

US EPA ARCHIVE DOCUMENT

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TABLE 5.1.1
NONTAMPERED EXHAUST EMISSION RATES FOR
LOW ALTITUDE
LIGHT DUTY DIESEL POWERED VEHICLES
* BER = ZML + (DR * M)

Pol	Model Years	Zero Mile Emission Level	Deterioration Rate	50,000 Mile Emission Level	100,000 Mile Emission Level
HC	Pre-1975	1.310	0.080	1.710	2.110
	1975-1976	0.420	0.070	0.770	1.120
	1977	0.420	0.070	0.770	1.120
	1978	0.420	0.070	0.770	1.120
	1979	0.420	0.070	0.770	1.120
	1980+	0.290	0.030	0.440	0.590
CO	Pre-1975	2.710	0.130	3.360	4.010
	1975-1976	1.170	0.090	1.620	2.070
	1977	1.170	0.090	1.620	2.070
	1978	1.170	0.090	1.620	2.070
	1979	1.170	0.090	1.620	2.070
	1980+	1.150	0.040	1.350	1.550
NOx	Pre-1975	1.460	0.040	1.660	1.860
	1975-1976	1.400	0.040	1.600	1.800
	1977	1.400	0.040	1.600	1.800
	1978	1.400	0.040	1.600	1.800
	1979	1.400	0.040	1.600	1.800
	1980	1.400	0.040	1.600	1.800
	1981-1984	1.310	0.030	1.460	1.610
	1985+	0.870	0.030	1.020	1.170

* WHERE : BER = Nontampered basic exhaust emission rates in grams/mile,
ZML = Zero mile level in grams/mile,
DR = Deterioration rate in grams/mile/10K miles,
M = Cumulative mileage / 10,000 miles.

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TABLE 5.1.2
NONTAMPERED EXHAUST EMISSION RATES FOR
HIGH ALTITUDE
LIGHT DUTY DIESEL POWERED VEHICLES
* BER = ZML + (DR * M)

Pol	Model Years	Zero Mile Emission Level	Deterioration Rate	50,000 Mile Emission Level	100,000 Mile Emission Level
HC	Pre-1975	3.010	0.080	3.410	3.810
	1975-1976	0.970	0.070	1.320	1.670
	1977	0.970	0.070	1.320	1.670
	1978	0.970	0.070	1.320	1.670
	1979	0.970	0.070	1.320	1.670
	1980-1981	0.670	0.030	0.820	0.970
	1982-1983	0.400	0.030	0.550	0.700
	1984+	0.290	0.030	0.440	0.590
CO	Pre-1975	4.740	0.130	5.390	6.040
	1975-1976	2.050	0.090	2.500	2.950
	1977	2.050	0.090	2.500	2.950
	1978	2.050	0.090	2.500	2.950
	1979	2.050	0.090	2.500	2.950
	1980-1981	2.010	0.040	2.210	2.410
	1982-1983	2.010	0.040	2.210	2.410
	1984+	1.150	0.040	1.350	1.550
NOx	Pre-1975	1.460	0.040	1.660	1.860
	1975-1976	1.400	0.040	1.600	1.800
	1977	1.400	0.040	1.600	1.800
	1978	1.400	0.040	1.600	1.800
	1979	1.400	0.040	1.600	1.800
	1980	1.400	0.040	1.600	1.800
	1981-1984	1.310	0.030	1.460	1.610
	1985+	0.870	0.030	1.020	1.170

* WHERE : BER = Nontampered basic exhaust emission rates in grams/mile,
ZML = Zero mile level in grams/mile,
DR = Deterioration rate in grams/mile/10K miles,
M = Cumulative mileage / 10,000 miles.
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TABLE 5.4A

REGISTRATION MIX AND
MILEAGE ACCUMULATION RATES FOR
LIGHT DUTY DIESEL POWERED VEHICLES

Model Year Index**	July 1 Registration Mix*	Mileage Accumulation Rate (per vehicle*)	Jan 1 Registration Mix	Jan 1 Mileage Accumulation Rate*** (fleet)	Jan 1 Mileage Accumulation (fleet)
1	0.049	17825.	0.010	17825.	2228.
2	0.079	16478.	0.048	17488.	13327.
3	0.083	15233.	0.051	16167.	30145.
4	0.082	14081.	0.050	14945.	45692.
5	0.084	13017.	0.026	13815.	60064.
6	0.081	12033.	0.025	12771.	73349.
7	0.077	11124.	0.024	11806.	85630.
8	0.056	10283.	0.017	10914.	96984.
9	0.050	9506.	0.015	10089.	107479.
10	0.051	8788.	0.016	9327.	117181.
11	0.050	8123.	0.000	8622.	126150.
12	0.054	7509.	0.000	7970.	134441.
13	0.047	6942.	0.000	7367.	142105.
14	0.037	6417.	0.034	6811.	149190.
15	0.024	5932.	0.022	6296.	155740.
16	0.019	5484.	0.052	5820.	161794.
17	0.014	5069.	0.073	5380.	167391.
18	0.015	4686.	0.096	4973.	172565.
19	0.011	4332.	0.158	4598.	177347.
20	0.008	4005.	0.145	4250.	181769.
21	0.006	3702.	0.081	3929.	185856.
22	0.005	3422.	0.032	3632.	189635.
23	0.004	3163.	0.011	3357.	193127.
24	0.003	2924.	0.005	3103.	196356.
25+	0.010	2703.	0.009	2869.	199340.

* Default information that may be altered by the MOBILE5a user with information about the local area.

** The indices refer to the most recent model year vehicles in any given calendar year. Index 1 references the newest model year vehicles and index 25+ references the oldest model year vehicles.

*** Sales weighted fleet mileage accumulation adjusted to January 1, where: $JANMAR(1) = MAR(1)$ and,
 $JANMAR(MYI) = .25 * MAR(MYI) + .75 * MAR(MYI-1)$, $MYI = 2, \dots, 25+$.

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TABLE 5.4B

DIESEL SALES FRACTION FOR
LIGHT DUTY DIESEL POWERED VEHICLES

Model Years	Diesel Sales Fraction
Pre-1971	0.000
1971	0.001
1972-1973	0.002
1974	0.003
1975	0.002
1976	0.003
1977	0.005
1978	0.009
1979	0.021
1980	0.044
1981	0.059
1982	0.047
1983	0.021
1984	0.017
1985	0.009
1986-1987	0.003
1988-1990	0.000
1991-1996	0.001
1997-2000	0.002
2001+	0.003

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TABLE 5.5

EXAMPLE TRAVEL WEIGHTING FRACTION CALCULATION FOR
LIGHT DUTY DIESEL POWERED VEHICLES
JANUARY 1, 1995

Model Years	(A) LDV Fleet Registration	(B) Sales Fraction	(C=A*B/DAF) LDDV Registration	(D) Annual Mileage Accrual Rate	(C*D/TFNORM) Travel (C*D) Fractions		
1995	0.049	0.001	0.000	0.010	17825.	178.3	0.024
1994	0.079	0.001	0.000	0.048	17488.	846.1	0.114
1993	0.083	0.001	0.000	0.051	16167.	821.8	0.111
1992	0.082	0.001	0.000	0.050	14945.	750.5	0.101
1991	0.084	0.001	0.000	0.026	13815.	355.4	0.048
1990	0.081	0.000	0.000	0.025	12771.	316.8	0.043
1989	0.077	0.000	0.000	0.024	11806.	278.4	0.037
1988	0.056	0.000	0.000	0.017	10914.	187.2	0.025
1987	0.050	0.003	0.000	0.015	10089.	154.5	0.021
1986	0.051	0.003	0.000	0.016	9327.	145.7	0.020
1985	0.050	0.009	0.000	0.000	8622.	0.0	0.000
1984	0.054	0.017	0.001	0.000	7970.	0.0	0.000
1983	0.047	0.021	0.001	0.000	7367.	0.0	0.000
1982	0.037	0.047	0.002	0.034	6811.	231.5	0.031
1981	0.024	0.059	0.001	0.022	6296.	138.8	0.019
1980	0.019	0.044	0.001	0.052	5820.	304.8	0.041
1979	0.014	0.021	0.000	0.073	5380.	392.1	0.053
1978	0.015	0.009	0.000	0.096	4973.	479.7	0.065
1977	0.011	0.005	0.000	0.158	4598.	727.8	0.098
1976	0.008	0.003	0.000	0.145	4250.	614.3	0.083
1975	0.006	0.002	0.000	0.081	3929.	317.6	0.043
1974	0.005	0.003	0.000	0.032	3632.	116.8	0.016
1973	0.004	0.002	0.000	0.011	3357.	37.0	0.005
1972	0.003	0.002	0.000	0.005	3103.	14.3	0.002
1971-	0.010	0.001	0.000	0.009	2869.	26.4	0.004

DAF: 0.008

TFNORM: 7435.6

WHERE :

- A = July 1 registration mix from Table 1.5.4A,
 B = Diesel fleet sales fractions,
 D = Sales weighted fleet mileage accumulation rate from Table 1.5.4A.

NOTE : In general, the travel weighting fractions will change for every calendar year since the sales fraction (column B) changes for almost every model year.

