§ 2442. Emission Standards.

(a) Model year 2001 and later model year spark-ignition personal watercraft and outboard marine engines:

(1) Exhaust emissions from new spark-ignition marine engines manufactured for sale, sold, or offered for sale in California, or that are introduced, delivered or imported into California for introduction into commerce must not exceed the hydrocarbon plus oxides of nitrogen ($HC+NO_x$) exhaust emission standards listed in Table 1.1 nor the carbon monoxide (CO) exhaust emission standards listed in Table 1.2 during its designated useful life:

Table 1.1

Corporate Average Emission Standards by Implementation Date $HC+NO_x$ (g/kW-hr)			
Model Year	Max. Family Emission Limit (FEL)	**$P_{tx} < 4.3$ kW[1]**	**$P_{tx} \geq 4.3$ kW[1]**
2001-2003	Not Applicable	81.00	$(0.25 \times (151+557/P_{tx}^{0.9})) + 6.0$
2004-2007	80	64.80	$(0.20 \times (151+557/P_{tx}^{0.9})) + 4.8$
2008 and Later[2]	44	30.00	$(0.09 \times (151+557/P_{tx}^{0.9})) + 2.1$

1. For 2010 and subsequent model years, an engine or engine family's power category is based on maximum engine power; otherwise maximum rated power may be used.
2. For 2010 and subsequent model years, standards are measured in total hydrocarbons plus oxides of nitrogen.

Table 1.2

Outboard and Personal Watercraft Carbon Monoxide Standards

ENGINE CATEGORY	MODEL YEAR	POWER CATEGORY[a] *[kilowatts]*	CO STANDARD *[grams per kilowatt-hour]*
OB/PWC[b]	2009 and later	kW ≤ 40	500 - 5 x P[c]
		kW > 40	300.0

a For 2010 and subsequent model years, an engine or engine family's power category is based on maximum engine power; otherwise maximum rated power may be used.
b Abbreviation for "Outboard and Personal Water Craft" engines
c P is defined as maximum rated power or maximum engine power (see footnote a) in kilowatts (kW)

where:

P_{tx} is the average power in kilowatts (kW) (sales-weighted) of the total number of spark-ignition marine engines produced for sale in California in model year x. Engine power must be calculated using the Society of Automotive Engineers (SAE) standard J1228, November 1991, incorporated herein by reference. Engine manufacturers must not determine P_{tx} by combining the power outputs of outboard engines with the power outputs of personal watercraft engines.

(2) An engine manufacturer may comply with the standards directly on an individual engine family basis. Consequently in Table 1.1, FELs are not applicable for any model year and P_{tx} means the average power in kW (sales-weighted) of the subject engine family produced for sale in California in model year x.

Compliance with the $HC+NO_x$ standards on a corporate average basis is determined as follows:

$$\frac{\sum_{j=1}^{n}(PROD_{jx})(FEL_{jx})(P_{jx})}{\sum_{j=1}^{n}(PROD_{jx})(P_{jx})} = STD_{ca}$$

where:

n = Total number of engine families (by category)

$PROD_{jx}$ = Number of units each engine family j produced for sale in California in model year x.

FEL_{jx} = The Family Emission Limit (FEL) for engine family j in model year x, which must be determined by the engine manufacturer subject to the following conditions: (1) no individual engine family FEL shall exceed the maximum allowed value as specified in Table 1.1; (2) no engine family designation or FEL shall be amended in a model year unless the engine family is recertified; and (3) prior to sale or offering for sale in California, each engine family must be certified in accordance with the test procedures referenced in section 2447 and must meet the engine manufacturer's FEL as a condition of the Executive Order. Before certification, the engine manufacturer must also submit estimated production volumes for each engine family to be offered for sale in California.

P_{jx} = The average power in kW (sales-weighted) of engine family j produced for sale in California in model year x. Engine power must be calculated using SAE standard J1228, November 1991, incorporated herein by reference.

STD_{ca} = An engine manufacturer's calculated corporate average $HC+NO_x$ exhaust emissions from those California spark-ignition marine engines subject to the California corporate average $HC+NO_x$ exhaust emission standard determined from Table 1.1, as established by an Executive Order certifying the California production for the model year. This Executive Order must be obtained prior to the issuance of certification Executive Orders for individual engine families for the model year.

