

STATE OF CALIFORNIA - OFFICE OF ADMINISTRATIVE LAW
REGULAR
 NOTICE OF PUBLICATION/REGULATIONS SUBMISSION

(See instructions on reverse)

For use by Secretary of State only

STD. 400 (REV. 2-91)

AGENCY AIR RESOURCES BOARD			AGENCY FILE NUMBER (if any)
OAL FILE NUMBER 2940726-12	NOTICE FILE NUMBER	REGULATORY ACTION NUMBER 95-0302-005	EMERGENCY NUMBER
PREVIOUS REGULATORY ACTION NUMBER			

ENDORSED FILED
 IN THE OFFICE OF
 95 APR 13 PM 3:37
Bill Jones
 SECRETARY OF STATE

RECEIVED FOR FILING		PUBLICATION DATE	
JUL 26 '94		AUG 5 '94	
Office of Administrative Law		Office of Administrative Law	
NOTICE		REGULATIONS	

ISSUED AND ENDORSED
 APPROVED FOR FILING
 AND PUBLICATION
ADMINISTRATIVE LAW
APR 13 1995
 Office of Administrative Law

A. PUBLICATION OF NOTICE (Complete for publication in Notice Register)

1. TOPIC OF NOTICE Diesel Certification Fuel — CNG/LPG	TITLE(S) 13	FIRST SECTION AFFECTED 1956.8	2. REQUESTED PUBLICATION DATE August 5, 1994
3. NOTICE TYPE <input checked="" type="checkbox"/> Notice re Proposed Regulatory Action <input type="checkbox"/> Other	4. AGENCY CONTACT PERSON W. Thomas Jennings		TELEPHONE NUMBER (916) 322-2884
OAL USE ONLY <input type="checkbox"/> Approved as Submitted <input checked="" type="checkbox"/> Approved as Modified <input type="checkbox"/> Disapproved/Withdrawn	ACTION ON PROPOSED NOTICE	NOTICE REGISTER NUMBER 94, 31-2	PUBLICATION DATE 8/5/94

B. SUBMISSION OF REGULATIONS (Complete when submitting regulations)

1. SPECIFY CALIFORNIA CODE OF REGULATIONS TITLE(S) AND SECTION(S) (Including title 26, if toxics-related)

TITLE(S) 13	ADOPT
SECTIONS AFFECTED	AMEND 1956.8, 1960.1(k), 2292.6 and the Incorporated Test Procedures
	REPEAL

2. TYPE OF FILING

Regular Rulemaking (Gov. Code, § 11346) Resubmittal Changes Without Regulatory Effect (Cal. Code Regs., title 1, § 100) Emergency (Gov. Code, § 11346.1(b))

Certificate of Compliance: The agency officer named below certifies that this agency complied with the provisions of Government Code §§ 11346.4 - 11346.8 prior to, or within 120 days of, the effective date of the regulations listed above.

Print Only Other (specify)

3. DATE(S) OF AVAILABILITY OF MODIFIED REGULATIONS AND/OR MATERIAL ADDED TO THE RULEMAKING FILE (Cal. Code Regs. title 1, §§ 44 and 45)
N/A

4. EFFECTIVE DATE OF REGULATORY CHANGES (Gov. Code § 11346.2)

Effective 30th day after filing with Secretary of State Effective on filing with Secretary of State Effective other (Specify)

5. CHECK IF THESE REGULATIONS REQUIRE NOTICE TO, OR REVIEW, CONSULTATION, APPROVAL OR CONCURRENCE BY, ANOTHER AGENCY OR ENTITY **N/A**

Department of Finance (Form STD. 399) Fair Political Practices Commission State Fire Marshal

Other (Specify)

6. CONTACT PERSON
W. Thomas Jennings, Senior Staff Counsel TELEPHONE NUMBER **(916) 322-2884**

7. I certify that the attached copy of the regulation(s) is a true and correct copy of the regulation(s) identified on this form, that the information specified on this form is true and correct, and that I am the head of the agency taking this action, or a designee of the head of the agency, and am authorized to make this certification.

SIGNATURE OF AGENCY HEAD OR DESIGNEE: *James D. Boyd* DATE: **12/22/94**

TYPED NAME AND TITLE OF SIGNATORY
James D. Boyd, Executive Officer

FINAL REGULATION ORDER

Note: New language is shown in underline and deletions are shown in ~~strikeout~~.

