Attachment 2. Proposed Regulation Order

NOTE: This document is printed in a style to indicate changes from the adopted regulation. All original language is indicated by plain type. The amendments as proposed at the December 11, 2003 public hearing are shown in underline to indicate additions to the original language and ~~strikeout~~ to indicate deletions. Further proposed amendments that were considered at the February 26, 2004 public hearing are shown in double underline to indicate additions and ~~double strikeout~~ to indicate deletions. The symbol "*****" means that the remainder of the text of the regulation for a specific section is not shown, but has been incorporated by reference, unchanged.

NOTE: Adopt Title 13, California Code of Regulations, sections 2701, 2702, 2703, 2704, 2705, 2706, 2707 and 2709 to read as follows:

Chapter 14. Verification Procedure, Warranty and In-Use Compliance Requirements for In-Use Strategies to Control Emissions from Diesel Engines

§ 2701. Definitions

(a) The definitions in Section 1900(b), Chapter 1, Title 13 of the California Code of Regulations are incorporated by reference herein. The following definitions shall govern the provisions of this chapter:

(1) "15 ppmw or less sulfur fuel" means diesel fuel with a sulfur content equal to or less than 15 parts per million by weight (ppmw).

(2) "Alternative Diesel Fuel" means any fuel used in diesel engines that is not commonly or commercially known, sold or represented as diesel fuel No. 1-D or No. 2-D, pursuant to the specifications in ASTM Standard Specification for Diesel Fuel Oils D975-81, and does not require engine or fuel system modifications for the engine to operate, although minor modifications (e.g. recalibration of the engine fuel control) may enhance performance. Examples of alternative diesel fuels include, but are not limited to, biodiesel, Fischer Tropsch fuels, and emulsions of water in diesel fuel. Natural gas is not an alternative diesel fuel. An emission control strategy using a fuel additive will be treated as an alternative diesel fuel based strategy unless:

(A) The additive is supplied to the vehicle or engine fuel by an on-board dosing mechanism, or

(B) The additive is directly mixed into the base fuel inside the fuel tank of the vehicle or engine, or

(C) The additive and base fuel are not mixed until vehicle or engine fueling commences, and no more additive plus base fuel combination is mixed than required for a single fueling of a single engine or vehicle.

(3) "Approach Light System with Sequenced Flasher Lights in Category 1 and Category 2 Configurations" (ALSF-1 and ALSF-2) mean high intensity

approach lighting systems with sequenced flashers used at airports to illuminate specified runways during category II or III weather conditions, where category II means a decision height of 100 feet and runway visual range of 1,200 feet, and category III means no decision height or decision height below 100 feet and runway visual range of 700 feet.

(4) ~~(3)~~ "Applicant" means the entity that has applied for or has been granted verification under this Procedure.

(5) ~~(4)~~ "Auxiliary Emission Control Device" (AECD) means any device or element of design that senses temperature, vehicle speed, engine revolutions per minute (RPM), transmission gear, manifold vacuum, or any other parameter for the purpose of activating, modulating, delaying, or deactivating the operation of the emission control system.

(6) ~~(5)~~ "Average" means the arithmetic mean.

(7) ~~(6)~~ "Backpressure Monitor" means a device that includes a sensor for measuring the engine backpressure upstream of a hardware-based diesel emission control system or component thereof installed in the exhaust system and an indicator to notify the operator when the backpressure exceeds specified high and in some cases low backpressure limits, as defined by the engine manufacturer or the applicant for verification of a diesel emission control strategy.

(8) ~~(7)~~ "Baseline" means the test of a vehicle or engine without the diesel emission control strategy implemented.

(9) ~~(8)~~ "Cold Start" means the start of an engine only after the engine oil and water temperatures are stabilized between 68 and 86 degrees F for a minimum of 15 minutes.

(10) ~~(9)~~ "Diesel emission control strategy" or "Diesel emission control system" means any device, system, or strategy employed with an in-use diesel vehicle or piece of equipment that is intended to reduce emissions. Examples of diesel emission control strategies include, but are not limited to, particulate filters, diesel oxidation catalysts, selective catalytic reduction systems, fuel additives used in combination with particulate filters, alternative diesel fuels, and combinations of the above.

(11) ~~(10)~~ "Diesel Emission Control Strategy Family Name." See Section 2706(g)(2).