* * * * *

(b) Model year 2003 and later model year spark-ignition ~~inboard and~~ sterndrive/inboard marine engines:

(1) Exhaust emissions from all new model year 2003 and later spark-ignition ~~inboard and~~ sterndrive/inboard marine engines must not exceed the ~~exhaust~~ emission standards listed in Table 2.1(a) for standard performance engines and 2.1(b) for high performance engines, for the designated emission durability test period.

(A) Prior to Model Year 2007 certification, each engine manufacturer must select either Option 1 (OPT 1) or Option 2 (OPT 2) for its entire production of standard performance engines for the 2007 and 2008 model years.

Table 2.1(a)
Standard Performance ~~Inboard/~~Sterndrive/Inboard Marine Engine Standards

MODEL YEAR	~~RATED~~ POWER CATEGORY[1]	COMPLIANCE OPTION[12]	DURABILITY	EXHAUST STANDARDS			SUPPLEMENTAL MEASURE[45]
				~~NMHC[23]~~+NO_x	TYPE[34]	CO	
	[kilowatts]		[hours / years]	[grams per kilowatt-hour]		[grams per kilowatt-hour]	
2003 - 2006	kW ≤ 373	N/A	N/A	16.0	AVE[6]		None
2007	kW ≤ 373	OPT 1	N/A	16.0 (55%)	AVE[6]		None
			480 / 10	5.0 (45%)	FIXED		
		OPT 2	N/A	14.0	FIXED	N/A	Low-Permeation Fuel Line Hoses
2008	kW ≤ 373	OPT 1	N/A	16.0 (25%)	AVE[6]		None
			480 / 10	5.0 (75%)	FIXED		
		OPT 2	480 / 10	5.0	FIXED		Low-Permeation Fuel Line Hoses
2009 and later	kW ≤ 373	N/A	480 / 10	5.0[6,7,8]	FIXED	75.0[7,9]	Carryover[710]
	~~373 < kW ≤ 485~~		~~150[5] / 3~~	~~5.0[6]~~	~~AVE~~		
	~~kW > 485~~		~~50[5] / 1~~	~~5.0[6]~~	~~AVE~~		

Notes:
1. For 2010 and subsequent model years, an engine or engine family's power category is based on maximum engine power; otherwise maximum rated power may be used
~~1~~2. Once a manufacturer has chosen an option, that option must continue to be used exclusively across product lines
~~2~~3. ~~The non-methane component of hydrocarbon~~For 2010 and subsequent model years, standards are measured in total hydrocarbons plus oxides of nitrogen; however, the non-methane component of hydrocarbon may be substituted in prior years
~~3~~4. Corporate averaging (AVE) may be used to demonstrate compliance with the exhaust emission standard, except where a FIXED standard is required
~~4~~5. Supplemental measures may be different than shown, but must provide equal and verifiable emission reductions to those indicated
~~5. For the purpose of durability testing, engine components that have been approved with an hourly warranty period shorter than the full hourly durability period per § 2445.1 (c)(3)(C)1. may be replaced at the specified warranty interval~~
6. The corporate average calculation may be met with or without power weighting for these years
~~6~~7. ~~All engines ≤ 373 kW must meet a 5.0 g/kW-hr NMHC+NO_x capping standard. For engines > 373 kW, the standard may be met by sales averaging with engines equal to or less than 373 kW~~A single engine family certified under the discontinuation allowance in § 2442(g)(2) may continue to meet current certification levels for HC+NO_x and no more than 150 g/kW-hr for CO over the engine's useful life provided that the manufacturer certifying such an engine family also certifies one or more engine families to family emissions limits sufficiently low to enable compliance on a corporate average basis
8. Large volume manufacturers that produce high performance engines and qualified intermediate volume manufacturers are required to certify one or more engine families to a family emissions limit lower than the HC+NO_x standard when complying with high performance engines on a corporate average basis
9. Standard performance engines ≥ 6.0 liter displacement may alternatively meet a 25 g/kW-hr standard for Modes 2-5 of the ISO 8178-4 E4 marine test cycle
~~7~~10. The same or better supplemental emission control hardware used to ~~meet the standard~~ comply in 2007 must be used every model year thereafter and all fuel hoses (i.e.,not just the fuel line hose) must be low-permeation hoses

(A) At the time of, or prior to, model year 2009 certification, each large volume manufacturer that intends to produce high performance engines or qualified intermediate volume manufacturer must declare whether it will comply with the high performance exhaust standard of 5.0 g/kW-hr HC+NO_x through averaging or whether it will comply with the less stringent small volume high performance HC+NO_x exhaust standard through the incorporation of enhanced evaporative control systems on vessels using standard performance engines for 2009 and subsequent model year engine production.

