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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 85, 86, 1036, 1037, 1065, 1066, and 1068

DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

49 CFR Parts 523, 534 and 535

[EPA-HQ-OAR-2010-0162; FRL-9219-4; NHTSA 2010-0079]

RIN 2060-AP61; RIN 2127-AK74

**Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium-
and Heavy-Duty Engines and Vehicles**

AGENCY: Environmental Protection Agency (EPA) and National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT).

ACTION: Proposed rules; correction.

SUMMARY: NHTSA and EPA published in the **Federal Register** of November 30, 2010, proposed rules to establish a comprehensive Heavy-Duty National Program that will increase fuel efficiency and reduce greenhouse gas emissions for on-road heavy-duty vehicles, responding to the President's directive on May 21, 2010, to take coordinated steps to produce a new generation of clean vehicles. That document inadvertently contained some incorrect fuel consumption values in NHTSA-specific tables in the preamble that resulted from using an incorrect conversion factor for determining CO₂ emissions to equivalent fuel consumption for gasoline fuel. That document also contained some rounding errors in NHTSA-specific tables in the preamble. This document corrects the rounding errors by adopting a uniform rounding

approach for all fuel consumption equivalents for those NHTSA-specific tables and makes the appropriate corrections to the conversions.

EFFECTIVE DATE: [insert date of publication in the **Federal Register**].

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SUPPLEMENTARY INFORMATION: NHTSA and EPA published in the **Federal Register** of November 30, 2010, proposed rules to establish a comprehensive Heavy-Duty National Program that will increase fuel efficiency and reduce greenhouse gas emissions for on-road heavy-duty vehicles, responding to the President’s directive on May 21, 2010, to take coordinated steps to produce a new generation of clean vehicles. That document inadvertently contained some incorrect fuel consumption values in NHTSA-specific tables in the preamble that resulted from using an incorrect conversion factor for determining CO₂ emissions to equivalent fuel consumption for gasoline fuel. The correct values that should have been used in the document are a factor of 1,018 grams of CO₂ per gallon of diesel for conversion of diesel fuel, and a factor of 8,887 grams of CO₂ per gallon of gasoline for gasoline.

That document also contained some rounding errors in NHTSA-specific tables in the preamble. This document corrects the rounding errors by adopting a uniform rounding approach for all fuel consumption equivalents and makes the appropriate corrections to the conversions. These changes are made to several NHTSA-specific tables and in several places in the NHTSA-specific text of the preamble. The proposed regulatory text for both NHTSA and EPA is not affected.

In FR Doc. 2010-28120, appearing on page 74152 in the **Federal Register** of Tuesday, November 30, 2010, the following corrections are made:

1. On page 74176, correct Table II-1 and accompanying footnote 39 by revising them to read as follows:

Table II-1: Heavy-duty Combination Tractor Emissions and Fuel Consumption Standards

2014 Model Year CO ₂ Grams per Ton-Mile			
	Day Cab		Sleeper Cab
	Class 7	Class 8	Class 8
Low Roof	104	79	65
Mid Roof	104	79	70
High Roof	118	87	73
2014-2016 Model Year Gallons of Fuel per 1,000 Ton-Mile ³⁹			
	Day Cab		Sleeper Cab
	Class 7	Class 8	Class 8
Low Roof	10.2	7.8	6.4
Mid Roof	10.2	7.8	6.9
High Roof	11.6	8.5	7.2
2017 Model Year CO ₂ Grams per Ton-Mile			
	Day Cab		Sleeper Cab
	Class 7	Class 8	Class 8
Low Roof	103	78	64
Mid Roof	103	78	69
High Roof	116	86	71
2017 Model Year Gallons of Fuel per 1,000 Ton-Mile			
	Day Cab		Sleeper Cab
	Class 7	Class 8	Class 8
Low Roof	10.1	7.7	6.3
Mid Roof	10.1	7.7	6.8
High Roof	11.4	8.4	7.0

2. On page 74194, correct Tables II-7 and II-8 by revising them to read as follows:

³⁹ Manufacturers may voluntarily opt-in to the NHTSA fuel consumption program in 2014 or 2015. If a manufacturer opts-in, the program becomes mandatory. See Section I.B.5 for more information about NHTSA's voluntary opt-in program for MYs 2014 and 2015.

