) Additional Testing.
  - (A) Based upon testing of the motor vehicle class in section (b)(4) above and after review of all evidence available at the conclusion of such testing, the Executive Officer may elect to conduct further testing of a subgroup of vehicles from the motor vehicle class if the Executive Officer has determined that:
    - (i) a subgroup of tested vehicles differs sufficiently enough from other vehicles in the tested motor vehicle class, and
    - (ii) a reasonable basis exists to believe that the identified differences may indicate that the subgroup may be nonconforming whereas the tested motor vehicle class as a whole is not.
  - (B) Hereinafter all references to motor vehicle class shall be applicable to the subgroup meeting the conditions of section (b)(5)(A) above.
  - (C) In any testing of a subgroup of vehicles under section (b)(5), the Executive Officer shall follow the vehicle selection and testing procedures set forth in sections (b)(3) and (4) above.
- (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: 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 section 1968.2(e) are exceeded.
  - (B) OBD II Ratio Testing:



- (i) For 2004, 2005, and 2006 model year vehicles, 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.
  - (ii) For 2007 and subsequent model year vehicles, the data collected from the vehicles in the test sample indicate either that 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 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 section 1968.2(e) to meet the monitoring condition requirements of title 13, CCR section 1968.2(d)(3.2).
- (C) All Other OBD II Testing:
- (i) The results of the testing indicate that at least 30 percent of the vehicles in the test sample do not comply with the same requirement of title 13, CCR section 1968.2.
  - (ii) If the finding of nonconformance under paragraph (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) (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 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 recall under section (c)(3)(A)(i).

- (7) Executive Officer Notification to the Manufacturer Regarding Determination of Nonconformance
- (A) Upon making the determination of nonconformance in section (b)(6) above, the Executive Officer shall notify the manufacturer in writing.
- (B) The Executive Officer shall include in the notice:
- (i) all relevant information, including supporting test data, that the Executive Officer relied upon in making his or her determination,
  - (ii) a provision allowing the manufacturer no less than 90 days from the date of issuance of the notice to provide the Executive Officer with any information contesting the findings set forth in the notice, and
  - (iii) a statement that if a final determination is made that the motor vehicle class is equipped with a nonconforming OBD II system, the manufacturer may be subject to appropriate remedial action, including recall and monetary penalties.
- (C) Within the time period set by the Executive Officer in section (b)(7)(B)(ii), the manufacturer may provide the Executive Officer with any test results, data, or other information that may rebut or mitigate the results of the ARB testing.
- (i) If the manufacturer elects to conduct additional testing of vehicles or engines, the manufacturer shall notify the Executive Officer before conducting such testing so that the Executive Officer may have the opportunity to review the testing protocol of the manufacturer, and witness the testing of vehicles.
  - (ii) If the manufacturer objects to the size of the test sample group or the method used to procure vehicles in the test sample group used by the Executive Officer pursuant to section (b)(3)(B)(iii) or (b)(3)(C)(iii), the manufacturer shall set forth what it considers to be the appropriate size and procurement method and the reasons therefore.
  - (iii) If the manufacturer elects to present evidence to overcome the presumption of nonconformance in section (b)(6)(C)(ii) above, the manufacturer shall demonstrate that the vehicles comply with in-use monitor performance ratio requirements of title 13, CCR section 1968.2(d)(3.2) by following one of the following procedures:
    - a. Presenting evidence in accord with the procurement and testing requirements of sections (b)(3) and (4).
    - b. Requesting Executive Officer approval to use an alternate procedure to demonstrate compliance. The Executive Officer shall approve the alternate procedure if the manufacturer demonstrates that it would provide an equivalent level of proof that vehicles operated in California do comply with the in-use monitor performance ratio.
- (D) After receipt of any information submitted by the manufacturer pursuant to section (b)(7)(C) above, the Executive Officer shall

consider all information submitted by the manufacturer and may conduct any additional testing that he or she believes is necessary.

(E) Final Determination:

(i) Within 60 days after completing any additional testing that the Executive Officer deemed necessary under section (b)(7)(D) above, the Executive Officer shall notify the manufacturer of his or her final determination regarding the finding of nonconformity of the OBD II system in the motor vehicle class. The determination shall be made after considering all of the information collected and received, including all information that has been received from the manufacturer.

(ii) The notice must include a description of each test group(s), OBD II group(s), or subgroups thereof, that has been determined to have a nonconforming OBD II system and set forth the factual bases for the determination.