Table 2.1(b)
High Performance Sterndrive/Inboard Marine Engine Standards

MODEL YEAR	POWER[a] CATEGORY *[kilowatts]*	DURABILITY *[hours / years]*	HC^b+NO_x STANDARD *[grams per kilowatt-hour]*		CO STANDARD *[grams per kilowatt-hour]*
			Small Volume Manufacturers or Intermediate Volume Manufacturers that are not Qualified Intermediate Volume Manufacturers	Large Volume or Qualified Intermediate Volume Manufacturers	
2009 - 2010	373 < kW ≤ 485	150[c] / 3	16.0[d]	5.0[e]	350.0[d]
	kW > 485	50[c] / 1	25.0[d]		
2011 and later	373 < kW ≤ 485	150[c] / 3	16.0[d]	5.0[e]	350.0[d]
	kW > 485	50[c] / 1	22.0[d]		

a For 2010 and subsequent model years, an engine or engine family's power category is based on maximum engine power; otherwise maximum rated power may be used

b For 2010 and subsequent model years, standards are measured in total hydrocarbons plus oxides of nitrogen; however, the non-methane component of hydrocarbon may be substituted in prior years

c For the purpose of durability testing, engine components that have been approved with an hourly warranty period shorter than the full hourly durability period per § 2445.1 (c)(3)(C)4. may be replaced at the specified warranty interval

d These standards are fixed except that engine families certified under the discontinuation allowance in Title 13, California Code of Regulations, § 2442(g)(2) may continue to meet current certification levels for $HC+NO_x$ over the engine's useful life provided that the manufacturer certifying such an engine family also certifies one or more engine families to family emissions limits sufficiently low to enable compliance on a corporate average basis

e This standard may be met on a corporate average basis between high performance engines and/or between standard performance and high performance engines. Alternately, large volume manufacturers that produce high performance engines and qualified intermediate volume manufacturers may comply with the exhaust standards for small volume manufacturers provided a sufficient number of vessels with the manufacturer's standard performance engines are equipped with enhanced evaporative control systems as noted in Title 13, California Code of Regulations, § 2442(b)(5). Manufacturers must declare their intent to use this alternative prior to certifying engines for the 2009 model year and must continue to certify future model year engines using this alternative exclusively across product lines

(C) ~~(A)~~No crankcase emissions shall be discharged into the ambient atmosphere from 2003 and later spark-ignition ~~inboard and~~ sterndrive/inboard marine engines.

(D) ~~(B)~~Production and sale of spark-ignition marine engines that result in noncompliance with the California standard for the model year shall cause an engine manufacturer to be subject to: revocation or suspension of Executive Orders for the applicable engine families; enjoinment from any further sales, or distribution, of such noncompliant engine families, in the State of California pursuant to section 43017 of the Health and Safety Code; and all other remedies available under Part 5, Division 26 of the Health and Safety Code. Before seeking remedial action against the engine manufacturer, the Executive Officer will consider any information provided by the equipment manufacturer.

(E) ~~(C)~~For each engine family, the engine manufacturer shall submit the total number of engines produced for sale in California, or the total number of engines produced for sale nationally, ninety (90) days after the end of the model year.

(2) Evaporative Requirements for All High Performance Engine Manufacturers and Boat Manufacturers:

(A) For 2009 and subsequent model year engines, each engine manufacturer must provide written instructions, as part of the installation materials provided to boat manufacturers, to use enhanced evaporative control systems on any boat that is manufactured for sale, sold, or offered for sale in California, or that is introduced, delivered or imported into California for introduction into commerce. The engine manufacturer shall also provide evidence to the Executive Officer, as part of its application for certification, that the supplier(s) of the enhanced evaporative control system has designed the system components to meet or exceed the diurnal and permeation design specifications listed in Table 2.2 throughout the useful life of the engine.