For the first model year (A*B) must be divided by 3 in order to properly adjust registration from July 1 to January 1.

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TABLE 5.6

SPEED CORRECTION FACTOR COEFFICIENTS FOR
LIGHT DUTY DIESEL POWERED VEHICLES

$$* SCF(s, s_{adj}) = EXP(B*(s - s_{adj}) + C*(s^2 - s_{adj}^2))$$

Pol	Model Years	Coefficients		
		A	B	C
HC	All	0.00000	-0.05500	0.00044
CO	All	0.00000	-0.08800	0.00091
NOx	All	0.00000	-0.04800	0.00071

* WHERE :

s = average speed (mph),
s_{adj} = basic test procedure speed; adjusted for
fraction of cold start operation x and
fraction of hot start operation w,
[1/s_{adj} = (w+x)/26 + (1-w-x)/16].

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TABLE 5.7

NORMALIZED BAG FRACTIONS FOR
LIGHT DUTY DIESEL POWERED VEHICLES

Poll	Model Years	Normalized Fractions						Total B0	Test D0
		Test Segment 1 B1	D1	Test Segment 2 B2	D2	Test Segment 3 B3	D3		
HC	Pre-1975	1.2090	0.0710	1.0730	0.0560	0.7030	0.0640	1.0000	0.0613
	1975-1976	1.2090	0.1050	1.0730	0.0840	0.7030	0.0880	1.0000	0.0894
	1977	1.2090	0.1050	1.0730	0.0840	0.7030	0.0880	1.0000	0.0894
	1978	1.2090	0.1050	1.0730	0.0840	0.7030	0.0880	1.0000	0.0894
	1979	1.2090	0.1050	1.0730	0.0840	0.7030	0.0880	1.0000	0.0894
	1980+	1.3490	0.1030	0.9690	0.1380	0.7960	0.1030	1.0000	0.1212
CO	Pre-1975	1.1990	0.0600	0.9350	0.0420	0.9740	0.0510	1.0000	0.0482
	1975-1976	1.1990	0.0670	0.9350	0.0480	0.9740	0.0570	1.0000	0.0544
	1977	1.1990	0.0670	0.9350	0.0480	0.9740	0.0570	1.0000	0.0544
	1978	1.1990	0.0670	0.9350	0.0480	0.9740	0.0570	1.0000	0.0544
	1979	1.1990	0.0670	0.9350	0.0480	0.9740	0.0570	1.0000	0.0544
	1980+	1.1500	0.0610	0.9940	0.0260	0.8990	0.0350	1.0000	0.0357
NOx	Pre-1975	1.0680	0.0260	0.9810	0.0290	0.9850	0.0260	1.0000	0.0276
	1975-1976	1.0680	0.0310	0.9810	0.0330	0.9850	0.0300	1.0000	0.0318
	1977	1.0680	0.0310	0.9810	0.0330	0.9850	0.0300	1.0000	0.0318
	1978	1.0680	0.0310	0.9810	0.0330	0.9850	0.0300	1.0000	0.0318
	1979	1.0680	0.0310	0.9810	0.0330	0.9850	0.0300	1.0000	0.0318
	1980	0.9690	0.0310	1.0620	0.0470	0.9060	0.0310	1.0000	0.0393
	1981-1982	0.9690	0.0310	1.0620	0.0470	0.9060	0.0310	1.0000	0.0393
	1983+	0.9690	0.0310	1.0620	0.0470	0.9060	0.0310	1.0000	0.0393

NOTE : The fractions given in this table are used in the calculation of the operating-mode/temperature correction factor (OMTCF).

WHERE :

$$\text{OMTCF} = [(\text{TERM1} + \text{TERM2} + \text{TERM3}) / \text{DENOM}],$$

$$\text{TERM1} = W * \text{TCF}(1) * (B1 + D1 * M),$$

$$\text{TERM2} = (1 - W - X) * \text{TCF}(2) * (B2 + D2 * M),$$

$$\text{TERM3} = X * \text{TCF}(3) * (B3 + D3 * M),$$

$$\text{DENOM} = B0 + D0 * M,$$

W = Fraction of VMT in the cold start mode,
 X = Fraction of VMT in the hot start mode,
 TCF(b) = Temperature correction factor for pollutant, model year, for test segment b from Table 5.7A,
 M = Cumulative mileage / 10,000 miles.

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TABLE 5.10A.1

METHANE OFFSETS*
FOR LOW ALTITUDE
LIGHT DUTY DIESEL POWERED VEHICLES

Model Years	Methane Offsets (Grams/Mile)
Pre-1975	0.043
1975-1979	0.011
1980+	0.011

* Methane offsets are used to estimate nonmethane hydrocarbon emissions (NMHC), i.e., NMHC = Total HC - Methane Offset.

VOC/TOG CORRECTION FACTOR FOR
LIGHT DUTY GASOLINE POWERED VEHICLES

$$\text{VOC/TOG} = (\text{Total HC} - \text{Methane offset}) * \text{FID} + \text{Methane offset}.$$

$$\begin{aligned} * \text{FID} = & \text{SHRMKT}(1) * \text{CF} + \\ & \text{SHRMKT}(2) * (\text{CF} + 0.074 * \text{OXYCNT}(1) * 100) + \\ & \text{SHRMKT}(3) * (\text{CF} + 0.062 * \text{OXYCNT}(2) * 100) \end{aligned}$$

Model Years	TOG	VOC
-----	-----	-----
Pre-2021	1.0349	1.0332

The correction factor is the same for Gasoline, Ether blend and Alcohol blend fueled vehicles in MOBILE5a

* WHERE:

FID -FID correction factor (TOG or VOC)

SHRMKT(i)-Market share for i=1-Gasoline, i=2-Ether blend, i=3-Alcohol blend.

CF -Coefficients from the table above (TOG or VOC)

OXYCNT(j)-Oxygen content adjustment for j=1-Ether blend, j=2-Alcohol blend.

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TABLE 5.10A.2

METHANE OFFSETS*
FOR HIGH ALTITUDE
LIGHT DUTY DIESEL POWERED VEHICLES

Model Years	Methane Offsets (Grams/Mile)
Pre-1975	0.099
1975-1979	0.025
1980+	0.025

* Methane offsets are used to estimate nonmethane hydrocarbon emissions (NMHC), i.e., NMHC = Total HC - Methane Offset.

VOC/TOG CORRECTION FACTOR FOR
LIGHT DUTY GASOLINE POWERED VEHICLES

VOC/TOG = (Total HC - Methane offset)*FID + Methane offset.

* $FID = SHRMKT(1) * CF + SHRMKT(2) * (CF + 0.074 * OXYCNT(1) * 100) + SHRMKT(3) * (CF + 0.062 * OXYCNT(2) * 100)$

Model Years	TOG	VOC
-----	-----	-----
Pre-2021	1.0349	1.0332

The correction factor is the same for Gasoline, Ether blend and Alcohol blend fueled vehicles in MOBILE5a

* WHERE:

FID -FID correction factor (TOG or VOC)

SHRMKT(i)-Market share for i=1-Gasoline, i=2-Ether blend, i=3-Alcohol blend.

CF -Coefficients from the table above (TOG or VOC)

OXYCNT(j)-Oxygen content adjustment for j=1-Ether blend, j=2-Alcohol blend.

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TABLE 5.11A.1
BY-MODEL-YEAR EMISSION LEVELS FOR LOW ALTITUDE
LIGHT DUTY DIESEL POWERED VEHICLES
TOTAL NONMETHANE HC