(12) ~~(11)~~ "Diesel Engine" means an internal combustion engine with operating characteristics significantly similar to the theoretical diesel combustion cycle. The primary means of controlling power output in a diesel cycle engine is by limiting the amount of fuel that is injected into the combustion chambers of the engine. A diesel cycle engine may be petroleum-fueled (i.e., diesel-fueled) or alternate-fueled.

(13) ~~(12)~~ "Durability" means the ability of the applicant's diesel emission control strategy to maintain a level of emissions below the baseline and maintain its physical integrity over some period of time or distance determined by the Executive Officer pursuant to these regulations. The minimum durability testing periods contained herein are not necessarily

meant to represent the entire useful life of the diesel emission control strategy in actual service.

~~(13) "Emergency/Standby Engine" means an internal combustion engine used only as follows: (1) when normal power line or natural gas service fails; or (2) for the emergency pumping of water for either fire protection or flood relief. An engine operated to supplement a primary power source when the load capacity or rating of the primary power source has been either reached or exceeded is not an emergency/standby engine.~~

(14) "Emergency Standby Engine" means a diesel engine operated solely for emergency use, except as otherwise provided in airborne toxic control measures adopted by the ARB.

(15) "Emergency Use" means using a diesel engine to provide electrical power or mechanical work during any of the following events and subject to the following conditions:

(A) The failure or loss of all or part of normal electrical power service or normal natural gas supply to the facility,

(B) The failure of a facility's internal power distribution system,

(C) The pumping of flood water or sewage to prevent or mitigate a flood or sewage overflow,

(D) The pumping of water for fire suppression or protection,

(E) The powering of ALSF-1 and ALSF-2 airport runway lights under category II or III weather conditions,

(F) Other conditions as specified in airborne toxic control measures adopted by the ARB.

(16) ~~(14)~~ "Emission control group" means a set of diesel engines and applications determined by parameters that affect the performance of a particular diesel emission control strategy. The exact parameters depend on the nature of the diesel emission control strategy and may include, but are not limited to, certification levels of engine emissions, combustion cycle, displacement, aspiration, horsepower rating, duty cycle, exhaust temperature profile, and fuel composition. Verification of a diesel emission control strategy and the extension of existing verifications are done on the basis of emission control groups.

(17) ~~(15)~~ "Executive Officer" means the Executive Officer of the Air Resources Board or the Executive Officer's designee.

(18) ~~(16)~~ "Executive Order" means the document signed by the Executive Officer that specifies the verification level of a diesel emission control strategy for an emission control group and includes any enforceable conditions and requirements necessary to support the designated verification.

(19) ~~(17)~~ "Fuel Additive" means any substance designed to be added to fuel or fuel systems or other engine-related systems such that it is present in-cylinder during combustion and has any of the following effects: decreased emissions, improved fuel economy, increased performance of the entire vehicle or one of its component parts, or any combination thereof; or assists diesel emission control strategies in decreasing

emissions, or improving fuel economy or increasing performance of a vehicle or component part, or any combination thereof. Fuel additives used in conjunction with diesel fuel may be treated as an alternative diesel fuel. See Section 2701 (a)(2).

(20) ~~(18)~~ "Hot Start" means the start of an engine within four hours after the engine is last turned off. The first hot start test run should be initiated 20 minutes after the cold start for Federal Test Procedure testing following Section 86.1327-90 of the Code of Federal Regulations, Title 40, Part 86.

~~(19) "Portable Diesel-Fueled Diesel Engine" means a diesel-fueled diesel engine which is designed and capable of being carried or moved from one location to another and does not remain at a single location for more than 12 consecutive months. Engines used to propel mobile equipment or a motor vehicle of any kind are not portable engines. Examples of portable diesel-fueled engine applications include, but are not limited to cranes, pumps, welders, woodchippers, tactical support equipment (military), power generation sets, pile-driving hammers, service or work-over rigs, dredges or boats or barges, and compressors. The definitions in Title 13 California Code of Regulations Section 2452(g) and Section 2452(x) are incorporated by reference herein.~~

(21) "Portable Engine" means an engine designed and capable of being carried or moved from one location to another, except as defined in Section 2701(a)(24). Engines used to propel mobile equipment or a motor vehicle of any kind are not portable. Indicators of portability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform. A portable engine cannot remain at the same facility location for more than 12 consecutive rolling months or 365 rolling days, whichever occurs first, not including time spent in a storage facility. If it does remain at the facility for more than 12 months, it is considered to be a stationary engine. The definitions in Title 13 California Code of Regulations Section 2452(g) and Section 2452(x) are incorporated by reference herein.

