

EPA's Final Rulemaking for Nonroad SI Engines and Equipment

October 23, 2008

www.epa.gov/otaq/equip-ld.htm

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Basic Provisions of the FRM

- Final Rule signed September 4; published October 8
- Exhaust Emission Standards (1st, 2nd, or 3rd round)
 - Small Spark-Ignition Nonroad Engines ≤ 19 kW ("Small SI")
 - Nonhandheld Engines only
 - Handheld engines just completed transition to Phase 2 standards
 - Marine Spark-Ignition Engines ("Marine SI")
- Evaporative Emission Standards to address venting and permeation emissions (first-time)
 - Small SI
 - Handheld and nonhandheld equipment
 - Marine SI

Small SI—Nonhandheld (NHH) Class I



walk-behind mower



generator



pressure washer

Sales: 10 million/year+



riding mower



zero-turn mower



generator

Sales: 4 million/year+

Small SI—Handheld (HH) Classes III, IV, V



string trimmer



leaf blower



chainsaw



edger

Sales: 12 million/year+

Marine SI Vessels



Outboard



Personal Watercraft



Sterndrive



Inboard

Sales: ~500,000/year

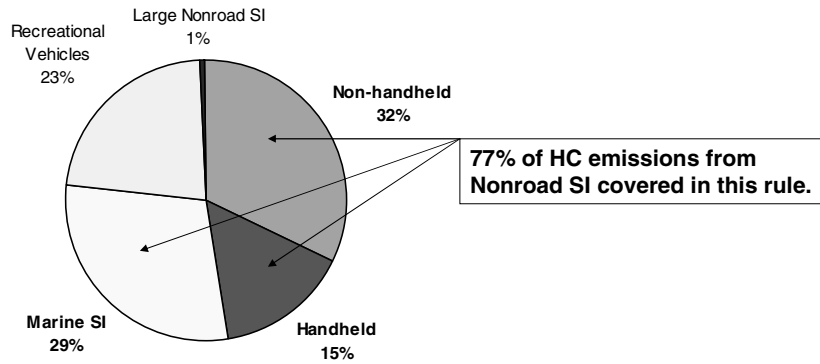
Congressional Origins

- Section 428 of the Omnibus Appropriations Bill for 2004 required EPA to propose regulations under CAA §213 for new nonroad spark-ignition (SI) engines below 50 hp
 - Proposal by December 2004
 - Final Rule by December 2005
- In August 2005 Congress added a requirement to assess potential safety issues before proposing emission standards for these engines (Section 205 of PL 109-54)
 - In March 2006 we released our "Safety Study," in which we found that emission controls could be safely applied to Small SI engines and equipment

Emission Reductions, Cost Effectiveness and Benefits

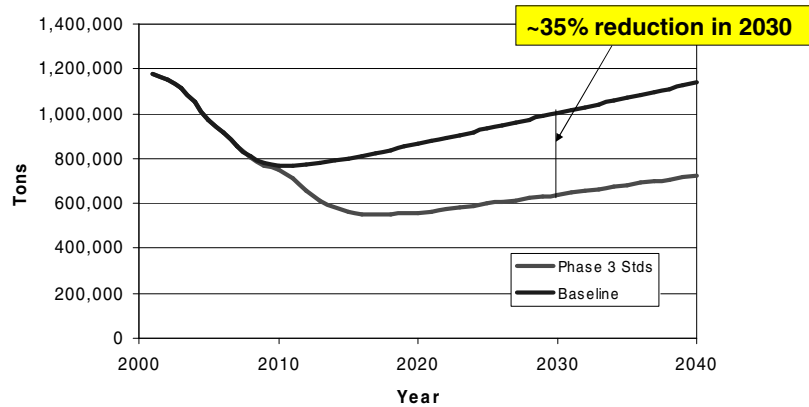
Inventory

- Mobile Source HC emissions projected to be ~4 million tons (in 2030)
 - ▮ Nonroad SI is 43% of Mobile Source HC inventory

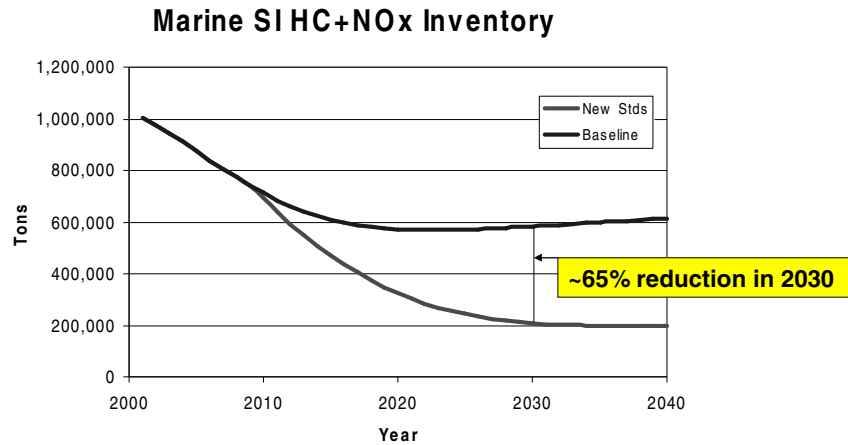


Small SI Emission Reductions (Exhaust + Evap)

