

SmartWay 2.0.8

Trucking Model Technical Documentation - Final

12-24-09



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1.0 Overview

The SmartWay 2.0 Trucking Model utilizes the most up-to-date emission factors, in combination with detailed vehicle activity data, to estimate precise, accurate emission performance measures Partner truck fleets. While the previous version of the truck carrier model (FLEET) calculated the likely fuel and emission reduction benefits of specific advanced technologies (e.g., through the adoption of certified aerodynamic retrofits) relative to a pre-control baseline, the new model is designed to calculate actual pollutant emissions for specific truck types and applications. The modified model thereby allows fleet operators and shippers to determine the carbon-footprint associated with their freight activity, as well as estimates for NOx and PM emissions.

The new model allows the user to evaluate fleet performance in terms of different mass-based metrics, including:¹

- Grams per mile
- Grams per average payload ton-mile
- Grams per thousand cubic foot-miles
- Grams per thousand utilized cubic foot-miles

Estimates are provided for CO₂, NOx, and PM. In addition, each of these metrics can be calculated and displayed for total miles, loaded miles, and revenue miles. Fleet performance can then be assessed at the truck class and/or fuel type level, or on an aggregated basis across all classes and fuels.

The new version of the model also collects extensive information on fleet operations and truck body types, allowing detailed segmentation of Partner fleets for more appropriate, equitable comparisons. For example, fleets that cube-out with low payloads (e.g., those hauling potato chips) should not be compared on a simple grams per mile basis with fleets that routinely weigh out. Similarly, fleets that operate in primarily short-haul, urban environments at relatively low average speeds will have fundamentally different emission rates and constraints than long-haul fleets operating at highway speeds. By collecting detailed information on fleet operations (short vs. long, TL vs. LTL, urban vs. highway, etc), as well as truck class (2b through 8b) and body type (dry van, reefer, flatbeds, etc.), carriers may be segmented allowing their performance to be compared on a more reasonable basis, using the most appropriate performance metrics.

The following provides detailed documentation of the data sources, calculation methods, and assumptions used within the updated Trucking Model to estimate fleet-specific performance metrics.

¹ At this time the 2.0 Trucking Model does not calculate performance metrics for specialty fleets that track their activity in terms of hours of use rather than miles traveled or freight hauled (e.g., refuse haulers and utility fleets). Future modifications may be made to the current model to accommodate such fleets.

This document provides valuable background information for those entities performing carbon footprint development, NOx and PM evaluation, as well as efficiency performance assessments.

2.0 Data Inputs and Sources

Most vehicle characteristic, operational, and activity data needed for emissions performance estimation are provided by the Trucking Model user. The required emission rate data have been collected from recent published sources, and are stored in look-up tables within the model.

Emission rate data are of two primary types, depending upon the pollutant. CO₂ emission estimates are calculated from fuel factors expressed in grams of CO₂ per gallon of fuel.² NOx and PM are calculated from emission factors expressed in grams of pollutant per mile traveled for operating emissions, and in grams per hour for idle emissions. In general, fuel factors are independent of the type of vehicle used and the way in which it is operated. Emission factors, however, vary depending upon a number of parameters, including:

- Truck class
- Engine model year/emission certification standard
- Vehicle speed
- Vehicle driving pattern (referred to as “drive cycle”)

In addition, PM emissions will also vary with the application of PM control retrofits, including diesel oxidation catalysts (DOC), closed crankcase ventilation (CCV), and diesel particulate filters (DPF). PM control adjustments are applied equally to operating as well as idle emission factors.

2.1 Fuel Factors

The truck model utilizes the latest fuel factors obtained from the EPA Office of Transportation and Air Quality, and are summarized below in Table 1.

Table 1. CO₂ Fuel Factors by Fuel Type*

	g/gal	Source³
Gasoline	8,887	(i)
Diesel	10,180	(i)
Biodiesel (B100)	9,460	(ii)
Ethanol (E100)	5,764	(i)
CNG	7,030	(i)
LNG	4,394	(iii)
LPG	5,790	(iv)

* 100% oxidized

Note that fuel factors for biofuel blends (gasoline/ethanol, diesel/biodiesel) were calculated separately by volume for each blend component and added together to determine total CO₂ emissions. Therefore separate fuel factors were not needed for each possible blend ratio.

² At this time other greenhouse gases such as methane (CH₄) and nitrous oxide (N₂O) are not included in the FLEET2.0 model.

³ i) U.S. EPA, Office of Transportation and Air Quality, Calculating CO₂-e Emissions: Light Duty Vehicles and Medium-Duty Passenger Vehicles, August 6, 2009.

ii) Tables IV.A.3-2 and 3-3 in A Comprehensive Analysis of Biodiesel Impacts on Exhaust Emissions, available at <http://www.epa.gov/oms/models/analysis/biodsl/p02001.pdf>

iii) Assuming 74,720 Btu/gal lower heating value (<http://www.afdc.energy.gov/afdc/fuels/properties.html>), and 0.059 g/Btu (from CNG calculation).

iv) From Direct Fuel Factor table obtained from Sarah Froman, EPA – June 18, 2008.

Within the Trucking Model, users may provide their CNG fuel use estimates in terms of diesel-equivalent gallons, or in standard cubic feet (scf). If CNG consumption is expressed in scf, the model applies a fuel factor expressed in grams per scf (57.8), based on 983 Btu/scf and 58,819 g CO₂/mmBtu.⁴

2.2 Emission Factors

NOx and PM emission factors for diesel, gasoline, and E10 were obtained from the beta version of EPA's Motor Vehicle Emissions Simulator (MOVES2009) model, for each possible truck class, vehicle speed group, and drive cycle.⁵ In order to assess the sensitivity of the model to variations in driver cycles, vehicle weight, and vehicle regulatory classification, ERG reviewed the documentation, database, and source code of EPA's MOVES model.⁶

The MOVES model departs from the MOBILE6 model in the way that it groups vehicles for emission calculations. The intent of the new MOVES system is to bridge the gap between the activity data and emissions data. According to the EPA MOVES Draft Software Design and Reference Manual (February 2007):

On the activity side, vehicles are grouped into "Source Use Types," or "Use Types", which are expected to have unique activity patterns. Because the HPMS is a fundamental source of activity information, the MOVES use types are defined as subsets of the HPMS vehicle classifications.

...However, emission rates contained in the model are not broken down by use type, for two (related) reasons: first, emission and fuel consumption data are not gathered according to use types or other activity-based classifications (e.g. HPMS). Second, the factors that influence fuel consumption and emission production are different from how vehicles are used.

...It is necessary to account for these differences in fuel consumption and emission generation separately from activity patterns. To do this, the MOVES design has implemented the concept of "Source Bins." Unique source bins are differentiated by characteristics that significantly influence fuel (or energy) consumption and emissions – and because these vary by pollutant, they are allowed to vary by pollutant in MOVES.

The MOBILE6 vehicle classes of interest to the SmartWay Trucking Model are shown in Table 2 below. Included in this table is an ERG created cross mapping to the MOVES Weight Class (shown in Table 3) and Regulatory class (shown in Table 4).

⁴ U.S. EPA, Office of Transportation and Air Quality, Calculating CO₂-e Emissions: Light Duty Vehicles and Medium-Duty Passenger Vehicles, August 6, 2009.

⁵ Obtained from <http://www.epa.gov/otaq/models/moves/index.htm>, last validated August 21, 2009.

⁶ At the time of ERG's assessment, the MOVES model was still in draft form. The documentation was from February 2007 and the source code was from December 16, 2008.

Table 2. MOBILE6 Vehicle Classes of Interest

MOBILE 6 Classification			Gross Vehicle Weight Rating (GVWR)				Initial Assignment to MOVES Groupings	
Code	Description	HPMSV Type	Low	High	Midpoint lbs	Midpoint Tons	Weight Class	Regulatory Class
HDV2B	Class 2b Heavy-Duty Vehicles	30	8,501	10,000	9,251	4.63	100	41
HDV3	Class 3 Heavy-Duty Vehicles	50	10,001	14,000	12,001	6.00	140	41
HDV4	Class 4 Heavy-Duty Vehicles	50	14,001	16,000	15,001	7.50	160	42
HDV5	Class 5 Heavy-Duty Vehicles	50	16,001	19,500	17,751	8.88	195	42
HDV6	Class 6 Heavy-Duty Vehicles	50	19,501	26,000	22,751	11.38	260	46
HDV7	Class 7 Heavy-Duty Vehicles	50	26,001	33,000	29,501	14.75	330	46
HDV8A	Class 8a Heavy-Duty Vehicles	60	33,001	60,000	46,501	23.25	500	47
HDV8B	Class 8b Heavy-Duty Vehicles	60	>60,000		60,000	30.00		47

Table 3. MOVES Weight Classes

Weight Class ID	Weight Class Name	Midpoint Weight (pounds)
20	weight < 2000 pounds	1,000
25	2,000 pounds <= weight < 2,500 pounds	2,250
30	2,500 pounds <= weight < 3,000 pounds	2,750
35	3,000 pounds <= weight < 3,500 pounds	3,250
40	3,500 pounds <= weight < 4,000 pounds	3,750
45	4,000 pounds <= weight < 4,500 pounds	4,250
50	4,500 pounds <= weight < 5,000 pounds	4,750
60	5,000 pounds <= weight < 6,000 pounds	5,500
70	6,000 pounds <= weight < 7,000 pounds	6,500
80	7,000 pounds <= weight < 8,000 pounds	7,500
90	8,000 pounds <= weight < 9,000 pounds	8,500
100	9,000 pounds <= weight < 10,000 pounds	9,500
140	10,000 pounds <= weight < 14,000 pounds	12,000
160	14,000 pounds <= weight < 16,000 pounds	15,000
195	16,000 pounds <= weight < 19,500 pounds	17,750
260	19,500 pounds <= weight < 26,000 pounds	22,750
330	26,000 pounds <= weight < 33,000 pounds	29,500
400	33,000 pounds <= weight < 40,000 pounds	36,500
500	40,000 pounds <= weight < 50,000 pounds	45,000
600	50,000 pounds <= weight < 60,000 pounds	55,000
800	60,000 pounds <= weight < 80,000 pounds	70,000
1000	80,000 pounds <= weight < 100,000 pounds	90,000
1300	100,000 pounds <= weight < 130,000 pounds	115,000
9999	130,000 pounds <= weight	130,000
5	weight < 500 pounds (for MCs)	350
7	500 pounds <= weight < 700 pounds (for MCs)	600
9	700 pounds <= weight (for MCs)	700

Table 4. MOVES Regulatory Classes

Regulatory Class ID	Regulatory Class Name	Regulatory Class Description
10	MC	Motorcycles
20	LDV	Light Duty Vehicles
30	LDT	Light Duty Trucks
41	LHD<=14k	Light-Heavy Duty (8.5K lbs < GVWR <= 14K lbs)
42	LHD45	Light-Heavy Duty (14K lbs < GVWR <= 19.5K lbs)
46	MHD	Medium-Heavy Duty (19.5K lbs < GVWR < =33K lbs)
47	HHD	Heavy-Heavy Duty (GVWR > 33K lbs)
48	Urban Bus	Urban Bus (see CFR Sec. 86.091_2)

An initial cross reference from the MOBILE6 vehicle types to the new MOVES source types can be performed through the use of the HPMSVtypeID shown in Tables 5 and 2. The groupings and source binning performed by MOVES prevents a direct one to one mapping from MOBILE6 vehicles to MOVES vehicles.

Table 5. MOVES Source Types

Source Type ID	HPMSV Type ID	Source Type Name	Source Mass (Tons)
11	10	Motorcycle	0.295
21	20	Passenger Car	1.48
31	30	Passenger Truck	1.87
32	30	Light Commercial Truck	2.06
41	40	Intercity Bus	19.59
42	40	Transit Bus	16.56
43	40	School Bus	9.07
51	50	Refuse Truck	20.68
52	50	Single Unit Short-haul Truck	7.64
53	50	Single Unit Long-haul Truck	6.25
54	50	Motor Home	6.73
61	60	Combination Short-haul Truck	29.33
62	60	Combination Long-haul Truck	31.40

For the SmartWay Trucking Model we focused on the following MOVES source types:

- Single Unit Short-Haul Truck
- Single Unit Long-Haul Truck
- Combination Short-Haul Truck
- Combination Long-Haul Truck

Drive Cycles

The MOVES database currently contains 40 different drive cycles. Of these, 15 were determined to be of possible interest for use in the Trucking model (see Table 6). Each drive cycle contains the second by second speed of the vehicle. A graph of two drive cycles is provided in Figure 1 for reference.

Figure 1. Example MOVES Drive Cycles

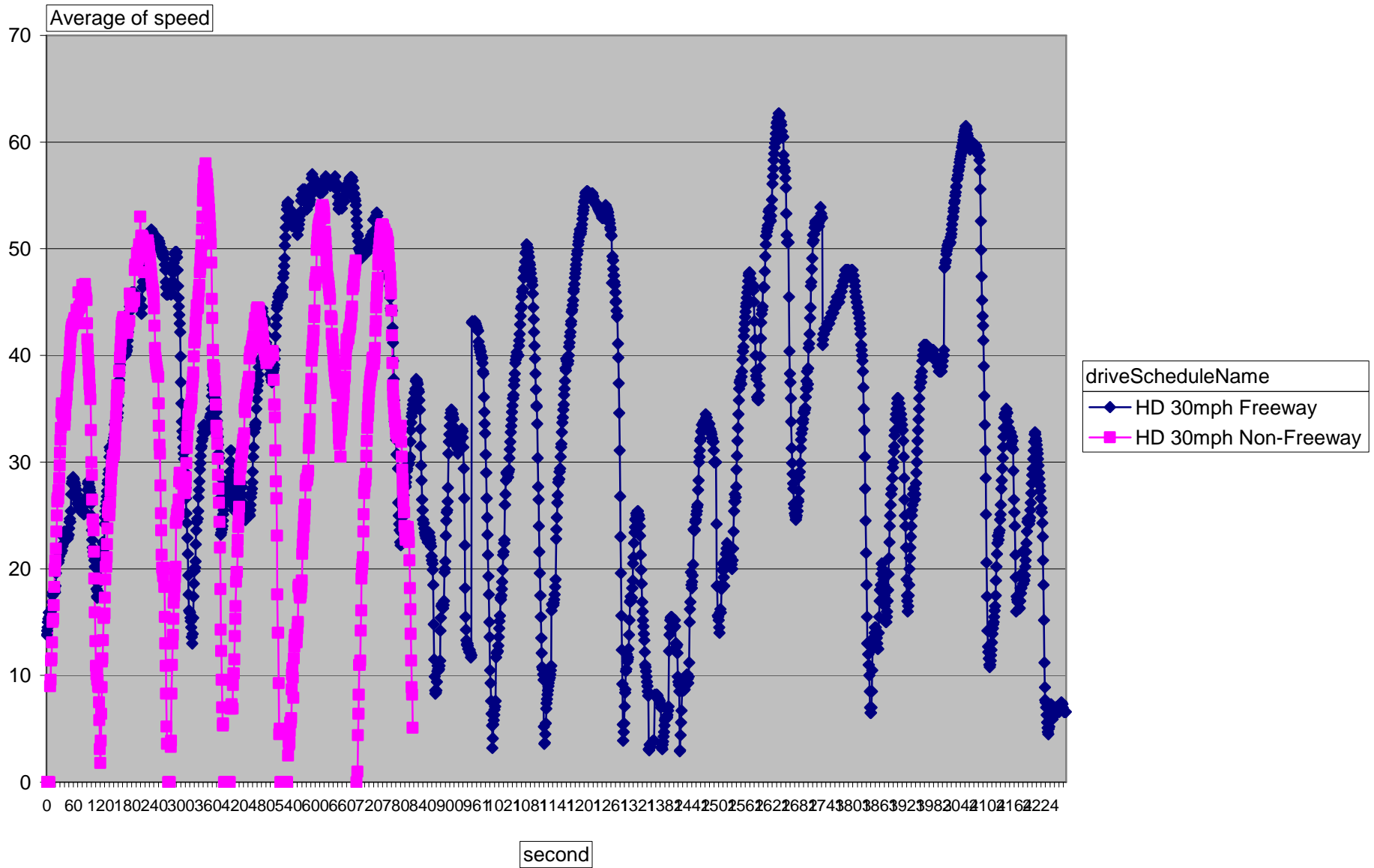


Table 6. MOVES Drive Cycles of Interest

Drive Schedule ID	Average Speed (mph)	Drive Schedule Name
301	5.8	HD 5mph Non-Freeway
302	11.2	HD 10mph Non-Freeway
303	15.6	HD 15mph Non-Freeway
304	19.4	HD 20mph Non-Freeway
305	25.6	HD 25mph Non-Freeway
306	32.5	HD 30mph Non-Freeway
351	34.3	HD 30mph Freeway
352	47.1	HD 40mph Freeway
353	54.2	HD 50mph Freeway
354	59.4	HD 60mph Freeway
399	25.3	HD Freeway Ramp
401	15	Bus Low Speed Urban
402	30	Bus 30 mph Flow
403	45	Bus 45 mph Flow
501	2.2	Refuse Truck Urban

Drive cycles are used by the MOVES model to calculate the second by second vehicle specific power (VSP) by source type. This calculation takes into account the mass and other characteristics (such as vehicle drag) in the source type table for each source type. The VSP information is then used to calculate the operating mode distribution by source type. This in turn is used to weight the emission factors which are applied to source hours of operation to calculate actual emissions.

In order to assess the sensitivity of the MOVES model to the various drive cycles, the second by second speed information was adjusted for all drive cycles applicable to a given source type, in order to evaluate only one drive cycle at a time. This had the desired effect of changing the VSP results and Operating Mode Distribution, while leaving the hours of operation constant. Due to variations in hours of operation across source types it is only valid to compare differences in drive cycle emissions within a source type. That is, it is not valid to compare across two different source types.

After reviewing the results, it was concluded that:

- The differences between the emissions of the 30 mph non-freeway and 30 mph freeway drive cycles are relatively small.
- The difference between the bus drive schedule and the freeway/non-freeway schedules is substantial.

The different drive cycle/speed combinations were then evaluated to identify a reasonable set of combinations to represent Partner fleet operations. For example, transit bus drive cycles, which feature frequent starts and stops at low speeds, with short idle periods, were selected to represent urban driving conditions. Such drive cycles may be selected to model NO_x and PM emissions

for Pick up and Delivery fleets. Two “urban” cycles were selected, one featuring low speeds (< 30 mph) which might be representative of CBD operations, and one featuring higher speeds (> 30 mph), more appropriate for drive cycles with significant arterial operation.

Highway operation was modeled for the following average speed bins in mph:

- <20
- 20 – 30
- 30 – 40
- 40 – 50
- 50 – 60
- 60+

In this case the lower speed bins are more indicative of congested (and therefore “urban”) operation, but reflect freeway conditions, rather than arterial/local road conditions. (Higher speeds would reflect free-flow / long-haul operation.) For this reason all highway operations are grouped separately from the two “urban” cycles described above.

Therefore, based on the analysis it was concluded that the primary information needed to characterize drive cycles is:

- Percentage split between “Urban” versus “Highway” operation, on a mileage basis;
- Average Speed

Vehicle Weight and GVWR

According to the MOVES documentation, vehicle weight is taken into account in the following way:

- Source Type Table includes Source mass, which is used in the VSP calculation.
- Binning of sources is performed on a pollutant and process basis and may take into account:
 - Size weight fraction within a source type
 - Regulatory class fraction within a source type

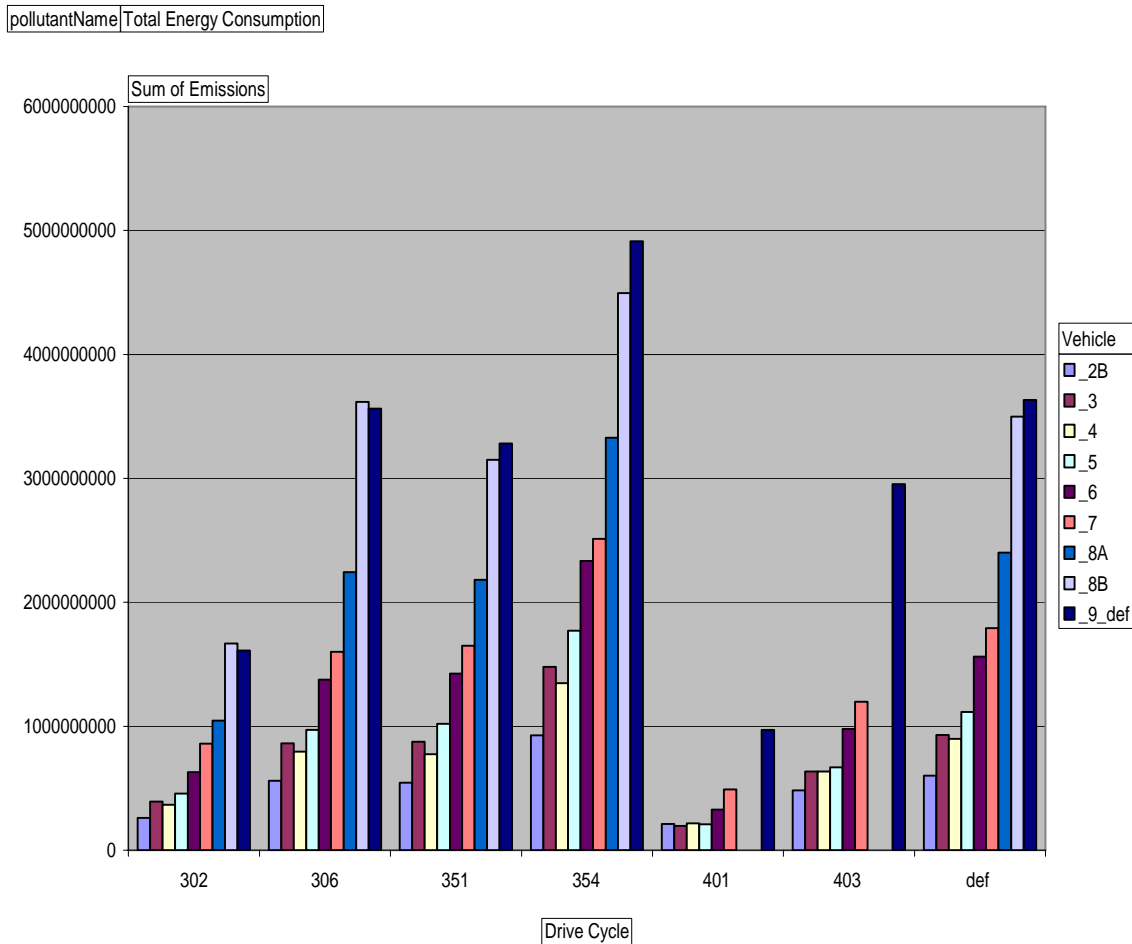
In order to assess the impact of vehicle weight on MOVES model outputs, the three different references to vehicle weight in the supporting data were modified such that only one MOBILE6 vehicle class was evaluated per run. This was done for the default distribution of drive cycles, and then all drive cycles were modified to reflect one of six drive cycles shown in Table 7 below.