(F) Extensions: The Executive Officer may for good cause extend the time requirements set forth in section (b)(7). In granting additional time to a manufacturer, the Executive Officer shall consider, among other things, any documentation submitted by the manufacturer regarding the time that it reasonably believes is necessary to conduct its own testing, why such information could not have been more expeditiously presented, and what effect any delay caused by granting the extension may have on effective enforcement and the health and welfare of the State.

**(c) Remedial Action**

(1) General.

(A) Upon being notified by the Executive Officer, pursuant to section (b)(7)(E), that a motor vehicle class is equipped with a nonconforming OBD II system, the manufacturer may, within 45 days from the date of service of such notification, elect to conduct an influenced recall of all vehicles within the motor vehicle class for the purpose of correcting the nonconforming OBD II systems. Upon such an election, the manufacturer shall follow the procedures set forth in sections (c)(2) and (d) below.

(B) If a manufacturer does not elect to conduct an influenced recall under section (c)(1)(A) above, the Executive Officer may order the manufacturer to undertake appropriate remedial action, up to and including the recall and repair of the nonconforming OBD II systems.

(2) Voluntary and Influenced OBD II-Related Recalls.

(A) If a manufacturer initiates a voluntary OBD II-related recall campaign, the manufacturer shall notify the Executive Officer of the recall at least 45 days before owner notification is to begin. The manufacturer shall also submit a voluntary recall plan for approval, as prescribed under section (d)(1) below.

- (B) If a manufacturer initiates an influenced OBD II-related recall pursuant to section (c)(1)(A), the manufacturer shall submit a recall plan for approval, as prescribed under section (d)(1) below.
  - (C) A voluntary or influenced OBD II-related recall plan submitted under sections (c)(2)(A) and (B) above shall be approved by the Executive Officer pursuant to section (d)(1)(B) below.
- (3) Ordered Remedial Action.
- (A) The Executive Officer shall order the recall and repair of all vehicles and engines 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 indicates that:
    - (i) For 2007 and subsequent model year vehicles, 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 2004, 2005, and 2006 model year vehicles, the Executive Officer shall determine the remedial action for nonconformances regarding the in-use monitor performance ratio in accordance with section (c)(3)(B) 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, a major monitor (other than the monitors for misfire causing catalyst damage and the evaporative system) is unable to detect and illuminate the MIL for a malfunction of the monitored component/system prior to emissions exceeding the malfunction criteria of title 13, CCR section 1968.2(e) by an additional amount equal to 1.5 times the applicable FTP standard (e.g., if the malfunction criteria is 1.5 times the applicable FTP standard, recall would be required when emissions exceed 3.0 times the applicable FTP standard). For purposes of the emission exceedance determination, carbon monoxide (CO) emissions are not considered.
    - (iii) 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).

- (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 non-major monitor 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 the malfunction criteria by an additional amount equal to or greater than 1.5 times the applicable FTP standard).
  - (vi) The motor vehicle class cannot be tested so as to obtain valid test results in accordance with the procedures of the California Inspection & Maintenance (I/M) program applicable at the time of vehicle certification due to the nonconforming OBD II system. If the I/M test procedures have been amended within two years prior to the time of certification, the motor vehicle manufacturer may elect to use the preceding procedures.
- (B) If the Executive Officer has determined that a motor vehicle class is equipped with a nonconforming OBD II system and the nonconformance does not fall within the provisions of section (c)(3)(A) above, he or she may require the manufacturer to undertake remedial action up to and including recall of the affected motor vehicle class. In making his or her findings regarding remedial action, the Executive Officer shall consider the capability of the OBD II system to properly function. This determination shall be based upon consideration of all relevant circumstances including, but not limited to, those set forth below.
- (i) Whether the manufacturer identified and informed the ARB about the nonconformance(s) or whether the ARB identified the nonconformance(s) prior to being informed by manufacturer.
  - (ii) The number of nonconformances.
  - (iii) If the identified nonconformance(s) is with a major monitor(s), the nature and extent of the nonconformance(s), including:
    - a. the degree to which the in-use monitor performance ratio(s) is below the required ratio(s) specified in title 13, CCR section 1968.2 (d)(3.2.1), and
    - b. the amount of the emission exceedance(s) over the established malfunction criteria set forth in title 13, CCR section 1968.2(e) before a malfunction is detected and the MIL is illuminated.