Small SI HC+NOx Inventory



Marine SI Emission Reductions (Exhaust + Evap)



Overall Emission Reductions

Small SI/Marine SI Exhaust+Evap Emission Benefits – tons				
Year	Category	Total VOC	NOx	Direct PM _{2.5}
2020	Small SI	241,000	65,000	820
	Marine SI	218,000	30,000	3,300
	All	458,000	95,000	4,100
2030	Small SI	285,000	77,000	960
	Marine SI	320,000	55,000	4,600
	All	604,000	132,000	5,600

Total Ozone and PM_{2.5} Benefits – Combined Small SI/Marine SI Engines

Year	2020	2030
Ozone-related benefits	\$40 million - \$1.6 billion	\$65 million - \$2.7 billion
PM-related benefits – 3% Discount Rate (7% DR) ¹	\$1.1 billion (\$1.0 billion)	\$1.7 billion (\$1.6 billion)
Total benefits of the Small SI/Marine SI program – 3% DR (7% DR)	\$1.2 billion - \$2.7 billion (\$1.1 billion - \$2.6 billion)	\$1.8 billion - \$4.4 billion (\$1.6 billion - \$4.3 billion)
Estimated cost of the Small SI/Marine SI program (including fuel savings)	\$210 million	\$190 million
Ratio of total benefits to social costs for the Small SI/Marine SI – 3% DR (7% DR)	6:1 to 13:1 (5:1 to 12:1)	9:1 to 23:1 (8:1 to 23:1)

Note: 2005 dollars; totals may not sum due to rounding.

¹ PM benefits based on the ACS-derived estimate of premature mortality (Pope et al., 2002). The discount rate is used in the calculation of annual PM benefits to discount the value of a statistical life over the assumed 20-year segmented lag and to discount the cost-of-illness of nonfatal heart attacks over a 5-year period after the incident.

Marine SI Exhaust Standards

Marine SI Exhaust Standards

Outboard and Personal Watercraft (OB/PWC)

- Second round of EPA standards for OB/PWC engines
 - ┆ Consistent with California ARB standards for 2008
- HC+NOx standard based on power of engine, starting in 2010
 - ┆ 65% HC+NOx reduction from EPA's current standards
 - ┆ Eliminate "dirty" carbureted 2-strokes
 - ┆ Increased use of 4-stroke and Direct Injection 2-stroke engines
 - ┆ Added CO standard to cap emission levels

Marine SI Exhaust Standards

Sterndrive and Inboard Engines (SD/I)

- First EPA standards for SD/I engines
- HC+NOx and CO standards in 2010 for engines <373kW
 - ┆ 5 g/kW-hr for HC+NOx (70% reduction) and 75 g/kW-hr for CO (50% reduction)
 - ┆ Consistent with California ARB's 2007/2008 standards
 - ┆ Catalyst-based standards
- Separate standards for high-performance SD/I engines:
 - ┆ Based on increased use of fuel injection

Power Category	Start Year	HC+NOx, g/kW-hr	CO, g/kW-hr
<485 kW	2010	20.0	350
	2011	16.0	350
>485 kW	2010	25.0	350
	2011	22.0	350



Small SI Emission Standards and Other Rule Changes



Phase 3 Exhaust Standards

Exhaust Emissions	HC+NOx g/kW-hr	Start Year	Estimated % Reduction	Comments
Class I	10.0	2012	38%	- No change in CO standards, except for marine generators, which have a 5 g/kW-hr standard.
Class II	8.0	2011	34%	
Classes III-V	No changes in exhaust emission standards			

- Consistent with California ARB's Tier 3 standards for 2007/2008
- Catalysts and general engine improvements expected for Class I engines
- A mix of technologies expected for Class II engines – general engine improvements, fuel injection, and catalysts.

Altitude

- NHH exhaust standards apply up to about 7000 ft. above sea level (80 kPa) (§1054.115(c))
 - ┆ Engines must comply in standard configuration up to 2000 ft. (94 kPa)
- Manufacturer may specify kit installation for operation above 2000 ft. (§1054.205(r))
 - ┆ Cert application includes kit description, installation instructions/specifications, description of compliance
 - ┆ Manufacturer must make parts and information for kit installation "widely available" in high-altitude areas
- Similar approach for HH engines, except that standards apply up to about 1100 ft. (96 kPa) for now (§1054.145(c))

Bonding

- New bonding requirement covers any possible compliance action– recall, penalties, warranty failure, etc. (§90.1007, §1054.690)
 - ┆ Requirements apply equally to foreign and domestic companies
- Engine manufacturers must post bond starting in 2010 if they don't have fixed assets in the United States
 - ┆ \$3 million for long-term certificate holders (10+ years)
 - ┆ \$6 million for secondary engine manufacturers
 - ┆ \$10 million for other companies
- Fixed assets include equity in buildings, land, and fixed equipment (minus depreciation)
- Manufacturer describes in cert application whether bond requirement applies; bond must be in place when engines are sold in U.S.
- Minimum bond value is \$500,000
 - ┆ Higher value applies for high sales volumes (e.g., more than 20,000 HH and Class I engines)
- If importer is not the certificate-holder, either company may meet bond requirements (or qualify for exemption)