Table 7. Drive Cycles Used for Sensitivity Analysis

Name	Average Speed (mph)	Type	Drive Cycle ID
HD 30mph Freeway	30	low	351
HD 10mph Non-Freeway	10	low	302
Bus Low Speed Urban	15	low	401
HD 60mph Freeway	60	high speed	354
HD 30mph Non-Freeway	30	high speed	306
Bus 45 mph Flow	45	high speed	403

During review of the data outputs some anomalies with the NOx and PM emission results were discovered.⁷ However, the total energy consumption results did follow expected trends. These results are shown Figure 2, indicating that vehicle weight does have a large influence on MOVES outputs. Therefore based on the total energy consumption estimates, it was concluded that the SmartWay model should continue to collect data at the more resolved MOBILE6 vehicle class level, rather than the more aggregated MOVES basis.

Figure 2. Energy Consumption by Weight Class



⁷ ERG subsequently passed along the anomalous results to EPA for review and further discussion.

Emission factor outputs were obtained using the beta version of the MOVES model for the 2009 calendar year, for all heavy truck classes (2b – 8b), for model years 1988 through 2010, for operating emissions (see Appendix A). Separate factors were modeled for gasoline, diesel, and E10. Note that current MOVES model outputs are considered draft and subject to change. These factors will be updated with new values once the MOVES model is finalized in 2010.

Idle emission factors for NOx and PM10 were developed separately. The MOVES model does not currently output idle factors, so the MOBILE6.2 model was used for this purpose. PM idle factors in grams per hour were output directly from MOBILE for fleet average diesel trucks by class for the 2009 calendar year, assuming ultra low sulfur diesel. PM idle factors for gasoline vehicles, and NOx idle factors for both gas and diesel, were calculated by taking the emission factor output (in grams/mi) for 2.5 mph travel, and multiplying by 2.5 to obtain idle factors in grams per hour. The resulting idle factors are presented in Table 8.

Table 8. NOx and PM10 Idle Factors in Grams/Hour (MOBILE6.2)

Vehicle Type	NOx	PM10
HDGV2b	4.45	0.0029
HDGV3	4.69	0.0030
HDGV4	6.95	0.0022
HDGV5	6.17	0.0024
HDGV6	6.00	0.0024
HDGV7	6.91	0.0024
HDGV8a	8.10	0.0023
HDGV8b*	8.10	0.0023
HDDV2b	11.46	1.1600
HDDV3	12.15	1.0820
HDDV4	16.50	1.1400
HDDV5	17.22	1.0840
HDDV6	22.05	1.1380
HDDV7	27.51	1.1580
HDDV8a	32.07	1.1350
HDDV8b	38.24	1.1760

* No outputs from MOBILE6.2; set equal to HDGV8a

2.3 Alternative Fuels

NOx and PM emission factors are not available from the current MOVES for various alternative fuels, including biodiesel, E85, natural gas, and LPG. Accordingly, adjustment factors were identified for these other fuels from a number of sources.

NOx and PM emission factors for biodiesel were based on the findings from an EPA study, A Comprehensive Analysis of Biodiesel Impacts on Exhaust

Emissions (EPA420-P-02-001, October 2002). This study developed regression equations to predict the percentage change in NOx and PM emission rates relative to conventional diesel fuel, as a function of biodiesel blend percentage, expressed in the following form:

$$\% \text{ change in emissions} = \{\exp[a \times (\text{vol\% biodiesel})] - 1\} \times 100\%$$

where $a = 0.0009794$ for NOx, and $a = -0.006384$ for PM

Using this equation adjustment factors are developed for any biodiesel blend percentage, and then applied to the appropriate conventional diesel emission factors as shown in Appendix A.

Unlike biodiesel, which may be blended with conventional diesel in any ratio, ethanol is assumed to be provided at two discrete levels: 10% (E10) and 85% (E85), consistent with current market supplies. NOx and PM factors for E10 were obtained directly from MOVES outputs. Adjustment factors for E85 were obtained from the US DOE Alternative Fuels and Advanced Vehicles Data Center estimates for light-duty vehicle operation.⁸ An average NOx reduction of 54% (based on 73 vehicle tests), and an average PM reduction of 34% (based on 3 vehicle tests) were found relative to conventional gasoline vehicles. Given the lack of heavy-duty E85 test data, these factors are assumed applicable to all gasoline engine emission factors in Appendix A.

Within the SmartWay model, the user specifies both conventional and biofuel volumes. In the case of ethanol, a decision rule is applied to assign appropriate emission factor adjustments, as indicated below.

- If calculated volume is less than 5%, conventional gasoline is assumed;
- If ethanol volume is between 5% and 15%, E10 is assumed;
- If ethanol volume is greater than 15%, E85 is assumed.⁹

Emission adjustment factors for gaseous fuels (LPG, CNG and LNG) were also obtained from the Alternative Fuels and Advanced Vehicles Data Center, Table 2: NREL/UWV Field Tests of Natural Gas Vehicle Emissions.¹⁰ For this assessment it was assumed that CNG and LNG emissions were identical. In addition, LPG emissions were also set equal to natural gas vehicle emissions.¹¹ To be conservative the smallest emission reduction estimates provided in Table

⁸ See http://www.afdc.energy.gov/afdc/vehicles/emissions_e85.html, last validated August 20, 2009.

⁹ In all cases the user is shown the calculated volume percent and allowed to adjust their inputs if the assigned blend levels are incorrect.

¹⁰ http://www.afdc.energy.gov/afdc/vehicles/emissions_natural_gas.html, last validated August 24, 2009.

¹¹ The PM and NOx estimates cited by this source for LPG vehicles were actually slightly lower than for natural gas vehicles - http://www.afdc.energy.gov/afdc/vehicles/emissions_propane.html. However, based on engineering judgment it was assumed that LPG PM and NOx emissions would be no better than comparable CNG vehicles.

2 were selected – 86% for PM and 17% for NOx, relative to comparable diesel vehicles. As such, the appropriate adjustment factors were applied to the diesel emission factors in Appendix A for these fuels.

Note that the above adjustments are not sensitive to the base vehicle emission standard, and it may not be reasonable to assume the same emission ratio for older trucks with minimal emission controls as well as new trucks with extensive control systems in place. Ideally such adjustment factors would vary depending upon the emission standard of the vehicle in question, although the necessary model year-specific emissions data do not appear to be available at this time.

2.4 PM Control Effectiveness

Reduction factors are applied to PM emissions for any pre-2007 diesel truck using selected retrofit control options. The following control effectiveness factors are assumed (see Section 3.2 below for details):

- Diesel oxidation catalyst (DOC) – 30%
- Closed crankcase ventilation (CCV) – 30%
- Diesel particulate filter (DPF) – 90%

These factors are applied to the pre-2007 PM emission estimates after their calculation within the model, and are applied to both operating and idle emissions. It is assumed that CCVs may be applied in combination with either DOCs or DPFs. In such a case, the reduction effectiveness is calculated multiplicatively. For example, if pre-control operating emissions were 1.0 g/mile for a diesel truck, and a CCV and DPF were applied, the resulting emission rate would be:

$$1.0 \times (1 - 0.3) \times (1 - 0.9) = 0.07 \text{ g/mile, post-control.}$$

However, the Trucking Model assumes that DOC and DPF application are mutually exclusive.

3.0 Emission and Activity Estimation

The emission rates and adjustment factors discussed above are combined with appropriate activity data as provided by the Partners to calculate mass emissions at the fleet and/or division level for CO₂, NOx and PM, as described below.

3.1 CO₂

CO₂ is calculated within the Trucking Model utilizing fuel factors expressed in grams per gallon of fuel, as discussed in Section 2.1 above. The general equation for calculating CO₂ emissions using reported fuel consumption values is as follows:

$$E_{\text{CO}_2} = ((F - B) \times EF_F) + (B \times EF_B)$$

Where:

E_{CO_2} = grams CO₂ per year

F = Fuel (Gallons per year)

B = Biofuel (Gallons per year)

EF_F = Fuel Emissions Factor (g/gal based on fuel type)¹²

EF_B = Biofuel Emissions Factor (g/gal based on biofuel type)

3.2 NOx and PM

Unlike CO₂ emissions which only vary with fuel type, NOx and PM emission rates also vary substantially depending upon model year and/or emission certification level, vehicle class, drive cycle, speed, and operation mode (running or idle). For this reason large lookup tables were developed to match the Trucking Model user inputs regarding their fleet activity profiles. For these pollutants emission rates expressed in grams per mile for running operation are combined with the appropriate mileage metric (i.e., total, revenue, or loaded miles) in order to estimate mass emissions. The general equation for calculating NOx is as follows:

$$E_{NOx} = (M_C \times ((GPM_U \times UDC) + (GPM_N \times (1 - UDC)))) \times T_{CY} / T_T + (GPH_I \times H_I \times T_C)$$

Where:

E_{NOx} = grams NOx

M_C = Miles driven for Truck Class C

GPM_U = Grams per mile (by truck class & engine yr) for Urban Driving

GPM_N = Grams per mile (by truck class & engine yr) for Highway Driving

UDC = Urban drive cycle % (percentage of miles under urban driving)

T_{CY} = Number of trucks for a given Class/Year combination

T_C = Number of trucks in Truck Class C

T_T = Number of trucks total

GPH_I = Grams per hour (by truck class & engine year) for Idling

H_I = Hours of Idling (average per truck per year)

PM emissions for non-diesel vehicles are calculated using an equation identical to that for NOx, utilizing PM emission factors. PM emission for diesel vehicles may be adjusted for PM control effectiveness, as shown below.

$$E_{PM} = ((M_C \times ((GPM_U \times UDC) + (GPM_N \times (1 - UDC)))) \times T_{CY} / T_T + (GPH_I \times H_I \times T_C)) \times (1 - (0.3 \times T_{DOC} / T_T)) \times (1 - (0.3 \times T_{CCV} / T_T)) \times (1 - (0.9 \times T_{DPF} / T_T))$$

Where:

E_{PM} = grams PM per year

T_{DOC} = Number of trucks using Diesel Oxidation Catalysts

T_{CCV} = Number of trucks using Closed Crankcase Ventilation

T_{DPF} = Number of trucks using Diesel Particulate Filters

0.3 = Effectiveness of DOC & CCV (30%) at reducing particulate matter

0.9 = Effectiveness of DPFs (90%) at reducing particulate matter

¹² In the case of CNG when fuel consumption is expressed in scf, the corresponding emission factor is expressed in g/scf

3.3 Activity Calculations

The Trucking Model requires users to provide specific activity information on both fuel consumption and miles travelled at the fleet level for emissions performance assessment. However, the model allows users to input vehicle activity data in a number of ways at the truck class level. In addition to direct inputs, “percent of fleet” may be specified for both fuel consumption and mileage. When selected the “percent of fleet” option simply allocates total fleet fuel consumption and/or miles traveled based on the percentages specified at the truck class level.¹³

The user may also specify the average fuel efficiency (in terms of miles per gallon) for each truck class in the fleet if actual fuel consumption is not known at the fuel level. The model then uses the total fuel consumption for the fleet and the mileage specified at the truck class level to allocate fuel consumption for each truck class by dividing total miles by the associated miles per gallon figure.

The Trucking Model also allows the user to select default values for average payload by truck class if this information is not available. These values were obtained from the US Census Bureau’s 2002 Vehicle Inventory Use Survey (VIUS), and are presented below in Table 9.¹⁴

Table 9. Default Average Payload by Vehicle Class (2002 VIUS)

Truck Class	2	3	4	5	6	7	8
Tons	2.1	1.5	2.2	3.4	12.0	14.0	19.4

The model also provides a volume calculator to estimate the cubic feet associated with different trailer, container, carrier, and tanker sizes, for class 7 – 8b trucks. The per unit interior volumes assumes standard dry vans - no high cubes, reefers, etc.), and containers. Trailer calculations assume an 8’ x 9’ cross-section, and the exterior length less 1/2 foot. 20 and 40 foot container dimensions are referenced in many places, such as <http://www.mussonfreight.com/containers/containers.html>. Table 10 summarizes the default volumes assumed for a number of standard trailers, etc.

¹³ Percentages must sum to 100.

¹⁴ http://ops.fhwa.dot.gov/freight/freight_analysis/faf/faf2_reports/reports9/s510_11_12_tables.htm#t12, dry van value basis, last validated August 25, 2009.

Table 10. Default Average Cubic Feet (Class 7 – 8b trucks)

Type	Size	Cubic Feet
Trailers	28ft	1,980
	40ft	2,844
	42ft	2,988
	45ft	3,204
	48ft	3,420
	53ft	3,780
	57ft	4,068
	28x28	3,960
	40x28	4,824
	40x40	5,688
	48x48	6,840
	28x28x28	5,940
	Containers	20ft
40ft		2,347
Tankers	Small (3,000 gal)	401
	Medium (5,250 gal)	702
	Large (7,500 gal)	1,003
Bulk Carriers	Small (22'x8'10.25')	1,804
	Medium (32'x8'x11')	2,816
	Large (42'x8.5'x11.5')	4,106

Default average payload values, along with default average capacity volumes and cube utilization percentages, may be based on SmartWay partner fleet data in future model updates.

4.0 Performance Metrics

The Trucking Model allows the user to calculate their emissions performance using a number of different metrics, at different levels of aggregation. Available performance metrics include:

- Grams per mile
- Grams per Average Payload Ton-Mile
- Grams per Average Cubic Foot-Mile
- Grams per Average Utilized Cubic Foot-Mile

The Internal Metrics report within the Trucking Model presents the results of 36 calculations ($4 \times 3 \times 3 = 36$), which represent the following four calculations for each of the three pollutants (CO_2 , NO_x , and PM) and for each of three different mileage types (total, payload, and loaded). Note that all capitalized fields represent fields in the user interface:

1. **g/mile: ?E / M**
where E = Emissions, M = Miles Driven
2. **g/avg payload ton-mile: ?E / (M × AP)**

where E = Emissions, M = Miles Driven, AP = Average Payload

3. g/avg cubic foot volume: $\frac{E}{M \times ACV}$

where E = Emissions, M = Miles Driven, ACV = Average Capacity Volume

4. g/avg utilized cubic foot: $\frac{E}{M \times ACV} / CU$

where E = Emissions, M = Miles Driven, ACV = Average Capacity Volume, CU = % Cube Utilization

For all four calculations:

Emissions = grams of pollutant (as specified above)

Miles Driven = Total Miles, Payload Miles, or Loaded Miles (Total Miles minus Empty Miles)

As shown in the equations above, summations are performed for the different metrics. Each of the metrics is automatically aggregated across model years (for NOx and PM) for all reporting purposes. Additional aggregation may be reported across truck classes, fuel types, divisions, and at the company level, as specified by the user.

4.1 Upcoming Functionality

Future versions of the Trucking Model will contain additional functionality to allow Partners to track their performance from year to year, as well as to compare their performance with other Partners.

Appendix A: MOVES NOx/PM10 Emission Factors

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
1988-2B-1	1.2268	4.4028	4.9501	0.0802	0.0478	0.0498
1988-2B-2	0.9705	5.2591	5.7602	0.0633	0.0586	0.0596
1988-2B-3	0.7970	5.4583	5.9803	0.0504	0.0660	0.0670
1988-2B-4	0.7696	5.2400	5.7967	0.0430	0.0567	0.0581
1988-2B-5	0.7690	5.7692	6.3819	0.0387	0.0615	0.0632
1988-2B-6	0.7807	5.1423	5.7116	0.0357	0.0567	0.0585
1988-2B-7	1.2004	5.3843	5.7824	0.0775	0.0616	0.0620
1988-2B-8	1.0038	6.3948	6.8868	0.0627	0.0852	0.0859
1988-3-1	3.8043	4.4028	4.9501	0.2521	0.0478	0.0498
1988-3-2	3.0002	5.2591	5.7602	0.1977	0.0586	0.0596
1988-3-3	2.4657	5.4583	5.9803	0.1572	0.0660	0.0670
1988-3-4	2.3803	5.2400	5.7967	0.1343	0.0567	0.0581
1988-3-5	2.3787	5.7692	6.3819	0.1212	0.0615	0.0632
1988-3-6	2.4058	5.1423	5.7116	0.1116	0.0567	0.0585
1988-3-7	3.6861	5.3843	5.7824	0.2400	0.0616	0.0620
1988-3-8	3.0847	6.3948	6.8868	0.1933	0.0852	0.0859
1988-4-1	3.8043	4.4028	4.9501	0.2521	0.0478	0.0498
1988-4-2	3.0002	5.2591	5.7602	0.1977	0.0586	0.0596
1988-4-3	2.4657	5.4583	5.9803	0.1572	0.0660	0.0670
1988-4-4	2.3803	5.2400	5.7967	0.1343	0.0567	0.0581
1988-4-5	2.3787	5.7692	6.3819	0.1212	0.0615	0.0632
1988-4-6	2.4058	5.1423	5.7116	0.1116	0.0567	0.0585
1988-4-7	3.6861	5.3843	5.7824	0.2400	0.0616	0.0620
1988-4-8	3.0847	6.3948	6.8868	0.1933	0.0852	0.0859
1988-5-1	3.8043	4.4028	4.9501	0.2521	0.0478	0.0498
1988-5-2	3.0002	5.2591	5.7602	0.1977	0.0586	0.0596
1988-5-3	2.4657	5.4583	5.9803	0.1572	0.0660	0.0670
1988-5-4	2.3803	5.2400	5.7967	0.1343	0.0567	0.0581

¹⁵ Key: Cycles 1 – 6 Highway (< 20 mph, 20 – 30 mph, etc); Cycles 7-8 Urban (< 30 mph and > 30 mph)

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
1988-5-5	2.3787	5.7692	6.3819	0.1212	0.0615	0.0632
1988-5-6	2.4058	5.1423	5.7116	0.1116	0.0567	0.0585
1988-5-7	3.6861	5.3843	5.7824	0.2400	0.0616	0.0620
1988-5-8	3.0847	6.3948	6.8868	0.1933	0.0852	0.0859
1988-6-1	7.1181	4.4028	4.9501	0.4665	0.0478	0.0498
1988-6-2	6.0478	5.2591	5.7602	0.3493	0.0586	0.0596
1988-6-3	4.7636	5.4583	5.9803	0.2476	0.0660	0.0670
1988-6-4	4.3964	5.2400	5.7967	0.1985	0.0567	0.0581
1988-6-5	4.1488	5.7692	6.3819	0.1581	0.0615	0.0632
1988-6-6	3.6511	5.1423	5.7116	0.1302	0.0567	0.0585
1988-6-7	5.6620	5.3843	5.7824	0.3295	0.0616	0.0620
1988-6-8	4.4406	6.3948	6.8868	0.2346	0.0852	0.0859
1988-7-1	7.1181	4.4028	4.9501	0.4665	0.0478	0.0498
1988-7-2	6.0478	5.2591	5.7602	0.3493	0.0586	0.0596
1988-7-3	4.7636	5.4583	5.9803	0.2476	0.0660	0.0670
1988-7-4	4.3964	5.2400	5.7967	0.1985	0.0567	0.0581
1988-7-5	4.1488	5.7692	6.3819	0.1581	0.0615	0.0632
1988-7-6	3.6511	5.1423	5.7116	0.1302	0.0567	0.0585
1988-7-7	5.6620	5.3843	5.7824	0.3295	0.0616	0.0620
1988-7-8	4.4406	6.3948	6.8868	0.2346	0.0852	0.0859
1988-8A-1	22.3743	4.4028	4.9501	1.3404	0.0478	0.0498
1988-8A-2	19.4868	5.2591	5.7602	0.9756	0.0586	0.0596
1988-8A-3	15.2710	5.4583	5.9803	0.6626	0.0660	0.0670
1988-8A-4	13.5025	5.2400	5.7967	0.5269	0.0567	0.0581
1988-8A-5	11.9862	5.7692	6.3819	0.3793	0.0615	0.0632
1988-8A-6	10.3308	5.1423	5.7116	0.3060	0.0567	0.0585
1988-8A-7	17.1079	5.3843	5.7824	0.8623	0.0616	0.0620
1988-8A-8	13.2329	6.3948	6.8868	0.5748	0.0852	0.0859
1988-8B-1	22.3743	4.4028	4.9501	1.3404	0.0478	0.0498
1988-8B-2	19.4868	5.2591	5.7602	0.9756	0.0586	0.0596