Amend Title 13, California Code of Regulations, section 1956.8(b) and (d), to read as follows:

1956.8 Exhaust Emissions Standards and Test Procedures - 1985 and Subsequent Model Heavy-Duty Engines and Vehicles.

(a) [no change]

(b) The test procedures for determining compliance with standards applicable to 1985 and subsequent heavy-duty diesel engines and vehicles are set forth in the "California Exhaust Emission Standards and Test Procedures for 1985 and Subsequent Model Heavy-Duty Diesel Engine and Vehicles" adopted April 8, 1985, as last amended ~~March 24, 1994~~ September 22, 1994, which is incorporated herein by reference.

(c) [no change]

(d) The test procedures for determining compliance with standards applicable to 1987 and subsequent model heavy-duty otto-cycle engines and vehicles are set forth in the "California Exhaust Emission Standards and Test Procedures for 1987 and Subsequent Model Heavy-Duty Otto-Cycle Engines and Vehicles," adopted April 25, 1986, as last amended ~~May 28, 1993~~ September 22, 1994, which is incorporated by reference herein.

(e) through (h) [no change]

NOTE: Authority cited: Sections 39600, 39601, 43013, 43018, 43101, 43103, 43104 and 43806, Health and Safety Code; and Section 28114, Vehicle Code. Reference: Sections 39002, 39003, 43000, 43013, 43018, 43100, 43101, 43101.5, 43102, 43103, 43104, 43106, 43204, and 43806, Health and Safety Code.

Amend Title 13, California Code of Regulations, section 1960.1(k) to read as follows:

1960.1 Exhaust Emissions Standards and Test Procedures - 1981 and Subsequent Model Passenger Cars, Light-Duty and Medium-Duty Vehicles.

(a) through (j) [no change]

(k) The procedures for determining compliance with these standards are set forth in "California Exhaust Emission Standards and Test Procedures for 1981 through 1987 Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles," adopted by the state board on November 23, 1976, as last amended May 20, 1987, and in "California Exhaust Emission Standards and Test Procedures for 1988 and Subsequent Model Passenger Cars, Light-Duty

Trucks, and Medium-Duty Vehicles," adopted by the state board on May 20, 1987, as last amended ~~September 22, 1993~~ September 22, 1994, both of which are incorporated herein by reference.

(l) through (p) [no change]

NOTE: Authority cited: Sections 39600, 39601, 43013, 43018, 43101, 43104, and 43105, Health and Safety Code. Reference: Sections 39002, 39003, 39667, 43000, 43009.5, 43013, 43018, 43100, 43101, 43101.5, 43102, 43103, 43104, 43105, 43106, 43107, 43204, and 43205.5, Health and Safety Code.

Amend Title 13, California Code of Regulations, section 2292.6, to read as follows:

2292.6 Specifications for Liquefied Petroleum Gas

The following standards apply to liquefied petroleum gas (The identified methods are incorporated herein by reference):

Specifications for Liquefied Petroleum Gas

<i>Specification</i>	<i>Value</i>	<i>Test Method</i>
Propane	85.0 vol. % (min.) ^a	ASTM D 2163-87
Vapor Pressure at 100° F	208 psig (max.)	ASTM D 1267-89 ASTM D 2598-88 ^b
Volatility residue: evaporated temp., 95%	-37° F (max.)	ASTM D 1837-86
or butane and heavier;	2.5 vol. % (max.)	ASTM D 2163-87
Propene	5.0 vol. % (max.) ^c	ASTM D 2163-87
Residual matter: residue on evap. of 100 ml	0.05 ml (max.)	ASTM D 2158-89
oil stain observ.	pass ^d	ASTM D 2158-89
Corrosion, copper; strip	No. 1 (max.)	ASTM D 1838-89
Sulfur	120 ppmw (max.)	ASTM D 2784-89
Moisture content	pass	ASTM D 2713-86
Odorant	e	