		January 1 of Calendar Year																																			
		1985			1986			1987			1988			1989			1990			1991			1992			1993			1994			1995			1996		
		MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**		
+		1961	0.0	1962	0.0	1963	0.0	1964	0.0	1965	0.0	1966	0.0	1967	0.0	1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0
		1962	0.0	1963	0.0	1964	0.0	1965	0.0	1966	0.0	1967	0.0	1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0
		1963	0.0	1964	0.0	1965	0.0	1966	0.0	1967	0.0	1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0
		1964	0.0	1965	0.0	1966	0.0	1967	0.0	1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0	1981	0.0
		1965	0.0	1966	0.0	1967	0.0	1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0	1981	0.0	1982	0.0
		1966	0.0	1967	0.0	1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0	1981	0.0	1982	0.0	1983	0.0
		1967	0.0	1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0	1981	0.0	1982	0.0	1983	0.0	1984	0.0
		1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0	1981	0.0	1982	0.0	1983	0.0	1984	0.0	1985	0.0
		1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0	1981	0.0	1982	0.0	1983	0.0	1984	0.0	1985	0.0	1986	0.0
		1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0	1981	0.0	1982	0.0	1983	0.0	1984	0.0	1985	0.0	1986	0.0	1987	0.0
		1971	2.5	1972	2.5	1973	2.5	1974	2.5	1975	2.5	1976	2.5	1977	2.5	1978	2.5	1979	2.5	1980	2.5	1981	2.5	1982	2.5	1983	2.5	1984	2.5	1985	2.5	1986	2.5	1987	2.5	1988	2.5
		1972	2.5	1973	2.5	1974	2.5	1975	2.5	1976	2.5	1977	2.5	1978	2.5	1979	2.5	1980	2.5	1981	2.5	1982	2.5	1983	2.5	1984	2.5	1985	2.5	1986	2.5	1987	2.5	1988	2.5	1989	2.5
		1973	2.4	1974	2.4	1975	2.4	1976	2.4	1977	2.4	1978	2.4	1979	2.4	1980	2.4	1981	2.4	1982	2.4	1983	2.4	1984	2.4	1985	2.4	1986	2.4	1987	2.4	1988	2.4	1989	2.4	1990	2.4
		1974	2.3	1975	2.3	1976	2.3	1977	2.3	1978	2.3	1979	2.3	1980	2.3	1981	2.3	1982	2.3	1983	2.3	1984	2.3	1985	2.3	1986	2.3	1987	2.3	1988	2.3	1989	2.3	1990	2.3	1991	2.3
		1975	1.3	1976	1.3	1977	1.3	1978	1.3	1979	1.3	1980	1.3	1981	1.3	1982	1.3	1983	1.3	1984	1.3	1985	1.3	1986	1.3	1987	1.3	1988	1.3	1989	1.3	1990	1.3	1991	1.3	1992	1.3
		1976	1.2	1977	1.2	1978	1.2	1979	1.2	1980	1.2	1981	1.2	1982	1.2	1983	1.2	1984	1.2	1985	1.2	1986	1.2	1987	1.2	1988	1.2	1989	1.2	1990	1.2	1991	1.2	1992	1.2	1993	1.2
		1977	1.2	1978	1.2	1979	1.2	1980	1.2	1981	1.2	1982	1.2	1983	1.2	1984	1.2	1985	1.2	1986	1.2	1987	1.2	1988	1.2	1989	1.2	1990	1.2	1991	1.2	1992	1.2	1993	1.2	1994	1.2
		1978	1.1	1979	1.1	1980	1.1	1981	1.1	1982	1.1	1983	1.1	1984	1.1	1985	1.1	1986	1.1	1987	1.1	1988	1.1	1989	1.1	1990	1.1	1991	1.1	1992	1.1	1993	1.1	1994	1.1	1995	1.1
		1979	1.0	1980	1.0	1981	1.0	1982	1.0	1983	1.0	1984	1.0	1985	1.0	1986	1.0	1987	1.0	1988	1.0	1989	1.0	1990	1.0	1991	1.0	1992	1.0	1993	1.0	1994	1.0	1995	1.0	1996	1.0
		1980	0.5	1981	0.5	1982	0.5	1983	0.5	1984	0.5	1985	0.5	1986	0.5	1987	0.5	1988	0.5	1989	0.5	1990	0.5	1991	0.5	1992	0.5	1993	0.5	1994	0.5	1995	0.5	1996	0.5	1997	0.5
		1981	0.5	1982	0.5	1983	0.5	1984	0.5	1985	0.5	1986	0.5	1987	0.5	1988	0.5	1989	0.5	1990	0.5	1991	0.5	1992	0.5	1993	0.5	1994	0.5	1995	0.5	1996	0.5	1997	0.5	1998	0.5
		1982	0.4	1983	0.4	1984	0.4	1985	0.4	1986	0.4	1987	0.4	1988	0.4	1989	0.4	1990	0.4	1991	0.4	1992	0.4	1993	0.4	1994	0.4	1995	0.4	1996	0.4	1997	0.4	1998	0.4	1999	0.4
		1983	0.4	1984	0.4	1985	0.4	1986	0.4	1987	0.4	1988	0.4	1989	0.4	1990	0.4	1991	0.4	1992	0.4	1993	0.4	1994	0.4	1995	0.4	1996	0.4	1997	0.4	1998	0.4	1999	0.4	2000	0.4
		1984	0.3	1985	0.3	1986	0.3	1987	0.3	1988	0.3	1989	0.3	1990	0.3	1991	0.3	1992	0.3	1993	0.3	1994	0.3	1995	0.3	1996	0.3	1997	0.3	1998	0.3	1999	0.3	2000	0.3	2001	0.3
		1985	0.3	1986	0.3	1987	0.3	1988	0.3	1989	0.3	1990	0.3	1991	0.3	1992	0.3	1993	0.3	1994	0.3	1995	0.3	1996	0.3	1997	0.3	1998	0.3	1999	0.3	2000	0.3	2001	0.3	2002	0.3

*MY -- Indicates the model year.

**E -- Indicates the average grams/mile emission level for model year "MY" on January 1 of the given calendar year. These emission levels are calculated for the FTP test conditions:

19.6 MPH, TEMP=75 Degrees F
20.6% of VMT traveled in cold start,
52.1% of VMT in stabilized,
27.3% of VMT in hot start.

Emissions are based on January 1 mileage accumulation figures given in Table 1.4A.5

Continued on the next page.

TABLE 5.11A.1 (continued)
BY-MODEL-YEAR EMISSION LEVELS FOR LOW ALTITUDE
LIGHT DUTY DIESEL POWERED VEHICLES
TOTAL NONMETHANE HC

January 1 of Calendar Year									
1997		1998		1999		2000		2003	
MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**
1973	2.9	1974	2.9	1975	1.8	1976	1.8	1979	1.8
1974	2.8	1975	1.8	1976	1.8	1977	1.8	1980	1.8
1975	1.8	1976	1.8	1977	1.8	1978	1.8	1981	0.9
1976	1.7	1977	1.7	1978	1.7	1979	1.7	1982	0.8
1977	1.7	1978	1.7	1979	1.7	1980	0.8	1983	0.8
1978	1.7	1979	1.7	1980	0.8	1981	0.8	1984	0.8
1979	1.7	1980	0.8	1981	0.8	1982	0.8	1985	0.8
1980	0.8	1981	0.8	1982	0.8	1983	0.8	1986	0.8
1981	0.8	1982	0.8	1983	0.8	1984	0.8	1987	0.8
1982	0.8	1983	0.8	1984	0.8	1985	0.8	1988	0.8
1983	0.7	1984	0.7	1985	0.7	1986	0.7	1989	0.7
1984	0.7	1985	0.7	1986	0.7	1987	0.7	1990	0.7
1985	0.7	1986	0.7	1987	0.7	1988	0.7	1991	0.7
1986	0.7	1987	0.7	1988	0.7	1989	0.7	1992	0.7
1987	0.7	1988	0.7	1989	0.7	1990	0.7	1993	0.7
1988	0.7	1989	0.7	1990	0.7	1991	0.7	1994	0.7
1989	0.7	1990	0.7	1991	0.7	1992	0.7	1995	0.7
1990	0.7	1991	0.7	1992	0.7	1993	0.7	1996	0.7
1991	0.5	1992	0.5	1993	0.5	1994	0.5	1997	0.6
1992	0.5	1993	0.5	1994	0.5	1995	0.5	1998	0.6
1993	0.5	1994	0.5	1995	0.5	1996	0.5	1999	0.6
1994	0.4	1995	0.4	1996	0.4	1997	0.4	2000	0.6
1995	0.4	1996	0.4	1997	0.4	1998	0.4	2001	0.6
1996	0.3	1997	0.3	1998	0.3	1999	0.3	2002	0.6
1997	0.3	1998	0.3	1999	0.3	2000	0.3	2003	0.6
+									
January 1 of Calendar Year									
2008		2010		2012		2015		2018	
MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**
1996	0.9	1997	0.9	1998	0.9	1999	0.9	2000	0.9
1997	0.9	1998	0.9	1999	0.9	2000	0.9	2001	0.9
1998	0.9	1999	0.9	2000	0.9	2001	0.9	2002	0.9
1999	0.8	2000	0.8	2001	0.8	2002	0.8	2003	0.8
2000	0.8	2001	0.8	2002	0.8	2003	0.8	2004	0.8
2001	0.8	2002	0.8	2003	0.8	2004	0.8	2005	0.8
2002	0.8	2003	0.8	2004	0.8	2005	0.8	2006	0.8
2003	0.8	2004	0.8	2005	0.8	2006	0.8	2007	0.8
2004	0.8	2005	0.8	2006	0.8	2007	0.8	2008	0.8
2005	0.8	2006	0.8	2007	0.8	2008	0.8	2009	0.8
2006	0.8	2007	0.8	2008	0.8	2009	0.8	2010	0.8
2007	0.8	2008	0.8	2009	0.8	2010	0.8	2011	0.8
2008	0.8	2009	0.8	2010	0.8	2011	0.8	2012	0.8
2009	0.8	2010	0.8	2011	0.8	2012	0.8	2013	0.8
2010	0.8	2011	0.8	2012	0.8	2013	0.8	2014	0.

*MY -- Indicates the model year.

-- Indicates the average grams/mile emission level for model year "MY" on January 1 of the given calendar year. These emission levels are calculated for the FTP test conditions:
 **E -- Indicates the model year.

19.6 MPH, TEMP=75 Degrees F
20.6% of VMT traveled in cold start,
52.1% of VMT in stabilized,
27.3% of VMT in hot start.

Emissions are based on January 1 mileage accumulation figures given in Table 1.4A.5
27.3% of VMI in 1992.