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
1988-8B-3	15.2710	5.4583	5.9803	0.6626	0.0660	0.0670
1988-8B-4	13.5025	5.2400	5.7967	0.5269	0.0567	0.0581
1988-8B-5	11.9862	5.7692	6.3819	0.3793	0.0615	0.0632
1988-8B-6	10.3308	5.1423	5.7116	0.3060	0.0567	0.0585
1988-8B-7	17.1079	5.3843	5.7824	0.8623	0.0616	0.0620
1988-8B-8	13.2329	6.3948	6.8868	0.5748	0.0852	0.0859
1989-2B-1	0.6564	4.6515	5.0440	0.0420	0.0499	0.0515
1989-2B-2	0.5206	5.2046	5.5381	0.0330	0.0573	0.0577
1989-2B-3	0.4252	5.2736	5.6387	0.0261	0.0632	0.0638
1989-2B-4	0.4094	5.0936	5.4843	0.0221	0.0554	0.0566
1989-2B-5	0.4087	5.5639	6.0021	0.0197	0.0597	0.0612
1989-2B-6	0.4114	5.0104	5.4690	0.0182	0.0555	0.0575
1989-2B-7	0.6661	5.2287	5.4187	0.0419	0.0587	0.0581
1989-2B-8	0.5541	6.0811	6.3681	0.0335	0.0803	0.0800
1989-3-1	4.7237	4.6515	5.0440	0.3141	0.0499	0.0515
1989-3-2	3.8272	5.2046	5.5381	0.2413	0.0573	0.0577
1989-3-3	3.0562	5.2736	5.6387	0.1816	0.0632	0.0638
1989-3-4	2.9234	5.0936	5.4843	0.1494	0.0554	0.0566
1989-3-5	2.8945	5.5639	6.0021	0.1295	0.0597	0.0612
1989-3-6	2.7134	5.0104	5.4690	0.1132	0.0555	0.0575
1989-3-7	4.3355	5.2287	5.4187	0.2715	0.0587	0.0581
1989-3-8	3.5095	6.0811	6.3681	0.2063	0.0803	0.0800
1989-4-1	4.7237	4.6515	5.0440	0.3141	0.0499	0.0515
1989-4-2	3.8272	5.2046	5.5381	0.2413	0.0573	0.0577
1989-4-3	3.0562	5.2736	5.6387	0.1816	0.0632	0.0638
1989-4-4	2.9234	5.0936	5.4843	0.1494	0.0554	0.0566
1989-4-5	2.8945	5.5639	6.0021	0.1295	0.0597	0.0612
1989-4-6	2.7134	5.0104	5.4690	0.1132	0.0555	0.0575
1989-4-7	4.3355	5.2287	5.4187	0.2715	0.0587	0.0581
1989-4-8	3.5095	6.0811	6.3681	0.2063	0.0803	0.0800

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
1989-5-1	4.7237	4.6515	5.0440	0.3141	0.0499	0.0515
1989-5-2	3.8272	5.2046	5.5381	0.2413	0.0573	0.0577
1989-5-3	3.0562	5.2736	5.6387	0.1816	0.0632	0.0638
1989-5-4	2.9234	5.0936	5.4843	0.1494	0.0554	0.0566
1989-5-5	2.8945	5.5639	6.0021	0.1295	0.0597	0.0612
1989-5-6	2.7134	5.0104	5.4690	0.1132	0.0555	0.0575
1989-5-7	4.3355	5.2287	5.4187	0.2715	0.0587	0.0581
1989-5-8	3.5095	6.0811	6.3681	0.2063	0.0803	0.0800
1989-6-1	6.7854	4.6515	5.0440	0.4309	0.0499	0.0515
1989-6-2	5.8111	5.2046	5.5381	0.3208	0.0573	0.0577
1989-6-3	4.5745	5.2736	5.6387	0.2255	0.0632	0.0638
1989-6-4	4.1712	5.0936	5.4843	0.1797	0.0554	0.0566
1989-6-5	3.8802	5.5639	6.0021	0.1400	0.0597	0.0612
1989-6-6	3.3930	5.0104	5.4690	0.1152	0.0555	0.0575
1989-6-7	5.6120	5.2287	5.4187	0.3120	0.0587	0.0581
1989-6-8	4.3931	6.0811	6.3681	0.2181	0.0803	0.0800
1989-7-1	6.7854	4.6515	5.0440	0.4309	0.0499	0.0515
1989-7-2	5.8111	5.2046	5.5381	0.3208	0.0573	0.0577
1989-7-3	4.5745	5.2736	5.6387	0.2255	0.0632	0.0638
1989-7-4	4.1712	5.0936	5.4843	0.1797	0.0554	0.0566
1989-7-5	3.8802	5.5639	6.0021	0.1400	0.0597	0.0612
1989-7-6	3.3930	5.0104	5.4690	0.1152	0.0555	0.0575
1989-7-7	5.6120	5.2287	5.4187	0.3120	0.0587	0.0581
1989-7-8	4.3931	6.0811	6.3681	0.2181	0.0803	0.0800
1989-8A-1	23.1936	4.6515	5.0440	1.3919	0.0499	0.0515
1989-8A-2	20.2099	5.2046	5.5381	1.0128	0.0573	0.0577
1989-8A-3	15.8344	5.2736	5.6387	0.6872	0.0632	0.0638
1989-8A-4	13.9806	5.0936	5.4843	0.5470	0.0554	0.0566
1989-8A-5	12.3884	5.5639	6.0021	0.3932	0.0597	0.0612
1989-8A-6	10.6699	5.0104	5.4690	0.3176	0.0555	0.0575

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
1989-8A-7	18.4877	5.2287	5.4187	0.9318	0.0587	0.0581
1989-8A-8	14.2950	6.0811	6.3681	0.6185	0.0803	0.0800
1989-8B-1	23.1936	4.6515	5.0440	1.3919	0.0499	0.0515
1989-8B-2	20.2099	5.2046	5.5381	1.0128	0.0573	0.0577
1989-8B-3	15.8344	5.2736	5.6387	0.6872	0.0632	0.0638
1989-8B-4	13.9806	5.0936	5.4843	0.5470	0.0554	0.0566
1989-8B-5	12.3884	5.5639	6.0021	0.3932	0.0597	0.0612
1989-8B-6	10.6699	5.0104	5.4690	0.3176	0.0555	0.0575
1989-8B-7	18.4877	5.2287	5.4187	0.9318	0.0587	0.0581
1989-8B-8	14.2950	6.0811	6.3681	0.6185	0.0803	0.0800
1990-2B-1	0.2579	3.8953	4.2870	0.0176	0.0239	0.0253
1990-2B-2	0.1939	4.3112	4.6572	0.0141	0.0390	0.0400
1990-2B-3	0.1627	4.3256	4.6892	0.0118	0.0523	0.0539
1990-2B-4	0.1579	4.1204	4.4918	0.0104	0.0503	0.0526
1990-2B-5	0.1591	4.4461	4.8507	0.0096	0.0578	0.0607
1990-2B-6	0.1750	4.0999	4.5253	0.0092	0.0624	0.0661
1990-2B-7	0.2919	4.3056	4.5536	0.0210	0.0386	0.0386
1990-2B-8	0.2495	4.9910	5.3241	0.0172	0.0704	0.0718
1990-3-1	4.0259	3.8953	4.2870	0.3118	0.0239	0.0253
1990-3-2	3.2495	4.3112	4.6572	0.2371	0.0390	0.0400
1990-3-3	2.5904	4.3256	4.6892	0.1766	0.0523	0.0539
1990-3-4	2.4796	4.1204	4.4918	0.1456	0.0503	0.0526
1990-3-5	2.4568	4.4461	4.8507	0.1256	0.0578	0.0607
1990-3-6	2.2997	4.0999	4.5253	0.1103	0.0624	0.0661
1990-3-7	3.6762	4.3056	4.5536	0.2654	0.0386	0.0386
1990-3-8	2.9687	4.9910	5.3241	0.1973	0.0704	0.0718
1990-4-1	4.0259	3.8953	4.2870	0.3118	0.0239	0.0253
1990-4-2	3.2495	4.3112	4.6572	0.2371	0.0390	0.0400
1990-4-3	2.5904	4.3256	4.6892	0.1766	0.0523	0.0539
1990-4-4	2.4796	4.1204	4.4918	0.1456	0.0503	0.0526

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
1990-4-5	2.4568	4.4461	4.8507	0.1256	0.0578	0.0607
1990-4-6	2.2997	4.0999	4.5253	0.1103	0.0624	0.0661
1990-4-7	3.6762	4.3056	4.5536	0.2654	0.0386	0.0386
1990-4-8	2.9687	4.9910	5.3241	0.1973	0.0704	0.0718
1990-5-1	4.0259	3.8953	4.2870	0.3118	0.0239	0.0253
1990-5-2	3.2495	4.3112	4.6572	0.2371	0.0390	0.0400
1990-5-3	2.5904	4.3256	4.6892	0.1766	0.0523	0.0539
1990-5-4	2.4796	4.1204	4.4918	0.1456	0.0503	0.0526
1990-5-5	2.4568	4.4461	4.8507	0.1256	0.0578	0.0607
1990-5-6	2.2997	4.0999	4.5253	0.1103	0.0624	0.0661
1990-5-7	3.6762	4.3056	4.5536	0.2654	0.0386	0.0386
1990-5-8	2.9687	4.9910	5.3241	0.1973	0.0704	0.0718
1990-6-1	8.4287	3.8953	4.2870	0.6299	0.0239	0.0253
1990-6-2	7.1564	4.3112	4.6572	0.4651	0.0390	0.0400
1990-6-3	5.6307	4.3256	4.6892	0.3263	0.0523	0.0539
1990-6-4	5.1064	4.1204	4.4918	0.2627	0.0503	0.0526
1990-6-5	4.7173	4.4461	4.8507	0.2048	0.0578	0.0607
1990-6-6	4.1566	4.0999	4.5253	0.1714	0.0624	0.0661
1990-6-7	6.9938	4.3056	4.5536	0.4574	0.0386	0.0386
1990-6-8	5.4785	4.9910	5.3241	0.3170	0.0704	0.0718
1990-7-1	8.4287	3.8953	4.2870	0.6299	0.0239	0.0253
1990-7-2	7.1564	4.3112	4.6572	0.4651	0.0390	0.0400
1990-7-3	5.6307	4.3256	4.6892	0.3263	0.0523	0.0539
1990-7-4	5.1064	4.1204	4.4918	0.2627	0.0503	0.0526
1990-7-5	4.7173	4.4461	4.8507	0.2048	0.0578	0.0607
1990-7-6	4.1566	4.0999	4.5253	0.1714	0.0624	0.0661
1990-7-7	6.9938	4.3056	4.5536	0.4574	0.0386	0.0386
1990-7-8	5.4785	4.9910	5.3241	0.3170	0.0704	0.0718
1990-8A-1	16.8014	3.8953	4.2870	1.2166	0.0239	0.0253
1990-8A-2	14.5106	4.3112	4.6572	0.8846	0.0390	0.0400

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
1990-8A-3	11.3425	4.3256	4.6892	0.6020	0.0523	0.0539
1990-8A-4	10.0079	4.1204	4.4918	0.4821	0.0503	0.0526
1990-8A-5	8.8695	4.4461	4.8507	0.3526	0.0578	0.0607
1990-8A-6	7.6453	4.0999	4.5253	0.2866	0.0624	0.0661
1990-8A-7	13.2574	4.3056	4.5536	0.8116	0.0386	0.0386
1990-8A-8	10.2344	4.9910	5.3241	0.5387	0.0704	0.0718
1990-8B-1	16.8014	3.8953	4.2870	1.2166	0.0239	0.0253
1990-8B-2	14.5106	4.3112	4.6572	0.8846	0.0390	0.0400
1990-8B-3	11.3425	4.3256	4.6892	0.6020	0.0523	0.0539
1990-8B-4	10.0079	4.1204	4.4918	0.4821	0.0503	0.0526
1990-8B-5	8.8695	4.4461	4.8507	0.3526	0.0578	0.0607
1990-8B-6	7.6453	4.0999	4.5253	0.2866	0.0624	0.0661
1990-8B-7	13.2574	4.3056	4.5536	0.8116	0.0386	0.0386
1990-8B-8	10.2344	4.9910	5.3241	0.5387	0.0704	0.0718
1991-2B-1	0.2579	4.0947	4.5290	0.0703	0.0348	0.0368
1991-2B-2	0.1939	4.3084	4.6917	0.0555	0.0315	0.0327
1991-2B-3	0.1627	4.2720	4.6692	0.0446	0.0305	0.0317
1991-2B-4	0.1579	4.1206	4.5263	0.0388	0.0237	0.0249
1991-2B-5	0.1591	4.4115	4.8515	0.0364	0.0239	0.0251
1991-2B-6	0.1750	4.1573	4.6333	0.0330	0.0252	0.0269
1991-2B-7	0.2919	4.2907	4.5887	0.0636	0.0314	0.0321
1991-2B-8	0.2495	4.8529	5.2308	0.0530	0.0377	0.0386
1991-3-1	4.0259	4.0947	4.5290	0.2042	0.0348	0.0368
1991-3-2	3.2495	4.3084	4.6917	0.1611	0.0315	0.0327
1991-3-3	2.5904	4.2720	4.6692	0.1301	0.0305	0.0317
1991-3-4	2.4796	4.1206	4.5263	0.1139	0.0237	0.0249
1991-3-5	2.4568	4.4115	4.8515	0.1072	0.0239	0.0251
1991-3-6	2.2997	4.1573	4.6333	0.0975	0.0252	0.0269
1991-3-7	3.6762	4.2907	4.5887	0.1867	0.0314	0.0321
1991-3-8	2.9687	4.8529	5.2308	0.1562	0.0377	0.0386

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
1991-4-1	4.0259	4.0947	4.5290	0.2042	0.0348	0.0368
1991-4-2	3.2495	4.3084	4.6917	0.1611	0.0315	0.0327
1991-4-3	2.5904	4.2720	4.6692	0.1301	0.0305	0.0317
1991-4-4	2.4796	4.1206	4.5263	0.1139	0.0237	0.0249
1991-4-5	2.4568	4.4115	4.8515	0.1072	0.0239	0.0251
1991-4-6	2.2997	4.1573	4.6333	0.0975	0.0252	0.0269
1991-4-7	3.6762	4.2907	4.5887	0.1867	0.0314	0.0321
1991-4-8	2.9687	4.8529	5.2308	0.1562	0.0377	0.0386
1991-5-1	4.0259	4.0947	4.5290	0.2042	0.0348	0.0368
1991-5-2	3.2495	4.3084	4.6917	0.1611	0.0315	0.0327
1991-5-3	2.5904	4.2720	4.6692	0.1301	0.0305	0.0317
1991-5-4	2.4796	4.1206	4.5263	0.1139	0.0237	0.0249
1991-5-5	2.4568	4.4115	4.8515	0.1072	0.0239	0.0251
1991-5-6	2.2997	4.1573	4.6333	0.0975	0.0252	0.0269
1991-5-7	3.6762	4.2907	4.5887	0.1867	0.0314	0.0321
1991-5-8	2.9687	4.8529	5.2308	0.1562	0.0377	0.0386
1991-6-1	8.4287	4.0947	4.5290	0.3403	0.0348	0.0368
1991-6-2	7.1564	4.3084	4.6917	0.2609	0.0315	0.0327
1991-6-3	5.6307	4.2720	4.6692	0.1837	0.0305	0.0317
1991-6-4	5.1064	4.1206	4.5263	0.1450	0.0237	0.0249
1991-6-5	4.7173	4.4115	4.8515	0.1158	0.0239	0.0251
1991-6-6	4.1566	4.1573	4.6333	0.0961	0.0252	0.0269
1991-6-7	6.9938	4.2907	4.5887	0.2399	0.0314	0.0321
1991-6-8	5.4785	4.8529	5.2308	0.1655	0.0377	0.0386
1991-7-1	8.4287	4.0947	4.5290	0.3403	0.0348	0.0368
1991-7-2	7.1564	4.3084	4.6917	0.2609	0.0315	0.0327
1991-7-3	5.6307	4.2720	4.6692	0.1837	0.0305	0.0317
1991-7-4	5.1064	4.1206	4.5263	0.1450	0.0237	0.0249
1991-7-5	4.7173	4.4115	4.8515	0.1158	0.0239	0.0251
1991-7-6	4.1566	4.1573	4.6333	0.0961	0.0252	0.0269

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
1991-7-7	6.9938	4.2907	4.5887	0.2399	0.0314	0.0321
1991-7-8	5.4785	4.8529	5.2308	0.1655	0.0377	0.0386
1991-8A-1	16.8014	4.0947	4.5290	1.2085	0.0348	0.0368
1991-8A-2	14.5106	4.3084	4.6917	0.9236	0.0315	0.0327
1991-8A-3	11.3425	4.2720	4.6692	0.6212	0.0305	0.0317
1991-8A-4	10.0079	4.1206	4.5263	0.4688	0.0237	0.0249
1991-8A-5	8.8695	4.4115	4.8515	0.3360	0.0239	0.0251
1991-8A-6	7.6453	4.1573	4.6333	0.2699	0.0252	0.0269
1991-8A-7	13.2574	4.2907	4.5887	0.7976	0.0314	0.0321
1991-8A-8	10.2344	4.8529	5.2308	0.5020	0.0377	0.0386
1991-8B-1	16.8014	4.0947	4.5290	1.2085	0.0348	0.0368
1991-8B-2	14.5106	4.3084	4.6917	0.9236	0.0315	0.0327
1991-8B-3	11.3425	4.2720	4.6692	0.6212	0.0305	0.0317
1991-8B-4	10.0079	4.1206	4.5263	0.4688	0.0237	0.0249
1991-8B-5	8.8695	4.4115	4.8515	0.3360	0.0239	0.0251
1991-8B-6	7.6453	4.1573	4.6333	0.2699	0.0252	0.0269
1991-8B-7	13.2574	4.2907	4.5887	0.7976	0.0314	0.0321
1991-8B-8	10.2344	4.8529	5.2308	0.5020	0.0377	0.0386
1992-2B-1	0.2579	4.1028	4.5250	0.0566	0.0347	0.0368
1992-2B-2	0.1939	4.2338	4.5828	0.0447	0.0306	0.0319
1992-2B-3	0.1627	4.1606	4.5214	0.0368	0.0295	0.0307
1992-2B-4	0.1579	4.0160	4.3842	0.0325	0.0231	0.0243
1992-2B-5	0.1591	4.2867	4.6893	0.0308	0.0232	0.0245
1992-2B-6	0.1750	4.0614	4.5227	0.0287	0.0246	0.0264
1992-2B-7	0.2919	4.1900	4.4414	0.0555	0.0304	0.0311
1992-2B-8	0.2495	4.6906	5.0137	0.0470	0.0363	0.0371
1992-3-1	4.0259	4.1028	4.5250	0.2091	0.0347	0.0368
1992-3-2	3.2495	4.2338	4.5828	0.1639	0.0306	0.0319
1992-3-3	2.5904	4.1606	4.5214	0.1318	0.0295	0.0307
1992-3-4	2.4796	4.0160	4.3842	0.1152	0.0231	0.0243

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
1992-3-5	2.4568	4.2867	4.6893	0.1076	0.0232	0.0245
1992-3-6	2.2997	4.0614	4.5227	0.0988	0.0246	0.0264
1992-3-7	3.6762	4.1900	4.4414	0.1926	0.0304	0.0311
1992-3-8	2.9687	4.6906	5.0137	0.1592	0.0363	0.0371
1992-4-1	4.0259	4.1028	4.5250	0.2091	0.0347	0.0368
1992-4-2	3.2495	4.2338	4.5828	0.1639	0.0306	0.0319
1992-4-3	2.5904	4.1606	4.5214	0.1318	0.0295	0.0307
1992-4-4	2.4796	4.0160	4.3842	0.1152	0.0231	0.0243
1992-4-5	2.4568	4.2867	4.6893	0.1076	0.0232	0.0245
1992-4-6	2.2997	4.0614	4.5227	0.0988	0.0246	0.0264
1992-4-7	3.6762	4.1900	4.4414	0.1926	0.0304	0.0311
1992-4-8	2.9687	4.6906	5.0137	0.1592	0.0363	0.0371
1992-5-1	4.0259	4.1028	4.5250	0.2091	0.0347	0.0368
1992-5-2	3.2495	4.2338	4.5828	0.1639	0.0306	0.0319
1992-5-3	2.5904	4.1606	4.5214	0.1318	0.0295	0.0307
1992-5-4	2.4796	4.0160	4.3842	0.1152	0.0231	0.0243
1992-5-5	2.4568	4.2867	4.6893	0.1076	0.0232	0.0245
1992-5-6	2.2997	4.0614	4.5227	0.0988	0.0246	0.0264
1992-5-7	3.6762	4.1900	4.4414	0.1926	0.0304	0.0311
1992-5-8	2.9687	4.6906	5.0137	0.1592	0.0363	0.0371
1992-6-1	8.4287	4.1028	4.5250	0.3591	0.0347	0.0368
1992-6-2	7.1564	4.2338	4.5828	0.2745	0.0306	0.0319
1992-6-3	5.6307	4.1606	4.5214	0.1903	0.0295	0.0307
1992-6-4	5.1064	4.0160	4.3842	0.1486	0.0231	0.0243
1992-6-5	4.7173	4.2867	4.6893	0.1158	0.0232	0.0245
1992-6-6	4.1566	4.0614	4.5227	0.0954	0.0246	0.0264
1992-6-7	6.9938	4.1900	4.4414	0.2408	0.0304	0.0311
1992-6-8	5.4785	4.6906	5.0137	0.1610	0.0363	0.0371
1992-7-1	8.4287	4.1028	4.5250	0.3591	0.0347	0.0368
1992-7-2	7.1564	4.2338	4.5828	0.2745	0.0306	0.0319