Warranty assurance

- Regulations specify steps to ensure validity of warranty, starting with 2010 model year (§90.1103, §1054.120(f))
 - ┆ toll-free phone number and e-mail address for consumer information
 - ┆ At least one source of replacement parts in the U.S. (including distributors)
 - ┆ Use one of three approaches related to repair network
 - ┆ Authorized service centers in all U.S. population centers over 100,000
 - ┆ Authorized service centers for owners within 100 miles (excluding Rocky Mountain states), or, for others, either—
 - (1) free shipping, (2) free service call, or (3) reimbursement for service at local repair shop
 - ┆ Compliance may be based on a mix of these two approaches by state
- Bond requirement applies for limited repair networks
 - ┆ “Adequate” repair network to avoid bonding includes at least 100 repair facilities, or at least one for each 5000 engines sold in U.S.
 - ┆ Bond process and amounts are the same as for certification
 - ┆ One bond covers both certification and warranty

Engine certification and compliance

- Useful life (§1054.107)
 - ┆ Preserving options for selecting useful life values
 - ┆ Adding requirement to identify useful life (hours) on labels
 - ┆ Including EPA oversight provision to ensure proper selections
- Emission credits for Phase 3 (§1054.740)
 - ┆ May use some emission credits generated with Phase 2 standards in initial years of Phase 3 standards
 - ┆ HH and NHH emission credits no longer exchangeable
- Competition engines (§1054.620)
 - ┆ New rule includes several provisions to clarify which engines qualify for an exemption based on their use as competition engines
- Fuel conversions (§90.1003, §1054.645)
 - ┆ Starting in 2010, engines converted to run on a different fuel must be certified to meet emission standards

Engine testing

- Ethanol-based test fuel (§1054.501)
 - ┆ HH: Manufacturers may test with E10; EPA may then test with E10 or gasoline
 - ┆ NHH: Manufacturers may test with E10; EPA will also test with E10 (unless manufacturer still uses some E0—straight gasoline—after 2012/2013)
- Governor—NHH (§1054.505)
 - ┆ Engine operates governed below full-load point
 - ┆ Governor setting may be adjusted to target constant nominal speed (or may not)
 - ┆ Testing may include ramped-modal cycle for streamlined test run
- Target test speed—HH (§1054.505)
 - ┆ Testing occurs at application-specific speed, or speed at max power point, or both (± 350 rpm)
- 40 CFR Part 1065
 - ┆ Migrating test procedures to common/universal specifications
 - ┆ Category-specific requirements specified in §1054.501-520
 - ┆ New tests must conform to part 1065 starting in 2013; continued carryover certification with part 90 procedures is ok

Engine-related small-business provisions

- Small business definition (§1054.801)
 - ┆ Annual U.S. sales of handheld engine $\leq 25,000$
 - ┆ Annual U.S. sales of nonhandheld engine $\leq 10,000$
 - ┆ Or manufacturers with fewer than 1000 employees, with EPA approval
- Some provisions based on Phase 2 regulations:
 - ┆ Assigned deterioration factor (§1054.145(c) and §1054.240(c))
 - ┆ Waived production-line testing (§1054.301(a))
 - ┆ Both of these provisions also apply in certain cases for a bigger company's small-volume engine families (production ≤ 5000 units)
- Some new provisions for Phase 3:
 - ┆ Two additional years to meet Phase 3 standards (§1054.145(a))
 - ┆ Broader engine families (§1054.230(d))
 - ┆ Hardship provisions accommodate special needs (§1068.245 and §1068.250)

Delegated Assembly

- Regulation *generally* requires engine manufacturer to ship engines in complete, certified configuration (§1068.101(a))
- “Delegated assembly” provisions allow NHH equipment manufacturers to get their own catalyzed mufflers (§1054.610; §1068.261)
 - ┆ Engine manufacturer must include separately sourced parts in cert application and take steps to ensure proper installation:
 - ┆ Contractual agreement, installation instructions, audits, labeling, initial confirmation that parts have been ordered
 - ┆ Equipment manufacturers prepare annual affidavit showing orders for sufficient catalyzed mufflers relative to engine volumes
 - ┆ Provisions apply equally for air filters if engine manufacturer depends on specific design (not just pressure spec)
 - ┆ Distributors may further delegate assembly to equipment manufacturers through 2014; after that distributors may not sell incomplete engines

Equipment manufacturer recertification

- An additional option is available if equipment manufacturer can't use engine manufacturer's muffler design
- NHH equipment manufacturers may go through simplified certification with their own muffler design, subject to conditions (§1054.612)
 - ┆ Initial emission test required; no durability testing and no production-line testing
 - ┆ Equipment manufacturer assumes all other responsibilities that apply to engine manufacturers
- Starting in 2015, this applies only for small families (annual U.S. sales < 5000 units)