- a Propane shall be required to be a minimum of 80.0 volume percent starting on January 1, 1993. Starting on January 1, ~~1995~~1997, the minimum propane content shall be 85.0 volume percent.
 - b In case of dispute about the vapor pressure of a product, the value actually determined by Test Method ASTM D 1267-89 shall prevail over the value calculated by Practice ASTM D 2598-88.
 - c The propene shall be limited to 10.0 volume percent starting January 1, 1993. Starting January 1, ~~1995~~1997, the propene limit shall be 5.0 volume percent.
 - d An acceptable product shall not yield a persistent oil ring when 0.3 ml of solvent residue mixture is added to a filter paper, in 0.1 ml increments and examined in daylight after 2 min. as described in Test Method ASTM 2158-89.
 - e The liquefied petroleum gas upon vaporization at ambient conditions must have a distinctive odor potent enough for its presence to be detected down to a concentration in air of not over 1/5 (one-fifth) of the lower limit of flammability.
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NOTE: Authority cited: Sections 39600, 39601, 43013, 43018, and 43101, Health and Safety Code; and *Western Oil and Gas Ass'n v. Orange County Air Pollution Control District*, 14 Cal. 3d 411, 121 Cal. Rptr. 249 (1975). Reference: Sections 39000, 39001, 39002, 39003, 39010, 39500, 40000, 43000, 43016, 43018, and 43101, Health and Safety Code; and *Western Oil and Gas Ass'n v. Orange County Air Pollution Control District*, 14 Cal. 3d 411, 121 Cal. Rptr. 249 (1975).

State of California
AIR RESOURCES BOARD

**CALIFORNIA EXHAUST EMISSION STANDARDS AND
TEST PROCEDURES FOR 1985 AND SUBSEQUENT MODEL
HEAVY-DUTY DIESEL ENGINES AND VEHICLES**

Adopted: April 8, 1985
Amended: July 29, 1986
Amended: January 22, 1990
Amended: May 15, 1990
Amended: December 26, 1990
Amended: July 12, 1991
Amended: October 23, 1992
Amended: October 22, 1993
Amended: March 24, 1994
Amended: September 22, 1994

Note: New language is shown in underline and deletions are shown in ~~strikeout~~.

The symbol "# # # # #" means that the remainder of the text in the test procedure is not shown in this document, and has not been amended in the September 22, 1994 regulatory action. "x"

These Standards and Test Procedures incorporate by reference various sections of the Code of Federal Regulations, some with modifications. California provisions which replace specific federal provisions are denoted by the words "DELETE" for the federal language and "REPLACE WITH" for the new California language. California provisions adding new paragraphs are denoted by "ADD." The symbols "*****" and "..." mean that the remainder of the federal text for a specific section, which is not shown in these procedures, has been included by reference, with only the printed text changed. Federal regulations which are not listed are not part of the procedures.

**CALIFORNIA EXHAUST EMISSION STANDARDS AND
TEST PROCEDURES FOR 1985 AND SUBSEQUENT MODEL
HEAVY-DUTY DIESEL ENGINES AND VEHICLES**

#

86.1313-90 Fuel Specifications. April 11, 1989.

* * * * *

(b)(2) Except as noted below, petroleum fuel for diesel engines...shall be used. For 1993 and subsequent model-year diesel-fueled engines, the petroleum fuel used in exhaust emissions testing may meet the specifications in Table N94-2 of 40 Code of Federal Regulations section 86.1313-94(b)(2), as adopted August 21, 1990, or substantially equivalent specifications approved by the Executive Officer as an option to the specifications in Table N90-2. For 1995 and subsequent model-year medium-duty diesel-fueled engines, and for 1996 and 1997 model-year urban bus engines only, the petroleum fuel used in exhaust emissions testing may meet the specifications of the general reference fuel in Section 2282(g)(3), Title 13, California Code of Regulations, listed below, or substantially equivalent specifications approved by the Executive Officer, as an option to the specifications in Table N90-2. Where a manufacturer elects pursuant to this subparagraph to conduct exhaust emission testing using the specifications in Table N94-2, or the specifications listed below, the Executive Officer shall conduct exhaust emission testing with the diesel fuel meeting the specifications elected by the manufacturer.