- (iv) If the identified nonconformance(s) is with a non-major monitor the nature and extent of the nonconformance(s), including:
    - a. the degree to which the in-use monitor performance ratio(s) (where applicable) is below the required ratio(s) specified in title 13, CCR section 1968.2 (d)(3.2.1),
    - b. the degree to which the monitored component must be malfunctioning or exceed the established malfunction criteria set forth in title 13, CCR section 1968.2(e) before a malfunction is detected and the MIL is illuminated, and
    - c. the effect that the nonconformance(s) has on the operation of a major monitor(s).
  - (v) The impact of the nonconformance on vehicle owners (e.g., cost of future repairs, driveability, etc.) and the ability of the service and repair industry to make effective repairs (e.g., difficulty in accessing fault information, diagnosing the root cause of a failure, etc.).
  - (vi) The degree to which the identified nonconformance(s) complicates, interferes with, disrupts, or hampers a service technicians ability to follow California I/M testing protocol when performing a California I/M inspection.
  - (vii) The failure of the data link connector of the motor vehicle class to meet the requirements of title 13, CCR section 1968.2(f)(2).
  - (viii) The failure of the PCV system in a motor vehicle class to comply with the requirements of title 13, CCR section 1968.2(e)(9).
  - (ix) The failure of the cooling system monitor in a motor vehicle class to properly verify that the cooling system reaches the highest enable temperature used for any other monitor when the vehicle is operated in the monitoring conditions disclosed in the manufacturer's certification application, or failure to comply with any requirement in title 13, CCR section 1968.2(e)(10).
  - (x) The estimated frequency that a monitor detects a malfunction and illuminates the MIL when no component malfunction is present (i.e., false MILs).
  - (xi) The estimated frequency that a monitor fails to detect a malfunction and illuminate the MIL when the monitoring conditions, as set forth in the manufacturer's approved certification application, have been satisfied and a faulty or deteriorated monitored component is present (i.e., false passes).
  - (xii) Whether the manufacturer submitted false, inaccurate, or incomplete documentation regarding the identified nonconformance at the time of certification and the extent to which the false, inaccurate, or incomplete documentation was material to the granting of certification.
- (4) Assessment of Monetary Penalties.  
 The Executive Officer may seek penalties pursuant to the applicable provisions of the Health and Safety Code for violations of the requirements of title 13, CCR section 1968.2 or for production vehicles otherwise failing

- to be equipped with OBD II systems that have been certified by the ARB. In determining the penalty amounts that the ARB may seek, the Executive Officer shall consider all relevant circumstances including, but not limited to, mitigation factors and the factors set forth below:
- (A) Whether the manufacturer self-reported the nonconformity or the ARB discovered the nonconformity independent of the manufacturer.
  - (B) The nature and degree of the nonconformity and whether the manufacturer should reasonably have discovered the nonconformity and taken corrective action by voluntary recall or running changes during the production year.
  - (C) The economic benefits, if any, gained by the manufacturer from not complying with the provisions of title 13, CCR section 1968.2.
  - (D) The manufacturer's history of compliance with the OBD II requirements.
  - (E) The preventative efforts taken by the manufacturer to avoid noncompliance, including any programs followed by the manufacturer to ensure compliance.
  - (F) The manufacturer's efforts to correct the nonconformity once it was identified.
  - (G) The innovative nature and magnitude of effort, including the cost of any other proposed remedial action, necessary to correct the nonconformity.
  - (H) The cooperation of the manufacturer during the course of the investigation and any action taken by the manufacturer, including the nature, extent, and time of response of any action taken to mitigate the violation.
  - (I) The deterrent effect of the penalty.
  - (J) Whether the manufacturer has failed to provide complete and accurate information required to be submitted at the time of certification pursuant to title 13, CCR section 1968.2(h).
  - (K) The nature and degree that OBD II systems on production vehicles differ from the systems that have been certified by the ARB.
- (5) Notice to Manufacturer.
- (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:
    - (i) specifically set forth the remedial action that is being ordered,
    - (ii) include a description of the test group(s), OBD II group(s), or subgroup(s) thereof, that has been determined to have a nonconforming OBD II system,
    - (iii) set forth the factual bases for the determination, and
    - (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 paragraph (c)(6)(B) below, all plans shall be submitted to the Chief, Mobile Source Operations Division, 9528 Telstar Avenue, El Monte, California 91731, within the time limit specified in the notice. The Executive Officer may grant the manufacturer an extension of time for good cause.