Table II-2: Coefficients for Proposed HD Pickup and Van Target Standards⁷⁴

Diesel Vehicles				
Model Year	a	b	c	D
2014	0.0478	368	0.000470	3.61
2015	0.0474	366	0.000466	3.60
2016	0.0460	354	0.000452	3.48
2017	0.0445	343	0.000437	3.37
2018 and later	0.0416	320	0.000409	3.14
Gasoline Vehicles				
Model Year	a	b	c	D
2014	0.0482	371	0.000542	4.17
2015	0.0479	369	0.000539	4.15
2016	0.0469	362	0.000528	4.07
2017	0.0460	354	0.000518	3.98
2018 and later	0.0440	339	0.000495	3.81

Table II-3: Coefficients Proposed for NHTSA's First Alternative and EPA's Alternative HD Pickup and Van Target Standards

Diesel Vehicles				
Model Year	a	b	c	D
2014 ^a	0.0478	368	0.000470	3.61
2015 ^a	0.0474	366	0.000466	3.60
2016-2018	0.0440	339	0.000432	3.33
2019 and later	0.0416	320	0.000409	3.14
Gasoline Vehicles				
Model Year	a	b	c	D
2014 ^a	0.0482	371	0.000542	4.17
2015 ^a	0.0479	369	0.000539	4.15
2016-2018	0.0456	352	0.000513	3.96
2019 and later	0.0440	339	0.000495	3.81

3. On page 74202, correct Table II-11 by revising it to read as follows:

⁷⁴ The NHTSA proposal provides voluntary standards for model years 2014 and 2015. Target line functions for 2016-2018 are for the second NHTSA alternative described in Section II.C(d)(ii).

Table II-4: Proposed Vocational Diesel Engine Standards Over the Heavy-Duty FTP Cycle

Model Year	Standard	Light Heavy-Duty Diesel	Medium Heavy-Duty Diesel	Heavy Heavy-Duty Diesel
2014-2016	CO ₂ Standard (g/bhp-hr)	600	600	567
	Voluntary Fuel Consumption Standard (gallon/100 bhp-hr)	5.89	5.89	5.57
2017 and Later	CO ₂ Standard (g/bhp-hr)	576	576	555
	Fuel Consumption (gallon/100 bhp-hr)	5.66	5.66	5.45

4. On page 74202, in the third column, correct the first sentence of the first complete paragraph by revising it to read as follows: “The baseline 2010 model year CO₂ performance of these heavy-duty gasoline engines over the Heavy-duty FTP cycle is 660 g CO₂/bhp-hr (7.43 gal/100 bhp-hr) in 2010 based on non-GHG certification data provided to EPA by the manufacturers.”

5. On page 74202, in the third column, correct the first sentence of the second complete paragraph by revising it to read as follows: “NHTSA is proposing a 7.06 gallon/100 bhp-hr standard for fuel consumption while EPA is proposing a 627 g CO₂/bhp-hr standard tested over the Heavy-duty FTP, effective in the 2016 model year.”

6. On page 74220, correct Table III-2 by revising it to read as follows:

Table III-5: Class 7 and 8 Tractor Baseline CO₂ Emissions and Fuel Consumption

	Class 7		Class 8				
	Day Cab		Day Cab		Sleeper Cab		
	Low/Mid Roof	High Roof	Low/Mid Roof	High Roof	Low Roof	Mid Roof	High Roof
CO ₂ (grams CO ₂ /ton-mile)	111	130	84	96	76	81	89
Fuel Consumption (gal/1,000 ton-mile)	10.9	12.8	8.3	9.4	7.5	8.0	8.6

7. On page 74225, correct Table III-6 by revising it to read as follows:

Table III-6: Proposed 2014 and 2017 Model Year Tractor Reductions

	Class 7		Class 8				
	Day Cab		Day Cab		Sleeper Cab		
	Low/Mid Roof	High Roof	Low/Mid Roof	High Roof	Low Roof	Mid Roof	High Roof
2014 Model Year							
2014 MY Voluntary Fuel Consumption Standard (gallon/1,000 ton-mile)	10.2	11.6	7.8	8.5	6.4	6.9	7.2
2014 MY CO ₂ Standard (grams CO ₂ /ton-mile)	104	118	79	87	65	70	73
Percent Reduction	6%	9%	6%	9%	15%	14%	18%
2017 Model Year							
2017 MY Fuel Consumption Standard (gallon/1,000 ton-mile)	10.1	11.4	7.7	8.4	6.3	6.8	7.0
2017 MY CO ₂ Standard (grams CO ₂ /ton-mile)	103	116	78	86	64	69	71
Percent Reduction	7%	11%	7%	10%	16%	15%	20%

8. On page 74244, correct Table III-12 by revising it to read as follows:

Table III-7: Baseline Vocational Vehicle Performance

	Vocational Vehicle		
	Light Heavy-Duty	Medium Heavy-Duty	Heavy Heavy-Duty
Fuel Consumption Baseline (gallon/1,000 ton-mile)	37.5	22.3	11.3
CO ₂ Baseline (grams CO ₂ /ton-mile)	382	227	115