Transition program for equipment manufacturers

- Equipment manufacturers may install a certain number of Class II engines without catalysts (§1054.625)
- Allowances: 30% of annual average Class II equipment sales from 2007 through 2009, spread over four years (2011-2014)
 - ┆ 200% for small manufacturers (annual U.S. NHH sales < 5,000 units)
 - ┆ Up to a total of 100% for mid-size manufacturers (annual U.S. Class II sales = 5,000 - 50,000 units), subject to EPA approval
- Equipment manufacturer actions/responsibilities:
 - ┆ Get engines: (1) "Flex engines" may be ordered from engine manufacturer;
 - ┆ (2) Delegated-assembly engines may be built with noncatalyzed muffler
 - ┆ NOTE: Equipment manufacturers may not remove catalyzed mufflers to create flex engines
 - ┆ Add equipment label(s)
 - ┆ Notify EPA before using allowances and send report after every year of using allowances
- Engine manufacturer is responsible for meeting Phase 2 standards with flex engines
- Additional provisions apply for equipment produced outside of U.S. (§1054.626)

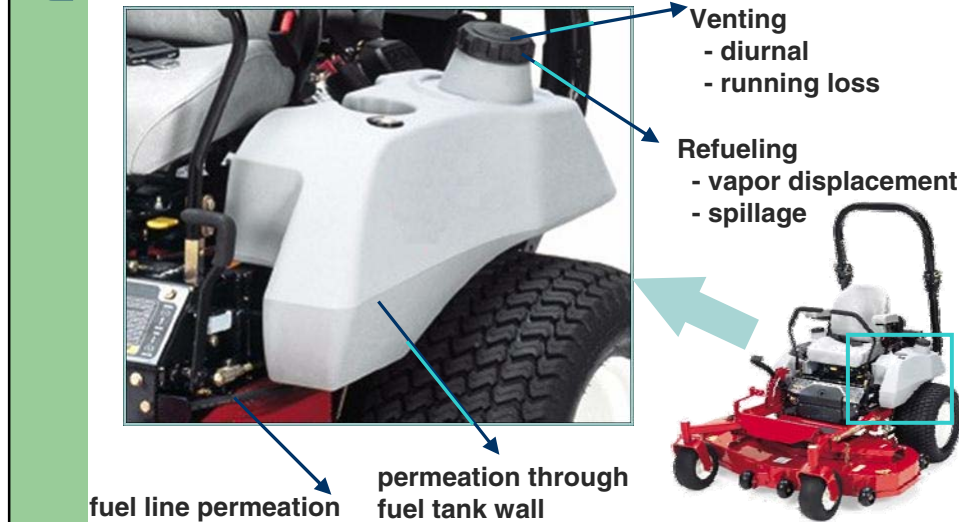
Evaporative Emission Standards and Certification Requirements For Small SI Engines and Equipment

October 23, 2008

Introduction

- Overview
- Summary of Marine SI standards
- Small SI standards
 - Fuel line permeation
 - Fuel tank permeation
 - Running losses (tank venting during operation)
 - Refueling
- Certification provisions
- Labeling

Evaporative Emission Sources



Marine SI Evaporative Standards

Evaporative Controls	Personal watercraft	Portable Tanks	Other Installed Tanks	Estimated HC % Reduction
Hose permeation	2009	2009	2009-2015	80%
Tank permeation	2011	2011	2012	85%
Diurnal	2010	2010	2011-2013	60%

- First-ever evaporative emission controls for Marine SI engines and vessels
 - Hose standard – 15 g/m²/day
 - Tank standard – 1.5 g/m²/day
 - Diurnal standard - 0.40 g/gal/day
- California ARB has initiated efforts to adopt similar evaporative requirements

Small SI Evaporative Standards

Evaporative Controls	Class I (NHH)	Class II (NHH)	Classes III-V (HH)	Estimated HC % Reduction
Hose permeation	2009	2009	2012-2016	95%
Tank permeation	2012	2011	2009-2013	85%
Running loss	2012	2011	N/A	80%

- First-ever evaporative emission controls for Small SI engines and equipment
 - Useful life = 5 years (unless noted otherwise)
- Main differences from California ARB evaporative requirements
 - CARB requirements started in 2006-2008
 - CARB requires diurnal controls, EPA does not
 - EPA requires HH hose permeation, CARB does not

Fuel line permeation—NHH

- 15 g/m²/day standard starts Jan. 1, 2009 (§90.127)
 - Timing of new requirements based on equipment build date
 - Labeling requirements waived for 2009 model year
- Either equipment or component manufacturers may certify
- Certification may be based on new testing, data for CARB Executive Order, or data establishing SAE grade material under SAE J2260 or J30 (R11A or R12)
 - This may include SHED-certified equipment
- 40 CFR part 1054 and part 1060 apply starting with Phase 3 models (2011/2012) (esp. §1060.102)
 - EPA testing and certification procedures required

