

**California Air Resources Board  
Diesel Particulate Matter Control Measure for On-road Diesel-fueled Fleet  
Vehicles Owned and Operated by Public Agencies and Utilities**

***The following definitions recently adopted by the Board are provided for informational purposes:***

Section 2020. Purpose and Definitions of Diesel Particulate Matter Control Measures

- (a) **Purpose.** Diesel particulate matter was identified in 1998 as a toxic air contaminant. According to California law, an airborne toxic control measure using the best available control technology shall, therefore, be employed to reduce the public's exposure to diesel particulate matter.
- (b) **Definitions.** For the purposes of the rules specified in article 4, the following definitions apply:

"Alternative fuel" means natural gas, propane, ethanol, methanol, gasoline (when used in hybrid electric buses only), hydrogen, electricity, fuel cells, or advanced technologies that do not rely on diesel fuel. "Alternative fuel" also means any of these fuels used in combination with each other or in combination with other non-diesel fuels.

"Commercially available" means available for purchase and installation at a reasonable cost.

"Heavy-duty pilot ignition engine" means an engine designed to operate using an alternative fuel, except that diesel fuel is used for pilot ignition at an average ratio of no more than one part diesel fuel to ten parts total fuel on an energy equivalent basis. An engine that can operate or idle solely on diesel fuel at any time does not meet this definition.

"Level" means one of three categories of Air Resources Board-verified diesel emission control strategies: Level 1 means the strategy reduces engine diesel particulate matter emissions by between 25 and 49 percent, Level 2 means the strategy reduces engine diesel particulate matter emissions by between 50 and 84 percent, and Level 3 means the strategy reduces engine diesel particulate matter emissions by 85 percent or greater, or reduces engine emissions to less than or equal to 0.01 grams diesel particulate matter per brake horsepower-hour.

"Municipality" means a city, county, city and county, special district, or a public agency of the United States of America or the State of California, and any department, division, public corporation, or public agency of this State or of the United States, or two or more entities acting jointly, or the duly constituted body of an Indian reservation or rancheria.

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“Retirement” or “Retire” means an engine or vehicle will be withdrawn from an active fleet in California. The engine may be sold outside of California, scrapped, or used in a backup vehicle.

“Terminal” means any place or places where a vehicle is regularly garaged or maintained, or from which it is operated or dispatched, which may include a private business or residence.

“Verified” means that a diesel emission control strategy or system has received approval from the Executive Officer according to the “Verification Procedure for In-Use Strategies to Control Emissions from Diesel Engines” in title 13, California Code of Regulations, commencing with section 2700, and incorporated by reference.

“Warranty Period” means the same as in title 13, California Code of Regulations, section 2707.

***The following new sections are proposed:***

Section 2022. Diesel Particulate Matter Control Measure for Public or Utility On-road Heavy Duty Diesel-fueled Vehicles

- (a) **Scope and Applicability.** Sections 2022 and 2022.1 apply to any municipality or utility that owns, leases, or operates an on-road diesel-fueled heavy-duty vehicle with a manufacturer’s gross vehicle weight rating greater than 14,000 pounds and a 1960 to 2006 model year engine. These sections do not apply to a vehicle subject to the solid waste collection vehicle rule commencing with title 13, California Code of Regulations section 2021 or to the fleet rule for transit agencies commencing with section 1956.2, or to a school bus as defined in Vehicle Code section 545.
- (b) **Definitions.** The definitions in section 2020 shall apply to sections 2022 and 2022.1. In addition the following definitions apply only to sections 2022 and 2022.1.

“Low Usage Vehicle” means a vehicle that is operated for fewer less than 1000 miles or 50 hours per year.

“Active Fleet” means the total, by terminal, of a municipality’s or utility’s on-road diesel-fueled heavy-duty vehicles with manufacturer’s gross vehicle weight rating greater than 14,000 pounds and 1960 to 2006 model year engine, excluding low usage vehicles.

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“Total Fleet” means the total of a municipality or utility’s on-road diesel-fueled heavy-duty vehicles with manufacturer’s gross vehicle weight rating greater than 14,000 pounds and 1960 to 2006 model year engine, excluding low usage vehicles.

“Utility” means a privately-owned company that provides the same or similar services for water, natural gas, and electricity as a public utility operated by a municipality.

NOTE: Authority cited: Sections 39600 and 39601, Health and Safety Code.  
Reference: Sections 39002, 39003, 39658, 43000, 43013, 43018, 43101, 43102, 43104, 43105, and 43700, Health and Safety Code.

Section 2022.1. Methods for Determining Compliance for a Municipality or Utility.