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DATE : JUNE 30, 1995

TABLE 5.11B.1
BY-MODEL-YEAR EMISSION LEVELS FOR LOW ALTITUDE
LIGHT DUTY DIESEL POWERED VEHICLES
CO

		January 1 of Calendar Year																																			
		1985			1986			1987			1988			1989			1990			1991			1992			1993			1994			1995			1996		
		MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**		
+		1961	0.0	1962	0.0	1963	0.0	1964	0.0	1965	0.0	1966	0.0	1967	0.0	1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0
		1962	0.0	1963	0.0	1964	0.0	1965	0.0	1966	0.0	1967	0.0	1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0
		1963	0.0	1964	0.0	1965	0.0	1966	0.0	1967	0.0	1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0
		1964	0.0	1965	0.0	1966	0.0	1967	0.0	1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0	1981	0.0
		1965	0.0	1966	0.0	1967	0.0	1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0	1981	0.0	1982	0.0
		1966	0.0	1967	0.0	1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0	1981	0.0	1982	0.0	1983	0.0
		1967	0.0	1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0	1981	0.0	1982	0.0	1983	0.0	1984	0.0
		1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0	1981	0.0	1982	0.0	1983	0.0	1984	0.0	1985	0.0
		1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0	1981	0.0	1982	0.0	1983	0.0	1984	0.0	1985	0.0	1986	0.0
		1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0	1981	0.0	1982	0.0	1983	0.0	1984	0.0	1985	0.0	1986	0.0	1987	0.0
		1971	4.7	1972	4.7	1973	4.7	1974	4.7	1975	4.7	1976	4.7	1977	4.7	1978	4.7	1979	4.7	1980	4.7	1981	4.7	1982	4.7	1983	4.7	1984	4.7	1985	4.7	1986	4.7	1987	4.7	1988	4.7
		1972	4.6	1973	4.6	1974	4.6	1975	4.6	1976	4.6	1977	4.6	1978	4.6	1979	4.6	1980	4.6	1981	4.6	1982	4.6	1983	4.6	1984	4.6	1985	4.6	1986	4.6	1987	4.6	1988	4.6	1989	4.6
		1973	4.6	1974	4.6	1975	4.6	1976	4.6	1977	4.6	1978	4.6	1979	4.6	1980	4.6	1981	4.6	1982	4.6	1983	4.6	1984	4.6	1985	4.6	1986	4.6	1987	4.6	1988	4.6	1989	4.6	1990	4.6
		1974	4.5	1975	4.5	1976	4.5	1977	4.5	1978	4.5	1979	4.5	1980	4.5	1981	4.5	1982	4.5	1983	4.5	1984	4.5	1985	4.5	1986	4.5	1987	4.5	1988	4.5	1989	4.5	1990	4.5	1991	4.5
		1975	2.3	1976	2.3	1977	2.3	1978	2.3	1979	2.3	1980	2.3	1981	2.3	1982	2.3	1983	2.3	1984	2.3	1985	2.3	1986	2.3	1987	2.3	1988	2.3	1989	2.3	1990	2.3	1991	2.3	1992	2.3
		1976	2.2	1977	2.2	1978	2.2	1979	2.2	1980	2.2	1981	2.2	1982	2.2	1983	2.2	1984	2.2	1985	2.2	1986	2.2	1987	2.2	1988	2.2	1989	2.2	1990	2.2	1991	2.2	1992	2.2	1993	2.2
		1977	2.1	1978	2.1	1979	2.1	1980	2.1	1981	2.1	1982	2.1	1983	2.1	1984	2.1	1985	2.1	1986	2.1	1987	2.1	1988	2.1	1989	2.1	1990	2.1	1991	2.1	1992	2.1	1993	2.1	1994	2.1
		1978	2.0	1979	2.0	1980	2.0	1981	2.0	1982	2.0	1983	2.0	1984	2.0	1985	2.0	1986	2.0	1987	2.0	1988	2.0	1989	2.0	1990	2.0	1991	2.0	1992	2.0	1993	2.0	1994	2.0	1995	2.0
		1979	1.9	1980	1.9	1981	1.9	1982	1.9	1983	1.9	1984	1.9	1985	1.9	1986	1.9	1987	1.9	1988	1.9	1989	1.9	1990	1.9	1991	1.9	1992	1.9	1993	1.9	1994	1.9	1995	1.9	1996	1.9
		1980	1.4	1981	1.4	1982	1.4	1983	1.4	1984	1.4	1985	1.4	1986	1.4	1987	1.4	1988	1.4	1989	1.4	1990	1.4	1991	1.4	1992	1.4	1993	1.4	1994	1.4	1995	1.4	1996	1.4	1997	1.4
		1981	1.4	1982	1.4	1983	1.4	1984	1.4	1985	1.4	1986	1.4	1987	1.4	1988	1.4	1989	1.4	1990	1.4	1991	1.4	1992	1.4	1993	1.4	1994	1.4	1995	1.4	1996	1.4	1997	1.4	1998	1.4
		1982	1.3	1983	1.3	1984	1.3	1985	1.3	1986	1.3	1987	1.3	1988	1.3	1989	1.3	1990	1.3	1991	1.3	1992	1.3	1993	1.3	1994	1.3	1995	1.3	1996	1.3	1997	1.3	1998	1.3	1999	1.3
		1983	1.3	1984	1.3	1985	1.3	1986	1.3	1987	1.3	1988	1.3	1989	1.3	1990	1.3	1991	1.3	1992	1.3	1993	1.3	1994	1.3	1995	1.3	1996	1.3	1997	1.3	1998	1.3	1999	1.3	2000	1.3
		1984	1.2	1985	1.2	1986	1.2	1987	1.2	1988	1.2	1989	1.2	1990	1.2	1991	1.2	1992	1.2	1993	1.2	1994	1.2	1995	1.2	1996	1.2	1997	1.2	1998	1.2	1999	1.2	2000	1.2	2001	1.2
		1985	1.2	1986	1.2	1987	1.2	1988	1.2	1989	1.2	1990	1.2	1991	1.2	1992	1.2	1993	1.2	1994	1.2	1995	1.2	1996	1.2	1997	1.2	1998	1.2	1999	1.2	2000	1.2	2001	1.2	2002	1.2

*MY -- Indicates the model year.

**E -- Indicates the average grams/mile emission level for model year "MY" on January 1 of the given calendar year. These emission levels are calculated for the FTP test conditions:

19.6 MPH, TEMP=75 Degrees F
20.6% of VMT traveled in cold start,
52.1% of VMT in stabilized,
27.3% of VMT in hot start.

Emissions are based on January 1 mileage accumulation figures given in Table 1.4A.5

Continued on the next page.

