



United States
Environmental Protection Agency
Office of Transportation and Air Quality

Manufacturer Averaging, Banking, and Trading Report for Marine Spark Ignition Engines

Last Revision: August 2010 Version Number: 2.1

Exhaust Emission Credits

Submission []

MODEL YEAR:
MANUFACTURER: Small Volume?:

Engine Family Name	Pollutant	Maximum Power (kW)*	Engine Type	Production Volume	FEL (g/kW-hr)	Jet Boat Engine Using Credits from Identical OB/PWC Engine?	Name of Associated OB/PWC Engine Family	Useful Life (hours)	Load Factor	Early Credit Multiplier	Standard (g/kW-hr)	Credit Balance (kg)	Messages

*Maximum power can be calculated using the Max Power Calc worksheet.

SUMMARY OF CURRENT MODEL YEAR EXHAUST CREDITS (kg)	HC+NO _x		CO	
	OB/PWC	SD/I	OB/PWC	SD/I
EARLY CREDITS:	0	0	0	0
STANDARD CREDITS:	0	0	0	0
JETBOAT CREDITS:	0	0	0	0

<p>OMB No. 2060-0338 Approval Expires on October 31, 2022 EPA Form 5900-92</p>	<p>Paperwork Reduction Act Notice The public reporting and recordkeeping burden for this collection of information is estimated to average 453.79 hours per respondent. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2622T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number 2060-0338 in any correspondence. Do not send the completed form to this address.</p>
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Engine Family Name	Configuration	Maximum Power Rating (kW)	Production Volume	Cum. Production Volume	Average Power (kW)

Paperwork Reduction Act Notice

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Field Descriptions (Exhaust and Evaporative Current MY Credit Calculations)

FIELD	DESCRIPTION	
	EXHAUST	EVAP
Engine Family Name/ Emission Family Name of Vessel	Enter the 12-character emission family name for the engine.	Enter the 12-character emission family name for the vessel.
Pollutant	Select the applicable pollutant (HC+NO _x or CO) from the drop-down menu. The engine family name will have separate line items for each pollutant.	NA
Permeation Family Name for Fuel Tank	NA	Enter the permeation family name for the fuel tank for which your evaporative emission ABT credits are being generated or used.
Maximum Power (kW)	Enter the maximum modal power in kW for the emission data test engine over the certification test cycle. The maximum power shall be determined as directed in 40 CFR 1045.140(d) and can be calculated using the Maximum Power Calculation spreadsheet.	NA
Engine Type	Select one of the following two options: 1) Outboard/Personal Watercraft or 2) Stern-drive/Inboard. Note that for Small Volume manufacturers (i.e., if "Yes" is selected in the Small Volume field above the data entry cells), the resulting credit totals for all SD/I engine families will be displayed below the data entry cells as "SD/I - Small Volume" and the corresponding values in the "Standard" column will reflect the provisions for delayed compliance under 40 CFR 1045.145(a).	NA
Tank Category	NA	Select one of the following two options: 1) Personal Watercraft Fuel Tank; 2) Other Installed Fuel Tank.
Production Volume	Enter the production volume of the engine family.	Enter the production volume of the engine family.
Total Area (m ²)	NA	Enter the combined internal surface area of all fuel tanks in the family, in m ² .
FEL (g/kW-hr)	Enter the applicable Family Emission Limit for the engine family in g/kW-hr. (OB/PWC- 40 CFR 1045.103; SD/I- 40 CFR 1045.104; SD/I-Jet Boat- 40 CFR 1045.701(d); Special Provisions- 40 CFR 1045.145(b),(c), and (f)).	Enter the applicable Family Emission Limit for the emission family in g/m ³ /day. (40 CFR 1045.112(b))
Jet Boat Engine Using Credits from Identical OB/PWC Engine? (Yes/No)	Select "Yes" or "No" to indicate whether the jet boat engine family is the same as a certified OB/PWC engine family. Note that Jet Boat Engines are subject to SD/I engine standards. A manufacturer may use exhaust ABT credits from OB/PWC engines subject to the provisions in 40 CFR 1045.701(d).	NA
Name of Associated OB/PWC Engine Family	For engine families with Jet Boat Engine Using Credits from Identical OB/PWC Engine? equal to "Yes," enter the name of the associated OB/PWC engine family. Note that the Jet Boat engine must be the same model as an OB/PWC engine model, but have sales less than the equivalent OB/PWC family.	NA
Useful Life (hours)	Select the useful life in hours (350 for OB/PWC or 480 for SD/I). A manufacturer may input a different useful life for exhaust emissions only if it has received approval from EPA for a longer useful life under 40 CFR 1045.103 or 1045.105.	The useful life is 5 years for personal watercraft and 10 years for all other vessels and for portable marine fuel tanks (40 CFR 1045.112). This value is not displayed in the "Current MY Credit Calc-EVAP" worksheet, but is included in the credit calculation.
Load Factor	This should be 0.207 in most cases. A manufacturer may input a different load factor only if it has received approval from EPA for a Special Test Procedure approved under 40 CFR 1065.10(c)(2).	NA
Test Temperature	NA	Select either 28°C or 40°C to indicate relevant test temperature.
Adjustment Factor	NA	This field will be automatically populated based on the Test Temperature selection. The Adjustment Factor will be 1.0 if the fuel tank testing was performed at 28° C, or 0.60 if the fuel tank testing was performed at 40° C.
Early Credit Multiplier	This field will be automatically populated. A value of 2.0, 1.5, or 1.25 will be entered for SD/I engine families certified by Small Volume Manufacturers in model year 2008, 2009, and 2010, respectively. 40 CFR 1045.145(b)(5)	NA
Standard (g/kW-hr)	This field will be automatically populated with the applicable HC+NO _x or CO standard in g/kW-hr based on the entries for Pollutant, Maximum Power, and Engine Type.	This field will be automatically populated with the applicable evaporative standard in g/m ³ /day: 1.5 if the fuel tank testing was performed at 28° C, or 2.5 if the fuel tank testing was performed at 40° C.
Credit Balance (kg)	This field will reflect the total credit balance (in kilograms) for all engine families by averaging set.	This field will reflect the total credit balance (in kilograms) for all marine vessels.