Fuel line permeation—HH

- 15 g/m²/day standard for most HH equipment starts with 2012 MY (2013 for small equipment models) (§1060.102 and §1060.515)
 - No emission credits
- Standards for cold-weather fuel lines phase in starting with 2012 model year (§1060.102 and §1060.515)
 - Cold-weather equipment = chainsaws, cut-off saws, clearing saws, brush cutters with engines at or above 40cc, commercial earth and wood drills, and ice augers.
 - Standard declines from 290 g/m²/day in 2012 to 225 g/m²/day in 2016
 - Corporate averaging allowed through 2015
 - Test fuel is E10 (10% blend of ethanol in gasoline)
 - Useful life = 2 years through 2013; 5 years thereafter

Fuel line testing

- Test procedure is based on SAE J30/SAE J1527 (§1060.515)
- Test fuel is CE10 (10% blend of ethanol in Fuel C)
 - E10 for cold-weather products
- Stabilize fuel line tank—8 weeks at 23°C or 4 weeks at 43°C—then test over 14-day sampling period at 23°C
 - Use good engineering judgment to adjust procedures as needed for short or narrow-diameter fuel lines

Fuel tank permeation—HH

- HH equipment using CARB-certified fuel tanks must meet 2.0 g/m²/day standard starting Jan. 1, 2009 (§90.129)
 - Timing of new requirements based on equipment build date
 - Either equipment or component manufacturers may certify
 - Certification based on data for CARB Executive Order
 - Fuel caps not included
- 1.5 g/m²/day standard for HH starts in 2010 model year, except for special cases (esp. §1060.103)
 - EPA testing and certification procedures required
 - 2011 model year start for structurally integrated nylon tanks
 - 2012 model year for tanks certified under §90.129
 - 2013 for all small-volume emission families (≤ 5000 units)
- Emission credits available (like NHH program)
 - Including early banking for tanks certified ahead of schedule

Fuel tank permeation—NHH

- 1.5 g/m²/day standard for NHH starts with Phase 3 models (2011/2012) (esp. §1060.103 and §1060.520)
 - Equipment manufacturers may alternatively rely on SHED-based procedures to meet permeation and diurnal standards
 - Directly mounted fuel caps are included; fuel-line grommets are not
 - Useful life = 2 years through 2013; 5 years thereafter
- Emission credits and allowances
 - Component manufacturer selects family emission limit; equipment manufacturer keeps a positive balance of credits
 - FEL cap is 5.0 g/m²/day starting in 2015 (2014 for Class II)
 - FEL cap for small equipment models is 8.0 g/m²/day (≤ 5000 units)
 - Early-compliant NHH tanks may generate allowances (trade for noncompliant models)
- Standards and FEL caps cited for testing at 28°C; alternate levels apply for testing at 40°C
- Simplified certification for tanks with inherently low emissions (§1060.240)
 - Coextruded tanks with EVOH barrier or metal tanks

Temporary exemption for rotation-molded tanks

- Permeation standards do not apply in 2011 for small-volume rotation-molded fuel tanks used in equipment with Class II engines (§1054.145(m))
 - “Small-volume” based on upper limit of 5000 unit production of “identical tanks”
- Same provisions apply in 2012, except that and equipment manufacturer’s production of exempt tanks may not exceed 10,000 units

Fuel tank permeation—Fuel caps

Tank manufacturer has three options to account for permeation from attached fuel caps (§1060.520(b)(5))

– Ignore cap permeation from tanks with filler neck

- 1. Measure tank with installed fuel cap (representative/worst case)
 - Fuel tanks must be sold with fuel cap
- 2. Use default value of 30 g/m²/day to calculate total tank emissions
 - Tanks may be sold with or without caps
 - Caps may be made of any material
 - Gaskets must be made of low-permeability material
- 3. Measure fuel cap separately (§1060.521)
 - Tank manufacturer may calculate a combined result to certify tank and cap together (tanks must be sold with cap)
 - Tank manufacturer may certify tank based on assumed cap permeation rate (tanks may be sold without caps)
 - Fuel cap manufacturer would need to certify fuel caps (meet 1.5 g/m²/day standard or name Family Emission Limit)
 - Equipment manufacturers would need to use certified fuel cap with family emission limit at or below specified level

Fuel tank testing

- Test procedure specified in §1060.520
- Stabilize tank—20 weeks at 28°C or 10 weeks at 43°C
 - pressure cycling, UV, and slosh testing apply only for tanks with surface treatment or other post-processing treatment
 - No exemption from pressure cycling for vented tanks
 - EPA may approve alternate pressure test if tank cannot be tested as specified
- Test fuel is E10 (CE10 is also permissible)
- Test temperature is 28°C (or 40°C, with alternate standard)
- Measure emissions daily for 10-20 days until emissions stabilize (until $r^2 \geq 0.95$)
 - Compare final result to emission standard (or Family Emission Limit)