TABLE 5.11B.1 (continued)
BY-MODEL-YEAR EMISSION LEVELS FOR LOW ALTITUDE
LIGHT DUTY DIESEL POWERED VEHICLES
CO

1997		1998		1999		2000		2003		January 1 of Calendar Year				2010		2012		2015		2018		2020	
MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**		
1973	5.3	1974	5.3	1975	3.0	1976	3.0	1979	3.0	1981	1.9	1984	1.9	1986	1.9	1988	0.0	1991	1.9	1994	1.9	1996	1.9
1974	5.3	1975	2.9	1976	2.9	1977	2.9	1980	1.9	1982	1.9	1985	1.9	1987	1.9	1989	0.0	1992	1.9	1995	1.9	1997	1.9
1975	2.9	1976	2.9	1977	2.9	1978	2.9	1981	1.9	1983	1.9	1986	1.9	1988	0.0	1990	0.0	1993	1.9	1996	1.9	1998	1.9
1976	2.9	1977	2.9	1978	2.9	1979	2.9	1982	1.9	1984	1.9	1987	1.9	1989	0.0	1991	1.9	1994	1.9	1997	1.9	1999	1.9
1977	2.8	1978	2.8	1979	2.8	1980	1.9	1983	1.9	1985	1.9	1988	0.0	1990	0.0	1992	1.9	1995	1.9	1998	1.9	2000	1.9
1978	2.8	1979	2.8	1980	1.9	1981	1.9	1984	1.9	1986	1.9	1989	0.0	1991	1.9	1993	1.9	1996	1.9	1999	1.9	2001	1.9
1979	2.8	1980	1.9	1981	1.9	1982	1.9	1985	1.9	1987	1.9	1990	0.0	1992	1.9	1994	1.9	1997	1.9	2000	1.9	2002	1.9
1980	1.8	1981	1.8	1982	1.8	1983	1.8	1986	1.8	1988	0.0	1991	1.8	1993	1.8	1995	1.8	1998	1.8	2001	1.8	2003	1.8
1981	1.8	1982	1.8	1983	1.8	1984	1.8	1987	1.8	1989	0.0	1992	1.8	1994	1.8	1996	1.8	1999	1.8	2002	1.8	2004	1.8
1982	1.8	1983	1.8	1984	1.8	1985	1.8	1988	0.0	1990	0.0	1993	1.8	1995	1.8	1997	1.8	2000	1.8	2003	1.8	2005	1.8
1983	1.8	1984	1.8	1985	1.8	1986	1.8	1989	0.0	1991	1.8	1994	1.8	1996	1.8	1998	1.8	2001	1.8	2004	1.8	2006	1.8
1984	1.7	1985	1.7	1986	1.7	1987	1.7	1990	0.0	1992	1.7	1995	1.7	1997	1.7	1999	1.7	2002	1.7	2005	1.7	2007	1.7
1985	1.7	1986	1.7	1987	1.7	1988	0.0	1991	1.7	1993	1.7	1996	1.7	1998	1.7	2000	1.7	2003	1.7	2006	1.7	2008	1.7
1986	1.7	1987	1.7	1988	0.0	1989	0.0	1992	1.7	1994	1.7	1997	1.7	1999	1.7	2001	1.7	2004	1.7	2007	1.7	2009	1.7
1987	1.7	1988	0.0	1989	0.0	1990	0.0	1993	1.7	1995	1.7	1998	1.7	2000	1.7	2002	1.7	2005	1.7	2008	1.7	2010	1.7
1988	0.0	1989	0.0	1990	0.0	1991	1.6	1994	1.6	1996	1.6	1999	1.6	2001	1.6	2003	1.6	2006	1.6	2009	1.6	2011	1.6
1989	0.0	1990	0.0	1991	1.6	1992	1.6	1995	1.6	1997	1.6	2000	1.6	2002	1.6	2004	1.6	2007	1.6	2010	1.6	2012	1.6
1990	0.0	1991	1.5	1992	1.5	1993	1.5	1996	1.5	1998	1.5	2001	1.5	2003	1.5	2005	1.5	2008	1.5	2011	1.5	2013	1.5
1991	1.5	1992	1.5	1993	1.5	1994	1.5	1997	1.5	1999	1.5	2002	1.5	2004	1.5	2006	1.5	2009	1.5	2012	1.5	2014	1.5
1992	1.4	1993	1.4	1994	1.4	1995	1.4	1998	1.4	2000	1.4	2003	1.4	2005	1.4	2007	1.4	2010	1.4	2013	1.4	2015	1.4
1993	1.4	1994	1.4	1995	1.4	1996	1.4	1999	1.4	2001	1.4	2004	1.4	2006	1.4	2008	1.4	2011	1.4	2014	1.4	2016	1.4
1994	1.3	1995	1.3	1996	1.3	1997	1.3	2000	1.3	2002	1.3	2005	1.3	2007	1.3	2009	1.3	2012	1.3	2015	1.3	2017	1.3
1995	1.3	1996	1.3	1997	1.3	1998	1.3	2001	1.3	2003	1.3	2006	1.3	2008	1.3	2010	1.3	2013	1.3	2016	1.3	2018	1.3
1996	1.2	1997	1.2	1998	1.2	1999	1.2	2002	1.2	2004	1.2	2007	1.2	2009	1.2	2011	1.2	2014	1.2	2017	1.2	2019	1.2
1997	1.2	1998	1.2	1999	1.2	2000	1.2	2003	1.2	2005	1.2	2008	1.2	2010	1.2	2012	1.2	2015	1.2	2018	1.2	2020	1.2

*MY -- Indicates the model year.

-- Indicates the average grams/mile emission level for model year "MY" on January 1 of the given calendar year. These emission levels are calculated for the FTP test conditions:
 **E -- Indicates the model year.

19.6 MPH, TEMP=75 Degrees F
20.6% of VMT traveled in cold start,
52.1% of VMT in stabilized,
27.3% of VMT in hot start.

Emissions are based on January 1 mileage accumulation figures given in Table 1.4A.5
27.3% of VMI in 1992.

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DATE : JUNE 30, 1995

TABLE 5.11C.1
BY-MODEL-YEAR EMISSION LEVELS FOR LOW ALTITUDE
LIGHT DUTY DIESEL POWERED VEHICLES
NOx

		January 1 of Calendar Year																																			
		1985			1986			1987			1988			1989			1990			1991			1992			1993			1994			1995			1996		
		MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**				
+		1961	0.0	1962	0.0	1963	0.0	1964	0.0	1965	0.0	1966	0.0	1967	0.0	1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0		
		1962	0.0	1963	0.0	1964	0.0	1965	0.0	1966	0.0	1967	0.0	1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0		
		1963	0.0	1964	0.0	1965	0.0	1966	0.0	1967	0.0	1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0		
		1964	0.0	1965	0.0	1966	0.0	1967	0.0	1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0		
		1965	0.0	1966	0.0	1967	0.0	1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0	1981	0.0		
		1966	0.0	1967	0.0	1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0	1981	0.0	1982	0.0		
		1967	0.0	1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0	1981	0.0	1982	0.0	1983	0.0		
		1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0	1981	0.0	1982	0.0	1983	0.0	1984	0.0		
		1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0	1981	0.0	1982	0.0	1983	0.0	1984	0.0	1985	0.0		
		1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0	1981	0.0	1982	0.0	1983	0.0	1984	0.0	1985	0.0	1986	0.0		
		1971	2.1	1972	2.1	1973	2.1	1974	2.1	1975	2.1	1976	2.1	1977	2.1	1978	2.1	1979	2.1	1980	2.1	1981	2.1	1982	2.1	1983	2.1	1984	2.1	1985	2.1	1986	2.1	1987	2.1		
		1972	2.1	1973	2.1	1974	2.1	1975	2.1	1976	2.1	1977	2.1	1978	2.1	1979	2.1	1980	2.1	1981	2.1	1982	2.1	1983	2.1	1984	2.1	1985	2.1	1986	2.1	1987	2.1	1988	2.1		
		1973	2.0	1974	2.0	1975	2.0	1976	2.0	1977	2.0	1978	2.0	1979	2.0	1980	2.0	1981	2.0	1982	2.0	1983	2.0	1984	2.0	1985	2.0	1986	2.0	1987	2.0	1988	2.0	1989	2.0		
		1974	2.0	1975	1.9	1976	1.9	1977	1.9	1978	1.9	1979	1.9	1980	1.9	1981	1.9	1982	1.9	1983	1.9	1984	1.9	1985	1.9	1986	1.9	1987	1.9	1988	1.9	1989	1.9	1990	1.9		
		1975	1.9	1976	1.9	1977	1.9	1978	1.9	1979	1.9	1980	1.9	1981	1.9	1982	1.9	1983	1.9	1984	1.9	1985	1.9	1986	1.9	1987	1.9	1988	1.9	1989	1.9	1990	1.9	1991	1.9		
		1976	1.9	1977	1.9	1978	1.9	1979	1.9	1980	1.9	1981	1.9	1982	1.9	1983	1.9	1984	1.9	1985	1.9	1986	1.9	1987	1.9	1988	1.9	1989	1.9	1990	1.9	1991	1.9	1992	1.9		
		1977	1.8	1978	1.8	1979	1.8	1980	1.8	1981	1.8	1982	1.8	1983	1.8	1984	1.8	1985	1.8	1986	1.8	1987	1.8	1988	1.8	1989	1.8	1990	1.8	1991	1.8	1992	1.8	1993	1.8		
		1978	1.8	1979	1.8	1980	1.8	1981	1.8	1982	1.8	1983	1.8	1984	1.8	1985	1.8	1986	1.8	1987	1.8	1988	1.8	1989	1.8	1990	1.8	1991	1.8	1992	1.8	1993	1.8	1994	1.8		
		1979	1.7	1980	1.7	1981	1.7	1982	1.7	1983	1.7	1984	1.7	1985	1.7	1986	1.7	1987	1.7	1988	1.7	1989	1.7	1990	1.7	1991	1.7	1992	1.7	1993	1.7	1994	1.7	1995	1.7		
		1980	1.7	1981	1.5	1982	1.5	1983	1.5	1984	1.5	1985	1.5	1986	1.5	1987	1.5	1988	1.5	1989	1.5	1990	1.5	1991	1.5	1992	1.5	1993	1.5	1994	1.5	1995	1.5	1996	1.5		
		1981	1.5	1982	1.5	1983	1.5	1984	1.5	1985	1.5	1986	1.5	1987	1.5	1988	1.5	1989	1.5	1990	1.5	1991	1.5	1992	1.5	1993	1.5	1994	1.5	1995	1.5	1996	1.5	1997	1.5		
		1982	1.4	1983	1.4	1984	1.4	1985	1.4	1986	1.4	1987	1.4	1988	1.4	1989	1.4	1990	1.4	1991	1.4	1992	1.4	1993	1.4	1994	1.4	1995	1.4	1996	1.4	1997	1.4	1998	1.4		
		1983	1.4	1984	1.4	1985	1.4	1986	1.4	1987	1.4	1988	1.4	1989	1.4	1990	1.4	1991	1.4	1992	1.4	1993	1.4	1994	1.4	1995	1.4	1996	1.4	1997	1.4	1998	1.4	1999	1.4		
		1984	1.4	1985	0.9	1986	0.9	1987	0.9	1988	0.9	1989	0.9	1990	0.9	1991	0.9	1992	0.9	1993	0.9	1994	0.9	1995	0.9	1996	0.9	1997	0.9	1998	0.9	1999	0.9	2000	0.9		
		1985	0.9	1986	0.9	1987	0.9	1988	0.9	1989	0.9	1990	0.9	1991	0.9	1992	0.9	1993	0.9	1994	0.9	1995	0.9	1996	0.9	1997	0.9	1998	0.9	1999	0.9	2000	0.9	2001	0.9		

*MY -- Indicates the model year.