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
1992-7-3	5.6307	4.1606	4.5214	0.1903	0.0295	0.0307
1992-7-4	5.1064	4.0160	4.3842	0.1486	0.0231	0.0243
1992-7-5	4.7173	4.2867	4.6893	0.1158	0.0232	0.0245
1992-7-6	4.1566	4.0614	4.5227	0.0954	0.0246	0.0264
1992-7-7	6.9938	4.1900	4.4414	0.2408	0.0304	0.0311
1992-7-8	5.4785	4.6906	5.0137	0.1610	0.0363	0.0371
1992-8A-1	16.8014	4.1028	4.5250	1.2462	0.0347	0.0368
1992-8A-2	14.5106	4.2338	4.5828	0.9541	0.0306	0.0319
1992-8A-3	11.3425	4.1606	4.5214	0.6429	0.0295	0.0307
1992-8A-4	10.0079	4.0160	4.3842	0.4863	0.0231	0.0243
1992-8A-5	8.8695	4.2867	4.6893	0.3504	0.0232	0.0245
1992-8A-6	7.6453	4.0614	4.5227	0.2822	0.0246	0.0264
1992-8A-7	13.2574	4.1900	4.4414	0.8100	0.0304	0.0311
1992-8A-8	10.2344	4.6906	5.0137	0.5112	0.0363	0.0371
1992-8B-1	16.8014	4.1028	4.5250	1.2462	0.0347	0.0368
1992-8B-2	14.5106	4.2338	4.5828	0.9541	0.0306	0.0319
1992-8B-3	11.3425	4.1606	4.5214	0.6429	0.0295	0.0307
1992-8B-4	10.0079	4.0160	4.3842	0.4863	0.0231	0.0243
1992-8B-5	8.8695	4.2867	4.6893	0.3504	0.0232	0.0245
1992-8B-6	7.6453	4.0614	4.5227	0.2822	0.0246	0.0264
1992-8B-7	13.2574	4.1900	4.4414	0.8100	0.0304	0.0311
1992-8B-8	10.2344	4.6906	5.0137	0.5112	0.0363	0.0371
1993-2B-1	0.2579	4.2188	4.6322	0.0806	0.0357	0.0376
1993-2B-2	0.1939	4.0577	4.4501	0.0625	0.0298	0.0313
1993-2B-3	0.1627	3.9205	4.3373	0.0477	0.0279	0.0294
1993-2B-4	0.1579	3.8363	4.2560	0.0408	0.0225	0.0239
1993-2B-5	0.1591	4.0787	4.5378	0.0369	0.0224	0.0239
1993-2B-6	0.1750	3.9782	4.4702	0.0326	0.0245	0.0264
1993-2B-7	0.2919	3.8803	4.2036	0.0689	0.0284	0.0296
1993-2B-8	0.2495	4.2938	4.7062	0.0546	0.0333	0.0348

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
1993-3-1	4.0259	4.2188	4.6322	0.1591	0.0357	0.0376
1993-3-2	3.2495	4.0577	4.4501	0.1253	0.0298	0.0313
1993-3-3	2.5904	3.9205	4.3373	0.0996	0.0279	0.0294
1993-3-4	2.4796	3.8363	4.2560	0.0861	0.0225	0.0239
1993-3-5	2.4568	4.0787	4.5378	0.0796	0.0224	0.0239
1993-3-6	2.2997	3.9782	4.4702	0.0717	0.0245	0.0264
1993-3-7	3.6762	3.8803	4.2036	0.1495	0.0284	0.0296
1993-3-8	2.9687	4.2938	4.7062	0.1225	0.0333	0.0348
1993-4-1	4.0259	4.2188	4.6322	0.1591	0.0357	0.0376
1993-4-2	3.2495	4.0577	4.4501	0.1253	0.0298	0.0313
1993-4-3	2.5904	3.9205	4.3373	0.0996	0.0279	0.0294
1993-4-4	2.4796	3.8363	4.2560	0.0861	0.0225	0.0239
1993-4-5	2.4568	4.0787	4.5378	0.0796	0.0224	0.0239
1993-4-6	2.2997	3.9782	4.4702	0.0717	0.0245	0.0264
1993-4-7	3.6762	3.8803	4.2036	0.1495	0.0284	0.0296
1993-4-8	2.9687	4.2938	4.7062	0.1225	0.0333	0.0348
1993-5-1	4.0259	4.2188	4.6322	0.1591	0.0357	0.0376
1993-5-2	3.2495	4.0577	4.4501	0.1253	0.0298	0.0313
1993-5-3	2.5904	3.9205	4.3373	0.0996	0.0279	0.0294
1993-5-4	2.4796	3.8363	4.2560	0.0861	0.0225	0.0239
1993-5-5	2.4568	4.0787	4.5378	0.0796	0.0224	0.0239
1993-5-6	2.2997	3.9782	4.4702	0.0717	0.0245	0.0264
1993-5-7	3.6762	3.8803	4.2036	0.1495	0.0284	0.0296
1993-5-8	2.9687	4.2938	4.7062	0.1225	0.0333	0.0348
1993-6-1	8.4287	4.2188	4.6322	0.3530	0.0357	0.0376
1993-6-2	7.1564	4.0577	4.4501	0.2712	0.0298	0.0313
1993-6-3	5.6307	3.9205	4.3373	0.1877	0.0279	0.0294
1993-6-4	5.1064	3.8363	4.2560	0.1460	0.0225	0.0239
1993-6-5	4.7173	4.0787	4.5378	0.1122	0.0224	0.0239
1993-6-6	4.1566	3.9782	4.4702	0.0919	0.0245	0.0264

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
1993-6-7	6.9938	3.8803	4.2036	0.2531	0.0284	0.0296
1993-6-8	5.4785	4.2938	4.7062	0.1688	0.0333	0.0348
1993-7-1	8.4287	4.2188	4.6322	0.3530	0.0357	0.0376
1993-7-2	7.1564	4.0577	4.4501	0.2712	0.0298	0.0313
1993-7-3	5.6307	3.9205	4.3373	0.1877	0.0279	0.0294
1993-7-4	5.1064	3.8363	4.2560	0.1460	0.0225	0.0239
1993-7-5	4.7173	4.0787	4.5378	0.1122	0.0224	0.0239
1993-7-6	4.1566	3.9782	4.4702	0.0919	0.0245	0.0264
1993-7-7	6.9938	3.8803	4.2036	0.2531	0.0284	0.0296
1993-7-8	5.4785	4.2938	4.7062	0.1688	0.0333	0.0348
1993-8A-1	16.8014	4.2188	4.6322	1.3743	0.0357	0.0376
1993-8A-2	14.5106	4.0577	4.4501	1.0524	0.0298	0.0313
1993-8A-3	11.3425	3.9205	4.3373	0.7083	0.0279	0.0294
1993-8A-4	10.0079	3.8363	4.2560	0.5351	0.0225	0.0239
1993-8A-5	8.8695	4.0787	4.5378	0.3835	0.0224	0.0239
1993-8A-6	7.6453	3.9782	4.4702	0.3082	0.0245	0.0264
1993-8A-7	13.2574	3.8803	4.2036	0.9461	0.0284	0.0296
1993-8A-8	10.2344	4.2938	4.7062	0.5956	0.0333	0.0348
1993-8B-1	16.8014	4.2188	4.6322	1.3743	0.0357	0.0376
1993-8B-2	14.5106	4.0577	4.4501	1.0524	0.0298	0.0313
1993-8B-3	11.3425	3.9205	4.3373	0.7083	0.0279	0.0294
1993-8B-4	10.0079	3.8363	4.2560	0.5351	0.0225	0.0239
1993-8B-5	8.8695	4.0787	4.5378	0.3835	0.0224	0.0239
1993-8B-6	7.6453	3.9782	4.4702	0.3082	0.0245	0.0264
1993-8B-7	13.2574	3.8803	4.2036	0.9461	0.0284	0.0296
1993-8B-8	10.2344	4.2938	4.7062	0.5956	0.0333	0.0348
1994-2B-1	0.8329	3.7841	3.8286	0.0430	0.0142	0.0150
1994-2B-2	0.6546	3.8532	3.8771	0.0336	0.0227	0.0236
1994-2B-3	0.5318	3.8152	3.8692	0.0244	0.0333	0.0346
1994-2B-4	0.5126	3.6894	3.7552	0.0192	0.0359	0.0373

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
1994-2B-5	0.5120	3.9553	4.0389	0.0155	0.0420	0.0438
1994-2B-6	0.5163	3.9891	4.1503	0.0132	0.0367	0.0383
1994-2B-7	0.8136	3.6991	3.6504	0.0410	0.0223	0.0228
1994-2B-8	0.6762	4.2498	4.2612	0.0298	0.0381	0.0391
1994-3-1	3.4492	3.7841	3.8286	0.1835	0.0142	0.0150
1994-3-2	2.7560	3.8532	3.8771	0.1433	0.0227	0.0236
1994-3-3	2.2102	3.8152	3.8692	0.1021	0.0333	0.0346
1994-3-4	2.1232	3.6894	3.7552	0.0796	0.0359	0.0373
1994-3-5	2.1101	3.9553	4.0389	0.0630	0.0420	0.0438
1994-3-6	2.0341	3.9891	4.1503	0.0528	0.0367	0.0383
1994-3-7	3.1799	3.6991	3.6504	0.1627	0.0223	0.0228
1994-3-8	2.5991	4.2498	4.2612	0.1155	0.0381	0.0391
1994-4-1	3.4492	3.7841	3.8286	0.1835	0.0142	0.0150
1994-4-2	2.7560	3.8532	3.8771	0.1433	0.0227	0.0236
1994-4-3	2.2102	3.8152	3.8692	0.1021	0.0333	0.0346
1994-4-4	2.1232	3.6894	3.7552	0.0796	0.0359	0.0373
1994-4-5	2.1101	3.9553	4.0389	0.0630	0.0420	0.0438
1994-4-6	2.0341	3.9891	4.1503	0.0528	0.0367	0.0383
1994-4-7	3.1799	3.6991	3.6504	0.1627	0.0223	0.0228
1994-4-8	2.5991	4.2498	4.2612	0.1155	0.0381	0.0391
1994-5-1	3.4492	3.7841	3.8286	0.1835	0.0142	0.0150
1994-5-2	2.7560	3.8532	3.8771	0.1433	0.0227	0.0236
1994-5-3	2.2102	3.8152	3.8692	0.1021	0.0333	0.0346
1994-5-4	2.1232	3.6894	3.7552	0.0796	0.0359	0.0373
1994-5-5	2.1101	3.9553	4.0389	0.0630	0.0420	0.0438
1994-5-6	2.0341	3.9891	4.1503	0.0528	0.0367	0.0383
1994-5-7	3.1799	3.6991	3.6504	0.1627	0.0223	0.0228
1994-5-8	2.5991	4.2498	4.2612	0.1155	0.0381	0.0391
1994-6-1	3.9345	3.7841	3.8286	0.1879	0.0142	0.0150
1994-6-2	3.3531	3.8532	3.8771	0.1555	0.0227	0.0236

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
1994-6-3	2.6370	3.8152	3.8692	0.1076	0.0333	0.0346
1994-6-4	2.3945	3.6894	3.7552	0.0839	0.0359	0.0373
1994-6-5	2.2128	3.9553	4.0389	0.0615	0.0420	0.0438
1994-6-6	1.9416	3.9891	4.1503	0.0497	0.0367	0.0383
1994-6-7	3.1781	3.6991	3.6504	0.1489	0.0223	0.0228
1994-6-8	2.4897	4.2498	4.2612	0.1003	0.0381	0.0391
1994-7-1	3.9345	3.7841	3.8286	0.1879	0.0142	0.0150
1994-7-2	3.3531	3.8532	3.8771	0.1555	0.0227	0.0236
1994-7-3	2.6370	3.8152	3.8692	0.1076	0.0333	0.0346
1994-7-4	2.3945	3.6894	3.7552	0.0839	0.0359	0.0373
1994-7-5	2.2128	3.9553	4.0389	0.0615	0.0420	0.0438
1994-7-6	1.9416	3.9891	4.1503	0.0497	0.0367	0.0383
1994-7-7	3.1781	3.6991	3.6504	0.1489	0.0223	0.0228
1994-7-8	2.4897	4.2498	4.2612	0.1003	0.0381	0.0391
1994-8A-1	16.7982	3.7841	3.8286	0.7019	0.0142	0.0150
1994-8A-2	14.6557	3.8532	3.8771	0.6103	0.0227	0.0236
1994-8A-3	11.4720	3.8152	3.8692	0.4200	0.0333	0.0346
1994-8A-4	10.0898	3.6894	3.7552	0.3331	0.0359	0.0373
1994-8A-5	8.8821	3.9553	4.0389	0.2328	0.0420	0.0438
1994-8A-6	7.6562	3.9891	4.1503	0.1869	0.0367	0.0383
1994-8A-7	13.0392	3.6991	3.6504	0.5506	0.0223	0.0228
1994-8A-8	10.0730	4.2498	4.2612	0.3638	0.0381	0.0391
1994-8B-1	16.7982	3.7841	3.8286	0.7019	0.0142	0.0150
1994-8B-2	14.6557	3.8532	3.8771	0.6103	0.0227	0.0236
1994-8B-3	11.4720	3.8152	3.8692	0.4200	0.0333	0.0346
1994-8B-4	10.0898	3.6894	3.7552	0.3331	0.0359	0.0373
1994-8B-5	8.8821	3.9553	4.0389	0.2328	0.0420	0.0438
1994-8B-6	7.6562	3.9891	4.1503	0.1869	0.0367	0.0383
1994-8B-7	13.0392	3.6991	3.6504	0.5506	0.0223	0.0228
1994-8B-8	10.0730	4.2498	4.2612	0.3638	0.0381	0.0391

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
1995-2B-1	0.8355	3.7917	3.8621	0.0428	0.0152	0.0160
1995-2B-2	0.6660	3.7908	3.8404	0.0337	0.0178	0.0185
1995-2B-3	0.5379	3.7219	3.7998	0.0242	0.0214	0.0223
1995-2B-4	0.5171	3.6124	3.7021	0.0187	0.0207	0.0218
1995-2B-5	0.5147	3.8636	3.9706	0.0148	0.0220	0.0232
1995-2B-6	0.5038	3.9177	4.0980	0.0122	0.0274	0.0293
1995-2B-7	0.8088	3.6318	3.6075	0.0403	0.0166	0.0169
1995-2B-8	0.6646	4.1355	4.1710	0.0285	0.0284	0.0293
1995-3-1	2.2481	3.7917	3.8621	0.1150	0.0152	0.0160
1995-3-2	1.7759	3.7908	3.8404	0.0898	0.0178	0.0185
1995-3-3	1.4379	3.7219	3.7998	0.0644	0.0214	0.0223
1995-3-4	1.3830	3.6124	3.7021	0.0501	0.0207	0.0218
1995-3-5	1.3774	3.8636	3.9706	0.0395	0.0220	0.0232
1995-3-6	1.3599	3.9177	4.0980	0.0327	0.0274	0.0293
1995-3-7	2.2037	3.6318	3.6075	0.1094	0.0166	0.0169
1995-3-8	1.8161	4.1355	4.1710	0.0771	0.0284	0.0293
1995-4-1	2.2481	3.7917	3.8621	0.1150	0.0152	0.0160
1995-4-2	1.7759	3.7908	3.8404	0.0898	0.0178	0.0185
1995-4-3	1.4379	3.7219	3.7998	0.0644	0.0214	0.0223
1995-4-4	1.3830	3.6124	3.7021	0.0501	0.0207	0.0218
1995-4-5	1.3774	3.8636	3.9706	0.0395	0.0220	0.0232
1995-4-6	1.3599	3.9177	4.0980	0.0327	0.0274	0.0293
1995-4-7	2.2037	3.6318	3.6075	0.1094	0.0166	0.0169
1995-4-8	1.8161	4.1355	4.1710	0.0771	0.0284	0.0293
1995-5-1	2.2481	3.7917	3.8621	0.1150	0.0152	0.0160
1995-5-2	1.7759	3.7908	3.8404	0.0898	0.0178	0.0185
1995-5-3	1.4379	3.7219	3.7998	0.0644	0.0214	0.0223
1995-5-4	1.3830	3.6124	3.7021	0.0501	0.0207	0.0218
1995-5-5	1.3774	3.8636	3.9706	0.0395	0.0220	0.0232
1995-5-6	1.3599	3.9177	4.0980	0.0327	0.0274	0.0293

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
1995-5-7	2.2037	3.6318	3.6075	0.1094	0.0166	0.0169
1995-5-8	1.8161	4.1355	4.1710	0.0771	0.0284	0.0293
1995-6-1	3.7562	3.7917	3.8621	0.1768	0.0152	0.0160
1995-6-2	3.2180	3.7908	3.8404	0.1475	0.0178	0.0185
1995-6-3	2.5324	3.7219	3.7998	0.1022	0.0214	0.0223
1995-6-4	2.3000	3.6124	3.7021	0.0797	0.0207	0.0218
1995-6-5	2.1239	3.8636	3.9706	0.0583	0.0220	0.0232
1995-6-6	1.8595	3.9177	4.0980	0.0469	0.0274	0.0293
1995-6-7	3.0769	3.6318	3.6075	0.1429	0.0166	0.0169
1995-6-8	2.4073	4.1355	4.1710	0.0962	0.0284	0.0293
1995-7-1	3.7562	3.7917	3.8621	0.1768	0.0152	0.0160
1995-7-2	3.2180	3.7908	3.8404	0.1475	0.0178	0.0185
1995-7-3	2.5324	3.7219	3.7998	0.1022	0.0214	0.0223
1995-7-4	2.3000	3.6124	3.7021	0.0797	0.0207	0.0218
1995-7-5	2.1239	3.8636	3.9706	0.0583	0.0220	0.0232
1995-7-6	1.8595	3.9177	4.0980	0.0469	0.0274	0.0293
1995-7-7	3.0769	3.6318	3.6075	0.1429	0.0166	0.0169
1995-7-8	2.4073	4.1355	4.1710	0.0962	0.0284	0.0293
1995-8A-1	19.4499	3.7917	3.8621	0.7952	0.0152	0.0160
1995-8A-2	17.0038	3.7908	3.8404	0.6964	0.0178	0.0185
1995-8A-3	13.3092	3.7219	3.7998	0.4794	0.0214	0.0223
1995-8A-4	11.6805	3.6124	3.7021	0.3811	0.0207	0.0218
1995-8A-5	10.2457	3.8636	3.9706	0.2653	0.0220	0.0232
1995-8A-6	8.8228	3.9177	4.0980	0.2129	0.0274	0.0293
1995-8A-7	15.4034	3.6318	3.6075	0.6398	0.0166	0.0169
1995-8A-8	11.8907	4.1355	4.1710	0.4223	0.0284	0.0293
1995-8B-1	19.4499	3.7917	3.8621	0.7952	0.0152	0.0160
1995-8B-2	17.0038	3.7908	3.8404	0.6964	0.0178	0.0185
1995-8B-3	13.3092	3.7219	3.7998	0.4794	0.0214	0.0223
1995-8B-4	11.6805	3.6124	3.7021	0.3811	0.0207	0.0218

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
1995-8B-5	10.2457	3.8636	3.9706	0.2653	0.0220	0.0232
1995-8B-6	8.8228	3.9177	4.0980	0.2129	0.0274	0.0293
1995-8B-7	15.4034	3.6318	3.6075	0.6398	0.0166	0.0169
1995-8B-8	11.8907	4.1355	4.1710	0.4223	0.0284	0.0293
1996-2B-1	0.9742	2.7796	2.6578	0.0490	0.0125	0.0133
1996-2B-2	0.7602	2.7339	2.6256	0.0382	0.0134	0.0140
1996-2B-3	0.6163	2.7343	2.6636	0.0275	0.0137	0.0143
1996-2B-4	0.5945	2.7631	2.7125	0.0214	0.0121	0.0128
1996-2B-5	0.5939	2.9590	2.9217	0.0170	0.0119	0.0126
1996-2B-6	0.6038	3.1085	3.1452	0.0141	0.0121	0.0128
1996-2B-7	0.9424	2.5495	2.3991	0.0465	0.0121	0.0124
1996-2B-8	0.7819	2.9597	2.8570	0.0330	0.0185	0.0192
1996-3-1	2.7715	2.7796	2.6578	0.1404	0.0125	0.0133
1996-3-2	2.1805	2.7339	2.6256	0.1096	0.0134	0.0140
1996-3-3	1.7622	2.7343	2.6636	0.0784	0.0137	0.0143
1996-3-4	1.6937	2.7631	2.7125	0.0612	0.0121	0.0128
1996-3-5	1.6844	2.9590	2.9217	0.0482	0.0119	0.0126
1996-3-6	1.6858	3.1085	3.1452	0.0399	0.0121	0.0128
1996-3-7	2.6263	2.5495	2.3991	0.1299	0.0121	0.0124
1996-3-8	2.1685	2.9597	2.8570	0.0915	0.0185	0.0192
1996-4-1	2.7715	2.7796	2.6578	0.1404	0.0125	0.0133
1996-4-2	2.1805	2.7339	2.6256	0.1096	0.0134	0.0140
1996-4-3	1.7622	2.7343	2.6636	0.0784	0.0137	0.0143
1996-4-4	1.6937	2.7631	2.7125	0.0612	0.0121	0.0128
1996-4-5	1.6844	2.9590	2.9217	0.0482	0.0119	0.0126
1996-4-6	1.6858	3.1085	3.1452	0.0399	0.0121	0.0128
1996-4-7	2.6263	2.5495	2.3991	0.1299	0.0121	0.0124
1996-4-8	2.1685	2.9597	2.8570	0.0915	0.0185	0.0192
1996-5-1	2.7715	2.7796	2.6578	0.1404	0.0125	0.0133
1996-5-2	2.1805	2.7339	2.6256	0.1096	0.0134	0.0140