Diurnal emissions—NHH

- CARB specifies SHED procedure to measure diurnal and permeation emissions for certain types of equipment
- EPA did not adopt diurnal emission standard
- Equipment measured with CARB's SHED procedure can be certified with EPA
 - SHED-certified configuration must be sold nationwide (carbon canisters, etc.)
 - Fuel lines and fuel tanks don't need to be certified separately

Running loss

- NHH equipment must use one of the following designs for controlling running losses (§1060.104)
 - Vent tank vapors to engine intake, or
 - Seal fuel tank (pressurized, bladder, etc.), or
 - Get a CARB Executive Order for other designs
- Equipment manufacturers that install fuel tanks need to coordinate design with engine manufacturer
 - Engine manufacturer provides installation instructions
 - Engines must meet exhaust standards for “expected in-use operation,” including tank/equipment configurations
- NHH equipment must have tethered fuel cap with physical indication of seal (e.g., click when tight)
- Running loss standard (and tethering requirement) does not apply for HH equipment

Refueling

- Equipment must be built so operators can “reasonably be expected to fill the fuel tank without spitback or spillage” (§1060.101(f))
 - Requirement starts in the same year that tank permeation standards start
- Size and placement of fuel tank inlet are key parameters
 - Operator should be able to place nozzle directly in tank inlet and see fuel level while fueling
 - Meeting published industry standard is sufficient demonstration (such as specified cap diameter for chainsaws)
 - Goal is to move industry toward good standard practice
- Similar requirement applies to gas can manufacturers (40 CFR 59.611(c))
- No separate certification is required

General certification provisions

- General certification provisions apply for all standards under 40 CFR part 1060
 - Not required for early standards (2009 HH fuel tanks and 2009 NHH fuel lines certified under part 90)
- Component manufacturers expected to certify fuel tanks and fuel lines (§1060.5 and §1060.205)
 - Certification may be delegated to equipment manufacturers that want to certify (§1060.601(f))
- Regulation specifies parameters for including different products in the same emission family (§1060.230)
- Test worst-case model in the emission family (§1060.235)
- Equipment manufacturers must certify their equipment (§1060.5(e))
 - Identify certified fuel tanks and fuel lines
 - Describe running loss controls (NHH only)
 - Describe any additional testing (if certifying components)
 - Describe Family Emission Limits and emission credits if applicable

General certification provisions –cont.

- Certifying manufacturers are responsible for warranty (§1060.120)
 - Either component or equipment manufacturer may process claims
- Equipment manufacturers may use up existing inventory of noncompliant fuel tanks and fuel lines (§1060.601(g))
 - “Normal inventory” requirement does not allow for stockpiling to circumvent standards in first year
- Equipment manufacturers not required to comply in first year if the engine’s model year is from the previous year (§1060.605(f))
 - Example: 2012 standard applies after 2011 engines are used up
 - Separate stockpiling provisions apply for engines (§1068.105(a))
- New fuel tanks and fuel lines replacing certified parts must be certified (§1060.601(b))
 - New parts replacing “pre-evap” components are exempt
 - Exempt parts (or package) must be labeled to describe limitations on use
 - Starting Jan. 2020, exempt parts must be labeled; companies must take additional steps to prevent exempt parts from replacing certified parts

Labeling

- **Component manufacturers (§1060.137)**
 - Add detailed label information:
 - Include company name, emission family, compliance statement, and FEL (if applicable)
 - Fuel lines include numbers or code to identify emission level
 - Or, alternatively, use coded abbreviation
 - e.g., “EPA-MFR-A15”
- **Equipment manufacturers (§1060.135)**
 - Evap label must include company name, build date, compliance statement
 - Identify certified components with master code, or individual codes to match component markings



Certification Procedures

The ABCs of getting a Certificate of Conformity with EPA emission regulations...



Certification Procedures

- The basics:
 - If your product is subject to EPA emissions standards, you must obtain a Certificate of Conformity before you introduce it into US Commerce.
 - Must demonstrate compliance with the applicable regulation.
 - Certificates are issued by the Compliance and Innovative Strategies Division (CISD), Office of Transportation and Air Quality.
 - CISD's Heavy-Duty and Nonroad Engines Group processes the Applications for Certification for Small SI
 - You must certify every model year or production period



How do I certify?

- To obtain a Certificate of Conformity:
 1. Read the regulations!
 - Small SI: 40 CFR Parts 90, 1054, 1060, 1065 and 1068
 - <http://www.epa.gov/otaq/equip-ld.htm>
 2. Request an EPA Manufacturer Code:
 - <http://epa.gov/otaq/verify/mfr-code.htm>
 - Contact: Mr. Pete Petersen, EPA Contractor
petersen.pete@epa.gov
 3. Determine:
 - Engine Families/Permeation Families
 - The type of Certificate you need:
 - Exhaust, Evaporative (fuel lines, fuel tanks, fuel caps), or both



How do I certify?