<u>Fuel Property</u>	<u>Limit</u>	<u>Test Method a/</u>
<u>Natural Cetane Number</u>	<u>47-55</u>	<u>D 613-86</u>
<u>Distillation Range, degrees F</u>		<u>D 86-82</u>
<u>IBP</u>	<u>340-420</u>	
<u>10 % point</u>	<u>400-490</u>	
<u>50 % point</u>	<u>470-560</u>	
<u>90 % point</u>	<u>550-610</u>	
<u>EP</u>	<u>580-660</u>	
<u>API Gravity, degrees</u>	<u>33-39</u>	<u>D 287-82</u>
<u>Total Sulfur, wt. %</u>	<u>0.01-0.05</u>	<u>D 2622-82</u>
<u>Nitrogen Content, ppmw</u>	<u>100-500</u>	<u>D 4629-86</u>
<u>Total Aromatic Hydrocarbons, vol. %</u>	<u>8-12</u>	<u>D 1313-83, D 5186-91</u>
<u>Polycyclic Aromatic</u>		
<u>hydrocarbons, wt. % (max)</u>	<u>1.4</u>	<u>D 2425-88</u>
<u>Flashpoint, degrees F (max)</u>	<u>130</u>	<u>D 93-80</u>
<u>Viscosity @ 40 degrees F,</u>		
<u>centistokes</u>	<u>2.0-4.1</u>	<u>D 445-83</u>

a/ ASTM specifications.

#

ADD SUBPARAGRAPH (e) TO READ:

#

(e)(1)(ii) Natural gas used in service accumulation and in exhaust emission testing for 1994 and subsequent model-year engines shall meet the specifications as follows.

Mileage accumulation fuel: Natural gas meeting the specifications listed in Title 13, CCR, Section 2292.5 shall be used in service accumulation.

Emission-test fuel: Natural gas meeting specifications listed in Title 13, CCR, Section 2292.5 as modified by the following: a) methane content at 90.0 +/- 1.0 mole percent; b) ethane content at 4.0 +/- 0.5 mole percent; c) C₃ and higher hydrocarbon content at 2.0 +/- 0.3 mole percent; d) ~~oxygen content at 0.5 +/- 0.1 mole percent~~ oxygen content at 0.5 mole percent maximum; e) inert gas (sum of CO₂ and N₂) content at 3.5 +/- 0.5 mole percent.

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State of California
AIR RESOURCES BOARD

**CALIFORNIA EXHAUST EMISSION STANDARDS AND TEST
PROCEDURES FOR 1987 AND SUBSEQUENT MODEL
HEAVY-DUTY OTTO-CYCLE ENGINES AND VEHICLES**

Adopted: April 25, 1986
Amended: June 2, 1988
Amended: January 22, 1990
Amended: May 15, 1990
Amended: December 26, 1990
Amended: July 12, 1991
Amended: October 23, 1992
Amended: May 28, 1993
Amended: September 22, 1994

Note: New language is shown in underline and deletions are shown in ~~strikeout~~.

The symbol "# # # # #" means that the remainder of the text in the test procedure is not shown in this document, and has not been amended in the September 22, 1994 regulatory action. **

These Standards and Test Procedures incorporate by reference various sections of the Code of Federal Regulations, some with modifications. California provisions which replace specific federal provisions are denoted by the words "DELETE" for the federal language and "REPLACE WITH" for the new California language. California provisions adding new paragraphs are denoted by "ADD." The symbols "*****" and "... " mean that the remainder of the federal text for a specific section, which is not shown in these procedures, has been included by reference, with only the printed text changed. Federal regulations which are not listed are not part of the procedures.

**CALIFORNIA EXHAUST EMISSION STANDARDS AND TEST
PROCEDURES FOR 1987 AND SUBSEQUENT MODEL
HEAVY-DUTY OTTO-CYCLE ENGINES AND VEHICLES**

#

86.1313-90 Fuel Specifications. April 11, 1989.

#

ADD SUBPARAGRAPH (e) TO READ:

#

(e)(1)(ii) Natural gas used in service accumulation and in exhaust emission testing for 1994 and subsequent model-year engines shall meet the specifications as follows.

Mileage accumulation fuel: Natural gas meeting the specifications listed in Title 13, CCR, Section 2292.5 shall be used in service accumulation.

Emission-test fuel: Natural gas meeting specifications listed in Title 13, CCR, Section 292.5 as modified by the following: a) methane content at 90.0 +/- 1.0 mole percent; b) ethane content at 4.0 +/- 0.5 mole percent; c) C₃ and higher hydrocarbon content at 2.0 +/- 0.3 mole percent; d) ~~oxygen content at 0.5 +/- 0.1 mole percent~~ oxygen content at 0.5 mole percent maximum; e) inert gas (sum of CO₂ and N₂) content at 3.5 +/- 0.5 mole percent.