Table 2.2 Sterndrive/Inboard Marine Evaporative Design Specifications

	PERMEATION STANDARDS[1] *[grams per square meter per day]*	DIURNAL STANDARD[2] *[grams per gallon per day]*	TEST TEMPERATURES *[degrees Celsius]*
Fuel Hoses	15.0	—	23 ± 2
Fuel Tank	1.5	—	28 ± 2
Trailerable Boat	—	0.40	25.6 – 32.2
Nontrailerable Boat	—	0.16	27.6 – 30.2

1. Fuel hoses and tank permeation testing requires fuel with 10% ethanol content.
2. Diurnal testing requires fuel with 9 pounds per square inch (psi) Reid Vapor Pressure volatility and a 24-hour fuel temperature cycle.

(B) For 2009 and subsequent model year engines, each boat manufacturer must install an enhanced evaporative control system on every boat that is manufactured for sale, sold, or offered for sale in California that uses a high performance engine.

(3) ~~(2)~~Compliance with the standards on a corporate averaging basis is calculated as follows:

~~$$\frac{\sum_{j=1}^{n}(PROD_{jx})(EL_{jx})}{\sum_{j=1}^{n}(PROD_{jx})} = Corporate\ Average$$~~

$$\frac{\sum_{j=1}^{n}(PROD_{jx})(EL_{jx})(P_{jx})}{\sum_{j=1}^{n}(PROD_{jx})(P_{jx})} = Corporate\ Average$$

where:

n = Total number of engine families available for averaging

$PROD_{jx}$ = Number of engines in engine family j produced for sale in California in model year x.

EL_{jx} = The measured ~~NMHC~~+NO_x emission levels for engine family j in model year x~~; or for engines > 485 kW, the manufacturer may choose to use 30 g/kW-hr as per paragraph (F) below~~.

P_{jx} = The average power in kW (sales-weighted) of engine family j produced for sale in California in model year x. Engine power must be calculated using SAE standard J1228, November 1991, incorporated herein by reference.

(A) During the engine manufacturer's production year, for each engine family, the engine manufacturer shall provide the Executive Officer within 45 days after the last day in each calendar quarter the total number of spark-ignition marine engines produced for sale in California and their applicable EL(s).

(B) The Executive Order certifying the California production for a model year must be obtained prior to the issuance of certification Executive Orders for individual engine families for the model year.

(C) The engine manufacturer's average ~~NMHC~~+NO_x exhaust emissions must meet the corporate average standard at the end of the engine manufacturer's production for the model year. At the end of the model year, the manufacturer must calculate a corrected corporate average using sales or eligible sales rather than projected sales.

* * * * *

~~(F) Engines exceeding 485 kilowatts maximum rated power: In lieu of exhaust emission testing, manufacturers may certify using a default exhaust emissions level of 30.0 grams per kilowatt-hour of NMHC+NO_x in their corporate averaging calculation.~~

(4) ~~(3)~~Alternate Requirements for Standard Performance Manufacturers:

(A) Requirements of engine manufacturers and boat manufacturers under Option 2 and using Low Permeation Fuel Line Hose:

~~(A)~~

1. Each engine manufacturer that chooses Option 2 must provide written instructions, as part of the installation materials provided to purchasers of the engine, to use Low Permeation Fuel Line Hose for the primary fuel line connecting the fuel tank to the engine of any boat that is manufactured for sale, sold, or offered for sale in California, or that is introduced, delivered or imported into California for introduction into commerce.

~~(B)~~

2. Each boat manufacturer must install Low Permeation Fuel Line Hose for the primary fuel line connecting the fuel tank to the engine of any boat that is manufactured for sale, sold, or offered for sale in California that uses an engine from a manufacturer that chooses Option 2.

~~(4)~~ (B) Supplemental Measures. Prior to Model Year 2007 certification, manufacturers choosing Option 2 may request Executive Officer approval of a supplemental measure as an alternative to meeting the requirements of paragraph (b)(3). In determining whether to approve a request, the Executive Officer will consider the following:

~~(A)~~ 1. Whether the proposed supplemental measure would achieve reductions in ~~NM~~HC+NO_x equivalent to using Low-Permeation Fuel Line Hoses,

~~(B)~~ 2. The engine manufacturer's measures to ensure successful implementation of the proposed supplemental measure,

~~(C)~~ 3. The durability of the proposed supplemental measure, and

~~(D)~~ 4. Any additional information the Executive Officer deems relevant.