- (C) For cases in which the ARB elects to seek monetary penalties pursuant to authority granted under the Health and Safety Code, the Executive Officer shall issue a notice to the manufacturer that he or she will be filing a complaint in the appropriate administrative or civil court forum seeking penalties against the manufacturer for violations of title 13, CCR section 1968.2. The notice must include a description of the test group(s), OBD II group(s), or subgroup(s) thereof, that have been determined to have a nonconforming OBD II system and set forth the factual bases for the determination.
- (6) Availability of Public Hearing to Contest Remedial Actions Other than Monetary Penalty Assessments.
  - (A) Within 45 days from the date of receipt of the notice that is required under section (c)(4) above, the manufacturer may request a public hearing pursuant to the procedures set forth in title 17, CCR section 60055, et seq., to contest the findings of nonconformity, the necessity for, or the scope of any ordered remedial action.
  - (B) If a manufacturer requests a public hearing pursuant to section (c)(6)(A) above and if the Executive Officer's determination of nonconformity is confirmed at the hearing, the manufacturer shall submit the required remedial action plan in accordance with section (d)(1) below within 30 days after receipt of the Board's decision.
- (d) Requirements for Implementing Remedial Actions**
  - (1) Remedial Action Plans.
    - (A) A manufacturer initiating a remedial action campaign (voluntary, influenced, or ordered) shall develop a remedial action plan that contains the following information, unless otherwise specified:
      - (i) A description of each test group, OBD II group, or subgroup thereof covered by the remedial action, including the number of vehicles or engines, the engine families, test groups, or subgroups within the identified class(es), the make(s), model(s), and model years of the covered vehicles and engines, and such other information as may be required to identify the covered vehicles or engines.
      - (ii) A description of the nonconforming OBD II system and, in the case of a recall (whether voluntary, influenced, or ordered), the specific modifications, alterations, repairs, adjustments, or other changes to correct the nonconforming OBD II system, including data and/or engineering evaluation supporting the specific corrections.



- (iii) A description of the method and schedule that the manufacturer will use to determine the names and addresses of vehicle or engine owners and to notify them of the remedial action.
  - (iv) A copy of all instructions that the manufacturer will use to notify service facilities about the required remedial action and the specific corrections, if any, that will be required to be made to the nonconforming OBD II systems.
  - (v) A description of the procedure to be followed by vehicle or engine owners to obtain remedial action for the nonconforming OBD II system. This must include the date, on or after which the owner can have required remedial action performed, the time reasonably necessary to perform the labor to remedy the nonconformity, and the designation of facilities at which the nonconformity can be remedied.
  - (vi) If some or all of the nonconforming OBD II systems are to be remedied by persons other than dealers or authorized warranty agents of the manufacturer, a description of such class of service agents and what steps, including a copy of all instructions mailed to such service agents, the manufacturer will take to assure that such agents are prepared and equipped to perform the proposed remedial action.
  - (vii) A copy of the letter of notification to be sent to vehicle or engine owners.
  - (viii) A proposed schedule for implementing the remedial action, including identified increments of progress towards full implementation.
  - (ix) A description of the method that the manufacturer will use to assure that an adequate supply of parts will be available to initiate the remedial action campaign on the date set by the manufacturer and that an adequate supply of parts will continue to be available throughout the campaign.
  - (x) A description and test data of the emission impact, if any, that the proposed remedial action may cause to a representative vehicle or engine from the motor vehicle class to be remedied.
  - (xi) A description of the impact, if any, and supporting data and/or engineering evaluation, that the proposed remedial action will have on fuel economy, driveability, performance, and safety of the motor vehicle class covered by the remedial action.
  - (xii) Any other information, reports, or data which the Executive Officer may reasonably determine to be necessary to evaluate the remedial action plan.
- (B) Approval and Implementation of Remedial Action Plans.
- (i) If the Executive Officer finds that the remedial action plan is designed effectively to address the required remedial action and complies with the provisions in section (d)(1)(A) above, he or she

shall notify the manufacturer in writing within 30 days of receipt of the plan that the plan has been approved.