**E -- Indicates the average grams/mile emission level for model year "MY" on January 1 of the given calendar year. These emission levels are calculated for the FTP test conditions:

19.6 MPH, TEMP=75 Degrees F
20.6% of VMT traveled in cold start,
52.1% of VMT in stabilized,
27.3% of VMT in hot start.

Emissions are based on January 1 mileage accumulation figures given in Table 1.4A.5

Continued on the next page.

TABLE 5.11C.1 (continued)
BY-MODEL-YEAR EMISSION LEVELS FOR LOW ALTITUDE
LIGHT DUTY DIESEL POWERED VEHICLES
NOx

January 1 of Calendar Year																							
1997		1998		1999		2000		2003		2005		2008		2010		2012		2015		2018		2020	
MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**
1973	2.3	1974	2.2	1975	2.2	1976	2.2	1979	2.2	1981	1.9	1984	1.9	1986	1.5	1988	0.0	1991	1.5	1994	1.5	1996	1.5
1974	2.2	1975	2.2	1976	2.2	1977	2.2	1980	2.2	1982	1.9	1985	1.5	1987	0.0	1989	0.0	1992	1.5	1995	1.5	1997	1.5
1975	2.2	1976	2.2	1977	2.2	1978	2.2	1981	2.2	1983	1.9	1986	1.9	1988	0.0	1990	0.0	1993	1.5	1996	1.5	1998	1.5
1976	2.2	1977	2.2	1978	2.2	1979	2.2	1982	2.2	1984	1.9	1987	1.4	1989	0.0	1991	1.4	1994	1.4	1997	1.4	1999	1.4
1977	2.1	1978	2.1	1979	2.1	1980	2.1	1983	1.9	1985	1.4	1988	0.0	1990	0.0	1992	1.4	1995	1.4	1998	1.4	2000	1.4
1978	2.1	1979	2.1	1980	2.1	1981	1.9	1984	1.9	1986	1.4	1989	0.0	1991	1.4	1993	1.4	1996	1.4	1999	1.4	2001	1.4
1979	2.1	1980	2.1	1981	1.8	1982	1.8	1985	1.4	1987	1.4	1990	0.0	1992	1.4	1994	1.4	1997	1.4	2000	1.4	2002	1.4
1980	2.1	1981	1.8	1982	1.8	1983	1.8	1986	1.4	1988	0.0	1991	1.4	1993	1.4	1995	1.4	1998	1.4	2001	1.4	2003	1.4
1981	1.8	1982	1.8	1983	1.8	1984	1.8	1987	1.4	1989	0.0	1992	1.4	1994	1.4	1996	1.4	1999	1.4	2002	1.4	2004	1.4
1982	1.8	1983	1.8	1984	1.8	1985	1.4	1988	0.0	1990	0.0	1993	1.4	1995	1.4	1997	1.4	2000	1.4	2003	1.4	2005	1.4
1983	1.8	1984	1.8	1985	1.3	1986	1.3	1989	0.0	1991	1.3	1994	1.3	1996	1.3	1998	1.3	2001	1.3	2004	1.3	2006	1.3
1984	1.8	1985	1.3	1986	1.3	1987	1.3	1990	0.0	1992	1.3	1995	1.3	1997	1.3	1999	1.3	2002	1.3	2005	1.3	2007	1.3
1985	1.3	1986	1.3	1987	1.3	1988	0.0	1991	1.3	1993	1.3	1996	1.3	1998	1.3	2000	1.3	2003	1.3	2006	1.3	2008	1.3
1986	1.3	1987	1.3	1988	0.0	1989	0.0	1992	1.3	1994	1.3	1997	1.3	1999	1.3	2001	1.3	2004	1.3	2007	1.3	2009	1.3
1987	1.2	1988	0.0	1989	0.0	1990	0.0	1993	1.2	1995	1.2	1998	1.2	2000	1.2	2002	1.2	2005	1.2	2008	1.2	2010	1.2
1988	0.0	1989	0.0	1990	0.0	1991	1.2	1994	1.2	1996	1.2	1999	1.2	2001	1.2	2003	1.2	2006	1.2	2009	1.2	2011	1.2
1989	0.0	1990	0.0	1991	1.2	1992	1.2	1995	1.2	1997	1.2	2000	1.2	2002	1.2	2004	1.2	2007	1.2	2010	1.2	2012	1.2
1990	0.0	1991	1.2	1992	1.2	1993	1.2	1996	1.2	1998	1.2	2001	1.2	2003	1.2	2005	1.2	2008	1.2	2011	1.2	2013	1.2
1991	1.1	1992	1.1	1993	1.1	1994	1.1	1997	1.1	1999	1.1	2002	1.1	2004	1.1	2006	1.1	2009	1.1	2012	1.1	2014	1.1
1992	1.1	1993	1.1	1994	1.1	1995	1.1	1998	1.1	2000	1.1	2003	1.1	2005	1.1	2007	1.1	2010	1.1	2013	1.1	2015	1.1
1993	1.1	1994	1.1	1995	1.1	1996	1.1	1999	1.1	2001	1.1	2004	1.1	2006	1.1	2008	1.1	2011	1.1	2014	1.1	2016	1.1
1994	1.0	1995	1.0	1996	1.0	1997	1.0	2000	1.0	2002	1.0	2005	1.0	2007	1.0	2009	1.0	2012	1.0	2015	1.0	2017	1.0
1995	1.0	1996	1.0	1997	1.0	1998	1.0	2001	1.0	2003	1.0	2006	1.0	2008	1.0	2010	1.0	2013	1.0	2016	1.0	2018	1.0
1996	0.9	1997	0.9	1998	0.9	1999	0.9	2002	0.9	2004	0.9	2007	0.9	2009	0.9	2011	0.9	2014	0.9	2017	0.9	2019	0.9
1997	0.9	1998	0.9	1999	0.9	2000	0.9	2003	0.9	2005	0.9	2008	0.9	2010	0.9	2012	0.9	2015	0.9	2018	0.9	2020	0.9

*MY -- Indicates the model year.

-- Indicates the average grams/mile emission level for model year "MY" on January 1 of the given calendar year. These emission levels are calculated for the FTP test conditions:
 **E -- Indicates the model year.

19.6 MPH, TEMP=75 Degrees F
20.6% of VMT traveled in cold start,
52.1% of VMT in stabilized,
27.3% of VMT in hot start.

Emissions are based on January 1 mileage accumulation figures given in Table 1.4A.5
27.3% of which are not stated.