(22) ~~(20)~~"Regeneration", in the context of diesel particulate filters, means the periodic or continuous combustion of collected particulate matter that is trapped in a particulate filter through an active or passive mechanism. Active regeneration requires a source of heat other than the exhaust itself to regenerate the particulate filter. Examples of active regeneration strategies include, but are not limited to, the use of fuel burners and electrical heaters. Passive regeneration does not require a source of heat for regeneration other than the exhaust stream itself. Examples of passive regeneration strategies include, but are not limited to, the use of fuel additives and the catalyst-coated particulate filter. In the context of NOx reduction strategies, "regeneration" means the desorption and reduction of NOx from NOx adsorbers (or NOx traps) during rich operation conditions.

(23) ~~(21)~~ "Revoke" means to cancel the verification status of a diesel emission control strategy. If a diesel emission control strategy's verification status is revoked by the Executive Officer, the applicant must immediately cease and desist selling the diesel emission control strategy to end-users.

~~(22) "Stationary Diesel-Fueled Diesel Engine" means either a diesel-fueled diesel engine that is used in a piece of equipment that is designed to remain in one location for the duration of its useful life, or a diesel-fueled diesel engine that is used in a piece of equipment that can be moved from one location to another but remains in a single location for more than 12 consecutive months. Examples of stationary applications include, but are not limited, to electric power generator sets, grinders, rock crushers, sand screeners, cranes, cement blowers, compressors, and water pumps. The definitions in Title 13 California Code of Regulations Section 2452(g) and Section 2452(x) are incorporated by reference herein.~~

(24) "Stationary Engine" means an engine that is designed to stay in one location, or remains in one location. An engine is stationary if any of the following are true:

(A) The engine or its replacement is attached to a foundation, or if not so attached, will reside at the same location for more than 12 consecutive months. Any engine that replaces engine(s) at a location, and is intended to perform the same or similar function as the engine(s) being replaced, will be included in calculating the consecutive time period. In that case, the cumulative time of all engine(s), including the time between the removal of the original engine(s) and installation of the replacement engine(s), will be counted toward the consecutive time period; or

(B) The engine remains or will reside at a location for less than 12 consecutive months if the engine is located at a seasonal source and operates during the full annual operating period of the seasonal source, where a seasonal source is a stationary source that remains in a single location on a permanent basis (at least two years) and that operates at that single location at least three months each year; or

(C) The engine is moved from one location to another in an attempt to circumvent the residence time requirements [Note: The period during which the engine is maintained at a storage facility shall be excluded from the residency time determination.] The definitions in Title 13 California Code of Regulations Section 2452(g) and Section 2452(x) are incorporated by reference herein.

(25)~~(23)~~ "Verification" means a determination by the Executive Officer that a diesel emission control strategy meets the requirements of this Procedure. This determination is based on both data submitted or otherwise known to the Executive Officer and engineering judgement.

NOTE: Authority cited: Sections 39002, 39003, 39500, 39600, 39601, 39650-39675, 40000, 43000, 43000.5, 43011, 43013, 43018, 43105, 43600, and 43700, Health and Safety Code. Reference: Sections 39650-39675, 43000, 43009.5, 43013, 43018, 43101, 43104, 43105, 43106, 43107, and 43204-43205.5 Health and Safety Code; and Title 17 California Code of Regulations Section 93000.

§ 2702. Application Process

* * * * *

(b) Proposed Verification Testing Protocol. Before formally submitting an application for the initial verification of a diesel emission control strategy, the applicant must submit a proposed verification testing protocol at the Executive Officer's discretion. The Executive Officer shall use the information in the proposed protocol to help determine whether the strategy relies on sound principles of science and engineering to control emissions, the need for additional analyses, and the appropriateness of allowing alternatives to the prescribed requirements. The protocol should include the following information:

(1) Identification of the contact persons, phone numbers, names and addresses of the responsible party proposing to submit an application.

(2) Description of the diesel emission control strategy's principles of operation. A schematic depicting operation should be included as appropriate. It is the responsibility of the applicant to demonstrate that its product relies on sound principles of science and engineering to achieve emission reductions.