- (ii) The Executive Officer shall approve a voluntary, influenced, or ordered remedial action plan if the plan contains the information specified in section (d)(1)(A) above and is designed to notify the vehicle or engine owner and implement the remedial action in an expeditious manner.
  - (iii) In disapproving an ordered remedial action plan, the Executive Officer shall notify the manufacturer in writing of the disapproval and the reasons for the determination. The manufacturer shall resubmit a revised remedial action plan that fully addresses the reasons for the Executive Officer's disapproval within 10 days of receipt of the disapproval notice.
  - (iv) Upon receipt of the approval notice from the Executive Officer, the manufacturer shall, within 45 days of receipt of the notice, begin to notify vehicle or engine owners and implement the remedial action campaign.
  - (v) If the Executive Officer disapproves a voluntary or influenced remedial action plan, the manufacturer shall either accept the proposed modifications to the plan as suggested by the Executive Officer or be subject to an Executive Officer order that the manufacturer undertake appropriate remedial action pursuant to section (c)(1)(B) above.
- (2) Eligibility for Remedial Action.
- (A) The manufacturer may not condition a vehicle or engine owner's eligibility for remedial action required under section 1968.5 on the proper maintenance or use of the vehicle or engine.
  - (B) Subject to Executive Officer approval, the manufacturer may not be obligated to perform the remedial action on a vehicle which has been modified or altered such that the remedial action cannot be performed without additional cost.
- (3) Label Indicating that Recall Repairs Have Been Performed.
- (A) If the required remedial action involves recall of a test group(s), OBD II 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 or engine 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.
- (4) Proof of Performance of Remedial Action Certificate.
- If the required remedial action involves a recall, the manufacturer shall provide, through its service agents, to owners of vehicles or engines that have had the remedial action performed a certificate that confirms that the

vehicle has been recalled and that required inspection and/or repairs have been performed. The certificate must be in a format prescribed by the Executive Officer.

(5) Notice to Owners.

(A) The manufacturer shall notify owners of vehicles or engines in the motor vehicle class covered by the remedial order. The notice must be made by first-class mail or by such other means as approved by the Executive Officer. When necessary, the Executive Officer may require the use of certified mail to assure effective notification.

(B) The manufacturer shall use all reasonable means necessary to locate vehicle or engine owners, including motor vehicle registration lists available from the California Department of Motor Vehicles and commercial sources such as R.L. Polk & Co.

(C) The notice must contain the following:

(i) A statement: "The California Air Resources Board has determined that your vehicle (is or may be) equipped with an improperly functioning on-board emission-related diagnostic system that violates established standards and regulations that were adopted to protect your health and welfare from the dangers of air pollution."

(ii) A statement that "the (name of motor vehicle manufacturer) will, at its expense, be taking the following remedial action (describe) to redress the problems that have been identified with the improperly functioning emission control system."

(iii) A statement that eligibility for remedial action may not be denied solely on the basis that the vehicle or engine owner used parts not manufactured by the original equipment vehicle manufacturer, or had repairs performed by outlets other than the vehicle or engine manufacturer's franchised dealers.

(iv) Instructions to the vehicle or engine owners on how to obtain remedial action, including instructions on whom to contact (i.e., a description of the facilities where the vehicles or engines should be taken for the remedial action), the first date that a vehicle or engine may be brought in for remedial action, and the time that it will reasonably take to correct the nonconformity.

(v) The statement: "In order to assure your full protection under the emission warranty provisions, it is recommended that you have the required remedial action performed on your (vehicle or engine) (at the time and date indicated or, in the case of recall, as soon as possible). Failure to do so could be determined as lack of proper maintenance of your (vehicle or engine)."

(vi) A telephone number for vehicle and engine owners to call to report difficulty in obtaining remedial action.

(vii) A card to be used by a vehicle or engine owner in the event the vehicle or engine to be recalled has been sold. Such card should be addressed to the manufacturer, have postage paid, and shall provide a space in which the owner may indicate the name and

address of the person to whom the vehicle or engine was sold or transferred.

- (viii) If the remedial action involves recall, the notice must also provide:
- a. A clear description of the components that will be affected by the remedial action and a general statement of the measures to be taken to correct the nonconformity.
  - b. A statement that such nonconformity, if not corrected, may cause the vehicle or engine to fail an emission inspection or I/M smog check test.
  - c. A statement describing the adverse effects, if any, of an uncorrected nonconforming OBD II system on the performance, fuel economy, or durability of the vehicle or engine.
  - d. A statement that after remedial action has been taken, the manufacturer will have the service facility issue a certificate showing that a vehicle has been corrected under the recall program, and that such a certificate will be required to be provided to the Department of Motor Vehicles as a condition for vehicle registration.