(a) **Compliance Requirements.** Beginning with the applicable effective dates, a municipality or utility is required to comply with this diesel particulate matter control measure for each vehicle in its active fleet. Compliance requires all of the following:

(1) Use of a best available control technology for each vehicle in the active fleet as specified in subsection (b);

(2) Implementation for each vehicle in the active fleet as specified in subsection (c);

(3) If a compliance deadline extension is granted by the Executive Officer per subsection (d), the municipality or utility shall be deemed to be in compliance as specified by the Executive Officer’s authorization; and

(4) Records must be kept as specified in subsection (f).

(5) Continuous Compliance. A municipality or utility is required to keep its vehicle in compliance with this regulation, once it is in compliance, so long as the municipality or utility is operating the vehicle in California.

(b) **Best Available Control Technology.** Each municipality or utility shall use one of the following best available control technologies on each engine in its active fleet as required by the implementation schedule in subsection (c):

(1) An engine or power system certified to the optional 0.01 g/bhp-hr particulate emission standard as specified in title 13, California Code of Regulations, section 1956.8(a)(2), or the 0.01 g/bhp-hr particulate emission standard as specified in title 13, California Code of Regulations, section 1956.8(a), when effective; or

(2) An engine or power system certified to the 0.1 g/bhp-hr particulate emission standard, as specified in title 13, California Code of Regulations,

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section 1956.8, used in conjunction with the highest level diesel emission control strategy as defined in subsection (b)(4) applied by the implementation schedule in subsection (c); or

(3) An alternative fuel or heavy-duty pilot ignition engine; model year 2004 – 2006 alternative fuel engines must be certified to the optional, reduced emission standards as specified in title 13, California Code of Regulations, section 1956.8 (a)(2)(A); or

(4) The highest level diesel emission control strategy per title 13, California Code of Regulations, section 2702 (f), Table 1, that is verified for a specific engine to reduce diesel particulate matter and which the diesel emission control strategy manufacturer or authorized dealer agrees can be used on a specific engine and fleet vehicle combination, without jeopardizing the original engine warranty in effect at the time of application.

(c) **Implementation Schedule.** The municipality or utility shall comply with the schedule in Table 1 - Implementation Schedule for a Municipal and Utility Active Fleet Model Years 1960 to 2006, for the specified percentage of vehicles by each applicable compliance deadline.

Table 1 - Implementation Schedule for a Municipal and Utility Active Fleet Vehicle, Model Years 1960 to 2006.

Group	Engine Model Years	Percentage of Group to Use Best Available Control Technology <sup>b</sup>	Compliance Deadline, As of December 31 <sup>st</sup>
1 <sup>a</sup>	1960 – 1987	20 60 100	2007 2009 2011
2	1988 – 2002	20 60 100	2006 2008 2010
3	2003 – 2006 (Includes dual-fuel and bi-fuel engines)	50 100	2009 2010

<sup>a</sup>A municipality or utility may not use Level 1 technology as best available control technology on Group 1 engines.

<sup>b</sup>A vehicle that meets the requirements of the California Vehicle Code Section 27156.2 is excluded from the total fleet calculation of this subsection.

(1) **Calculating Number of Active Fleet Vehicles Required for Implementation.** A municipality or utility shall calculate the size of its active fleet as of July 1st of each year (#MUAFV) based on the model year of each engine (#Engines) plus

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the number of engines removed from the model year group by retirement in prior years, beginning with the initial applicable compliance deadline year for each group (TotRetire), and determine the number of vehicles required for implementation as follows.

$$\mathbf{\#MUAFV = \#Engines + TotRetire}$$

(A) The municipality or utility shall determine the total number of vehicles required to be in compliance by the compliance deadline in Table 1 (TotVeh) by multiplying "Percentage of Group to Use Best Available Control Technology" (Group%BACT) for that year by the sum of the number of vehicles in an engine model year group (#MUAFV) as in this following expression:

$$\mathbf{TotVeh = (Group\%BACT) \times (\#MUAFV)}$$

(B) After the first compliance deadline for each group, the municipality or utility shall determine the additional number of vehicles to be brought into compliance each subsequent year (TotAddComp) by subtracting the number of engines or vehicles brought into compliance the previous years using the method listed in subsection (b)(4) (TotRetrofit) or by retirement (TotRetire) from the total number of vehicles required to be in compliance (TotVeh), as in the following expression:

$$\mathbf{TotAddComp = TotVeh - TotRetrofit - TotRetire}$$

(C) Notwithstanding subsection (B) above, in the 100 percent compliance deadline year for each engine model year group the municipality or utility shall bring the remaining engines and vehicles into compliance.