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
1996-5-3	1.7622	2.7343	2.6636	0.0784	0.0137	0.0143
1996-5-4	1.6937	2.7631	2.7125	0.0612	0.0121	0.0128
1996-5-5	1.6844	2.9590	2.9217	0.0482	0.0119	0.0126
1996-5-6	1.6858	3.1085	3.1452	0.0399	0.0121	0.0128
1996-5-7	2.6263	2.5495	2.3991	0.1299	0.0121	0.0124
1996-5-8	2.1685	2.9597	2.8570	0.0915	0.0185	0.0192
1996-6-1	3.8309	2.7796	2.6578	0.1771	0.0125	0.0133
1996-6-2	3.2810	2.7339	2.6256	0.1483	0.0134	0.0140
1996-6-3	2.5769	2.7343	2.6636	0.1025	0.0137	0.0143
1996-6-4	2.3222	2.7631	2.7125	0.0803	0.0121	0.0128
1996-6-5	2.1214	2.9590	2.9217	0.0582	0.0119	0.0126
1996-6-6	1.8570	3.1085	3.1452	0.0468	0.0121	0.0128
1996-6-7	3.0459	2.5495	2.3991	0.1395	0.0121	0.0124
1996-6-8	2.3773	2.9597	2.8570	0.0933	0.0185	0.0192
1996-7-1	3.8309	2.7796	2.6578	0.1771	0.0125	0.0133
1996-7-2	3.2810	2.7339	2.6256	0.1483	0.0134	0.0140
1996-7-3	2.5769	2.7343	2.6636	0.1025	0.0137	0.0143
1996-7-4	2.3222	2.7631	2.7125	0.0803	0.0121	0.0128
1996-7-5	2.1214	2.9590	2.9217	0.0582	0.0119	0.0126
1996-7-6	1.8570	3.1085	3.1452	0.0468	0.0121	0.0128
1996-7-7	3.0459	2.5495	2.3991	0.1395	0.0121	0.0124
1996-7-8	2.3773	2.9597	2.8570	0.0933	0.0185	0.0192
1996-8A-1	17.6507	2.7796	2.6578	0.7307	0.0125	0.0133
1996-8A-2	15.4020	2.7339	2.6256	0.6379	0.0134	0.0140
1996-8A-3	12.0425	2.7343	2.6636	0.4389	0.0137	0.0143
1996-8A-4	10.5631	2.7631	2.7125	0.3486	0.0121	0.0128
1996-8A-5	9.2592	2.9590	2.9217	0.2427	0.0119	0.0126
1996-8A-6	7.9723	3.1085	3.1452	0.1948	0.0121	0.0128
1996-8A-7	13.5949	2.5495	2.3991	0.5711	0.0121	0.0124
1996-8A-8	10.4843	2.9597	2.8570	0.3763	0.0185	0.0192

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
1996-8B-1	17.6507	2.7796	2.6578	0.7307	0.0125	0.0133
1996-8B-2	15.4020	2.7339	2.6256	0.6379	0.0134	0.0140
1996-8B-3	12.0425	2.7343	2.6636	0.4389	0.0137	0.0143
1996-8B-4	10.5631	2.7631	2.7125	0.3486	0.0121	0.0128
1996-8B-5	9.2592	2.9590	2.9217	0.2427	0.0119	0.0126
1996-8B-6	7.9723	3.1085	3.1452	0.1948	0.0121	0.0128
1996-8B-7	13.5949	2.5495	2.3991	0.5711	0.0121	0.0124
1996-8B-8	10.4843	2.9597	2.8570	0.3763	0.0185	0.0192
1997-2B-1	1.2115	2.8614	2.8241	0.0599	0.0102	0.0108
1997-2B-2	0.9241	2.8193	2.8005	0.0464	0.0120	0.0126
1997-2B-3	0.7552	2.8423	2.8641	0.0340	0.0145	0.0153
1997-2B-4	0.7307	2.8955	2.9356	0.0268	0.0147	0.0156
1997-2B-5	0.7327	3.1194	3.1797	0.0217	0.0164	0.0173
1997-2B-6	0.7724	3.2842	3.4067	0.0183	0.0166	0.0176
1997-2B-7	1.1776	2.5638	2.4935	0.0579	0.0110	0.0114
1997-2B-8	0.9877	3.0667	3.0608	0.0419	0.0178	0.0186
1997-3-1	2.8221	2.8614	2.8241	0.1432	0.0102	0.0108
1997-3-2	2.1888	2.8193	2.8005	0.1111	0.0120	0.0126
1997-3-3	1.7770	2.8423	2.8641	0.0802	0.0145	0.0153
1997-3-4	1.7159	2.8955	2.9356	0.0629	0.0147	0.0156
1997-3-5	1.7163	3.1194	3.1797	0.0502	0.0164	0.0173
1997-3-6	1.7568	3.2842	3.4067	0.0419	0.0166	0.0176
1997-3-7	2.6348	2.5638	2.4935	0.1311	0.0110	0.0114
1997-3-8	2.1928	3.0667	3.0608	0.0936	0.0178	0.0186
1997-4-1	2.8221	2.8614	2.8241	0.1432	0.0102	0.0108
1997-4-2	2.1888	2.8193	2.8005	0.1111	0.0120	0.0126
1997-4-3	1.7770	2.8423	2.8641	0.0802	0.0145	0.0153
1997-4-4	1.7159	2.8955	2.9356	0.0629	0.0147	0.0156
1997-4-5	1.7163	3.1194	3.1797	0.0502	0.0164	0.0173
1997-4-6	1.7568	3.2842	3.4067	0.0419	0.0166	0.0176

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
1997-4-7	2.6348	2.5638	2.4935	0.1311	0.0110	0.0114
1997-4-8	2.1928	3.0667	3.0608	0.0936	0.0178	0.0186
1997-5-1	2.8221	2.8614	2.8241	0.1432	0.0102	0.0108
1997-5-2	2.1888	2.8193	2.8005	0.1111	0.0120	0.0126
1997-5-3	1.7770	2.8423	2.8641	0.0802	0.0145	0.0153
1997-5-4	1.7159	2.8955	2.9356	0.0629	0.0147	0.0156
1997-5-5	1.7163	3.1194	3.1797	0.0502	0.0164	0.0173
1997-5-6	1.7568	3.2842	3.4067	0.0419	0.0166	0.0176
1997-5-7	2.6348	2.5638	2.4935	0.1311	0.0110	0.0114
1997-5-8	2.1928	3.0667	3.0608	0.0936	0.0178	0.0186
1997-6-1	2.6256	2.8614	2.8241	0.1207	0.0102	0.0108
1997-6-2	2.2521	2.8193	2.8005	0.1011	0.0120	0.0126
1997-6-3	1.7719	2.8423	2.8641	0.0700	0.0145	0.0153
1997-6-4	1.6085	2.8955	2.9356	0.0549	0.0147	0.0156
1997-6-5	1.4841	3.1194	3.1797	0.0401	0.0164	0.0173
1997-6-6	1.3016	3.2842	3.4067	0.0323	0.0166	0.0176
1997-6-7	2.0238	2.5638	2.4935	0.0921	0.0110	0.0114
1997-6-8	1.5841	3.0667	3.0608	0.0619	0.0178	0.0186
1997-7-1	2.6256	2.8614	2.8241	0.1207	0.0102	0.0108
1997-7-2	2.2521	2.8193	2.8005	0.1011	0.0120	0.0126
1997-7-3	1.7719	2.8423	2.8641	0.0700	0.0145	0.0153
1997-7-4	1.6085	2.8955	2.9356	0.0549	0.0147	0.0156
1997-7-5	1.4841	3.1194	3.1797	0.0401	0.0164	0.0173
1997-7-6	1.3016	3.2842	3.4067	0.0323	0.0166	0.0176
1997-7-7	2.0238	2.5638	2.4935	0.0921	0.0110	0.0114
1997-7-8	1.5841	3.0667	3.0608	0.0619	0.0178	0.0186
1997-8A-1	18.3203	2.8614	2.8241	0.7333	0.0102	0.0108
1997-8A-2	16.0664	2.8193	2.8005	0.6471	0.0120	0.0126
1997-8A-3	12.5839	2.8423	2.8641	0.4458	0.0145	0.0153
1997-8A-4	11.0414	2.8955	2.9356	0.3554	0.0147	0.0156

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
1997-8A-5	9.6784	3.1194	3.1797	0.2468	0.0164	0.0173
1997-8A-6	8.3330	3.2842	3.4067	0.1981	0.0166	0.0176
1997-8A-7	13.6678	2.5638	2.4935	0.5585	0.0110	0.0114
1997-8A-8	10.5526	3.0667	3.0608	0.3685	0.0178	0.0186
1997-8B-1	18.3203	2.8614	2.8241	0.7333	0.0102	0.0108
1997-8B-2	16.0664	2.8193	2.8005	0.6471	0.0120	0.0126
1997-8B-3	12.5839	2.8423	2.8641	0.4458	0.0145	0.0153
1997-8B-4	11.0414	2.8955	2.9356	0.3554	0.0147	0.0156
1997-8B-5	9.6784	3.1194	3.1797	0.2468	0.0164	0.0173
1997-8B-6	8.3330	3.2842	3.4067	0.1981	0.0166	0.0176
1997-8B-7	13.6678	2.5638	2.4935	0.5585	0.0110	0.0114
1997-8B-8	10.5526	3.0667	3.0608	0.3685	0.0178	0.0186
1998-2B-1	0.2462	2.5034	2.5232	0.0079	0.0099	0.0105
1998-2B-2	0.1893	2.5219	2.5435	0.0060	0.0110	0.0116
1998-2B-3	0.1570	2.6596	2.7081	0.0047	0.0120	0.0127
1998-2B-4	0.1530	2.7517	2.8172	0.0039	0.0113	0.0121
1998-2B-5	0.1549	2.9982	3.0804	0.0036	0.0118	0.0126
1998-2B-6	0.1598	3.0841	3.2562	0.0033	0.0134	0.0144
1998-2B-7	0.2692	2.3516	2.3269	0.0082	0.0102	0.0105
1998-2B-8	0.2276	2.9336	2.9625	0.0065	0.0155	0.0163
1998-3-1	1.3991	2.5034	2.5232	0.0526	0.0099	0.0105
1998-3-2	1.1234	2.5219	2.5435	0.0395	0.0110	0.0116
1998-3-3	0.9205	2.6596	2.7081	0.0288	0.0120	0.0127
1998-3-4	0.9002	2.7517	2.8172	0.0230	0.0113	0.0121
1998-3-5	0.9127	2.9982	3.0804	0.0196	0.0118	0.0126
1998-3-6	0.8746	3.0841	3.2562	0.0173	0.0134	0.0144
1998-3-7	1.3718	2.3516	2.3269	0.0462	0.0102	0.0105
1998-3-8	1.1408	2.9336	2.9625	0.0341	0.0155	0.0163
1998-4-1	1.3991	2.5034	2.5232	0.0526	0.0099	0.0105
1998-4-2	1.1234	2.5219	2.5435	0.0395	0.0110	0.0116

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
1998-4-3	0.9205	2.6596	2.7081	0.0288	0.0120	0.0127
1998-4-4	0.9002	2.7517	2.8172	0.0230	0.0113	0.0121
1998-4-5	0.9127	2.9982	3.0804	0.0196	0.0118	0.0126
1998-4-6	0.8746	3.0841	3.2562	0.0173	0.0134	0.0144
1998-4-7	1.3718	2.3516	2.3269	0.0462	0.0102	0.0105
1998-4-8	1.1408	2.9336	2.9625	0.0341	0.0155	0.0163
1998-5-1	1.3991	2.5034	2.5232	0.0526	0.0099	0.0105
1998-5-2	1.1234	2.5219	2.5435	0.0395	0.0110	0.0116
1998-5-3	0.9205	2.6596	2.7081	0.0288	0.0120	0.0127
1998-5-4	0.9002	2.7517	2.8172	0.0230	0.0113	0.0121
1998-5-5	0.9127	2.9982	3.0804	0.0196	0.0118	0.0126
1998-5-6	0.8746	3.0841	3.2562	0.0173	0.0134	0.0144
1998-5-7	1.3718	2.3516	2.3269	0.0462	0.0102	0.0105
1998-5-8	1.1408	2.9336	2.9625	0.0341	0.0155	0.0163
1998-6-1	4.0945	2.5034	2.5232	0.1924	0.0099	0.0105
1998-6-2	3.4861	2.5219	2.5435	0.1458	0.0110	0.0116
1998-6-3	2.8498	2.6596	2.7081	0.0944	0.0120	0.0127
1998-6-4	2.6857	2.7517	2.8172	0.0692	0.0113	0.0121
1998-6-5	2.5917	2.9982	3.0804	0.0479	0.0118	0.0126
1998-6-6	2.2910	3.0841	3.2562	0.0385	0.0134	0.0144
1998-6-7	3.4433	2.3516	2.3269	0.1441	0.0102	0.0105
1998-6-8	2.8210	2.9336	2.9625	0.0894	0.0155	0.0163
1998-7-1	4.0945	2.5034	2.5232	0.1924	0.0099	0.0105
1998-7-2	3.4861	2.5219	2.5435	0.1458	0.0110	0.0116
1998-7-3	2.8498	2.6596	2.7081	0.0944	0.0120	0.0127
1998-7-4	2.6857	2.7517	2.8172	0.0692	0.0113	0.0121
1998-7-5	2.5917	2.9982	3.0804	0.0479	0.0118	0.0126
1998-7-6	2.2910	3.0841	3.2562	0.0385	0.0134	0.0144
1998-7-7	3.4433	2.3516	2.3269	0.1441	0.0102	0.0105
1998-7-8	2.8210	2.9336	2.9625	0.0894	0.0155	0.0163

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
1998-8A-1	17.9827	2.5034	2.5232	0.9113	0.0099	0.0105
1998-8A-2	15.6157	2.5219	2.5435	0.7021	0.0110	0.0116
1998-8A-3	12.8211	2.6596	2.7081	0.4335	0.0120	0.0127
1998-8A-4	11.7131	2.7517	2.8172	0.3047	0.0113	0.0121
1998-8A-5	10.8220	2.9982	3.0804	0.1811	0.0118	0.0126
1998-8A-6	9.4124	3.0841	3.2562	0.1393	0.0134	0.0144
1998-8A-7	14.4513	2.3516	2.3269	0.6684	0.0102	0.0105
1998-8A-8	11.8535	2.9336	2.9625	0.3809	0.0155	0.0163
1998-8B-1	17.9827	2.5034	2.5232	0.9113	0.0099	0.0105
1998-8B-2	15.6157	2.5219	2.5435	0.7021	0.0110	0.0116
1998-8B-3	12.8211	2.6596	2.7081	0.4335	0.0120	0.0127
1998-8B-4	11.7131	2.7517	2.8172	0.3047	0.0113	0.0121
1998-8B-5	10.8220	2.9982	3.0804	0.1811	0.0118	0.0126
1998-8B-6	9.4124	3.0841	3.2562	0.1393	0.0134	0.0144
1998-8B-7	14.4513	2.3516	2.3269	0.6684	0.0102	0.0105
1998-8B-8	11.8535	2.9336	2.9625	0.3809	0.0155	0.0163
1999-2B-1	0.7733	2.8864	2.9022	0.0308	0.0065	0.0068
1999-2B-2	0.5818	2.7659	2.7834	0.0236	0.0081	0.0084
1999-2B-3	0.4731	2.8873	2.9299	0.0183	0.0097	0.0102
1999-2B-4	0.4639	3.0109	3.0735	0.0152	0.0095	0.0100
1999-2B-5	0.4711	3.2563	3.3335	0.0136	0.0099	0.0104
1999-2B-6	0.4828	3.5316	3.7158	0.0125	0.0114	0.0121
1999-2B-7	0.7036	2.5708	2.5538	0.0273	0.0069	0.0070
1999-2B-8	0.5949	3.1401	3.1711	0.0219	0.0154	0.0160
1999-3-1	2.1143	2.8864	2.9022	0.0811	0.0065	0.0068
1999-3-2	1.5718	2.7659	2.7834	0.0618	0.0081	0.0084
1999-3-3	1.2741	2.8873	2.9299	0.0484	0.0097	0.0102
1999-3-4	1.2488	3.0109	3.0735	0.0408	0.0095	0.0100
1999-3-5	1.2663	3.2563	3.3335	0.0374	0.0099	0.0104
1999-3-6	1.3153	3.5316	3.7158	0.0345	0.0114	0.0121

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
1999-3-7	1.9330	2.5708	2.5538	0.0726	0.0069	0.0070
1999-3-8	1.6323	3.1401	3.1711	0.0590	0.0154	0.0160
1999-4-1	2.1143	2.8864	2.9022	0.0811	0.0065	0.0068
1999-4-2	1.5718	2.7659	2.7834	0.0618	0.0081	0.0084
1999-4-3	1.2741	2.8873	2.9299	0.0484	0.0097	0.0102
1999-4-4	1.2488	3.0109	3.0735	0.0408	0.0095	0.0100
1999-4-5	1.2663	3.2563	3.3335	0.0374	0.0099	0.0104
1999-4-6	1.3153	3.5316	3.7158	0.0345	0.0114	0.0121
1999-4-7	1.9330	2.5708	2.5538	0.0726	0.0069	0.0070
1999-4-8	1.6323	3.1401	3.1711	0.0590	0.0154	0.0160
1999-5-1	2.1143	2.8864	2.9022	0.0811	0.0065	0.0068
1999-5-2	1.5718	2.7659	2.7834	0.0618	0.0081	0.0084
1999-5-3	1.2741	2.8873	2.9299	0.0484	0.0097	0.0102
1999-5-4	1.2488	3.0109	3.0735	0.0408	0.0095	0.0100
1999-5-5	1.2663	3.2563	3.3335	0.0374	0.0099	0.0104
1999-5-6	1.3153	3.5316	3.7158	0.0345	0.0114	0.0121
1999-5-7	1.9330	2.5708	2.5538	0.0726	0.0069	0.0070
1999-5-8	1.6323	3.1401	3.1711	0.0590	0.0154	0.0160
1999-6-1	2.0391	2.8864	2.9022	0.1168	0.0065	0.0068
1999-6-2	1.6590	2.7659	2.7834	0.0889	0.0081	0.0084
1999-6-3	1.3428	2.8873	2.9299	0.0581	0.0097	0.0102
1999-6-4	1.2683	3.0109	3.0735	0.0430	0.0095	0.0100
1999-6-5	1.2246	3.2563	3.3335	0.0301	0.0099	0.0104
1999-6-6	1.0802	3.5316	3.7158	0.0242	0.0114	0.0121
1999-6-7	1.5083	2.5708	2.5538	0.0815	0.0069	0.0070
1999-6-8	1.2400	3.1401	3.1711	0.0514	0.0154	0.0160
1999-7-1	2.0391	2.8864	2.9022	0.1168	0.0065	0.0068
1999-7-2	1.6590	2.7659	2.7834	0.0889	0.0081	0.0084
1999-7-3	1.3428	2.8873	2.9299	0.0581	0.0097	0.0102
1999-7-4	1.2683	3.0109	3.0735	0.0430	0.0095	0.0100

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
1999-7-5	1.2246	3.2563	3.3335	0.0301	0.0099	0.0104
1999-7-6	1.0802	3.5316	3.7158	0.0242	0.0114	0.0121
1999-7-7	1.5083	2.5708	2.5538	0.0815	0.0069	0.0070
1999-7-8	1.2400	3.1401	3.1711	0.0514	0.0154	0.0160
1999-8A-1	12.6743	2.8864	2.9022	0.7958	0.0065	0.0068
1999-8A-2	10.4827	2.7659	2.7834	0.6151	0.0081	0.0084
1999-8A-3	8.5538	2.8873	2.9299	0.3786	0.0097	0.0102
1999-8A-4	7.8956	3.0109	3.0735	0.2647	0.0095	0.0100
1999-8A-5	7.3623	3.2563	3.3335	0.1548	0.0099	0.0104
1999-8A-6	6.3997	3.5316	3.7158	0.1185	0.0114	0.0121
1999-8A-7	8.9696	2.5708	2.5538	0.5437	0.0069	0.0070
1999-8A-8	7.3851	3.1401	3.1711	0.3083	0.0154	0.0160
1999-8B-1	12.6743	2.8864	2.9022	0.7958	0.0065	0.0068
1999-8B-2	10.4827	2.7659	2.7834	0.6151	0.0081	0.0084
1999-8B-3	8.5538	2.8873	2.9299	0.3786	0.0097	0.0102
1999-8B-4	7.8956	3.0109	3.0735	0.2647	0.0095	0.0100
1999-8B-5	7.3623	3.2563	3.3335	0.1548	0.0099	0.0104
1999-8B-6	6.3997	3.5316	3.7158	0.1185	0.0114	0.0121
1999-8B-7	8.9696	2.5708	2.5538	0.5437	0.0069	0.0070
1999-8B-8	7.3851	3.1401	3.1711	0.3083	0.0154	0.0160
2000-2B-1	0.7618	2.7661	2.8189	0.0347	0.0061	0.0065
2000-2B-2	0.5899	2.6196	2.6799	0.0263	0.0075	0.0079
2000-2B-3	0.4762	2.7170	2.8063	0.0194	0.0093	0.0099
2000-2B-4	0.4674	2.8436	2.9539	0.0157	0.0093	0.0099
2000-2B-5	0.4743	3.0723	3.2017	0.0136	0.0099	0.0106
2000-2B-6	0.4573	3.4133	3.6522	0.0120	0.0134	0.0145
2000-2B-7	0.6856	2.4245	2.4520	0.0292	0.0065	0.0068
2000-2B-8	0.5715	2.9563	3.0415	0.0222	0.0135	0.0143
2000-3-1	1.3200	2.7661	2.8189	0.0563	0.0061	0.0065
2000-3-2	1.0072	2.6196	2.6799	0.0429	0.0075	0.0079