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DATE : JUNE 30, 1995

TABLE 5.11A.2
BY-MODEL-YEAR EMISSION LEVELS FOR HIGH ALTITUDE
LIGHT DUTY DIESEL POWERED VEHICLES
TOTAL NONMETHANE HC

		January 1 of Calendar Year																																																																							
		1985			1986			1987			1988			1989			1990			1991			1992			1993			1994			1995			1996																																						
		MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**																																								
+		1961	0.0	1962	0.0	1963	0.0	1964	0.0	1965	0.0	1966	0.0	1967	0.0	1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0	1981	0.0	1982	0.0	1983	0.0	1984	0.0	1985	0.0	1986	0.0	1987	0.0	1988	0.0	1989	0.0	1990	0.0	1991	0.0	1992	0.0	1993	0.0	1994	0.0	1995	0.0	1996	0.0
		1962	0.0	1963	0.0	1964	0.0	1965	0.0	1966	0.0	1967	0.0	1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0	1981	0.0	1982	0.0	1983	0.0	1984	0.0	1985	0.0	1986	0.0	1987	0.0	1988	0.0	1989	0.0	1990	0.0	1991	0.0	1992	0.0	1993	0.0	1994	0.0	1995	0.0	1996	0.0		
		1963	0.0	1964	0.0	1965	0.0	1966	0.0	1967	0.0	1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0	1981	0.0	1982	0.0	1983	0.0	1984	0.0	1985	0.0	1986	0.0	1987	0.0	1988	0.0	1989	0.0	1990	0.0	1991	0.0	1992	0.0	1993	0.0	1994	0.0	1995	0.0	1996	0.0				
		1964	0.0	1965	0.0	1966	0.0	1967	0.0	1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0	1981	0.0	1982	0.0	1983	0.0	1984	0.0	1985	0.0	1986	0.0	1987	0.0	1988	0.0	1989	0.0	1990	0.0	1991	0.0	1992	0.0	1993	0.0	1994	0.0	1995	0.0	1996	0.0						
		1965	0.0	1966	0.0	1967	0.0	1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0	1981	0.0	1982	0.0	1983	0.0	1984	0.0	1985	0.0	1986	0.0	1987	0.0	1988	0.0	1989	0.0	1990	0.0	1991	0.0	1992	0.0	1993	0.0	1994	0.0	1995	0.0	1996	0.0								
		1966	0.0	1967	0.0	1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0	1981	0.0	1982	0.0	1983	0.0	1984	0.0	1985	0.0	1986	0.0	1987	0.0	1988	0.0	1989	0.0	1990	0.0	1991	0.0	1992	0.0	1993	0.0	1994	0.0	1995	0.0	1996	0.0										
		1967	0.0	1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0	1981	0.0	1982	0.0	1983	0.0	1984	0.0	1985	0.0	1986	0.0	1987	0.0	1988	0.0	1989	0.0	1990	0.0	1991	0.0	1992	0.0	1993	0.0	1994	0.0	1995	0.0	1996	0.0												
		1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0	1981	0.0	1982	0.0	1983	0.0	1984	0.0	1985	0.0	1986	0.0	1987	0.0	1988	0.0	1989	0.0	1990	0.0	1991	0.0	1992	0.0	1993	0.0	1994	0.0	1995	0.0	1996	0.0														
		1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0	1981	0.0	1982	0.0	1983	0.0	1984	0.0	1985	0.0	1986	0.0	1987	0.0	1988	0.0	1989	0.0	1990	0.0	1991	0.0	1992	0.0	1993	0.0	1994	0.0	1995	0.0	1996	0.0																
		1970	0.0	1971	4.2	1972	4.2	1973	4.2	1974	4.2	1975	4.2	1976	2.1	1977	2.1	1978	2.1	1979	2.1	1980	2.1	1981	2.1	1982	2.1	1983	2.1	1984	2.1	1985	2.1	1986	2.1	1987	2.1	1988	2.1	1989	2.1	1990	2.1	1991	2.1	1992	2.1	1993	2.1	1994	2.1	1995	2.1	1996	2.1																		
		1971	4.2	1972	4.2	1973	4.2	1974	4.2	1975	2.0	1976	2.0	1977	2.0	1978	2.0	1979	2.0	1980	2.0	1981	2.0	1982	2.0	1983	2.0	1984	2.0	1985	2.0	1986	2.0	1987	2.0	1988	2.0	1989	2.0	1990	2.0	1991	2.0	1992	2.0	1993	2.0	1994	2.0	1995	2.0	1996	2.0																				
		1972	4.1	1973	4.1	1974	4.1	1975	4.1	1976	2.0	1977	2.0	1978	2.0	1979	2.0	1980	2.0	1981	2.0	1982	2.0	1983	2.0	1984	2.0	1985	2.0	1986	2.0	1987	2.0	1988	2.0	1989	2.0	1990	2.0	1991	2.0	1992	2.0	1993	2.0	1994	2.0	1995	2.0	1996	2.0																						
		1973	4.0	1974	4.0	1975	4.0	1976	4.0	1977	1.9	1978	1.9	1979	1.9	1980	1.9	1981	1.9	1982	1.9	1983	1.9	1984	1.9	1985	1.9	1986	1.9	1987	1.9	1988	1.9	1989	1.9	1990	1.9	1991	1.9	1992	1.9	1993	1.9	1994	1.9	1995	1.9	1996	1.9																								
		1974	4.0	1975	4.0	1976	4.0	1977	4.0	1978	1.9	1979	1.9	1980	1.9	1981	1.9	1982	1.9	1983	1.9	1984	1.9	1985	1.9	1986	1.9	1987	1.9	1988	1.9	1989	1.9	1990	1.9	1991	1.9	1992	1.9	1993	1.9	1994	1.9	1995	1.9	1996	1.9																										
		1975	1.8	1976	1.8	1977	1.8	1978	1.8	1979	1.8	1980	1.8	1981	1.8	1982	1.8	1983	1.8	1984	1.8	1985	1.8	1986	1.8	1987	1.8	1988	1.8	1989	1.8	1990	1.8	1991	1.8	1992	1.8	1993	1.8	1994	1.8	1995	1.8	1996	1.8																												
		1976	1.8	1977	1.8	1978	1.8	1979	1.8	1980	1.8	1981	1.8	1982	1.8	1983	1.8	1984	1.8	1985	1.8	1986	1.8	1987	1.8	1988	1.8	1989	1.8	1990	1.8	1991	1.8	1992	1.8	1993	1.8	1994	1.8	1995	1.8	1996	1.8																														
		1977	1.7	1978	1.7	1979	1.7	1980	1.7	1981	1.7	1982	1.7	1983	1.7	1984	1.7	1985	1.7	1986	1.7	1987	1.7	1988	1.7	1989	1.7	1990	1.7	1991	1.7	1992	1.7	1993	1.7	1994	1.7	1995	1.7	1996	1.7																																
		1978	1.6	1979	1.6	1980	1.6	1981	1.6	1982	1.6	1983	1.6	1984	1.6	1985	1.6	1986	1.6	1987	1.6	1988	1.6	1989	1.6	1990	1.6	1991	1.6	1992	1.6	1993	1.6	1994	1.6	1995	1.6	1996	1.6																																		
		1979	1.5	1980	1.5	1981	0.9	1982	0.9	1983	0.9	1984	0.9	1985	0.9	1986	0.9	1987	0.9	1988	0.9	1989	0.9	1990	0.9	1991	0.9	1992	0.9	1993	0.9	1994	0.9	1995	0.9	1996	0.9																																				
		1980	0.9	1981	0.9	1982	0.6	1983	0.6	1984	0.6	1985	0.6	1986	0.6	1987	0.6	1988	0.6	1989	0.6	1990	0.6	1991	0.6	1992	0.6	1993	0.6	1994	0.6	1995	0.6	1996	0.6																																						
		1981	0.8	1982	0.8	1983	0.6	1984	0.6	1985	0.6	1986	0.6	1987	0.6	1988	0.6	1989	0.6	1990	0.6	1991	0.6	1992	0.6	1993	0.6	1994	0.6	1995	0.6	1996	0.6																																								
		1982	0.5	1983	0.5	1984	0.4	1985	0.4	1986	0.4	1987	0.4	1988	0.4	1989	0.4	1990	0.4	1991	0.4	1992	0.4	1993	0.4	1994	0.4	1995	0.4	1996	0.4																																										
		1983	0.5	1984	0.5	1985	0.4	1986	0.4	1987	0.4	1988	0.4	1989	0.4	1990	0.4	1991	0.4	1992	0.4	1993	0.4	1994	0.4	1995	0.4	1996	0.4																																												
		1984	0.3	1985	0.3	1986	0.3	1987	0.3	1988	0.3	1989	0.3	1990	0.3	1991	0.3	1992	0.3	1993	0.3	1994	0.3	1995	0.3	1996	0.3																																														
		1985	0.3	1986	0.3	1987	0.3	1988	0.3	1989	0.3	1990	0.3	1991	0.3	1992	0.3	1993	0.3	1994	0.3	1995	0.3	1996	0.3																																																

*MY -- Indicates the model year.

**E -- Indicates the average grams/mile emission level for model year "MY" on January 1 of the given calendar year. These emission levels are calculated for the FTP test conditions:

19.6 MPH, TEMP=75 Degrees F
20.6% of VMT traveled in cold start,
52.1% of VMT in stabilized,
27.3% of VMT in hot start.

Emissions are based on January 1 mileage accumulation figures given in Table 2.4A.5

Continued on the next page.

TABLE 5.11A.2 (continued)
BY-MODEL-YEAR EMISSION LEVELS FOR HIGH ALTITUDE
LIGHT DUTY DIESEL POWERED VEHICLES
TOTAL NONMETHANE HC

January 1 of Calendar Year									
1997		1998		1999		2000		2003	
MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**
1973	4.5	1974	4.5	1975	2.3	1976	2.3	1979	2.3
1974	4.5	1975	2.3	1976	2.3	1977	2.3	1980	2.3
1975	2.3	1976	2.3	1977	2.3	1978	2.3	1981	1.2
1976	2.3	1977	2.3	1978	2.3	1979	2.2	1982	0.9
1977	2.2	1978	2.2	1979	2.2	1980	1.2	1983	0.9
1978	2.2	1979	2.2	1980	1.2	1981	1.2	1984	0.8
1979	2.2	1980	1.2	1981	1.2	1982	0.9	1985	0.8
1980	1.2	1981	1.2	1982	0.9	1983	0.8	1986	0.8
1981	1.1	1982	0.9	1983	0.9	1984	0.8	1987	0.8
1982	0.9	1983	0.9	1984	0.8	1985	0.8	1988	0.8
1983	0.8	1984	0.7	1985	0.7	1986	0.7	1989	0.7
1984	0.7	1985	0.7	1986	0.7	1987	0.7	1990	0.7
1985	0.7	1986	0.7	1987	0.7	1988	0.7	1991	0.7
1986	0.7	1987	0.7	1988	0.7	1989	0.7	1992	0.7
1987	0.6	1988	0.6	1989	0.6	1990	0.6	1993	0.6
1988	0.6	1989	0.6	1990	0.6	1991	0.6	1994	0.6
1989	0.6	1990	0.6	1991	0.6	1992	0.6	1995	0.6
1990	0.6	1991	0.6	1992	0.6	1993	0.6	1996	0.6
1991	0.5	1992	0.5	1993	0.5	1994	0.5	1997	0.5
1992	0.5	1993	0.5	1994	0.5	1995	0.5	1998	0.5
1993	0.4	1994	0.4	1995	0.4	1996	0.4	1999	0.4
1994	0.4	1995	0.4	1996	0.4	1997	0.4	2000	0.4
1995	0.4	1996	0.4	1997	0.4	1998	0.4	2001	0.4
1996	0.3	1997	0.3	1998	0.3	1999	0.3	2002	0.3
1997	0.3	1998	0.3	1999	0.3	2000	0.3	2003	0.3
+									
2005									
2008									
2010									
2012									
2015									
2018									
2020									
MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**
1996	0.9	1997	0.9	1998	0.9	1999	0.9	2000	0.9
1997	0.9	1998	0.9	1999	0.9	2000	0.9	2001	0.9
1998	0.8	1999	0.8	2000	0.8	2001	0.8	2002	0.8
1999	0.8	2000	0.8	2001	0.8	2002	0.8	2003	0.8
2000	0.8	2001	0.8	2002	0.8	2003	0.8	2004	0.8
2001	0.8	2002	0.8	2003	0.8	2004	0.8	2005	0.8
2002	0.8	2003	0.8	2004	0.8	2005	0.8	2006	0.8
2003	0.8	2004	0.8	2005	0.8	2006	0.8	2007	0.8
2004	0.8	2005	0.8	2006	0.8	2007	0.8	2008	0.8
2005	0.8	2006	0.8	2007	0.8	2008	0.8	2009	0.8
2006	0.8	2007	0.8	2008	0.8	2009	0.8	2010	0.8
2007	0.8	2008	0.8	2009	0.8	2010	0.8	2011	0.8
2008	0.8	2009	0.8	2010	0.8	2011	0.8	2012	0.8
2009	0.8	2010	0.8	2011	0.8	2012	0.8	2013	0.8
2010	0.8	2011	0.8	2012	0.8	2013	0.8	2014	0.8
2011	0.8	2012	0.8	2013	0.8	2014	0.8	2015	0.8
2012	0.8	2013	0.8	2014	0.8	2015	0.8	2016	0.8
2013	0.8	2014	0.8	2015	0.8	2016	0.8	2017	0.8
2014	0.8	2015	0.8	2016	0.8	2017	0.8	2018	0.8
2015	0.8	2016	0.8	2017	0.8	2018	0.8	2019	0.8
2016	0.8	2017	0.8	2018	0.8	2019	0.8	2020	0.8
2017	0.8	2018	0.8	2019	0.8	2020	0.8		