(D) If the TotVeh or TotAddComp is not equal to a whole number, the municipality or utility shall round up a whole number when the fractional part of TotAddComp is greater than or equal to one-half of a vehicle, and round down to the nearest vehicle when the fractional part of TotAddComp is less than one-half of a vehicle.

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(d) **Compliance Extensions.** A municipality or utility may be granted an extension to a compliance deadline specified in subsection (c) for one of the following reasons:

(1) Compliance Extension based on Early Implementation. A municipality or utility will be granted an extension based on compliance with one or more of the following early implementation schedules, provided the Executive Officer has received a letter by the applicable early compliance deadline stating the municipality's or utility's intent to comply with one of the following conditions:

(A) If a municipality or utility has implemented best available control technology on fifty percent or more of its Group 1 engines in its total fleet by December 31, 2007, then the municipality or utility may delay the intermediate and final compliance deadlines for the remaining Group 1 engines to July 1, 2012.

(B) If a municipality or utility has implemented best available control technology on fifty percent or more of its Group 2 engines in its total fleet by December 31, 2006, then the municipality or utility may delay the intermediate and final compliance deadlines for the remaining Group 2 engines to July 1, 2011.

(C) For purposes of complying with this section, a municipality or utility may count an engine that meets the requirements of section 2022.1(b) as of January 1, 2005, in its calculation for determining early compliance.

(2) Compliance Extension based on No Verified Diesel Emission Control Strategy. If the Executive Officer has not verified a diesel emission control strategy, or one is not commercially available, for a particular engine and vehicle combination, an annual extension in compliance may be granted by the Executive Officer under one of the conditions specified below:

(A) Executive Officer Compliance Extension. The Executive Officer shall grant a blanket one-year compliance extension if a diesel emission control strategy is not verified for an engine ten months prior to each compliance deadline specified in subsection (c). A municipality or utility shall apply a diesel emission control strategy to each applicable engine before using this extension for any particular applicable vehicle.

(i) For a Group 1 active fleet vehicle engine, the Executive Officer shall grant an annual extension through 2011, after which the municipality or utility shall comply with subsection (b) by December 31, 2012.

(ii) For a Group 2 active fleet vehicle engine, the Executive Officer shall grant an annual extension through 2010, after which the

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municipality or utility shall comply with subsection (b) by December 31, 2011.

(B) Municipality or Utility Application Compliance Extension. A municipality or utility may apply to the Executive Officer for a compliance extension for an engine six months prior to each compliance deadline specified in subsection (c). The municipality or utility shall apply a diesel emission control strategy to each applicable engine as required before requesting this extension. The municipality or utility shall meet the following application conditions and documentation requirements by providing the-following to the Executive Officer:

- (i) Identification of each engine, by vehicle identification number; engine manufacturer, model year, family, and series; and type of vehicle for which no diesel emission control strategy has been verified, or
- (ii) Identification of each engine, by vehicle identification number; engine manufacturer, model year, family, and series; and type of vehicle for which a specific diesel emission control strategy would jeopardize the original engine warranty and a statement from the engine manufacturer or authorized dealer stating the original engine warranty would be jeopardized, or
- (iii) Identification of each engine and vehicle combination, by vehicle identification number; engine manufacturer, model year, family, and series; and type of vehicle for which no diesel emission control strategy is commercially available and a list of manufacturers that have been contacted with their responses to a request to purchase, and
- (iv) A description of the reason for the request for a compliance extension for each engine or engine and fleet vehicle combination, and
- (v) A copy of the statement of compliance as required in subsection (f)(1)(I), and
- (vi) Submission of the application for compliance extension to the Executive Officer no later than July 31 annually beginning 2007. For a Group 1 engine, the Executive Officer will accept an annual compliance extension application until July 31, 2011, after which the municipality or utility shall comply with subsection (b) by December 31, 2012. The Executive Officer will only grant one compliance extension for an engine in Group 1. For a Group 2 engine, the Executive Officer will accept an annual compliance extension application until July 31, 2010, after which the

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municipality or utility shall comply with subsection (b) by December 31, 2011.

(3) Compliance Extension for a Municipality in a Low-population County. A municipality located in a county listed in Table 2 with an estimated July 1, 2005, population of less than 125,000 may elect to follow the implementation schedule provided in Table 3.