(A) If, after reviewing the proposed protocol, the Executive Officer determines that the applicant has not made a satisfactory demonstration that its product relies on sound principles of science and engineering to achieve emission reductions, the Executive Officer shall notify the applicant of the determination in writing. The applicant may choose to withdraw from the verification process or submit additional materials and clarifications. The additional submittal must be received by the Executive Officer no later than 60 days from the date of the notification letter or the application may be suspended.

(B) If, after reviewing the additional submittal, the Executive Officer determines that the applicant has not yet made a satisfactory demonstration that its product relies on sound principles of science and engineering to achieve emission reductions, the application shall be suspended. If an application has been suspended, it may only be reactivated at the discretion of the Executive Officer.

(C) If at any time, the Executive Officer has reason to doubt the scientific or engineering soundness of a product, the Executive Officer may require the applicant to submit additional supporting materials and clarifications no later than 60 days from the date of the notification letter. If the additional submittal is not received by the Executive Officer by the deadline established in the notification letter, the application may be suspended or the existing verification may be revoked. In deciding whether to suspend an application or revoke an existing verification the Executive Officer will review submittals as provided in subsection (B) above.

(3) Preliminary parameters for defining emission control groups that are appropriate for the diesel emission control strategy. The Executive Officer

will work with the applicant to determine appropriate emission control group parameters.

(4) The applicant's plan for meeting the requirements of Sections 2703-2706. Existing test data may be submitted for the Executive Officer's consideration. The protocol must focus on verification of the diesel emission control strategy for use with a single emission control group.

(5) A brief statement that the applicant agrees to provide a warranty pursuant to the requirements of Section 2707.

* * * * *

NOTE: Authority cited: Sections 39002, 39003, 39500, 39600, 39601, 39650-39675, 40000, 43000, 43000.5, 43011, 43013, 43018, 43105, 43600, and 43700, Health and Safety Code. Reference: Sections 39650-39675, 43000, 43009.5, 43013, 43018, 43101, 43104, 43105, 43106, 43107, and 43204-43205.5 Health and Safety Code; and Title 17 California Code of Regulations Section 93000.

§ 2703. Emission Testing Requirements.

* * * * *

(e) Test Cycle.

* * * * *

(2) Off-road Engines and Equipment (including portable engines). For off-road diesel-fueled vehicles and equipment, the applicant must follow the steady-state test ~~cycle~~ procedure outlined in the ARB off-road regulations (California Code of Regulations, Title 13, Section 2423 and the incorporated California Exhaust Emission Standards and Test Procedures for New 2000 and Later Off-Road Compression-Ignition Engines, Part I-B). A minimum of three hot-start tests must be conducted using the specified ~~for each appropriate~~ test cycle. Applicants may request that the Executive Officer consider alternative test cycles, as described in subsection (f).

(3) Stationary Engines. For stationary engines, the applicant must follow the steady-state test procedure outlined in the ARB off-road regulations ~~use the most appropriate off-road test cycle~~ (as referenced in (2) above). ~~representing the operating conditions of the application, with approval from the Executive officer.~~ A minimum of three hot-start tests must be conducted using the specified ~~for each appropriate~~ test cycle. Applicants may request that the Executive Officer consider alternative test cycles and methods, as described in subsection (f).

(f) Alternative Test Cycles and Methods. The applicant may request the Executive Officer to approve an alternative test cycle or method in place of a required test cycle or method. In reviewing this request, the Executive Officer

may consider all relevant information including, but not limited to, the following:

(1) Test procedures specified in airborne toxic control measures adopted by the ARB, e.g. the Airborne Toxic Control Measure for Stationary Compression Ignition Engines,

(2) Similarity of average speed, percent of time at idle, average acceleration, and other characteristics to the specified test cycle or method and in-use duty cycle,

(3) Body of existing test data generated using the alternative test cycle or method,

(4) Technological necessity, and

(5) Technical ability to conduct the required test.

* * * * *

NOTE: Authority cited: Sections 39002, 39003, 39500, 39600, 39601, 39650-39675, 40000, 43000, 43000.5, 43011, 43013, 43018, 43105, 43600, and 43700, Health and Safety Code. Reference: Sections 39650-39675, 43000, 43009.5, 43013, 43018, 43101, 43104, 43105, 43106, 43107, and 43204-43205.5, Health and Safety Code; and Title 17 California Code of Regulations Section 93000.