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State of California
AIR RESOURCES BOARD

**CALIFORNIA EXHAUST EMISSION STANDARDS AND TEST
PROCEDURES FOR 1988 AND SUBSEQUENT MODEL PASSENGER
CARS, LIGHT-DUTY TRUCKS, AND MEDIUM-DUTY VEHICLES**

Adopted: May 20, 1987
Amended: December 20, 1989
Amended: January 22, 1990
Amended: December 26, 1990
Amended: July 12, 1991
Amended: August 12, 1992
Amended: October 23, 1992
Amended: August 29, 1993
Amended: September 17, 1993
Amended: September 22, 1993
Amended: September 22, 1994

Note: New language is shown in underline and deletions are shown in ~~strikeout~~.

The symbol "# # # #" means that the remainder of the text in the test procedure is not shown in this document, and has not been amended in the September 22, 1994 regulatory action. "

The numbering convention employed in this document, in order of priority, is 1.a.1.i.A. Any references within specific sections in the Code of Federal Regulations are denoted in order of priority as : (a)(1)(i)(A) - the same numbering system employed in the Code of Federal Regulations.

**CALIFORNIA EXHAUST EMISSION STANDARDS AND TEST PROCEDURES
FOR 1988 AND SUBSEQUENT MODEL PASSENGER CARS,
LIGHT-DUTY TRUCKS, AND MEDIUM-DUTY VEHICLES**

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9. Test Requirements

a. Fuel Specifications

In paragraph 86.113-90, 86.113-91, and 86.113-94:

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5. Amend subparagraph (b)(2) to read:

(2) Except as noted below, petroleum fuel for diesel vehicles meeting the specifications referenced in 86.113-90(b)(2), or substantially equivalent specifications approved by the Executive Officer, shall be used in exhaust emission testing. The grade of petroleum fuel recommended by the engine manufacturer, commercially designated as "Type 2-D" grade diesel fuel shall be used. For 1993 and subsequent model-year diesel vehicles, petroleum fuel meeting the specifications of 86.113-94(b)(2) may be used in exhaust emission testing as an option to the specifications in 86.113-90(b)(2). For 1995 and subsequent model-year diesel-fueled vehicles, the petroleum fuel used in exhaust emission testing may meet the specifications of the general reference fuel in Section 2256(g)(3) [renumbered as 2282(g)(3)], Title 13, California Code of Regulations listed below, or substantially equivalent specifications approved by the Executive Officer, as an option to the specifications in 86.113-90(b)(2) or 86.113-94(b)(2). Where a manufacturer elects pursuant to this subparagraph to conduct exhaust emission testing using the specifications of 86.113-94(b)(2), or the specifications listed below, the Executive Officer shall conduct exhaust emission testing with the diesel fuel meeting the specifications elected by the manufacturer.

Fuel Property	Limit	Test Method a/
Natural Cetane Number	47-55	D 613-86
Distillation Range, degrees F		D 86-82
IBP	340-420	
10 % point	400-490	
50 % point	470-560	
90 % point	550-610	
EP	580-660	
API Gravity, degrees	33-39	D 287-82
Total Sulfur, wt. %	0.01-0.05	D 2622-82
Nitrogen Content, ppmw	100-500	D 4629-86
Total Aromatic Hydrocarbons, vol. %	8-12	D 1313-83, D 5186-91
Polycyclic Aromatic		
hydrocarbons, wt. % (max)	1.4	D 2425-88
Flashpoint, degrees F (max)	130	D 93-80
Viscosity @ 40 degrees F,		
centistokes	2.0-4.1	D 445-83

a/ ASTM specifications.

#

13. Add new subparagraph (g) to read:

(g) Gaseous Fuel Specifications for 1994 and Subsequent Model Year Vehicles.

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(2) Dedicated gaseous- and dual-fueled vehicles and hybrid electric vehicles which use natural gas

Mileage accumulation fuel: Natural gas meeting the specifications listed in Title 13, CCR, Section 2292.5 shall be used in service accumulation.

Emission-test fuel: Natural gas meeting specifications listed in Title 13, CCR, Section 2292.5 as modified by the following: a) methane content at 90.0 +/- 1.0 mole percent; b) ethane content at 4.0 +/- 0.5 mole percent; c) C₃ and higher hydrocarbon content at 2.0 +/- 0.3 mole percent; d) oxygen content at 0.5 +/- 0.1 mole percent oxygen content at 0.5 mole percent maximum; e) inert gas (sum of CO₂ and N₂) content at 3.5 +/- 0.5 mole percent.

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