4. Gather your data
5. Pay your fee:
 - Per Application
 - Information:
<http://epa.gov/otaq/fees.htm>
 - Pay electronically at:
<https://www.pay.gov/>
 - Contact:
 - Mr. Bill Vanden Broek, EPA Contractor
 - vandenbroek.willem@epa.gov

Type of Certificate	Calendar Year*		Use Form
	2008	2009	
Exhaust	\$694	\$562	3520-29
Evaporative	\$241		"Miscellaneous Payments"

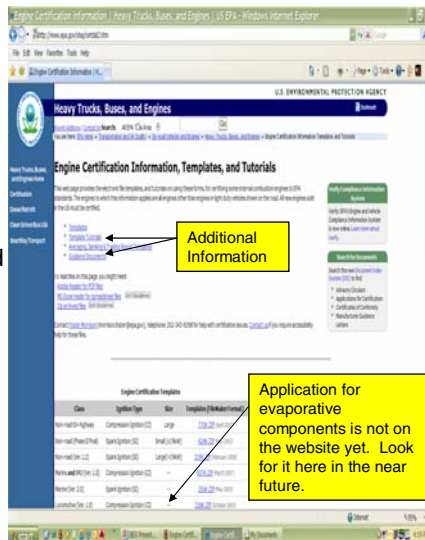
*The amount of the fee depends on the calendar year in which the application is submitted, not the engine's model year. Pay a fee for each application.

How do I certify?



6. Complete an Application for Certification

- Per engine or permeation family
- Download application template: epa.gov/otaq/certdat2.htm
- Software required: FileMaker Pro (versions 7.0 to 9.0)
 - www.filemaker.com
- Questions about regulations and completing/ submitting the application:
 - Exhaust: Mike Marko, marko.michael@epa.gov
 - Evaporative: Nick Flores: flores.nick@epa.gov
- Carry over, running changes
- Mark CBI
- Comments



How do I certify?



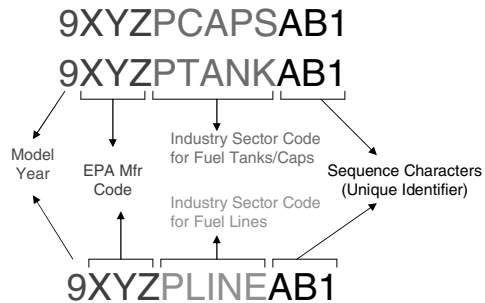
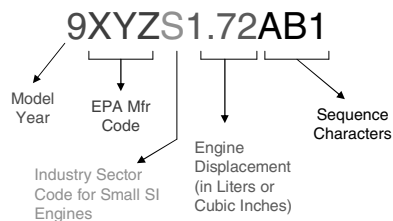
• Engine Family Names

- 12-character string
- Must follow EPA's family naming convention
- MY 2009 = 9; 2010 = A

Evaporative

(for MY 2009 only)

Small SI (Exhaust)





How do I certify?

Component Line Certification

[Menu](#)
[Component Tank](#)
[Guidance](#)

Note: A fee must be paid for component line certification.

Type of Certification: Tank Line

Applicable regs: 90.127 1045.112 1060.102

Line Permeation Family: _____ ---Follow the line family naming convention outlined in the guidance.

Manufacturer: _____

Process code: _____

Manuf. contact name: _____

Manuf. contact address: _____

Manuf. contact phone: _____

Manuf. contact fax: _____

Manuf. contact email: _____

CARB EQ #: _____ ---if using an EQ for EPA certification

Applicable Std: SAE J20, RT1A 40CFR 101.110 EPA NONROAD FUEL LINE (MARINE SI)
 SAE J30, R12 CARB SHED EPA LOW EMISSION FUEL LINE (LARGE SI)
 SAE J2260, CAT 1 CARB FUEL LINE ONLY TEST

Permeation level (g/m²/day): _____

Numerical Permeation Std: _____

ID number(s) on line: _____

Useful life: _____

Material type: _____

Production Method: _____

Type of connectors/fittings: _____

Comments: _____

Container Field 1: _____ Container Field 2: _____
Please attach all award documents, PDFs, and Excel documents to be placed in container fields. The CARB EQ in a list of engine families which utilize this component, can be placed

Draft

This template will be used for both Marine SI and Small SI components.



This template will be used for both Marine SI and Small SI components.



How do I certify?

Component Tank Certification

[Menu](#)
[Component Line](#)
[Guidance](#)

Note: A fee must be paid for component tank certification.

Type of Certification: Tank Line

Applicable regs: 1060.103 90.129

Tank Permeation Family: _____ ---Follow the tank family naming convention outlined in the guidance.

Manufacturer: _____

Process code: _____

Manuf. contact name: _____

Manuf. contact address: _____

Manuf. contact phone: _____

Manuf. contact fax: _____

Manuf. contact email: _____

CARB EQ #: _____ ---if using an EQ for EPA certification

Applicable Std: CARB TANK ONLY TEST 42CFR 1060.103 CARB SHED

Permeation level (g/m²/day): _____

Numerical Permeation Std: _____

ABT: Yes No

Family Emission Limit(FEL): _____ ---if applicable

ID number(s) on tank: _____ ---if applicable

Useful life: _____

Material type: _____ ---Glass, Plastic, Fiberglass

Production Method: _____ ---Blow-molded, Thermofomed, Rotational molded, Injection

Gasket Material: _____

Emission control Strategy: _____ ---No Barrier, Intensity Low-Dose Perm Material, Continuous multi-layer Non-continuous barrier gaskets, Barrier surface treatment

Comments: _____

Container Field 1: _____ Container Field 2: _____
Please attach all award documents, PDFs, and Excel documents to be placed in container fields. The CARB EQ in a list of engine families which utilize this component, can be placed

Draft

This template will be used for both Marine SI and Small SI components.