§ 2704. Durability Testing Requirements

* * * * *

Table 3. Minimum Durability Demonstration Periods

Engine Type	Minimum Durability Demonstration Period
On-Road	50,000 miles or 1000 hours
Off-Road (including portable engines) and Stationary	1000 hours
~~Stationary emergency generator~~ Stationary Emergency Standby Engines	500 hours

* * * * *

(g) Test Run. The requirements for emissions reduction testing are summarized in Table 4, below.

(1) The diesel emission control strategy must undergo one set of emission tests before beginning and after completion of the service accumulation.

Baseline testing with test repetitions as indicated in Table 4 must be conducted for either the initial test or the final test, but is suggested for both. If there are substantial test data from previous field studies or field demonstrations, applicants may request that the Executive Officer consider these in place of the initial emission tests.

(2) As an alternative to testing a single unit before and after the service accumulation period, the applicant may request that the Executive Officer consider the testing of two identical units, one that has been pre-conditioned and another that has completed the service accumulation period. In reviewing the request, the Executive Officer may consider all relevant information, including, but not limited to, the following:

(A) The effect of the diesel emission control strategy on engine operation over time. Strategies that cause changes in engine operation are likely not to qualify for this testing option.

(B) The quality of the evidence the applicant can provide to support that the two units are identical,

(C) Previous experience with similar or related technologies, and

(D) Whether the applicant is participating in the U.S. EPA verification process and has made an agreement with U.S. EPA to test two units.

(3) For strategies that include exhaust aftertreatment, engine backpressure and exhaust temperature must be measured and recorded on a second-by-second basis (1 Hertz) during at least one baseline run and each of the control test runs.

* * * * *

NOTE: Authority cited: Sections 39002, 39003, 39500, 39600, 39601, 39650-39675, 40000, 43000, 43000.5, 43011, 43013, 43018, 43105, 43600, and 43700, Health and Safety Code. Reference: Sections 39650-39675, 43000, 43009.5, 43013, 43018, 43101, 43104, 43105, 43106, 43107, and 43204-43205.5 Health and Safety Code; and Title 17 California Code of Regulations Section 93000.

§ 2705. Field Demonstration Requirements.

* * * * *

(b) Test Period.

(1) For on- and off-road engines, and stationary engines not used in emergency generators, a vehicle or piece of equipment must be operated with the diesel emission control strategy installed for a minimum period of 200 hours or 10,000 miles, whichever occurs first.

(2) For stationary emergency ~~generators~~ standby engines, the emission control system must remain in the field for at least 30 days and operation must include:

(A) 12 maintenance runs (allowing for engine cool down between runs), and

(B) a minimum of two separate 4 hour sessions where the engine is operated under load (allowing engine cool down between runs).

* * * * *

NOTE: Authority cited: Sections 39002, 39003, 39500, 39600, 39601, 39650-39675, 40000, 43000, 43000.5, 43011, 43013, 43018, 43105, 43600, and 43700, Health and Safety Code. Reference: Sections 39650-39675, 43000, 43009.5, 43013, 43018, 43101, 43104, 43105, 43106, 43107, and 43204-43205.5 Health and Safety Code; and Title 17 California Code of Regulations Section 93000.

§ 2706. Other Requirements.

(a) Limit and Procedure for Measuring Nitrogen Dioxide (NO_2).

(1) The post-control NO_2 emissions must not exceed 20 percent of the total baseline (pre-control) NOx emissions on a mass basis, from the same test cycle(s) for emission testing from Section 2703 (e). This limit takes effect beginning on January 1, 2007~~2004~~. Diesel emission control strategies verified and installed prior to January 1, 2007~~2004~~ are exempted from this requirement. Those verified prior to January 1, 2007~~2004~~ will no longer be allowed for installation after January 1, 2007~~2004~~ unless they meet the NO_2 emission limit. After January 1, 2007~~2004~~, all diesel emission control strategies verified and installed must meet this requirement.

(2) NO_2 emissions are to be quantified by one of the following methods:

(A) Two chemiluminescence analyzers,

(B) A dual-path chemiluminescence analyzer, or

(C) An alternative method approved by the Executive Officer.