(5) Alternate Requirements for Large Volume and Qualified Intermediate Volume Manufacturers.

In lieu of complying with the 5.0 g/kW-hr HC+NO_x exhaust standard in Table 2.1(b) for high performance engines, a large volume or qualified intermediate volume engine manufacturer may certify high performance engines to the same HC+NO_x exhaust standards as required for small volume manufacturers in Table 2.1(b) provided that they do either (A) or (B):

A. The manufacturer ensures that a sufficient number of boats using standard performance engines are equipped with enhanced evaporative control systems to fully compensate for the change in emission benefits from allowing compliance to the less stringent standard. Unless a lower percentage is demonstrated sufficient by the certifying manufacturer, a minimum of fifteen percent annually of the manufacturer's standard performance engine production for California must be installed in boats equipped with enhanced evaporative control systems. Beginning with the 2009 model year and for all model years thereafter, the following would apply:

1. Each engine manufacturer must provide written instructions, as part of the installation materials provided to purchasers of the engine, to use enhanced evaporative control systems on any boat that is manufactured for sale, sold, or offered for sale in California, or that is introduced, delivered or imported into California for introduction into commerce that uses a standard performance engine intended to qualify the engine manufacturer to certify its high performance engines using the HC+NO_x standards intended for small volume high performance manufacturers in Table 2.1(b) of this section. The engine manufacturer shall also provide evidence to the Executive Officer, as part of its application for certification, that the supplier(s) of the enhanced evaporative control system has designed the system components to meet or exceed the diurnal and permeation design specifications listed in Table 2.2 throughout the useful life of the engine.

2. Each boat manufacturer must install an enhanced evaporative control system on every boat that is manufactured for sale, sold, or offered for sale in California that uses a standard performance engine intended to qualify the engine manufacturer to certify its high performance engines using the $HC+NO_x$ standards intended for small volume high performance manufacturers in Table 2.1(b) of this section.

B. The manufacturer reduces by other means emissions sufficient to fully compensate for the change in emission benefits from allowing compliance to the less stringent standard.

1. The manufacturer must submit a plan prior to certification of any high performance engine family. The Executive Officer must approve a plan before certifying any of the manufacturer's engine families. To be approved, the plan must meet the following criteria:

i. The total emissions benefit of the measures must provide reductions equivalent to the 5.0 g/kw-hr $HC+NO_x$ standard.

ii. The emissions reductions achieved from the measures must be verifiable.

iii. The measures must be enforceable.

iv. Except as allowed by Sections 2442(g)(2), or 2442(g)(3), no engine families can exceed the emissions standards in 2442(b).

v. The plan must include backstop provisions to be followed in the event that a measure or measures are not able to be fully implemented.

2. If the manufacturer does not implement the plan as approved, the Executive Officer may rescind certification of the affected engine families until a revised plan is approved.

(c) Not-to-Exceed (NTE) Limits

Exhaust emissions from all new model year 2010 and later spark-ignition marine engines subject to the standards in Tables 1.1, 1.2, and 2.1(a) of § 2442, and measured according to the methods in Part I, section 20., paragraph (c) of the incorporated Test Procedures, must not exceed the applicable NTE limits defined as follows:

(1) NTE limits are calculated for each pollutant as the product of the individual standard (STD) for that pollutant and the applicable NTE multiplier (M). The mathematical expression of this equation is "NTE Limit = (STD) × (M)."

(A) (STD) is defined as either:

1. the emission standard specified in Tables 1.1, 1.2, or 2.1(a) of § 2442 for each pollutant for an engine family not certified using averaging, or;

2. the FEL (or corporate averaging equivalent) for each pollutant for an engine family certified using any form of averaging.

(B) (M) is defined as follows:

1. For engine families certified with a catalytic converter, the values listed in Table 2.3 below shall apply across the applicable zone specified in Part I, section 20., paragraph (c) of the incorporated Test Procedures; or

Table 2.3
NTE Multipliers for Catalyst-Equipped Engines

Pollutant	Subzone 1	Subzone 2
$HC+NO_x$	1.50	1.00
CO	N/A	1.00

2. For two-stroke engine families certified without a catalytic converter, the values listed in Table 2.4 below shall apply. Compliance with the NTE Limits for these engine families shall be based on the weighted discrete mode emissions measurement method specified in Part I, section 20., paragraph (c) of the incorporated Test Procedures; or

Table 2.4
NTE Multipliers for Two-Stroke Engines without Catalysts

Pollutant	All Test Points
$HC+NO_x$	1.2
CO	1.2

3. For all other engine families that do not meet the criteria in (c)(1)(B)1. or (c)(1)(B)2. above, the values listed in Table 2.5 below shall apply across the applicable zone specified in Part I, section 20., paragraph (c) of the incorporated Test Procedures.