This template will be used for both Marine SI and Small SI components.



How do I certify?

6. Submit your application

- Four things needed for a complete application:
(1) completed template, (2) signed Statement of Compliance, (3) any requested information, (4) fee
- To submit:
 - Email complete application to: Application-SI_Cert@epa.gov
Subject line: Permeation Component -Company name-# of submissions & Process Code
 - Example: "Tank –ABC Tanks, Inc.-3 new submissions"
 - One industry and process code per e-mail
 - May submit by mail
- Allow at least 60 days from the time EPA receives a complete application for processing



EPA Review

- Please keep in mind that once you certify, you must comply with all parts of the regulation(s) that apply to your product, such as:
 - Labeling Requirements
 - Average, Banking and Trading (AB&T)
 - Production-line Testing (PLT)
 - In-use Testing
 - Warranties
 - Defect Reports & Recalls
 - Owner's Manual requirements
 - Selective Enforcement Audits
 - Recordkeeping, etc

Other useful information



Heavy-Duty and Nonroad Engines Group

Postal Delivery:

US EPA
1200 Pennsylvania Avenue, NW
Mail Code 6405J
Washington, DC 20460

Overnight/courier Delivery:

US EPA
Heavy-Duty and Nonroad Engine Group
1310 L Street, NW
Suite 601B
Washington, DC 20005

(For all submissions, including exemption requests and defect reports)

- Certification issues
 - Exhaust: Mike Marko, EPA Contractor
marko.michael@epa.gov
 - Evap: Nick Flores, EPA Contractor
flores.nick@epa.gov
- Imports Hotline: 734.214.4100
 - imports@epa.gov
- To submit:
 - AB&T: abt_engine@epa.gov
 - PLT (OB/PWC): plt@epa.gov
- Cert data available at:
www.epa.gov/otaq/certdata.htm

**Small Spark-Ignition Engines and Component Certification
- Summary of Useful Information -**

Topic	Website/E-mail	Contact	
		Name	E-mail
Regulations 40 CFR Parts 90, 1054, 1060, 1065, 1068	http://www.epa.gov/otaq/equip-ld.htm http://www.gpoaccess.gov/cfr/index.html		
<i>Certification Procedures</i>			
Instructions for Certifying Small Nonroad Spark-Ignition Engines ≤ 19 Kilowatts (April 2007)	www.epa.gov/otaq/certdat2.htm		
EPA Manufacturer Code	www.epa.gov/otaq/verify/mfr-code.htm	Pete Petersen	petersen.pete@epa.gov
Fees	https://www.pay.gov www.epa.gov/otaq/fees.htm	Bill VandenBroek	vandenbroek.willem@epa.gov
Application for Certification			
Download template	www.epa.gov/otaq/certdat2.htm		
Get the software (FileMaker Pro 7.0 to 9.0)	www.filemaker.com		
For info on completing/submitting the application			
- Exhaust		Mike Marko	marko.michael@epa.gov
- Evaporative		Nick Flores	flores.nick@epa.gov
Submit by e-mail	application-SI_Cert@epa.gov		
- Subject Line:			
<i>NRSI-Company Name-# of submissions & process code</i>			
- One type of industry and process code per e-mail, please!			
<i>Other Compliance Programs</i>			
Submit reports:			
Production-line Testing (PLT)	plt@epa.gov		
Averaging, Banking and Trading (AB&T)	abt_engine@epa.gov		
Certification Data (posted)	www.epa.gov/otaq/certdata.htm		
Imports	http://www.epa.gov/otaq/imports/index.htm		imports@epa.gov
Exemptions & Exclusions	See mailing addresses below		
Defect Reports & Recalls	See mailing addresses below		
<i>General Information</i>			

General Information www.epa.gov/nonroad
 General Information by topic www.epa.gov/otaq/siteindex.htm
 Dear Manufacturer Letters www.epa.gov/otaq/cert/dearmfr/dearmfr.htm

**Heavy-Duty and Nonroad Engine Group
Compliance and Innovative Strategies Division**

Postal Mail:
 US EPA
 Heavy-Duty and Nonroad Engine Group
 1200 Pennsylvania Avenue, NW
 Mail Code 6405J
 Washington, DC 20460

Overnight/Courier Address:
 US EPA
 Heavy-Duty and Nonroad Engine Group
 1310 L Street, NW
 Suite 601B
 Washington, DC 20005

Above Mailing addresses can be used for submissions, including exemption requests and defect reports.
 Note: Do not send discs to Regular Mail address because mail is irradiated.