(3) For (2)(A) and (2)(B), the analyzers are to be fed from a heated and conditioned sample path. If two chemiluminescence analyzers are employed, they are to be simultaneously fed from a common heated sample path. One instrument (or path) shall be set to NOx mode, while the second shall be set to nitric oxide (NO) mode. The instrument (or path) set to NOx mode receives a sample that has passed through an NO_2-to-NO converter, and the resultant concentration is designated as total NOx ($NO+NO_2$) in the sample. The instrument (or path) that is set to NO mode receives a sample that has not passed through the converter and quantifies the amount of NO only. The difference between NO and NOx is the amount of NO_2 in the sample. Both NO and NOx signals are recorded by an external data acquisition system at 1 Hertz. ~~The column data for each NO and NOx signal is then adjusted for time delays that are inherent in both the instruments and the sample paths. Once the data file is aligned, a subtraction of NO from NOx is performed on a second by second basis. The result of this subtraction is then integrated over the entire test run. The result of this integration is the amount of NO_2 over the entire test cycle in parts per million (ppm).~~ Using the average concentrations of NO and NOx over the entire test cycle, the conventional

~~The~~ equation for calculating total NOx (Code of Federal Regulations, Title 40, part 86, Subpart N) is then used to generate a gram per mile or g/bhp-hr ~~NO_2~~ value for both NO and NOx. The resulting value for NO is then subtracted from that for NOx to determine the gram per mile or g/bhp-hr value for NO_2. The instrument for measuring NO and NOx must be calibrated in accordance with the NOx calibration procedure as described in the Code of Federal Regulations, Title 40, part 86, Subpart N.

(4) Alternative Method to Measure NO_2. The applicant may request the Executive Officer to approve an alternative method in place of the required methods. In reviewing this request, the Executive Officer may consider all relevant information including, but not limited to, the following:

(A) Correlation of the alternative method with the methods stated in 2(A) or 2(B).

(B) Body of existing data generated using the alternative method.

(b) Limits on Other Pollutants

* * * * *

(2) Limit on CO.

(A) On-road and Off-road (including portable) Engines. In order for a diesel emission control strategy to be verified, the diesel emission control strategy must not increase the emissions of CO greater than the current CO emission standards for new diesel engines adopted by the Air Resources Board and in effect at the time of verification.

(B) Stationary Engines. In order for a diesel emission control strategy to be verified, the diesel emission control strategy must either; ~~not~~

1. Meet the applicable CO standard for off-road engines of the same model year and maximum rated power as specified in the Off-Road Compression-Ignition Engine Standards (title 13, CCR, section 2423). If no standards have been established for an off-road engine of the same model year and maximum rated power as the stationary diesel-fueled CI engine, then the stationary diesel-fueled CI engine shall meet the Tier 1 standard in title 13, CCR, section 2423 for an off-road engine of the same maximum rated power, irrespective of the stationary diesel-fueled CI engine's model; Or

2. Not increase the emissions of CO by more than 10 percent of the baseline emissions level as reported under Section 2708(a).

* * * * *

NOTE: Authority cited: Sections 39002, 39003, 39500, 39600, 39601, 39650-39675, 40000, 43000, 43000.5, 43011, 43013, 43018, 43105, 43600, 43700, and 43830.8 Health and Safety Code. Reference: Sections 39650-39675, 43000, 43009.5, 43013, 43018, 43101, 43104, 43105, 43106, 43107, and 43204-43205.5 Health and Safety

Code; Section 71017, Public Resources Code; and Title 17 California Code of Regulations Section 93000.

§ 2707. Warranty Requirements.

(a) (1) Product Warranty.

(A) The applicant must warrant to all owners, for ownership within the warranty period and lessees, for lease contracts within the warranty period, that its verified diesel emission control strategy is free from defects in design, materials, workmanship, or operation of the diesel emission control strategy which cause the diesel emission control strategy to fail to conform to the emission control performance level it was verified to, or to the other requirements of Sections 2700-2706, and 2710 for the minimum periods shown in Table 5, provided the operation of and conditions of use for the vehicle, equipment, engine, and diesel emission control strategy conform with the operation and conditions specified in the ARB's Executive Order.

(B) For each engine type and size listed in Table 5, the minimum defects warranty period is terminated by that listed event which occurs first. The warranty must cover the full repair or replacement cost of the diesel emission control strategy, including parts and labor.

(C) The warranty must also cover the full repair or replacement cost of ~~to~~ returning ~~the vehicle, equipment, or~~ engine components to the condition they were in prior to the failure, including parts and labor, for damage to the engine ~~or other vehicle components~~ proximately caused by the verified diesel emission control strategy. Repair or replacement of any warranted part, including the engine ~~and other parts~~, must be performed at no charge to the vehicle or engine owner. This includes only those relevant diagnostic expenses in the case in which a warranty claim is valid. The applicant may, at its option, instead pay the fair market value of the ~~vehicle, equipment, or~~ engine prior to the time the failure occurs.