Table 2.5
NTE Multipliers for Four-Stroke Engines without Catalysts

Pollutant	Subzone 1	Subzone 2
$HC+NO_x$	1.40	1.60
CO	1.50	1.50

(2) Each NTE Limit shall be rounded to the same number of decimal places as the applicable standard in Tables 1.1, 1.2, or 2.1(a) of § 2442 for each pollutant.

(3) NTE limits do not apply in the 2010 through 2012 model years to engine families that are certified based on carryover emission data from the 2009 model year. This may include models that were certified to federal requirements only, so long as no new testing is otherwise required per the provisions for certification and the issuance of an Executive Order contained in this article or the test procedures incorporated by reference in § 2447.

(4) NTE limits do not apply to high performance engines.

(d) Voluntary Standards. Model Year 2009 and later spark-ignition marine engines:

(1) Manufacturers may voluntarily certify their engines to the full useful life exhaust and evaporative emission standards in Table 3 below.

(2) Marine vessels powered by engines certified to the voluntary standards in Table 3 below and equipped with a fully compliant OBD-M system (see § 2444.2) shall display a five-star consumer/environmental emission label (see § 2443.2 and § 2443.3).

Table 3 - Voluntary Standards

HC^1+NO_x STANDARD *[grams per kilowatt-hour]*	CO STANDARD *[grams per kilowatt-hour]*	PERMEATION STANDARDS *[grams per square meter per day]*		DIURNAL STANDARD[2] *[grams per gallon per day]*
		Hose[3]	Tank[4]	
2.50	50.0	15.0	1.5	0.4

1. The exhaust standard includes total hydrocarbons
2. Diurnal testing assumes a trailerable boat and requires fuel with 9 pounds per square inch (psi) volatility and a 24 hour fuel temperature cycle of 25.6 to 32.2 °Celsius
3. Fuel line permeation testing requires gasoline fuel with 10% ethanol content and must be performed at a test temperature of 23 ± 2 °Celsius
4. Fuel tank permeation testing requires gasoline fuel with 10% ethanol content and must be performed at a test temperature of 28 ± 2 °Celsius

(3) Spark-ignition marine engines certified to the voluntary standards are subject to the same in-use compliance and recall requirements as engines certified to the required exhaust and evaporative standards.

(e) New Replacement Engine Requirements for Engine Manufacturers. A new spark-ignition marine engine produced solely to replace an engine originally manufactured in accordance with the requirements of § 2442 shall be identical in specifications to the most stringent certified emissions configuration currently available that can be installed in a vessel or personal watercraft without unreasonable modifications, as determined by the Executive Officer. A new replacement engine with emissions performance less than maximum stringency shall be allowed only if all engines of greater stringency are incompatible with the vessel or personal watercraft and so long as the emissions performance of the new replacement engine is at least as stringent as that of the engine being replaced. New replacement engines that do not comply with current year emission requirements must be labeled as follows:

> "SALE OR INSTALLATION OF THIS ENGINE FOR ANY PURPOSE OTHER THAN TO REPLACE AN ENGINE OF SIMILAR OR LESS STRINGENT EMISSIONS PERFORMANCE IS A VIOLATION OF CALIFORNIA LAW SUBJECT TO CIVIL PENALTY."

~~(e)~~(f) The test equipment and test procedures for determining compliance with these standards are set forth in Parts III and IV, respectively, of the "Test Procedures."

(g) Special Provisions for Engine and/or Vessel Manufacturers

(1) Jet Boat Engines

(A) Jet boat engine families previously certified to the $HC+NO_x$ standards for outboard engines and personal watercraft in § 2442(a) may continue to be certified to those standards until 2012 with the additional requirement for 2010 and subsequent model years to comply with the applicable carbon monoxide standards for OB/PWC engines in Table 1.2.