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
2000-3-3	0.8176	2.7170	2.8063	0.0325	0.0093	0.0099
2000-3-4	0.8011	2.8436	2.9539	0.0266	0.0093	0.0099
2000-3-5	0.8127	3.0723	3.2017	0.0235	0.0099	0.0106
2000-3-6	0.8061	3.4133	3.6522	0.0212	0.0134	0.0145
2000-3-7	1.2409	2.4245	2.4520	0.0504	0.0065	0.0068
2000-3-8	1.0407	2.9563	3.0415	0.0394	0.0135	0.0143
2000-4-1	1.3200	2.7661	2.8189	0.0563	0.0061	0.0065
2000-4-2	1.0072	2.6196	2.6799	0.0429	0.0075	0.0079
2000-4-3	0.8176	2.7170	2.8063	0.0325	0.0093	0.0099
2000-4-4	0.8011	2.8436	2.9539	0.0266	0.0093	0.0099
2000-4-5	0.8127	3.0723	3.2017	0.0235	0.0099	0.0106
2000-4-6	0.8061	3.4133	3.6522	0.0212	0.0134	0.0145
2000-4-7	1.2409	2.4245	2.4520	0.0504	0.0065	0.0068
2000-4-8	1.0407	2.9563	3.0415	0.0394	0.0135	0.0143
2000-5-1	1.3200	2.7661	2.8189	0.0563	0.0061	0.0065
2000-5-2	1.0072	2.6196	2.6799	0.0429	0.0075	0.0079
2000-5-3	0.8176	2.7170	2.8063	0.0325	0.0093	0.0099
2000-5-4	0.8011	2.8436	2.9539	0.0266	0.0093	0.0099
2000-5-5	0.8127	3.0723	3.2017	0.0235	0.0099	0.0106
2000-5-6	0.8061	3.4133	3.6522	0.0212	0.0134	0.0145
2000-5-7	1.2409	2.4245	2.4520	0.0504	0.0065	0.0068
2000-5-8	1.0407	2.9563	3.0415	0.0394	0.0135	0.0143
2000-6-1	2.1480	2.7661	2.8189	0.1208	0.0061	0.0065
2000-6-2	1.7432	2.6196	2.6799	0.0914	0.0075	0.0079
2000-6-3	1.4142	2.7170	2.8063	0.0606	0.0093	0.0099
2000-6-4	1.3467	2.8436	2.9539	0.0457	0.0093	0.0099
2000-6-5	1.3145	3.0723	3.2017	0.0335	0.0099	0.0106
2000-6-6	1.1635	3.4133	3.6522	0.0272	0.0134	0.0145
2000-6-7	1.6948	2.4245	2.4520	0.0889	0.0065	0.0068
2000-6-8	1.3963	2.9563	3.0415	0.0574	0.0135	0.0143

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
2000-7-1	2.1480	2.7661	2.8189	0.1208	0.0061	0.0065
2000-7-2	1.7432	2.6196	2.6799	0.0914	0.0075	0.0079
2000-7-3	1.4142	2.7170	2.8063	0.0606	0.0093	0.0099
2000-7-4	1.3467	2.8436	2.9539	0.0457	0.0093	0.0099
2000-7-5	1.3145	3.0723	3.2017	0.0335	0.0099	0.0106
2000-7-6	1.1635	3.4133	3.6522	0.0272	0.0134	0.0145
2000-7-7	1.6948	2.4245	2.4520	0.0889	0.0065	0.0068
2000-7-8	1.3963	2.9563	3.0415	0.0574	0.0135	0.0143
2000-8A-1	14.1487	2.7661	2.8189	0.8898	0.0061	0.0065
2000-8A-2	11.7126	2.6196	2.6799	0.6883	0.0075	0.0079
2000-8A-3	9.5638	2.7170	2.8063	0.4231	0.0093	0.0099
2000-8A-4	8.8337	2.8436	2.9539	0.2952	0.0093	0.0099
2000-8A-5	8.2442	3.0723	3.2017	0.1718	0.0099	0.0106
2000-8A-6	7.1663	3.4133	3.6522	0.1312	0.0134	0.0145
2000-8A-7	10.5186	2.4245	2.4520	0.6386	0.0065	0.0068
2000-8A-8	8.6662	2.9563	3.0415	0.3614	0.0135	0.0143
2000-8B-1	14.1487	2.7661	2.8189	0.8898	0.0061	0.0065
2000-8B-2	11.7126	2.6196	2.6799	0.6883	0.0075	0.0079
2000-8B-3	9.5638	2.7170	2.8063	0.4231	0.0093	0.0099
2000-8B-4	8.8337	2.8436	2.9539	0.2952	0.0093	0.0099
2000-8B-5	8.2442	3.0723	3.2017	0.1718	0.0099	0.0106
2000-8B-6	7.1663	3.4133	3.6522	0.1312	0.0134	0.0145
2000-8B-7	10.5186	2.4245	2.4520	0.6386	0.0065	0.0068
2000-8B-8	8.6662	2.9563	3.0415	0.3614	0.0135	0.0143
2001-2B-1	0.6472	1.7846	1.7102	0.0295	0.0048	0.0051
2001-2B-2	0.5003	1.6776	1.6172	0.0221	0.0059	0.0062
2001-2B-3	0.3981	1.6773	1.6240	0.0161	0.0072	0.0076
2001-2B-4	0.3892	1.6952	1.6475	0.0131	0.0069	0.0074
2001-2B-5	0.3936	1.8144	1.7680	0.0114	0.0074	0.0079
2001-2B-6	0.3751	1.7345	1.7232	0.0099	0.0069	0.0073

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
2001-2B-7	0.5643	1.5335	1.4613	0.0240	0.0050	0.0053
2001-2B-8	0.4651	1.7570	1.6961	0.0180	0.0109	0.0115
2001-3-1	1.9048	1.7846	1.7102	0.0874	0.0048	0.0051
2001-3-2	1.4742	1.6776	1.6172	0.0652	0.0059	0.0062
2001-3-3	1.1713	1.6773	1.6240	0.0475	0.0072	0.0076
2001-3-4	1.1450	1.6952	1.6475	0.0386	0.0069	0.0074
2001-3-5	1.1575	1.8144	1.7680	0.0334	0.0074	0.0079
2001-3-6	1.0993	1.7345	1.7232	0.0290	0.0069	0.0073
2001-3-7	1.6486	1.5335	1.4613	0.0703	0.0050	0.0053
2001-3-8	1.3568	1.7570	1.6961	0.0527	0.0109	0.0115
2001-4-1	1.9048	1.7846	1.7102	0.0874	0.0048	0.0051
2001-4-2	1.4742	1.6776	1.6172	0.0652	0.0059	0.0062
2001-4-3	1.1713	1.6773	1.6240	0.0475	0.0072	0.0076
2001-4-4	1.1450	1.6952	1.6475	0.0386	0.0069	0.0074
2001-4-5	1.1575	1.8144	1.7680	0.0334	0.0074	0.0079
2001-4-6	1.0993	1.7345	1.7232	0.0290	0.0069	0.0073
2001-4-7	1.6486	1.5335	1.4613	0.0703	0.0050	0.0053
2001-4-8	1.3568	1.7570	1.6961	0.0527	0.0109	0.0115
2001-5-1	1.9048	1.7846	1.7102	0.0874	0.0048	0.0051
2001-5-2	1.4742	1.6776	1.6172	0.0652	0.0059	0.0062
2001-5-3	1.1713	1.6773	1.6240	0.0475	0.0072	0.0076
2001-5-4	1.1450	1.6952	1.6475	0.0386	0.0069	0.0074
2001-5-5	1.1575	1.8144	1.7680	0.0334	0.0074	0.0079
2001-5-6	1.0993	1.7345	1.7232	0.0290	0.0069	0.0073
2001-5-7	1.6486	1.5335	1.4613	0.0703	0.0050	0.0053
2001-5-8	1.3568	1.7570	1.6961	0.0527	0.0109	0.0115
2001-6-1	2.0744	1.7846	1.7102	0.1178	0.0048	0.0051
2001-6-2	1.6940	1.6776	1.6172	0.0888	0.0059	0.0062
2001-6-3	1.3671	1.6773	1.6240	0.0587	0.0072	0.0076
2001-6-4	1.3013	1.6952	1.6475	0.0442	0.0069	0.0074

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
2001-6-5	1.2715	1.8144	1.7680	0.0323	0.0074	0.0079
2001-6-6	1.1066	1.7345	1.7232	0.0260	0.0069	0.0073
2001-6-7	1.6175	1.5335	1.4613	0.0858	0.0050	0.0053
2001-6-8	1.3237	1.7570	1.6961	0.0549	0.0109	0.0115
2001-7-1	2.0744	1.7846	1.7102	0.1178	0.0048	0.0051
2001-7-2	1.6940	1.6776	1.6172	0.0888	0.0059	0.0062
2001-7-3	1.3671	1.6773	1.6240	0.0587	0.0072	0.0076
2001-7-4	1.3013	1.6952	1.6475	0.0442	0.0069	0.0074
2001-7-5	1.2715	1.8144	1.7680	0.0323	0.0074	0.0079
2001-7-6	1.1066	1.7345	1.7232	0.0260	0.0069	0.0073
2001-7-7	1.6175	1.5335	1.4613	0.0858	0.0050	0.0053
2001-7-8	1.3237	1.7570	1.6961	0.0549	0.0109	0.0115
2001-8A-1	12.9912	1.7846	1.7102	0.8145	0.0048	0.0051
2001-8A-2	10.7440	1.6776	1.6172	0.6293	0.0059	0.0062
2001-8A-3	8.7643	1.6773	1.6240	0.3874	0.0072	0.0076
2001-8A-4	8.0953	1.6952	1.6475	0.2708	0.0069	0.0074
2001-8A-5	7.5603	1.8144	1.7680	0.1585	0.0074	0.0079
2001-8A-6	6.5670	1.7345	1.7232	0.1213	0.0069	0.0073
2001-8A-7	9.8414	1.5335	1.4613	0.5957	0.0050	0.0053
2001-8A-8	8.1021	1.7570	1.6961	0.3377	0.0109	0.0115
2001-8B-1	12.9912	1.7846	1.7102	0.8145	0.0048	0.0051
2001-8B-2	10.7440	1.6776	1.6172	0.6293	0.0059	0.0062
2001-8B-3	8.7643	1.6773	1.6240	0.3874	0.0072	0.0076
2001-8B-4	8.0953	1.6952	1.6475	0.2708	0.0069	0.0074
2001-8B-5	7.5603	1.8144	1.7680	0.1585	0.0074	0.0079
2001-8B-6	6.5670	1.7345	1.7232	0.1213	0.0069	0.0073
2001-8B-7	9.8414	1.5335	1.4613	0.5957	0.0050	0.0053
2001-8B-8	8.1021	1.7570	1.6961	0.3377	0.0109	0.0115
2002-2B-1	0.4911	1.5694	1.5248	0.0215	0.0065	0.0070
2002-2B-2	0.3763	1.4786	1.4457	0.0162	0.0063	0.0068

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
2002-2B-3	0.3038	1.4873	1.4623	0.0121	0.0064	0.0069
2002-2B-4	0.2980	1.5099	1.4908	0.0098	0.0060	0.0066
2002-2B-5	0.3029	1.6190	1.6033	0.0086	0.0062	0.0067
2002-2B-6	0.3004	1.5717	1.5900	0.0077	0.0077	0.0084
2002-2B-7	0.4508	1.3519	1.3053	0.0185	0.0057	0.0061
2002-2B-8	0.3765	1.5610	1.5298	0.0141	0.0080	0.0086
2002-3-1	1.6880	1.5694	1.5248	0.0777	0.0065	0.0070
2002-3-2	1.3087	1.4786	1.4457	0.0581	0.0063	0.0068
2002-3-3	1.0493	1.4873	1.4623	0.0418	0.0064	0.0069
2002-3-4	1.0324	1.5099	1.4908	0.0336	0.0060	0.0066
2002-3-5	1.0510	1.6190	1.6033	0.0286	0.0062	0.0067
2002-3-6	1.0111	1.5717	1.5900	0.0250	0.0077	0.0084
2002-3-7	1.4847	1.3519	1.3053	0.0632	0.0057	0.0061
2002-3-8	1.2293	1.5610	1.5298	0.0464	0.0080	0.0086
2002-4-1	1.6880	1.5694	1.5248	0.0777	0.0065	0.0070
2002-4-2	1.3087	1.4786	1.4457	0.0581	0.0063	0.0068
2002-4-3	1.0493	1.4873	1.4623	0.0418	0.0064	0.0069
2002-4-4	1.0324	1.5099	1.4908	0.0336	0.0060	0.0066
2002-4-5	1.0510	1.6190	1.6033	0.0286	0.0062	0.0067
2002-4-6	1.0111	1.5717	1.5900	0.0250	0.0077	0.0084
2002-4-7	1.4847	1.3519	1.3053	0.0632	0.0057	0.0061
2002-4-8	1.2293	1.5610	1.5298	0.0464	0.0080	0.0086
2002-5-1	1.6880	1.5694	1.5248	0.0777	0.0065	0.0070
2002-5-2	1.3087	1.4786	1.4457	0.0581	0.0063	0.0068
2002-5-3	1.0493	1.4873	1.4623	0.0418	0.0064	0.0069
2002-5-4	1.0324	1.5099	1.4908	0.0336	0.0060	0.0066
2002-5-5	1.0510	1.6190	1.6033	0.0286	0.0062	0.0067
2002-5-6	1.0111	1.5717	1.5900	0.0250	0.0077	0.0084
2002-5-7	1.4847	1.3519	1.3053	0.0632	0.0057	0.0061
2002-5-8	1.2293	1.5610	1.5298	0.0464	0.0080	0.0086

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
2002-6-1	3.0348	1.5694	1.5248	0.1759	0.0065	0.0070
2002-6-2	2.4831	1.4786	1.4457	0.1327	0.0063	0.0068
2002-6-3	2.0059	1.4873	1.4623	0.0865	0.0064	0.0069
2002-6-4	1.9053	1.5099	1.4908	0.0642	0.0060	0.0066
2002-6-5	1.8556	1.6190	1.6033	0.0456	0.0062	0.0067
2002-6-6	1.6184	1.5717	1.5900	0.0364	0.0077	0.0084
2002-6-7	2.3508	1.3519	1.3053	0.1273	0.0057	0.0061
2002-6-8	1.9206	1.5610	1.5298	0.0793	0.0080	0.0086
2002-7-1	3.0348	1.5694	1.5248	0.1759	0.0065	0.0070
2002-7-2	2.4831	1.4786	1.4457	0.1327	0.0063	0.0068
2002-7-3	2.0059	1.4873	1.4623	0.0865	0.0064	0.0069
2002-7-4	1.9053	1.5099	1.4908	0.0642	0.0060	0.0066
2002-7-5	1.8556	1.6190	1.6033	0.0456	0.0062	0.0067
2002-7-6	1.6184	1.5717	1.5900	0.0364	0.0077	0.0084
2002-7-7	2.3508	1.3519	1.3053	0.1273	0.0057	0.0061
2002-7-8	1.9206	1.5610	1.5298	0.0793	0.0080	0.0086
2002-8A-1	12.7397	1.5694	1.5248	0.7925	0.0065	0.0070
2002-8A-2	10.5095	1.4786	1.4457	0.6106	0.0063	0.0068
2002-8A-3	8.5527	1.4873	1.4623	0.3778	0.0064	0.0069
2002-8A-4	7.9102	1.5099	1.4908	0.2660	0.0060	0.0066
2002-8A-5	7.4018	1.6190	1.6033	0.1592	0.0062	0.0067
2002-8A-6	6.4330	1.5717	1.5900	0.1225	0.0077	0.0084
2002-8A-7	9.6282	1.3519	1.3053	0.5772	0.0057	0.0061
2002-8A-8	7.9073	1.5610	1.5298	0.3296	0.0080	0.0086
2002-8B-1	12.7397	1.5694	1.5248	0.7925	0.0065	0.0070
2002-8B-2	10.5095	1.4786	1.4457	0.6106	0.0063	0.0068
2002-8B-3	8.5527	1.4873	1.4623	0.3778	0.0064	0.0069
2002-8B-4	7.9102	1.5099	1.4908	0.2660	0.0060	0.0066
2002-8B-5	7.4018	1.6190	1.6033	0.1592	0.0062	0.0067
2002-8B-6	6.4330	1.5717	1.5900	0.1225	0.0077	0.0084

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
2002-8B-7	9.6282	1.3519	1.3053	0.5772	0.0057	0.0061
2002-8B-8	7.9073	1.5610	1.5298	0.3296	0.0080	0.0086
2003-2B-1	0.4235	1.4253	1.3739	0.0216	0.0047	0.0051
2003-2B-2	0.3211	1.2822	1.2410	0.0163	0.0050	0.0054
2003-2B-3	0.2495	1.2725	1.2403	0.0121	0.0055	0.0060
2003-2B-4	0.2345	1.2998	1.2736	0.0098	0.0053	0.0057
2003-2B-5	0.2285	1.3853	1.3621	0.0085	0.0056	0.0060
2003-2B-6	0.2201	1.3240	1.3290	0.0076	0.0058	0.0063
2003-2B-7	0.3981	1.1476	1.0891	0.0185	0.0044	0.0047
2003-2B-8	0.3150	1.2909	1.2465	0.0141	0.0077	0.0083
2003-3-1	1.3499	1.4253	1.3739	0.0744	0.0047	0.0051
2003-3-2	1.0291	1.2822	1.2410	0.0556	0.0050	0.0054
2003-3-3	0.7929	1.2725	1.2403	0.0400	0.0055	0.0060
2003-3-4	0.7444	1.2998	1.2736	0.0322	0.0053	0.0057
2003-3-5	0.7241	1.3853	1.3621	0.0274	0.0056	0.0060
2003-3-6	0.6833	1.3240	1.3290	0.0240	0.0058	0.0063
2003-3-7	1.2166	1.1476	1.0891	0.0607	0.0044	0.0047
2003-3-8	0.9535	1.2909	1.2465	0.0445	0.0077	0.0083
2003-4-1	1.3499	1.4253	1.3739	0.0744	0.0047	0.0051
2003-4-2	1.0291	1.2822	1.2410	0.0556	0.0050	0.0054
2003-4-3	0.7929	1.2725	1.2403	0.0400	0.0055	0.0060
2003-4-4	0.7444	1.2998	1.2736	0.0322	0.0053	0.0057
2003-4-5	0.7241	1.3853	1.3621	0.0274	0.0056	0.0060
2003-4-6	0.6833	1.3240	1.3290	0.0240	0.0058	0.0063
2003-4-7	1.2166	1.1476	1.0891	0.0607	0.0044	0.0047
2003-4-8	0.9535	1.2909	1.2465	0.0445	0.0077	0.0083
2003-5-1	1.3499	1.4253	1.3739	0.0744	0.0047	0.0051
2003-5-2	1.0291	1.2822	1.2410	0.0556	0.0050	0.0054
2003-5-3	0.7929	1.2725	1.2403	0.0400	0.0055	0.0060
2003-5-4	0.7444	1.2998	1.2736	0.0322	0.0053	0.0057