9. On page 74245, correct Table III-14 by revising it to read as follows:

Table III-8: Proposed Vocational Vehicle Standards and Percent Reductions

	Vocational Vehicle		
	Light Heavy-Duty	Medium Heavy-Duty	Heavy Heavy-Duty
2016 MY Fuel Consumption Standard (gallon/1,000 ton-mile)	35.2	20.8	10.7
2017 MY Fuel Consumption Standard (gallon/1,000 ton-mile)	33.8	20.0	10.5
2014 MY CO ₂ Standard (grams CO ₂ /ton-mile)	358	212	109
2017 MY CO ₂ Standard (grams CO ₂ /ton-mile)	344	204	107
Percent Reduction from 2010 baseline in 2014 MY	6%	7%	5%
Percent Reduction from 2010 baseline in 2017 MY	10%	10%	7%

10. On page 74245, in the third column, correct the second sentence of the third paragraph by revising it to read as follows: “The agencies are projecting a 100% application rate of this technology package to the heavy-duty gasoline engines, which results in a CO₂ standard of 627 g/bhp-hr and a fuel consumption standard of 7.06 gallon/100 bhp-hr.”

11. On page 74440, correct Table 1 by revising it to read as follows:

Table 1– Equation Coefficients for Vehicle Configuration Target Standards

Alternative 1 – Fixed Target Standards		
Compression-ignition Vehicle Coefficients for Model Years 2016 and later		
Model Year	c	D
2016 through 2018	0.000432	3.33
2019 and later	0.000409	3.14
Spark-ignition Vehicle Coefficients for Model Years 2016 and later		
2016 through 2018	0.000513	3.96
2019 and later	0.000495	3.81
Alternative 2 – Phased-in Target Standards		
Compression-ignition Vehicle Coefficients for Model Years 2016 and later		
Model Year	c	D
2016	0.000452	3.48
2017	0.000437	3.37
2018 and later	0.000409	3.14
Spark-ignition Vehicle Coefficients for Model Years 2016 and later		
2016	0.000528	4.07
2017	0.000518	3.98
2018 and later	0.000495	3.81

12. On page 74442, correct Table 2 by revising it to read as follows:

Table 2 – Voluntary Compliance Equation Coefficients for Vehicle Fuel Consumption Standards

Compression-ignition Vehicle Coefficients for Voluntary Compliance in Model Years 2013 through 2015		
Model Year	c	d
2013 and 14	0.000470	3.61
2015	0.000466	3.60
Spark-ignition Vehicle Coefficients for Voluntary Compliance in Model Years 2013 through 2015		
Model Year	c	d
2013 and 14	0.000542	4.17
2015	0.000539	4.15

13. On page 74444, correct Table 4 by revising it to read as follows:

Table 4 – Truck Tractor Fuel Consumption Standards

Fuel Consumption Standards (gallons per 1000 ton-miles) Effective for Model Years 2017 and later			
Regulatory Subcategories	Day Cab		Sleeper Cab
	Class 7	Class 8	Class 8
Low Roof	10.1	7.7	6.3
Mid Roof	10.1	7.7	6.8
High Roof	11.4	8.4	7.0
Fuel Consumption Standards (gallons per 1000 ton-miles) Effective for Model Years 2013 to 2016			
Regulatory Subcategories	Day Cab		Sleeper Cab
	Class 7	Class 8	Class 8
Low Roof	10.2	7.8	6.4
Mid Roof	10.2	7.8	6.9
High Roof	11.6	8.5	7.2

14. On page 74445, correct Table 5 by revising it to read as follows:

Table 5 – Heavy-Duty Engine Standards

Fuel Consumption Standards (gallons per100 bhp-hr)						
Regulatory Subcategory	Light Heavy-Duty Compression-Ignition Engine	Medium Heavy-Duty Compression-Ignition Engine		Heavy Heavy-Duty Compression-Ignition Engine		Spark-ignition Engines
Truck Application	Vocational	Vocational	Tractor	Vocational	Tractor	All
Effective Model Years	2017 and later					2016 and later
Fuel Consumption Standard	5.66	5.66	4.78	5.45	4.52	7.06
Fuel Consumption Standards for Voluntary Compliance (gallons per100 bhp-hr)						
Regulatory Subcategory	Light Heavy-Duty Diesel Engine	Medium Heavy-Duty Diesel Engine		Heavy Heavy-Duty Diesel Engine		Spark-ignition Engine
Truck Application	Vocational	Vocational	Tractor	Vocational	Tractor	All
Effective Model Years	2013 through 2016					2013 through 2015
Voluntary Fuel Consumption Standard	5.89	5.89	4.93	5.57	4.67	7.06

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