



United States
 Environmental Protection Agency
 Office of Transportation and Air Quality
Manufacturer Averaging, Banking, and Trading Report for Heavy Duty Highway Diesel Engines

Last Revision: August 2018 Version Number 2.1.1

Current Model Year Credit Calculations

MODEL YEAR:

Heavy Duty Highway Diesel Engines ABT Template (Credit Calculations) - Version 2.1

Engine Family	Service Class	Offsets Used? (Y/N)	PM Averaging Set	Certified to NOx, NMHC+NOx, or NMHC+NOx Alternate Standard?	NOx or NMHC+NOx FEL	PM FEL	Production Volume (units)	Conversion Factor	Applicable Standard (NOx or NMHC+NOx)	Applicable Standard (PM)	Useful Life (miles)	NOx or NMHC+NOx Averaging Credit Balance	PM Averaging Credit Balance	Messages
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	NOx			NMHC+NOx			PM				
	Light	Medium	Heavy	Light	Medium	Heavy	Urban Bus	Light	Medium	Heavy	
Current MY Deficit				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Current MY Credits available for Averaging											
(NMHC+NOx FEL > trigger: 10% discount applied before banking or trading.)				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(NMHC+NOx FEL < trigger: No discount applied before banking or trading.)				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL CREDITS AVAILABLE FOR AVERAGING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

PHASE-IN PERCENT (% Engines Certified to NOx and PM Standards for 2007+) **NOTE: this percentage must exceed 50% for MY 2007, 2008 and 2009**

OFFSETS ACCRUED PRIOR TO 2007	
OFFSETS USED (MY 2007 through 2009 only)	0
TOTAL OFFSETS	0

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The public reporting and recordkeeping burden for this collection of information is estimated to average 43 hours per response. 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 (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

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Manufacturer Averaging, Banking, and Trading Report for Heavy Duty Highway Diesel Engines

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Summary of Heavy Duty Highway Diesel Credit Balances

Model Year:	Manufacturer:	Averaging Set									
		NOx			NMHC+NOx			PM			
		Light	Medium	Heavy	Light	Medium	Heavy	Urban Bus	Light	Medium	Heavy
Deficit:											
	Current MY Deficit				0.00	0.00	0.00	0.00	0.00	0.00	0.00
Credit Balances before Averaging:											
	Current MY NOx credits	0.00	0.00	0.00							
	Carryover credits banked from prior model years										
	Current MY credits acquired via trading activity										
	Current MY Credits (FEL > trigger: 10% discount before banking or trading.)				0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Current MY Credits (FEL < trigger: No discount.)				0.00	0.00	0.00	0.00	0.00	0.00	0.00
Credit Usage and Averaging:											
	Apply credits acquired via trade										
	Apply carryover credits										
	Apply current MY credits (FEL > trigger)										
	Apply current MY credits (FEL < trigger)										
	Apply NMHC+NOx credits to NOx Balance										
	Credits applied to NOx Balance (w/ 20% discount)	0.00	0.00	0.00							
Credit Summary after Averaging:											
	Current MY Deficit				0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Carryover credit balance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Credits acquired via trading activity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Current MY credit bal. (FEL > trigger)				0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Discount Amount (10%)				0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Current MY credit bal. (FEL > trigger) after discount				0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Current MY credit bal. (FEL < trigger)				0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Current MY Credits for Banking/Trading	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Total Credit Balance after Averaging	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

*** Please make sure you have Automatic Calculations turned ON. [Tools --> Options --> Calculation tab. Select the 'Automatic' radio button]

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Field Descriptions for Credit Calculations- Current MY

FIELDS (for Credit Calculation - Current MY)	NOTES
Engine Family	Enter the 12-character engine family name or test group name.
Service Class	Enter the primary intended service class for the associated engine family. Available options are Light, Medium, and Heavy.
Offsets Used? (Y/N)	Select Y or N to indicate whether the engine family is using Offsets generated in previous model years. A selection of "Y" precludes participation in the ABT program and as such, credits will not be calculated.
PM Averaging Set	Enter the PM Averaging set - 'PM - Urban Bus' or 'PM - Other'.
Certified to NOx, NMHC+NOx, or NMHC+NOx Alternate Standard?	Indicate whether the engine family has been certified to the NOx standards for 2007 and later HDEs or the NMHC+NOx standards by selecting from the drop-down menu.
NOx or NMHC+NOx FEL	Enter the applicable standard for NOx or NMHC+NOx for the engine family. The NMHC+NOx standard for "Phase-out" engines must either be 2.4 or 2.5 g/bhp-hr. If the latter is chosen, the NMHC component must be no more than 0.5 g/bhp-hr.
PM FEL	Enter the NMHC+NOx FEL for the engine family.
Production Volume (units)	Enter the PM FEL for the engine family.
Conversion Factor	Enter the number of engines produced for U.S. sales within the associated engine family during the model year.
Applicable Standard (NOx or NMHC+NOx)	Enter the transient cycle conversion factor in bhp-hr/mile or MJ/mile for the associated engine family.
Applicable Standard (PM)	This is a determined value based on the PM Averaging Set.
Useful Life (miles)	The useful life for the engine family is determined based upon the Service Class entered. The options are 110, 185, and 435 for the Light, Medium, and Heavy service classes respectively.
NOx or NMHC+NOx Averaging Credit Balance	This is a calculated value based on the applicable NOx or NMHC+NOx standard, the entered FEL, conversion factor, useful life, and production volume. If the parameter is NMHC+NOx (i.e., phase-out engines), then the credit balance reflects the required 10% discount that is applied if the NMHC+NOx FEL is greater than the 1.90 g/bhp-hr cut-off point.
PM Averaging Credit Balance	This is a calculated value based on the applicable PM standard, the entered FEL, conversion factor, useful life, and production volume. If the engine family is certified to the NMHC+NOx standard (i.e., phase-out engines), then this PM credit balance also reflects the required 10% discount that is applied to both the NMHC+NOx and PM credit balances if the NMHC+NOx FEL is greater than the 1.90 g/bhp-hr cut-off point.

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