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
2003-5-5	0.7241	1.3853	1.3621	0.0274	0.0056	0.0060
2003-5-6	0.6833	1.3240	1.3290	0.0240	0.0058	0.0063
2003-5-7	1.2166	1.1476	1.0891	0.0607	0.0044	0.0047
2003-5-8	0.9535	1.2909	1.2465	0.0445	0.0077	0.0083
2003-6-1	2.1491	1.4253	1.3739	0.1769	0.0047	0.0051
2003-6-2	1.6922	1.2822	1.2410	0.1334	0.0050	0.0054
2003-6-3	1.2990	1.2725	1.2403	0.0868	0.0055	0.0060
2003-6-4	1.1798	1.2998	1.2736	0.0644	0.0053	0.0057
2003-6-5	1.1022	1.3853	1.3621	0.0455	0.0056	0.0060
2003-6-6	0.9457	1.3240	1.3290	0.0363	0.0058	0.0063
2003-6-7	1.6191	1.1476	1.0891	0.1282	0.0044	0.0047
2003-6-8	1.2368	1.2909	1.2465	0.0795	0.0077	0.0083
2003-7-1	2.1491	1.4253	1.3739	0.1769	0.0047	0.0051
2003-7-2	1.6922	1.2822	1.2410	0.1334	0.0050	0.0054
2003-7-3	1.2990	1.2725	1.2403	0.0868	0.0055	0.0060
2003-7-4	1.1798	1.2998	1.2736	0.0644	0.0053	0.0057
2003-7-5	1.1022	1.3853	1.3621	0.0455	0.0056	0.0060
2003-7-6	0.9457	1.3240	1.3290	0.0363	0.0058	0.0063
2003-7-7	1.6191	1.1476	1.0891	0.1282	0.0044	0.0047
2003-7-8	1.2368	1.2909	1.2465	0.0795	0.0077	0.0083
2003-8A-1	8.0933	1.4253	1.3739	0.7995	0.0047	0.0051
2003-8A-2	6.3629	1.2822	1.2410	0.6161	0.0050	0.0054
2003-8A-3	4.9102	1.2725	1.2403	0.3812	0.0055	0.0060
2003-8A-4	4.3585	1.2998	1.2736	0.2685	0.0053	0.0057
2003-8A-5	3.9222	1.3853	1.3621	0.1606	0.0056	0.0060
2003-8A-6	3.3599	1.3240	1.3290	0.1236	0.0058	0.0063
2003-8A-7	5.8767	1.1476	1.0891	0.5836	0.0044	0.0047
2003-8A-8	4.4984	1.2909	1.2465	0.3331	0.0077	0.0083
2003-8B-1	8.0933	1.4253	1.3739	0.7995	0.0047	0.0051
2003-8B-2	6.3629	1.2822	1.2410	0.6161	0.0050	0.0054

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
2003-8B-3	4.9102	1.2725	1.2403	0.3812	0.0055	0.0060
2003-8B-4	4.3585	1.2998	1.2736	0.2685	0.0053	0.0057
2003-8B-5	3.9222	1.3853	1.3621	0.1606	0.0056	0.0060
2003-8B-6	3.3599	1.3240	1.3290	0.1236	0.0058	0.0063
2003-8B-7	5.8767	1.1476	1.0891	0.5836	0.0044	0.0047
2003-8B-8	4.4984	1.2909	1.2465	0.3331	0.0077	0.0083
2004-2B-1	0.3686	1.3053	1.2445	0.0188	0.0058	0.0063
2004-2B-2	0.2803	1.1554	1.1039	0.0139	0.0055	0.0060
2004-2B-3	0.2172	1.1513	1.1096	0.0099	0.0058	0.0063
2004-2B-4	0.2038	1.1844	1.1496	0.0079	0.0056	0.0061
2004-2B-5	0.1984	1.2624	1.2304	0.0067	0.0059	0.0064
2004-2B-6	0.1894	1.2216	1.2201	0.0059	0.0063	0.0069
2004-2B-7	0.3452	1.0242	0.9551	0.0158	0.0051	0.0055
2004-2B-8	0.2719	1.1512	1.0953	0.0113	0.0070	0.0076
2004-3-1	1.1909	1.3053	1.2445	0.0658	0.0058	0.0063
2004-3-2	0.9103	1.1554	1.1039	0.0485	0.0055	0.0060
2004-3-3	0.6996	1.1513	1.1096	0.0339	0.0058	0.0063
2004-3-4	0.6559	1.1844	1.1496	0.0269	0.0056	0.0061
2004-3-5	0.6374	1.2624	1.2304	0.0224	0.0059	0.0064
2004-3-6	0.5965	1.2216	1.2201	0.0192	0.0063	0.0069
2004-3-7	1.0702	1.0242	0.9551	0.0529	0.0051	0.0055
2004-3-8	0.8353	1.1512	1.0953	0.0369	0.0070	0.0076
2004-4-1	1.1909	1.3053	1.2445	0.0658	0.0058	0.0063
2004-4-2	0.9103	1.1554	1.1039	0.0485	0.0055	0.0060
2004-4-3	0.6996	1.1513	1.1096	0.0339	0.0058	0.0063
2004-4-4	0.6559	1.1844	1.1496	0.0269	0.0056	0.0061
2004-4-5	0.6374	1.2624	1.2304	0.0224	0.0059	0.0064
2004-4-6	0.5965	1.2216	1.2201	0.0192	0.0063	0.0069
2004-4-7	1.0702	1.0242	0.9551	0.0529	0.0051	0.0055
2004-4-8	0.8353	1.1512	1.0953	0.0369	0.0070	0.0076

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
2004-5-1	1.1909	1.3053	1.2445	0.0658	0.0058	0.0063
2004-5-2	0.9103	1.1554	1.1039	0.0485	0.0055	0.0060
2004-5-3	0.6996	1.1513	1.1096	0.0339	0.0058	0.0063
2004-5-4	0.6559	1.1844	1.1496	0.0269	0.0056	0.0061
2004-5-5	0.6374	1.2624	1.2304	0.0224	0.0059	0.0064
2004-5-6	0.5965	1.2216	1.2201	0.0192	0.0063	0.0069
2004-5-7	1.0702	1.0242	0.9551	0.0529	0.0051	0.0055
2004-5-8	0.8353	1.1512	1.0953	0.0369	0.0070	0.0076
2004-6-1	2.1260	1.3053	1.2445	0.1767	0.0058	0.0063
2004-6-2	1.6733	1.1554	1.1039	0.1331	0.0055	0.0060
2004-6-3	1.2843	1.1513	1.1096	0.0859	0.0058	0.0063
2004-6-4	1.1641	1.1844	1.1496	0.0634	0.0056	0.0061
2004-6-5	1.0845	1.2624	1.2304	0.0441	0.0059	0.0064
2004-6-6	0.9306	1.2216	1.2201	0.0352	0.0063	0.0069
2004-6-7	1.6147	1.0242	0.9551	0.1290	0.0051	0.0055
2004-6-8	1.2324	1.1512	1.0953	0.0788	0.0070	0.0076
2004-7-1	2.1260	1.3053	1.2445	0.1767	0.0058	0.0063
2004-7-2	1.6733	1.1554	1.1039	0.1331	0.0055	0.0060
2004-7-3	1.2843	1.1513	1.1096	0.0859	0.0058	0.0063
2004-7-4	1.1641	1.1844	1.1496	0.0634	0.0056	0.0061
2004-7-5	1.0845	1.2624	1.2304	0.0441	0.0059	0.0064
2004-7-6	0.9306	1.2216	1.2201	0.0352	0.0063	0.0069
2004-7-7	1.6147	1.0242	0.9551	0.1290	0.0051	0.0055
2004-7-8	1.2324	1.1512	1.0953	0.0788	0.0070	0.0076
2004-8A-1	8.4388	1.3053	1.2445	0.8354	0.0058	0.0063
2004-8A-2	6.6351	1.1554	1.1039	0.6438	0.0055	0.0060
2004-8A-3	5.1215	1.1513	1.1096	0.3979	0.0058	0.0063
2004-8A-4	4.5438	1.1844	1.1496	0.2800	0.0056	0.0061
2004-8A-5	4.0858	1.2624	1.2304	0.1668	0.0059	0.0064
2004-8A-6	3.5000	1.2216	1.2201	0.1283	0.0063	0.0069

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
2004-8A-7	6.1947	1.0242	0.9551	0.6167	0.0051	0.0055
2004-8A-8	4.7418	1.1512	1.0953	0.3510	0.0070	0.0076
2004-8B-1	8.4388	1.3053	1.2445	0.8354	0.0058	0.0063
2004-8B-2	6.6351	1.1554	1.1039	0.6438	0.0055	0.0060
2004-8B-3	5.1215	1.1513	1.1096	0.3979	0.0058	0.0063
2004-8B-4	4.5438	1.1844	1.1496	0.2800	0.0056	0.0061
2004-8B-5	4.0858	1.2624	1.2304	0.1668	0.0059	0.0064
2004-8B-6	3.5000	1.2216	1.2201	0.1283	0.0063	0.0069
2004-8B-7	6.1947	1.0242	0.9551	0.6167	0.0051	0.0055
2004-8B-8	4.7418	1.1512	1.0953	0.3510	0.0070	0.0076
2005-2B-1	0.3369	0.9103	0.8655	0.0170	0.0051	0.0056
2005-2B-2	0.2570	0.8017	0.7666	0.0126	0.0049	0.0053
2005-2B-3	0.1987	0.7801	0.7560	0.0088	0.0051	0.0055
2005-2B-4	0.1861	0.8009	0.7828	0.0070	0.0049	0.0054
2005-2B-5	0.1810	0.8448	0.8301	0.0058	0.0052	0.0057
2005-2B-6	0.1713	0.8480	0.8552	0.0050	0.0055	0.0060
2005-2B-7	0.3129	0.7046	0.6545	0.0140	0.0045	0.0049
2005-2B-8	0.2455	0.7671	0.7327	0.0098	0.0061	0.0067
2005-3-1	1.1024	0.9103	0.8655	0.0601	0.0051	0.0056
2005-3-2	0.8450	0.8017	0.7666	0.0443	0.0049	0.0053
2005-3-3	0.6480	0.7801	0.7560	0.0306	0.0051	0.0055
2005-3-4	0.6067	0.8009	0.7828	0.0241	0.0049	0.0054
2005-3-5	0.5892	0.8448	0.8301	0.0197	0.0052	0.0057
2005-3-6	0.5471	0.8480	0.8552	0.0168	0.0055	0.0060
2005-3-7	0.9838	0.7046	0.6545	0.0478	0.0045	0.0049
2005-3-8	0.7651	0.7671	0.7327	0.0327	0.0061	0.0067
2005-4-1	1.1024	0.9103	0.8655	0.0601	0.0051	0.0056
2005-4-2	0.8450	0.8017	0.7666	0.0443	0.0049	0.0053
2005-4-3	0.6480	0.7801	0.7560	0.0306	0.0051	0.0055
2005-4-4	0.6067	0.8009	0.7828	0.0241	0.0049	0.0054

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
2005-4-5	0.5892	0.8448	0.8301	0.0197	0.0052	0.0057
2005-4-6	0.5471	0.8480	0.8552	0.0168	0.0055	0.0060
2005-4-7	0.9838	0.7046	0.6545	0.0478	0.0045	0.0049
2005-4-8	0.7651	0.7671	0.7327	0.0327	0.0061	0.0067
2005-5-1	1.1024	0.9103	0.8655	0.0601	0.0051	0.0056
2005-5-2	0.8450	0.8017	0.7666	0.0443	0.0049	0.0053
2005-5-3	0.6480	0.7801	0.7560	0.0306	0.0051	0.0055
2005-5-4	0.6067	0.8009	0.7828	0.0241	0.0049	0.0054
2005-5-5	0.5892	0.8448	0.8301	0.0197	0.0052	0.0057
2005-5-6	0.5471	0.8480	0.8552	0.0168	0.0055	0.0060
2005-5-7	0.9838	0.7046	0.6545	0.0478	0.0045	0.0049
2005-5-8	0.7651	0.7671	0.7327	0.0327	0.0061	0.0067
2005-6-1	2.1252	0.9103	0.8655	0.1748	0.0051	0.0056
2005-6-2	1.6721	0.8017	0.7666	0.1319	0.0049	0.0053
2005-6-3	1.2830	0.7801	0.7560	0.0847	0.0051	0.0055
2005-6-4	1.1617	0.8009	0.7828	0.0622	0.0049	0.0054
2005-6-5	1.0808	0.8448	0.8301	0.0427	0.0052	0.0057
2005-6-6	0.9275	0.8480	0.8552	0.0339	0.0055	0.0060
2005-6-7	1.6222	0.7046	0.6545	0.1286	0.0045	0.0049
2005-6-8	1.2371	0.7671	0.7327	0.0780	0.0061	0.0067
2005-7-1	2.1252	0.9103	0.8655	0.1748	0.0051	0.0056
2005-7-2	1.6721	0.8017	0.7666	0.1319	0.0049	0.0053
2005-7-3	1.2830	0.7801	0.7560	0.0847	0.0051	0.0055
2005-7-4	1.1617	0.8009	0.7828	0.0622	0.0049	0.0054
2005-7-5	1.0808	0.8448	0.8301	0.0427	0.0052	0.0057
2005-7-6	0.9275	0.8480	0.8552	0.0339	0.0055	0.0060
2005-7-7	1.6222	0.7046	0.6545	0.1286	0.0045	0.0049
2005-7-8	1.2371	0.7671	0.7327	0.0780	0.0061	0.0067
2005-8A-1	8.6024	0.9103	0.8655	0.8481	0.0051	0.0056
2005-8A-2	6.7640	0.8017	0.7666	0.6541	0.0049	0.0053

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
2005-8A-3	5.2213	0.7801	0.7560	0.4039	0.0051	0.0055
2005-8A-4	4.6312	0.8009	0.7828	0.2837	0.0049	0.0054
2005-8A-5	4.1633	0.8448	0.8301	0.1683	0.0052	0.0057
2005-8A-6	3.5664	0.8480	0.8552	0.1292	0.0055	0.0060
2005-8A-7	6.3579	0.7046	0.6545	0.6310	0.0045	0.0049
2005-8A-8	4.8665	0.7671	0.7327	0.3585	0.0061	0.0067
2005-8B-1	8.6024	0.9103	0.8655	0.8481	0.0051	0.0056
2005-8B-2	6.7640	0.8017	0.7666	0.6541	0.0049	0.0053
2005-8B-3	5.2213	0.7801	0.7560	0.4039	0.0051	0.0055
2005-8B-4	4.6312	0.8009	0.7828	0.2837	0.0049	0.0054
2005-8B-5	4.1633	0.8448	0.8301	0.1683	0.0052	0.0057
2005-8B-6	3.5664	0.8480	0.8552	0.1292	0.0055	0.0060
2005-8B-7	6.3579	0.7046	0.6545	0.6310	0.0045	0.0049
2005-8B-8	4.8665	0.7671	0.7327	0.3585	0.0061	0.0067
2006-2B-1	0.2892	0.8307	0.7900	0.0162	0.0050	0.0056
2006-2B-2	0.2222	0.7224	0.6900	0.0120	0.0047	0.0053
2006-2B-3	0.1716	0.7039	0.6826	0.0083	0.0049	0.0055
2006-2B-4	0.1604	0.7269	0.7124	0.0066	0.0048	0.0053
2006-2B-5	0.1562	0.7660	0.7550	0.0054	0.0050	0.0056
2006-2B-6	0.1459	0.7799	0.7928	0.0046	0.0053	0.0059
2006-2B-7	0.2632	0.6270	0.5781	0.0131	0.0044	0.0049
2006-2B-8	0.2058	0.6807	0.6476	0.0091	0.0059	0.0066
2006-3-1	0.9762	0.8307	0.7900	0.0580	0.0050	0.0056
2006-3-2	0.7527	0.7224	0.6900	0.0427	0.0047	0.0053
2006-3-3	0.5765	0.7039	0.6826	0.0293	0.0049	0.0055
2006-3-4	0.5389	0.7269	0.7124	0.0229	0.0048	0.0053
2006-3-5	0.5237	0.7660	0.7550	0.0186	0.0050	0.0056
2006-3-6	0.4809	0.7799	0.7928	0.0157	0.0053	0.0059
2006-3-7	0.8549	0.6270	0.5781	0.0455	0.0044	0.0049
2006-3-8	0.6622	0.6807	0.6476	0.0308	0.0059	0.0066

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
2006-4-1	0.9762	0.8307	0.7900	0.0580	0.0050	0.0056
2006-4-2	0.7527	0.7224	0.6900	0.0427	0.0047	0.0053
2006-4-3	0.5765	0.7039	0.6826	0.0293	0.0049	0.0055
2006-4-4	0.5389	0.7269	0.7124	0.0229	0.0048	0.0053
2006-4-5	0.5237	0.7660	0.7550	0.0186	0.0050	0.0056
2006-4-6	0.4809	0.7799	0.7928	0.0157	0.0053	0.0059
2006-4-7	0.8549	0.6270	0.5781	0.0455	0.0044	0.0049
2006-4-8	0.6622	0.6807	0.6476	0.0308	0.0059	0.0066
2006-5-1	0.9762	0.8307	0.7900	0.0580	0.0050	0.0056
2006-5-2	0.7527	0.7224	0.6900	0.0427	0.0047	0.0053
2006-5-3	0.5765	0.7039	0.6826	0.0293	0.0049	0.0055
2006-5-4	0.5389	0.7269	0.7124	0.0229	0.0048	0.0053
2006-5-5	0.5237	0.7660	0.7550	0.0186	0.0050	0.0056
2006-5-6	0.4809	0.7799	0.7928	0.0157	0.0053	0.0059
2006-5-7	0.8549	0.6270	0.5781	0.0455	0.0044	0.0049
2006-5-8	0.6622	0.6807	0.6476	0.0308	0.0059	0.0066
2006-6-1	2.1003	0.8307	0.7900	0.1762	0.0050	0.0056
2006-6-2	1.6515	0.7224	0.6900	0.1330	0.0047	0.0053
2006-6-3	1.2671	0.7039	0.6826	0.0853	0.0049	0.0055
2006-6-4	1.1461	0.7269	0.7124	0.0626	0.0048	0.0053
2006-6-5	1.0658	0.7660	0.7550	0.0428	0.0050	0.0056
2006-6-6	0.9153	0.7799	0.7928	0.0340	0.0053	0.0059
2006-6-7	1.6066	0.6270	0.5781	0.1302	0.0044	0.0049
2006-6-8	1.2241	0.6807	0.6476	0.0787	0.0059	0.0066
2006-7-1	2.1003	0.8307	0.7900	0.1762	0.0050	0.0056
2006-7-2	1.6515	0.7224	0.6900	0.1330	0.0047	0.0053
2006-7-3	1.2671	0.7039	0.6826	0.0853	0.0049	0.0055
2006-7-4	1.1461	0.7269	0.7124	0.0626	0.0048	0.0053
2006-7-5	1.0658	0.7660	0.7550	0.0428	0.0050	0.0056
2006-7-6	0.9153	0.7799	0.7928	0.0340	0.0053	0.0059

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
2006-7-7	1.6066	0.6270	0.5781	0.1302	0.0044	0.0049
2006-7-8	1.2241	0.6807	0.6476	0.0787	0.0059	0.0066
2006-8A-1	8.6514	0.8307	0.7900	0.8551	0.0050	0.0056
2006-8A-2	6.8019	0.7224	0.6900	0.6595	0.0047	0.0053
2006-8A-3	5.2510	0.7039	0.6826	0.4073	0.0049	0.0055
2006-8A-4	4.6564	0.7269	0.7124	0.2861	0.0048	0.0053
2006-8A-5	4.1853	0.7660	0.7550	0.1697	0.0050	0.0056
2006-8A-6	3.5858	0.7799	0.7928	0.1304	0.0053	0.0059
2006-8A-7	6.4217	0.6270	0.5781	0.6393	0.0044	0.0049
2006-8A-8	4.9149	0.6807	0.6476	0.3632	0.0059	0.0066
2006-8B-1	8.6514	0.8307	0.7900	0.8551	0.0050	0.0056
2006-8B-2	6.8019	0.7224	0.6900	0.6595	0.0047	0.0053
2006-8B-3	5.2510	0.7039	0.6826	0.4073	0.0049	0.0055
2006-8B-4	4.6564	0.7269	0.7124	0.2861	0.0048	0.0053
2006-8B-5	4.1853	0.7660	0.7550	0.1697	0.0050	0.0056
2006-8B-6	3.5858	0.7799	0.7928	0.1304	0.0053	0.0059
2006-8B-7	6.4217	0.6270	0.5781	0.6393	0.0044	0.0049
2006-8B-8	4.9149	0.6807	0.6476	0.3632	0.0059	0.0066
2007-2B-1	0.1526	0.2729	0.2615	0.0012	0.0032	0.0036
2007-2B-2	0.1187	0.2501	0.2384	0.0008	0.0030	0.0034
2007-2B-3	0.0928	0.2627	0.2559	0.0006	0.0031	0.0035
2007-2B-4	0.0872	0.2802	0.2775	0.0005	0.0031	0.0034
2007-2B-5	0.0853	0.3029	0.3018	0.0004	0.0032	0.0036
2007-2B-6	0.0792	0.3453	0.3617	0.0003	0.0034	0.0038
2007-2B-7	0.1398	0.2184	0.2025	0.0009	0.0028	0.0031
2007-2B-8	0.1113	0.2713	0.2612	0.0006	0.0038	0.0042
2007-3-1	0.5155	0.2729	0.2615	0.0041	0.0032	0.0036
2007-3-2	0.4003	0.2501	0.2384	0.0030	0.0030	0.0034
2007-3-3	0.3090	0.2627	0.2559	0.0021	0.0031	0.0035
2007-3-4	0.2901	0.2802	0.2775	0.0016	0.0031	0.0034