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Credit Summary for the Part 1045 Marine SI ABT Programs

MODEL YEAR: _____
MANUFACTURER: _____

		EXHAUST				EVAPORATIVE
		HC+NO _x Credits (kg)		CO Credits (kg)		Permeation Emission Credits (kg)
		Outboard and Personal Watercraft (OB/PWC)	Sterndrive/Inboard (SD/I)	Outboard and Personal Watercraft (OB/PWC)***	Sterndrive/Inboard (SD/I)	
Credit Balances before Averaging:						
Current MY	Early Part 1045 Credits		0		0	
	Standard Part 1045 Credits	0	0	0	0	0
	Jet Boat Engine Credits using OB/PWC Credits		0		0	
Banked	Early Part 1045 Credits*					
	Standard Part 1045 Credits					
Traded	Early Part 1045 Credits					
	Standard Part 1045 Credits					
Credits Applied to Current MY Balance:						
Current MY	Apply OB/PWC Credits to Jet Boat SD/I Engines**					
Banked	Apply Early Part 1045 Credits					
	Apply Standard Part 1045 Credits					
Traded	Apply Early Part 1045 Credits					
	Apply Standard Part 1045 Credits					
Credit Balances after Averaging:						
Current MY	Early Part 1045 Credits		0		0	
	Standard Part 1045 Credits	0	0	0	0	0
	Jet Boat SD/I Credits***		0		0	
Banked	Early Part 1045 Credits		0		0	
	Standard Part 1045 Credits	0	0		0	0
Traded	Early Part 1045 Credits		0		0	
	Standard Part 1045 Credits	0	0		0	0

MESSAGES

SUMMARY:						
Standard Part 1045 Credits	0	0	0	0	0	0
Banked/ Traded Standard Part 1045 Credits	0	0		0	0	0
Early Part 1045 Credits		0		0		
Jet Boat SD/I Credits		0		0		

NOTES:

* Early Part 1045 Banked Credits must be used before the 2013 model year, except for small volume manufacturers who must use them before model year 2014.

** Jet boat engines subject to SD/I standards and using credits from OB/PWC engines must: 1) be certified to an FEL that is at or below the Part 1045 standards for OB/PWC engines; 2) be the same model as an OB/PWC engine model, but have sales less than the equivalent OB/PWC family; and 3) only use credits from the manufacturer's same model year OB/PWC engines.

*** Jet boat engine credits and CO credits for OB/PWC engine families may not be banked or traded. As such, any credits in these categories that are left unused after averaging, will not carry forward to the following MY.

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Early Evaporative Allowances for Fuel Tanks Used on Marine SI Engines and Vessels (40 CFR 1045.145(d))

Submission Date

MODEL YEAR:
 MANUFACTURER:

ALLOWANCES ACCRUED				
Emission Family Name of Vessel	Tank Category	Permeation Family Name for Fuel Tank	Number of Allowances Accrued (Production Vol)	Messages

ALLOWANCES USED				
Emission Family Name of Vessel	Tank Category	Permeation Family Name for Fuel Tank	Number of Allowances Used (Production Vol)	Messages

ALLOWANCES SUMMARY				
Averaging Set	Allowances Accrued (current Model Year)	Allowances Used (current Model Year)	Allowances Available from Previous Model Yrs	TOTAL
PWC Tank	0	0		0
Other Installed Tank	0	0		0
Portable Tank	0	0		0

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