(D) A notice sent pursuant to this section or any other communication sent to vehicle or engine owners or dealers may not contain any statement, expressed or implied, that the OBD II system is compliant or that the OBD II system will not degrade air quality.

(E) The Executive Officer shall inform the manufacturer of any other requirements pertaining to the notification under section (d)(5) which the Executive Officer has determined as reasonable and necessary to assure the effectiveness of the recall campaign.

(6) Record Keeping and Reporting Requirements.

(A) The manufacturer shall maintain sufficient records to enable the Executive Officer to conduct an analysis of the adequacy of the remedial action.

(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, 9528 Telstar Avenue, El Monte, California 91731. For each test group within the motor vehicle class subject to the emission recall campaign, the quarterly report must contain the following:

- (i) The remedial action campaign number designated by the manufacturer and a brief description of the nature of the campaign.
- (ii) The date owner notifications began and date completed.
- (iii) The number of vehicles or engines involved in the remedial action campaign.

- (iv) The number of vehicles or engines known or estimated to be equipped with the nonconforming OBD II system and an explanation of the means by which this number was determined.
- (v) The number of vehicles or engines inspected during the reporting period and during the campaign since its inception.
- (vi) The number of vehicles or engines receiving remedial action during the reporting period and during the campaign since its inception.
- (vii) The number of vehicles or engines determined to be unavailable for inspection or remedial action, during the most recent reporting period and during the campaign since its inception, due to exportation, theft, scrapping, or other reasons (specify).
- (viii) The number of vehicles or engines, during the most recent reporting period and during the campaign since its inception, determined to be ineligible for remedial action under section (d)(1)(B).
- (ix) A list, using the following data elements and designated positions, indicating all vehicles or engines subject to recall that the manufacturer has not been informed of being corrected as of the end of the reporting period. 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 with a comma separating each element. For example: XTY32A7,1234,E-9456,1234,08-25-91,A. The add/delete flag (see below) should reflect changes in the quarterly updates. The Executive Officer may change the frequency of this submittal depending on the needs of enforcement.

<u>Data Elements</u>	<u>Positions</u>
• 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

- (x) A copy of any service bulletins issued during the reporting period by the manufacturer to franchised dealerships or other service agents that relate to the nonconforming OBD II system and the remedial action and have not previously been reported to the Executive Officer.

- (xi) A copy of all communications transmitted to vehicle or engine owners that relate to the nonconforming OBD II systems and the required remedial action and have not been previously reported to the Executive Officer.
- (C) If the manufacturer determines that any of the information submitted to the Executive Officer pursuant to section (d) has changed or is incorrect, the manufacturer shall submit the revised information, with an explanation.
- (D) The manufacturers shall maintain in a form suitable for inspection, such as computer information, storage devices, or card files, and shall make available to the Executive Officer or his or her authorized representative upon request, the names and addresses of vehicle or engine owners:
  - (i) To whom notification was sent;
  - (ii) Whose vehicles or engines were repaired or inspected under the recall campaign;
  - (iii) Whose vehicles or engines were determined not to be eligible for remedial action because the vehicles or engines were modified, altered, or unavailable due to exportation, theft, scrapping, or other reason specified in the answer to sections (d)(8)(B)(vii) and (viii).
- (E) The information gathered by the manufacturer to compile the reports required by these procedures must be retained for no less than one year beyond the useful life of the vehicles or engines and must be made available to authorized personnel of the ARB upon request.
- (F) The filing of any report under the provisions of these procedures must not affect the manufacturer's responsibility to file reports or applications, obtain approval, or give notice under any other provisions of law.

**(e) Penalties for Failing to Comply with the Requirements of Section (d).**

In addition to the penalties that may be assessed by the Executive Officer pursuant to section (c) because of a manufacturer's failure to comply with the requirements of title 13, CCR section 1968.2, a manufacturer may be subject to penalties for failing to comply with the requirements of section (d).

NOTE: Authority cited: Sections 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, 39010-39060, 39600-39601, 39515, 43000, 43000.5, 43004, 43006, 43013, 43016, 43018, 43100, 43101, 43102, 43104, 43105, 43105.5, 43106, 43150-43156, 43204, 43211, and 43212 Health and Safety Code.