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
2007-3-5	0.2828	0.3029	0.3018	0.0013	0.0032	0.0036
2007-3-6	0.2585	0.3453	0.3617	0.0011	0.0034	0.0038
2007-3-7	0.4524	0.2184	0.2025	0.0032	0.0028	0.0031
2007-3-8	0.3553	0.2713	0.2612	0.0021	0.0038	0.0042
2007-4-1	0.5155	0.2729	0.2615	0.0041	0.0032	0.0036
2007-4-2	0.4003	0.2501	0.2384	0.0030	0.0030	0.0034
2007-4-3	0.3090	0.2627	0.2559	0.0021	0.0031	0.0035
2007-4-4	0.2901	0.2802	0.2775	0.0016	0.0031	0.0034
2007-4-5	0.2828	0.3029	0.3018	0.0013	0.0032	0.0036
2007-4-6	0.2585	0.3453	0.3617	0.0011	0.0034	0.0038
2007-4-7	0.4524	0.2184	0.2025	0.0032	0.0028	0.0031
2007-4-8	0.3553	0.2713	0.2612	0.0021	0.0038	0.0042
2007-5-1	0.5155	0.2729	0.2615	0.0041	0.0032	0.0036
2007-5-2	0.4003	0.2501	0.2384	0.0030	0.0030	0.0034
2007-5-3	0.3090	0.2627	0.2559	0.0021	0.0031	0.0035
2007-5-4	0.2901	0.2802	0.2775	0.0016	0.0031	0.0034
2007-5-5	0.2828	0.3029	0.3018	0.0013	0.0032	0.0036
2007-5-6	0.2585	0.3453	0.3617	0.0011	0.0034	0.0038
2007-5-7	0.4524	0.2184	0.2025	0.0032	0.0028	0.0031
2007-5-8	0.3553	0.2713	0.2612	0.0021	0.0038	0.0042
2007-6-1	1.0653	0.2729	0.2615	0.0121	0.0032	0.0036
2007-6-2	0.8400	0.2501	0.2384	0.0092	0.0030	0.0034
2007-6-3	0.6455	0.2627	0.2559	0.0059	0.0031	0.0035
2007-6-4	0.5849	0.2802	0.2775	0.0044	0.0031	0.0034
2007-6-5	0.5448	0.3029	0.3018	0.0030	0.0032	0.0036
2007-6-6	0.4668	0.3453	0.3617	0.0024	0.0034	0.0038
2007-6-7	0.8183	0.2184	0.2025	0.0090	0.0028	0.0031
2007-6-8	0.6258	0.2713	0.2612	0.0054	0.0038	0.0042
2007-7-1	1.0653	0.2729	0.2615	0.0121	0.0032	0.0036
2007-7-2	0.8400	0.2501	0.2384	0.0092	0.0030	0.0034

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
2007-7-3	0.6455	0.2627	0.2559	0.0059	0.0031	0.0035
2007-7-4	0.5849	0.2802	0.2775	0.0044	0.0031	0.0034
2007-7-5	0.5448	0.3029	0.3018	0.0030	0.0032	0.0036
2007-7-6	0.4668	0.3453	0.3617	0.0024	0.0034	0.0038
2007-7-7	0.8183	0.2184	0.2025	0.0090	0.0028	0.0031
2007-7-8	0.6258	0.2713	0.2612	0.0054	0.0038	0.0042
2007-8A-1	4.2700	0.2729	0.2615	0.0577	0.0032	0.0036
2007-8A-2	3.3567	0.2501	0.2384	0.0447	0.0030	0.0034
2007-8A-3	2.5909	0.2627	0.2559	0.0278	0.0031	0.0035
2007-8A-4	2.2990	0.2802	0.2775	0.0197	0.0031	0.0034
2007-8A-5	2.0672	0.3029	0.3018	0.0119	0.0032	0.0036
2007-8A-6	1.7704	0.3453	0.3617	0.0091	0.0034	0.0038
2007-8A-7	3.1664	0.2184	0.2025	0.0433	0.0028	0.0031
2007-8A-8	2.4244	0.2713	0.2612	0.0247	0.0038	0.0042
2007-8B-1	4.2700	0.2729	0.2615	0.0577	0.0032	0.0036
2007-8B-2	3.3567	0.2501	0.2384	0.0447	0.0030	0.0034
2007-8B-3	2.5909	0.2627	0.2559	0.0278	0.0031	0.0035
2007-8B-4	2.2990	0.2802	0.2775	0.0197	0.0031	0.0034
2007-8B-5	2.0672	0.3029	0.3018	0.0119	0.0032	0.0036
2007-8B-6	1.7704	0.3453	0.3617	0.0091	0.0034	0.0038
2007-8B-7	3.1664	0.2184	0.2025	0.0433	0.0028	0.0031
2007-8B-8	2.4244	0.2713	0.2612	0.0247	0.0038	0.0042
2008-2B-1	0.1518	0.2423	0.2320	0.0011	0.0032	0.0036
2008-2B-2	0.1181	0.2086	0.2026	0.0008	0.0030	0.0034
2008-2B-3	0.0921	0.2167	0.2179	0.0006	0.0031	0.0035
2008-2B-4	0.0865	0.2339	0.2394	0.0005	0.0030	0.0034
2008-2B-5	0.0846	0.2515	0.2601	0.0004	0.0032	0.0036
2008-2B-6	0.0784	0.3030	0.3276	0.0003	0.0034	0.0038
2008-2B-7	0.1384	0.1800	0.1685	0.0009	0.0028	0.0031
2008-2B-8	0.1099	0.2134	0.2130	0.0006	0.0037	0.0042

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
2008-3-1	0.5128	0.2423	0.2320	0.0041	0.0032	0.0036
2008-3-2	0.3982	0.2086	0.2026	0.0030	0.0030	0.0034
2008-3-3	0.3070	0.2167	0.2179	0.0020	0.0031	0.0035
2008-3-4	0.2879	0.2339	0.2394	0.0016	0.0030	0.0034
2008-3-5	0.2806	0.2515	0.2601	0.0013	0.0032	0.0036
2008-3-6	0.2561	0.3030	0.3276	0.0011	0.0034	0.0038
2008-3-7	0.4486	0.1800	0.1685	0.0031	0.0028	0.0031
2008-3-8	0.3516	0.2134	0.2130	0.0021	0.0037	0.0042
2008-4-1	0.5128	0.2423	0.2320	0.0041	0.0032	0.0036
2008-4-2	0.3982	0.2086	0.2026	0.0030	0.0030	0.0034
2008-4-3	0.3070	0.2167	0.2179	0.0020	0.0031	0.0035
2008-4-4	0.2879	0.2339	0.2394	0.0016	0.0030	0.0034
2008-4-5	0.2806	0.2515	0.2601	0.0013	0.0032	0.0036
2008-4-6	0.2561	0.3030	0.3276	0.0011	0.0034	0.0038
2008-4-7	0.4486	0.1800	0.1685	0.0031	0.0028	0.0031
2008-4-8	0.3516	0.2134	0.2130	0.0021	0.0037	0.0042
2008-5-1	0.5128	0.2423	0.2320	0.0041	0.0032	0.0036
2008-5-2	0.3982	0.2086	0.2026	0.0030	0.0030	0.0034
2008-5-3	0.3070	0.2167	0.2179	0.0020	0.0031	0.0035
2008-5-4	0.2879	0.2339	0.2394	0.0016	0.0030	0.0034
2008-5-5	0.2806	0.2515	0.2601	0.0013	0.0032	0.0036
2008-5-6	0.2561	0.3030	0.3276	0.0011	0.0034	0.0038
2008-5-7	0.4486	0.1800	0.1685	0.0031	0.0028	0.0031
2008-5-8	0.3516	0.2134	0.2130	0.0021	0.0037	0.0042
2008-6-1	1.0698	0.2423	0.2320	0.0122	0.0032	0.0036
2008-6-2	0.8431	0.2086	0.2026	0.0092	0.0030	0.0034
2008-6-3	0.6475	0.2167	0.2179	0.0059	0.0031	0.0035
2008-6-4	0.5865	0.2339	0.2394	0.0044	0.0030	0.0034
2008-6-5	0.5461	0.2515	0.2601	0.0031	0.0032	0.0036
2008-6-6	0.4681	0.3030	0.3276	0.0024	0.0034	0.0038

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
2008-6-7	0.8217	0.1800	0.1685	0.0090	0.0028	0.0031
2008-6-8	0.6278	0.2134	0.2130	0.0054	0.0037	0.0042
2008-7-1	1.0698	0.2423	0.2320	0.0122	0.0032	0.0036
2008-7-2	0.8431	0.2086	0.2026	0.0092	0.0030	0.0034
2008-7-3	0.6475	0.2167	0.2179	0.0059	0.0031	0.0035
2008-7-4	0.5865	0.2339	0.2394	0.0044	0.0030	0.0034
2008-7-5	0.5461	0.2515	0.2601	0.0031	0.0032	0.0036
2008-7-6	0.4681	0.3030	0.3276	0.0024	0.0034	0.0038
2008-7-7	0.8217	0.1800	0.1685	0.0090	0.0028	0.0031
2008-7-8	0.6278	0.2134	0.2130	0.0054	0.0037	0.0042
2008-8A-1	4.2649	0.2423	0.2320	0.0577	0.0032	0.0036
2008-8A-2	3.3526	0.2086	0.2026	0.0446	0.0030	0.0034
2008-8A-3	2.5876	0.2167	0.2179	0.0277	0.0031	0.0035
2008-8A-4	2.2959	0.2339	0.2394	0.0196	0.0030	0.0034
2008-8A-5	2.0645	0.2515	0.2601	0.0118	0.0032	0.0036
2008-8A-6	1.7683	0.3030	0.3276	0.0091	0.0034	0.0038
2008-8A-7	3.1663	0.1800	0.1685	0.0432	0.0028	0.0031
2008-8A-8	2.4239	0.2134	0.2130	0.0247	0.0037	0.0042
2008-8B-1	4.2649	0.2423	0.2320	0.0577	0.0032	0.0036
2008-8B-2	3.3526	0.2086	0.2026	0.0446	0.0030	0.0034
2008-8B-3	2.5876	0.2167	0.2179	0.0277	0.0031	0.0035
2008-8B-4	2.2959	0.2339	0.2394	0.0196	0.0030	0.0034
2008-8B-5	2.0645	0.2515	0.2601	0.0118	0.0032	0.0036
2008-8B-6	1.7683	0.3030	0.3276	0.0091	0.0034	0.0038
2008-8B-7	3.1663	0.1800	0.1685	0.0432	0.0028	0.0031
2008-8B-8	2.4239	0.2134	0.2130	0.0247	0.0037	0.0042
2009-2B-1	0.1522	0.2437	0.2335	0.0012	0.0032	0.0036
2009-2B-2	0.1183	0.2095	0.2035	0.0008	0.0030	0.0033
2009-2B-3	0.0921	0.2172	0.2183	0.0006	0.0031	0.0034
2009-2B-4	0.0864	0.2344	0.2397	0.0005	0.0030	0.0034

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
2009-2B-5	0.0844	0.2518	0.2602	0.0004	0.0032	0.0036
2009-2B-6	0.0781	0.3026	0.3269	0.0003	0.0033	0.0038
2009-2B-7	0.1380	0.1805	0.1691	0.0009	0.0028	0.0031
2009-2B-8	0.1093	0.2134	0.2129	0.0006	0.0037	0.0041
2009-3-1	0.5139	0.2437	0.2335	0.0041	0.0032	0.0036
2009-3-2	0.3990	0.2095	0.2035	0.0030	0.0030	0.0033
2009-3-3	0.3072	0.2172	0.2183	0.0020	0.0031	0.0034
2009-3-4	0.2879	0.2344	0.2397	0.0016	0.0030	0.0034
2009-3-5	0.2805	0.2518	0.2602	0.0013	0.0032	0.0036
2009-3-6	0.2556	0.3026	0.3269	0.0011	0.0033	0.0038
2009-3-7	0.4480	0.1805	0.1691	0.0031	0.0028	0.0031
2009-3-8	0.3503	0.2134	0.2129	0.0021	0.0037	0.0041
2009-4-1	0.5139	0.2437	0.2335	0.0041	0.0032	0.0036
2009-4-2	0.3990	0.2095	0.2035	0.0030	0.0030	0.0033
2009-4-3	0.3072	0.2172	0.2183	0.0020	0.0031	0.0034
2009-4-4	0.2879	0.2344	0.2397	0.0016	0.0030	0.0034
2009-4-5	0.2805	0.2518	0.2602	0.0013	0.0032	0.0036
2009-4-6	0.2556	0.3026	0.3269	0.0011	0.0033	0.0038
2009-4-7	0.4480	0.1805	0.1691	0.0031	0.0028	0.0031
2009-4-8	0.3503	0.2134	0.2129	0.0021	0.0037	0.0041
2009-5-1	0.5139	0.2437	0.2335	0.0041	0.0032	0.0036
2009-5-2	0.3990	0.2095	0.2035	0.0030	0.0030	0.0033
2009-5-3	0.3072	0.2172	0.2183	0.0020	0.0031	0.0034
2009-5-4	0.2879	0.2344	0.2397	0.0016	0.0030	0.0034
2009-5-5	0.2805	0.2518	0.2602	0.0013	0.0032	0.0036
2009-5-6	0.2556	0.3026	0.3269	0.0011	0.0033	0.0038
2009-5-7	0.4480	0.1805	0.1691	0.0031	0.0028	0.0031
2009-5-8	0.3503	0.2134	0.2129	0.0021	0.0037	0.0041
2009-6-1	1.0770	0.2437	0.2335	0.0123	0.0032	0.0036
2009-6-2	0.8484	0.2095	0.2035	0.0093	0.0030	0.0033

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
2009-6-3	0.6511	0.2172	0.2183	0.0060	0.0031	0.0034
2009-6-4	0.5897	0.2344	0.2397	0.0044	0.0030	0.0034
2009-6-5	0.5491	0.2518	0.2602	0.0031	0.0032	0.0036
2009-6-6	0.4708	0.3026	0.3269	0.0024	0.0033	0.0038
2009-6-7	0.8273	0.1805	0.1691	0.0091	0.0028	0.0031
2009-6-8	0.6315	0.2134	0.2129	0.0055	0.0037	0.0041
2009-7-1	1.0770	0.2437	0.2335	0.0123	0.0032	0.0036
2009-7-2	0.8484	0.2095	0.2035	0.0093	0.0030	0.0033
2009-7-3	0.6511	0.2172	0.2183	0.0060	0.0031	0.0034
2009-7-4	0.5897	0.2344	0.2397	0.0044	0.0030	0.0034
2009-7-5	0.5491	0.2518	0.2602	0.0031	0.0032	0.0036
2009-7-6	0.4708	0.3026	0.3269	0.0024	0.0033	0.0038
2009-7-7	0.8273	0.1805	0.1691	0.0091	0.0028	0.0031
2009-7-8	0.6315	0.2134	0.2129	0.0055	0.0037	0.0041
2009-8A-1	4.2489	0.2437	0.2335	0.0574	0.0032	0.0036
2009-8A-2	3.3399	0.2095	0.2035	0.0444	0.0030	0.0033
2009-8A-3	2.5776	0.2172	0.2183	0.0276	0.0031	0.0034
2009-8A-4	2.2870	0.2344	0.2397	0.0196	0.0030	0.0034
2009-8A-5	2.0568	0.2518	0.2602	0.0118	0.0032	0.0036
2009-8A-6	1.7617	0.3026	0.3269	0.0091	0.0033	0.0038
2009-8A-7	3.1577	0.1805	0.1691	0.0431	0.0028	0.0031
2009-8A-8	2.4169	0.2134	0.2129	0.0246	0.0037	0.0041
2009-8B-1	4.2489	0.2437	0.2335	0.0574	0.0032	0.0036
2009-8B-2	3.3399	0.2095	0.2035	0.0444	0.0030	0.0033
2009-8B-3	2.5776	0.2172	0.2183	0.0276	0.0031	0.0034
2009-8B-4	2.2870	0.2344	0.2397	0.0196	0.0030	0.0034
2009-8B-5	2.0568	0.2518	0.2602	0.0118	0.0032	0.0036
2009-8B-6	1.7617	0.3026	0.3269	0.0091	0.0033	0.0038
2009-8B-7	3.1577	0.1805	0.1691	0.0431	0.0028	0.0031
2009-8B-8	2.4169	0.2134	0.2129	0.0246	0.0037	0.0041

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
2010-2B-1	0.0347	0.2378	0.2268	0.0011	0.0032	0.0036
2010-2B-2	0.0287	0.2031	0.1962	0.0008	0.0030	0.0033
2010-2B-3	0.0236	0.2106	0.2107	0.0006	0.0030	0.0034
2010-2B-4	0.0226	0.2279	0.2322	0.0005	0.0030	0.0034
2010-2B-5	0.0226	0.2448	0.2521	0.0004	0.0031	0.0035
2010-2B-6	0.0205	0.2963	0.3196	0.0003	0.0033	0.0037
2010-2B-7	0.0327	0.1741	0.1618	0.0009	0.0027	0.0031
2010-2B-8	0.0281	0.2055	0.2039	0.0006	0.0037	0.0041
2010-3-1	0.1204	0.2378	0.2268	0.0040	0.0032	0.0036
2010-3-2	0.0967	0.2031	0.1962	0.0030	0.0030	0.0033
2010-3-3	0.0769	0.2106	0.2107	0.0020	0.0030	0.0034
2010-3-4	0.0735	0.2279	0.2322	0.0016	0.0030	0.0034
2010-3-5	0.0727	0.2448	0.2521	0.0013	0.0031	0.0035
2010-3-6	0.0653	0.2963	0.3196	0.0011	0.0033	0.0037
2010-3-7	0.1064	0.1741	0.1618	0.0031	0.0027	0.0031
2010-3-8	0.0885	0.2055	0.2039	0.0021	0.0037	0.0041
2010-4-1	0.1204	0.2378	0.2268	0.0040	0.0032	0.0036
2010-4-2	0.0967	0.2031	0.1962	0.0030	0.0030	0.0033
2010-4-3	0.0769	0.2106	0.2107	0.0020	0.0030	0.0034
2010-4-4	0.0735	0.2279	0.2322	0.0016	0.0030	0.0034
2010-4-5	0.0727	0.2448	0.2521	0.0013	0.0031	0.0035
2010-4-6	0.0653	0.2963	0.3196	0.0011	0.0033	0.0037
2010-4-7	0.1064	0.1741	0.1618	0.0031	0.0027	0.0031
2010-4-8	0.0885	0.2055	0.2039	0.0021	0.0037	0.0041
2010-5-1	0.1204	0.2378	0.2268	0.0040	0.0032	0.0036
2010-5-2	0.0967	0.2031	0.1962	0.0030	0.0030	0.0033
2010-5-3	0.0769	0.2106	0.2107	0.0020	0.0030	0.0034
2010-5-4	0.0735	0.2279	0.2322	0.0016	0.0030	0.0034
2010-5-5	0.0727	0.2448	0.2521	0.0013	0.0031	0.0035
2010-5-6	0.0653	0.2963	0.3196	0.0011	0.0033	0.0037

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
2010-5-7	0.1064	0.1741	0.1618	0.0031	0.0027	0.0031
2010-5-8	0.0885	0.2055	0.2039	0.0021	0.0037	0.0041
2010-6-1	0.2534	0.2378	0.2268	0.0123	0.0032	0.0036
2010-6-2	0.2023	0.2031	0.1962	0.0093	0.0030	0.0033
2010-6-3	0.1566	0.2106	0.2107	0.0060	0.0030	0.0034
2010-6-4	0.1425	0.2279	0.2322	0.0045	0.0030	0.0034
2010-6-5	0.1330	0.2448	0.2521	0.0031	0.0031	0.0035
2010-6-6	0.1129	0.2963	0.3196	0.0024	0.0033	0.0037
2010-6-7	0.1992	0.1741	0.1618	0.0091	0.0027	0.0031
2010-6-8	0.1547	0.2055	0.2039	0.0055	0.0037	0.0041
2010-7-1	0.2534	0.2378	0.2268	0.0123	0.0032	0.0036
2010-7-2	0.2023	0.2031	0.1962	0.0093	0.0030	0.0033
2010-7-3	0.1566	0.2106	0.2107	0.0060	0.0030	0.0034
2010-7-4	0.1425	0.2279	0.2322	0.0045	0.0030	0.0034
2010-7-5	0.1330	0.2448	0.2521	0.0031	0.0031	0.0035
2010-7-6	0.1129	0.2963	0.3196	0.0024	0.0033	0.0037
2010-7-7	0.1992	0.1741	0.1618	0.0091	0.0027	0.0031
2010-7-8	0.1547	0.2055	0.2039	0.0055	0.0037	0.0041
2010-8A-1	1.0313	0.2378	0.2268	0.0576	0.0032	0.0036
2010-8A-2	0.8106	0.2031	0.1962	0.0446	0.0030	0.0033
2010-8A-3	0.6257	0.2106	0.2107	0.0277	0.0030	0.0034
2010-8A-4	0.5563	0.2279	0.2322	0.0196	0.0030	0.0034
2010-8A-5	0.5002	0.2448	0.2521	0.0119	0.0031	0.0035
2010-8A-6	0.4277	0.2963	0.3196	0.0091	0.0033	0.0037
2010-8A-7	0.7681	0.1741	0.1618	0.0433	0.0027	0.0031
2010-8A-8	0.5894	0.2055	0.2039	0.0248	0.0037	0.0041
2010-8B-1	1.0313	0.2378	0.2268	0.0576	0.0032	0.0036
2010-8B-2	0.8106	0.2031	0.1962	0.0446	0.0030	0.0033
2010-8B-3	0.6257	0.2106	0.2107	0.0277	0.0030	0.0034
2010-8B-4	0.5563	0.2279	0.2322	0.0196	0.0030	0.0034

Model Year/Truck Class/Cycle¹⁵	Diesel NOX	Gas NOX	E10 NOX	Diesel PM10	Gas PM10	E10 PM10
2010-8B-5	0.5002	0.2448	0.2521	0.0119	0.0031	0.0035
2010-8B-6	0.4277	0.2963	0.3196	0.0091	0.0033	0.0037
2010-8B-7	0.7681	0.1741	0.1618	0.0433	0.0027	0.0031
2010-8B-8	0.5894	0.2055	0.2039	0.0248	0.0037	0.0041