(D) The repair or replacement of any warranted part otherwise eligible for warranty coverage, may be excluded from such warranty coverage ~~at the applicant's discretion~~ if ~~the applicant demonstrates that~~ the diesel emission control strategy, vehicle or engine has been abused, neglected, or improperly maintained, and that such abuse, neglect, or improper maintenance was the direct cause of the need for the repair or replacement of the part.

(E) Failure of the vehicle or engine owner to ensure scheduled maintenance or to keep maintenance records for the vehicle, equipment, engine, or diesel emission control strategy may, but shall not per se, be grounds for disallowing a warranty claim.

(2) Installation Warranty

(A) A person or company who installs a verified diesel emission control strategy must warrant that the installation is free from defects in workmanship or materials which cause the diesel emission control strategy to fail to conform to the emission control performance level it was verified to or the other requirements of sections 2700-2706 for the minimum time periods shown in Table 5.

(B) For each engine type and size listed in Table 5, the minimum defects warranty period is terminated by that listed event whichever occurs first. The extent of the warranty coverage provided by installers must be the same as the warranty provided by the applicant as established in subsection (a)(1) and the same exclusions must apply.

Table 5. Minimum Warranty Periods

Engine Type	Engine Size	Minimum Warranty Period
On-Road	Light heavy-duty, 70 to 170 hp, Gross Vehicle Weight Rating (GVWR) less than 19,500 lbs.	5 years or 60,000 miles
	Medium heavy-duty, 170 to 250 hp, GVWR from 19,500 lbs. to 33,000 lbs.	5 years or 100,000 miles
	Heavy heavy-duty, exceeds 250 hp, GVWR exceeds 33,000 lbs.	5 years or 150,000 miles
	Heavy heavy-duty, exceeds 250 hp, GVWR exceeds 33,000 lbs., and the truck is: 1. Typically driven over 100,000 miles per year, and 2. Has less than 300,000 miles on the odometer at the time of installation.	2 years, unlimited miles
Off-Road (includes portable engines) and Stationary	Under 25 hp, and for constant speed engines rated under 50 hp with rated speeds greater than or equal to 3,000 rpm	3 years or 1,600 hours
	At or above 25 hp and under 50 hp	4 years or 2,600 hours
	At or above 50 hp	5 years or 4,200 hours

(b)(1) Product Warranty Statement. The applicant must furnish a copy of the following statement in the owner's manual. The applicant may include descriptions of circumstances that may result in a denial of warranty coverage, but these descriptions shall not limit warranty coverage in any way.

YOUR WARRANTY RIGHTS AND OBLIGATIONS

(Applicant's name) must warrant the diesel emission control system in the application for which it is sold or leased to be free from defects in design, materials, workmanship, or operation of the diesel emission control system which cause the diesel emission control system to fail to conform to the emission control performance level it was verified to, or to the requirements in the California Code of Regulations, Title 13, Sections 2700 to 2706, and 2710, for the periods of time listed below, provided there has been no abuse, neglect, or improper maintenance of your diesel emission control system, vehicle or equipment, as specified in the owner's manuals. Where a warrantable condition exists, this warranty also covers the engine ~~other vehicle or equipment parts~~ from damage caused by the diesel emission control system, subject to the same exclusions for abuse, neglect or improper maintenance of your vehicle or equipment. Please review your owner's manual for other warranty information. Your diesel emission control system may include a core part (e.g., particulate filter, diesel oxidation catalyst, selective catalytic reduction converter) as well as hoses, connectors, a back pressure monitor (if applicable), and other emission-related assemblies. Where a warrantable condition exists, (applicant's name) will repair or replace your diesel emission control system at no cost to you including diagnosis, parts, and labor.

WARRANTY COVERAGE:

For a (engine size) engine used in a(n) (type of application) application, the warranty period will be (years or hours or miles of operation) whichever occurs first. If any emission-related part of your diesel emission control system is defective in design, materials, workmanship, or operation of the diesel emission control system thus causing the diesel emission control system to fail to conform to the emission control performance level it was verified to, or to the requirements in the California Code of Regulations, Title 13, Sections 2700 to 2706, and 2710, within the warranty period, as defined above, (Applicant's name) will repair or replace the diesel emission control system, including parts and labor.