Table 2. Estimated July 1, 2000 and Projections for 2005 California Counties Population Under 125,000<sup>1</sup>

COUNTY	Projected Population as of July 2005
ALPINE	1,300
SIERRA	3,700
MODOC	10,100
TRINITY	13,800
MONO	14,200
INYO	18,800
MARIPOSA	19,600
PLUMAS	21,900
COLUSA	24,200
DEL NORTE	31,500
GLENN	31,800
AMADOR	37,600
LASSEN	39,800
SISKIYOU	47,200
CALAVERAS	47,800
TUOLUMNE	62,200
TEHAMA	63,400
SAN BENITO	63,600
YUBA	66,000
LAKE	69,200
SUTTER	90,400
MEDOCINO	95,500
NEVADA	106,300

<sup>1</sup>Reference: State of California, Department of Finance, *Interim County Population Projections*. Sacramento, California, June 2001.

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**Table 3 - Implementation Schedule for a Municipality Located in a Low-Population County Active Fleet Vehicle, Model Years 1960 to 2006.**

<b>Group</b>	<b>Engine Model Years</b>	<b>Percentage of Group to Use Best Available Control Technology<sup>b</sup></b>	<b>Compliance Deadline, as of December 31st</b>
<b>1<sup>a</sup></b>	<b>1960 – 1987</b>	20 60 100	2009 2011 2013
<b>2</b>	<b>1988 – 2002</b>	20 60 100	2008 2010 2012
<b>3</b>	<b>2003 – 2006 (Includes dual-fuel and bi-fuel engines)</b>	50 100	2011 2012

<sup>a</sup>Municipality may not use Level 1 technology as best available control technology on Group 1 vehicles or engines

<sup>b</sup>A vehicle that meets the requirements of California Vehicle Code section 27156.2 or is dedicated to snow moving operations is excluded in the total fleet calculation of subsection (c)

(4) Compliance Extension for a Municipality or Utility that Operates a Dual-Fuel or Bi-Fuel Engine. A municipality or utility may delay implementation of a Group 1 or 2 dual-fuel or bi-fuel engine to the Group 3 compliance deadlines.

(5) Compliance Extension for an Engine near Retirement. If a municipality or utility has applied best available control technology to all applicable engines as required, and the next applicable engine is scheduled to be retired from the active fleet within one year of the applicable compliance deadline, then the municipality or utility is exempt from applying the best available control technology as defined in subsection (b) to that engine for a maximum of one year, provided documentation of expected retirement date is kept in records as specified in subsection (f) and the engine is retired as of the stated expected date.

(6) Use of Experimental Diesel Particulate Matter Emission Control Strategies. A municipality or utility may use an experimental diesel particulate matter emission control strategy provided by or operated by the manufacturer in no more than 20 vehicles, or ten percent of its total fleet, whichever is less, for testing and evaluation purposes. The municipality or utility shall keep documentation of this use in records as specified in subsection (f). Each vehicle will be considered to be in compliance for the duration of the experiment, or a maximum of two years. The municipality or utility must bring the vehicle into compliance within six months of the end of the testing and evaluation period. No

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experimental diesel particulate matter emission control strategy may be used on a vehicle after December 31, 2012.

- (e) **Diesel Emission Control Strategy Special Circumstances.** A municipality or utility shall maintain the original level of best available control technology on each engine once that engine is in compliance, and is not required to upgrade to a higher level of best available control technology, except under specified special circumstances, as follows:

(1) Diesel Emission Control Strategy Failure or Damage. In the event of a failure or damage of a diesel emission control strategy, the following conditions apply:

(A) Failure or Damage during the Warranty Period. If a diesel emission control strategy fails or is damaged within its warranty period and the diesel emission control strategy manufacturer or authorized dealer determines it can not be repaired, the municipality or utility shall replace the diesel emission control strategy with either the same level diesel emission control strategy or another best available control technology as defined in subsection (b).

(B) Failure or Damage Outside of Warranty Period. If a diesel emission control strategy fails or is damaged outside of its warranty period, and it cannot be repaired, the municipality or utility shall apply the best available control technology at the time of replacement, as defined in subsection (b).

(2) Discontinuation of Fuel Verified as a Diesel Emission Control Strategy. If a municipality or utility discontinues use of a fuel verified as a diesel emission control strategy, the municipality or utility shall apply best available control technology within 30 days of the date of discontinuation or submit a compliance plan to the Executive Officer no later than 30 days after discontinuation that demonstrates how the municipality or utility will bring the fleet vehicles into compliance within six months of the date of discontinuation.

(3) Limited Use of Level 1 Diesel Emission Control Strategy. If a Level 1 diesel emission control strategy is identified as the best available control technology pursuant to subsection (b), a municipality or utility is subject to the following limitations:

(A) Group 1. A municipality or utility may not use a Level 1 diesel emission control strategy on any Group 1 engine.