(B) Beginning in 2010, all new jet boat engine families shall comply with the standards for sterndrive/inboard engines in § 2442(b) upon introduction, except that these new jet boat engine families may be cross-category averaged with any other jet boat or personal watercraft engine family to comply with those standards until 2012.

1. Notwithstanding subparagraph 2. below, an engine family certified to the § 2442(a) standards prior to 2010, but not previously used in a jet boat application would be considered a new jet boat engine family in 2010.

2. Replacements for discontinued jet boat engine families. In 2010 and 2011, if a jet boat engine certified to the § 2442(a) standards prior to 2010 is discontinued, the manufacturer may introduce a replacement engine family that complies with the § 2442(a) standards, provided that the replacement engine family is certified to an FEL at or below the certified emissions level of the family it replaces.

(C) Jet boat engines previously certified in the same engine family with personal watercraft engines must be certified separately and to a unique engine family beginning in 2012. All other jet boat engines, including replacements for discontinued jet boat engine families, must be certified separately and to a unique engine family beginning in 2010.

(D) The OBD-M requirements in § 2444.2 would apply to new jet boat engine families in 2010 and to all jet boat engine families in 2012.

(2) Discontinuation of Marinized Sterndrive/Inboard Engines.

Sterndrive/inboard engine manufacturers who marinize base engines produced by another manufacturer may request a discontinuation allowance from the Executive Officer, subject to the following:

(A) The base engine manufacturer has announced that it plans to discontinue the base engine.

(B) Each marinizer may have a discontinuation allowance for only one engine family in effect at any time. As an alternative to the "one engine family" stipulation, manufacturers may petition the Executive Officer to allow a modified grouping of engines based on factors that logically link the engines to be discontinued including, but not necessarily limited to, the pre-marinized base configuration of the engines (e.g., the same base engine offered in one family with fuel injection and another family with carburetion).

(C) The discontinuation allowance would allow the marinizing manufacturer to continue to certify the engine family to be discontinued to emission levels that are less stringent than the standards otherwise required for sterndrive/inboard engines in § 2442 (b) for a total of four model years, provided that on a corporate average basis, the manufacturer meets the required standards in § 2442 (b).

(D) Manufacturers shall not certify engine families to emission levels less stringent than those in effect for previous model year versions of the same or similar engine family. Fluctuations in certification levels from year to year due to component variation would not violate this prohibition unless the fluctuations result in an exceedance of the standards to which the engine family was previously certified.

(E) Manufacturers shall comply with all applicable OBD-M and evaporative requirements in effect for:

1. any previously uncertified engine family certified for the first time under paragraph (g)(2) of this section to emission levels that are less stringent than the standards otherwise required for sterndrive/inboard engines in § 2442 (b); and

2. any current production engine family that has previously been certified with OBD-M or evaporative systems.

(F) The applicable requirements of §§ 2442(b)(3), 2443.1, and 2443.2, including averaging, records keeping, reporting, and labeling, shall be applicable to manufacturers employing the discontinuation allowance provisions of this paragraph (g)(2).

(3) General Hardship Relief Provision

Manufacturers may petition the Executive Officer at any time to issue temporary relief from any of the requirements of this Article that would result in extreme financial or technical hardship to the manufacturer. The Executive Officer shall consider the following in determining whether or not to grant the manufacturer's request for relief and the extent to which relief is provided:

(A) The manufacturer could not have reasonably anticipated the situation for which relief is requested and has substantiated that the circumstances resulting in the hardship were beyond its control to avert; and

(B) The manufacturer has exhausted all existing relief provisions in trying to remedy the situation; and

(C) The manufacturer has proposed an effective, implementable, and enforceable plan to make up for any emission benefits that would be lost should the requested relief be provided.

(h) Practices for Rebuilding Engines. The rebuilding practices described in Part I, Section 7 of the incorporated test procedures shall apply to all spark-ignition marine engines subject to the requirements of § 2442 that are rebuilt after December 31, 2009, including those engines that were originally manufactured on, or prior to, December 31, 2009.

NOTE: Authority cited: Sections 39600, 39601, 43013, 43018, 43101, 43102 and 43104, Health and Safety Code.
Reference: Sections 43013, 43017, 43018, 43101, 43102, 43104, 43105, 43150-43154, 43205.5 and 43210-43212, Health and Safety Code.