In addition, (applicant's name) will replace or repair the ~~vehicle, equipment, or~~ engine components to the condition they were in prior to the failure, including parts and labor, for damage to the engine ~~or other vehicle components~~ proximately caused by the verified diesel emission control strategy. This also includes those relevant diagnostic expenses in the case in which a warranty claim is valid. (Applicant 's name) may, at its option, instead pay the fair market value of the ~~vehicle, equipment, or~~ engine prior to the time the failure occurs.

OWNER'S WARRANTY RESPONSIBILITY

As the (vehicle, engine, equipment) owner, you are responsible for performing the required maintenance described in your owner's manual. (Applicant's

name) recommends that you retain all maintenance records and receipts for maintenance expenses for your vehicle, engine, or equipment, and diesel emission control system. If you do not keep your receipts or fail to perform all scheduled maintenance, (applicant's name) may have grounds to deny warranty coverage. You are responsible for presenting your vehicle, equipment, or engine, and diesel emission control system to a (applicant's name) dealer as soon as a problem is detected. The warranty repair or replacement should be completed in a reasonable amount of time, not to exceed 30 days. If a replacement is needed, this may be extended to 90 days should a replacement not be available, but must be performed as soon as a replacement becomes available.

If you have questions regarding your warranty rights and responsibilities, you should contact (Insert chosen applicant's contact) at 1-800-xxx-xxxx or the California Air Resources Board at 9528 Telstar Avenue, El Monte, California 91731, or (800) 363-7664, or electronic mail: helpline@arb.ca.gov.

~~(b)~~(2) Installation Warranty Statement. The installer must furnish the owner with a copy of the following statement.

YOUR WARRANTY RIGHTS AND OBLIGATIONS

(Installer's name) must warrant that the installation of a diesel emission control system is free from defects in workmanship or materials which cause the diesel emission control system to fail to conform to the emission control performance level it was verified to, or to the requirements in the California Code of Regulations, Title 13, Sections 2700 to 2706. The warranty period and the extent of the warranty coverage provided by (installer's name) must be the same as the warranty provided by the product manufacturer, and the same exclusions must apply.

OWNER'S WARRANTY RESPONSIBILITY

As the vehicle, engine, or equipment owner, you are responsible for presenting your vehicle, engine, or equipment, and diesel emission control system to (installer's name) as soon as a problem with the installation is detected.

If you have questions regarding your warranty rights and responsibilities, you should contact (Insert chosen installer's contact) at 1-800-xxx-xxxx or the California Air Resources Board at 9528 Telstar Avenue, El Monte, California 91731, or (800) 363-7664, or electronic mail: helpline@arb.ca.gov.

* * * * *

NOTE: Authority cited: Sections 39002, 39003, 39500, 39600, 39601, 39650-39675, 40000, 43000, 43000.5, 43011, 43013, 43018, 43105, 43600, and 43700, Health and

Safety Code. Reference: Sections 39650-39675, 43000, 43009.5, 43013, 43018, 43101, 43104, 43105, 43106, 43107, and 43204-43205.5 Health and Safety Code; and Title 17 California Code of Regulations Section 93000.

§ 2709. In-Use Compliance Requirements

* * * * *

(b) Test Phases. In-use compliance testing, as described below in (c), (d), and (e), must be conducted at two different phases for each diesel emission control strategy family:

(1) Phase 1. Applicants must obtain and test diesel emission control systems once they have been operated for at least one year or within three months of their first maintenance, whichever comes first.

(2) Phase 2. Applicants must obtain and test diesel emission control systems once they have been operated between 60 and 80 percent of their minimum warranty period. <u>For all systems used with heavy heavy-duty vehicles, the 60 to 80 percent window must be applied to the 5 year or 150,000 mile minimum warranty period.</u>

* * * * *

NOTE: Authority cited: Sections 39002, 39003, 39500, 39600, 39601, 39650-39675, 40000, 43000, 43000.5, 43011, 43013, 43018 and 43105, 43600, 43700, Health and Safety Code. Reference: Sections 39650-39675, 43000, 43009.5, 43013, 43018, 43101, 43104, 43105, 43106, 43107, and 43204-43205.5 Health and Safety Code; Title 17 California Code of Regulations Section 93000.