(B) Group 2. A municipality or utility may use a Level 1 diesel emission control strategy in a Group 2 engine for up to ten years, after which the municipality or utility shall replace the Level 1 diesel emission control strategy with the best

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available control technology from subsection (b), except that a Level 1 diesel emission control strategy cannot be installed.

(C) Group 3. A municipality or utility may use a Level 1 diesel emission control strategy in a Group 3 engine for up to five years, after which the municipality or utility shall replace the Level 1 diesel emission control strategy with the best available control technology from subsection (b), except that a Level 1 diesel emission control strategy cannot be installed.

- (f) **Record Keeping Requirement.** Beginning January 1, 2006, a municipality or utility shall maintain the following records. The municipality or utility shall provide the following records to an agent or employee of the Air Resources Board upon request for all vehicles in his total fleet subject to compliance with this regulation.

(1) Records Accessible at Terminal. The municipality or utility shall keep the following records accessible either in hard copy format or computer records at the terminal where a vehicle normally resides:

(A) A list by vehicle identification number of vehicles identifying each vehicle type; engine manufacturer, model year, family, and series; and status as active fleet or low usage vehicle, and

(B) Correlated to each vehicle, the installed diesel emission control strategy, its serial number, manufacturer, model, level, installation date, and if using a Level 1 or Level 2 verified diesel emission control strategy, the reason for the choice, and

(C) Records of maintenance for each installed diesel emission control strategy, and

(D) For fuel or fuel additives used as a diesel emission control strategy, the most recent two years worth of records of purchase that demonstrate usage, and

(E) For each low usage vehicle, as of July 1 of each year beginning December 31, 2006, mileage records correlated to the information in paragraph (1)(A) above,

(F) If a municipality or utility is claiming a compliance extension pursuant to paragraph (d)(3), documentation affirming that the vehicle is not operated in a metropolitan statistical area as defined by the U.S. Census Bureau.

(G) For each engine for which a municipality or utility is claiming an exemption pursuant to paragraph (d)(5), the retirement date correlated to the information in paragraph (1)(A) above, and

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(H) For each engine for which a municipality or utility is claiming an extension pursuant to paragraph (d)(6), the records of the test plan, including start and end dates of the experiment; diesel particulate matter emission control strategy manufacturer name and contact information (representative, address, and phone number); name and type of experimental diesel particulate matter emission control strategy; and targeted data to be generated by experiment, correlated to the information in paragraph (1)(A) above, and

(I) A statement of compliance, prepared beginning December 31, 2006, and renewed each December 31, thereafter until December 31, 2012, certifying that the municipality's or utility's engines are in compliance as required, including the following:

- (i) "The [insert name of municipality or utility] vehicles at terminal [insert terminal identification number or address] are in compliance with Title 13, California Code of Regulations, section 2022;" and
- (ii) The municipality's or utility's name, address, business telephone; and The signature of the municipality's or utility's agent and date signed.

(2) Records Kept in the Vehicle. For each vehicle, the municipality or utility shall keep the following information affixed to the driver's side door jamb, or another readily accessible location known by the driver of each vehicle, in the form of a legible and durable label:

(A) For each installed diesel emission control strategy, label information as specified in Title 13, California Code of Regulations, section 2706 (g), and the installation date, or

(B) Engine model year and planned compliance date, or

(C) Designation as a low usage vehicle and the vehicle's mileage as of January 1 of each year beginning January 1, 2007, or

(D) Engine model year and county where the vehicle is permanently housed if the municipality or utility is claiming an extension pursuant to paragraph (d)(3), or

(E) Engine model year and retirement date for an engine for which a municipality or utility is claiming an extension pursuant to paragraph (d)(5), or

(F) Engine model year and beginning and ending date of the test plan for an engine for which a municipality or utility is claiming an extension pursuant to paragraph (d)(6).

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- (3) Each municipality or utility shall maintain these records for each vehicle until it is sold outside of the State of California or is no longer owned or operated by the municipality or utility. If ownership is transferred, the seller shall convey these records to the buyer, or a third party sale representative.
- (g) **Additional Compliance Requirements.** A municipality or utility shall include language requiring [any] contractor to be in compliance with all applicable California air pollution control laws and regulations in any new contract [for services that the municipality or utility would normally provide] that has an effective date of December 31, 2006 or subsequent.
- (h) **Non-Compliance.** Any violations of this section may carry civil penalties as specified in state law and regulations, including, but not limited to, Health and Safety Code Section 39674.

NOTE: Authority cited: Sections 39600, 39601, and 39658, Health and Safety Code.  
Reference: Sections 39002, 39003, 39658, 43000, 43013, 43018, 43101, 43102, 43104, 43105 and 43700, Health and Safety Code.