*MY -- Indicates the model year.

-- Indicates the average grams/mile emission level for model year "MY" on January 1 of the given calendar year. These emission levels are calculated for the FTP test conditions:
 **E -- Indicates the model year.

19.6 MPH, TEMP=75 Degrees F
20.6% of VMT traveled in cold start,
52.1% of VMT in stabilized,
27.3% of VMT in hot start.

Emissions are based on January 1 mileage accumulation figures given in Table 2.4A.5
27.3% of VMI in 1992 start.

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DATE : JUNE 30, 1995

TABLE 5.11B.2
BY-MODEL-YEAR EMISSION LEVELS FOR HIGH ALTITUDE
LIGHT DUTY DIESEL POWERED VEHICLES
CO

	January 1 of Calendar Year											
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	MY* E**	MY* E**	MY* E**	MY* E**	MY* E**	MY* E**	MY* E**	MY* E**	MY* E**	MY* E**	MY* E**	MY* E**
1961	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1962	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1963	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1969	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1971	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
1972	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
1973	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
1974	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
1975	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
1976	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
1977	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
1978	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
1979	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
1980	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
1981	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
1982	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
1983	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
1984	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
1985	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2

*MY -- Indicates the model year.

**E -- Indicates the average grams/mile emission level for model year "MY" on January 1 of the given calendar year. These emission levels are calculated for the FTP test conditions:

19.6 MPH, TEMP=75 Degrees F
20.6% of VMT traveled in cold start,
52.1% of VMT in stabilized,
27.3% of VMT in hot start.

Emissions are based on January 1 mileage accumulation figures given in Table 2.4A.5

Continued on the next page.

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TABLE 5.11B.2 (continued)
BY-MODEL-YEAR EMISSION LEVELS FOR HIGH ALTITUDE
LIGHT DUTY DIESEL POWERED VEHICLES
CO

	January 1 of Calendar Year											
	1997	1998	1999	2000	2003	2005	2008	2010	2012	2015	2018	2020
MY* E**	MY* E**	MY* E**	MY* E**	MY* E**	MY* E**	MY* E**	MY* E**	MY* E**	MY* E**	MY* E**	MY* E**	MY* E**
1973	7.3	7.3	7.3	3.8	3.8	2.8	1.9	1.9	0.0	1.9	1.9	1.9
1974	7.3	3.8	3.8	3.8	2.8	2.8	1.9	1.9	0.0	1.9	1.9	1.9
1975	3.8	3.8	3.8	3.8	2.8	2.8	1.9	0.0	0.0	1.9	1.9	1.9
1976	3.8	3.8	3.8	3.8	2.8	2.8	1.9	0.0	0.0	1.9	1.9	1.9
1977	3.7	3.7	3.7	3.7	2.8	2.8	0.0	0.0	1.9	1.9	1.9	1.9
1978	3.7	3.7	3.7	3.7	2.8	2.8	0.0	0.0	1.9	1.9	1.9	1.9
1979	3.6	3.6	2.7	2.7	2.7	1.9	0.0	1.9	1.9	1.9	1.9	1.9
1980	2.7	2.7	2.7	2.7	1.9	1.9	0.0	1.9	1.9	1.9	1.9	1.9
1981	2.7	2.7	2.7	2.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
1982	2.7	2.7	2.7	1.8	1.8	0.0	1.8	1.8	1.8	1.8	1.8	1.8
1983	2.6	1.8	1.8	1.8	0.0	0.0	1.8	1.8	1.8	1.8	1.8	1.8
1984	1.7	1.7	1.7	1.7	0.0	1.7	1.7	1.7	1.7	1.7	1.7	1.7
1985	1.7	1.7	1.7	1.7	0.0	1.7	1.7	1.7	1.7	1.7	1.7	1.7
1986	1.7	1.7	0.0	0.0	0.0	1.7	1.7	1.7	1.7	1.7	1.7	1.7
1987	1.7	0.0	0.0	0.0	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
1988	0.0	0.0	0.0	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
1989	0.0	0.0	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
1990	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
1991	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
1992	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
1993	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
1994	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
1995	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
1996	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
1997	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2

*MY -- Indicates the model year.

**E -- Indicates the average grams/mile emission level for model year "MY" on January 1 of the given calendar year. These emission levels are calculated for the FTP test conditions:

19.6 MPH, TEMP=75 Degrees F
20.6% of VMT traveled in cold start,
52.1% of VMT in stabilized,
27.3% of VMT in hot start.

Emissions are based on January 1 mileage accumulation figures given in Table 2.4A.5

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DATE : JUNE 30, 1995

TABLE 5.11C.2
BY-MODEL-YEAR EMISSION LEVELS FOR HIGH ALTITUDE
LIGHT DUTY DIESEL POWERED VEHICLES
NOx

		January 1 of Calendar Year																																			
		1985			1986			1987			1988			1989			1990			1991			1992			1993			1994			1995			1996		
		MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**	MY*	E**				
+		1961	0.0	1962	0.0	1963	0.0	1964	0.0	1965	0.0	1966	0.0	1967	0.0	1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0		
		1962	0.0	1963	0.0	1964	0.0	1965	0.0	1966	0.0	1967	0.0	1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0		
		1963	0.0	1964	0.0	1965	0.0	1966	0.0	1967	0.0	1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0		
		1964	0.0	1965	0.0	1966	0.0	1967	0.0	1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0		
		1965	0.0	1966	0.0	1967	0.0	1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0	1981	0.0		
		1966	0.0	1967	0.0	1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0	1981	0.0	1982	0.0		
		1967	0.0	1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0	1981	0.0	1982	0.0	1983	0.0		
		1968	0.0	1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0	1981	0.0	1982	0.0	1983	0.0	1984	0.0		
		1969	0.0	1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0	1981	0.0	1982	0.0	1983	0.0	1984	0.0	1985	0.0		
		1970	0.0	1971	0.0	1972	0.0	1973	0.0	1974	0.0	1975	0.0	1976	0.0	1977	0.0	1978	0.0	1979	0.0	1980	0.0	1981	0.0	1982	0.0	1983	0.0	1984	0.0	1985	0.0	1986	0.0		
		1971	2.1	1972	2.1	1973	2.1	1974	2.1	1975	2.1	1976	2.1	1977	2.1	1978	2.1	1979	2.1	1980	2.1	1981	2.1	1982	2.1	1983	2.1	1984	2.1	1985	2.1	1986	2.1	1987	2.1		
		1972	2.1	1973	2.1	1974	2.1	1975	2.1	1976	2.1	1977	2.1	1978	2.1	1979	2.1	1980	2.1	1981	2.1	1982	2.1	1983	2.1	1984	2.1	1985	2.1	1986	2.1	1987	2.1	1988	2.1		
		1973	2.0	1974	2.0	1975	2.0	1976	2.0	1977	2.0	1978	2.0	1979	2.0	1980	2.0	1981	2.0	1982	2.0	1983	2.0	1984	2.0	1985	2.0	1986	2.0	1987	2.0	1988	2.0	1989	2.0		
		1974	2.0	1975	1.9	1976	1.9	1977	1.9	1978	1.9	1979	1.9	1980	1.9	1981	1.9	1982	1.9	1983	1.9	1984	1.9	1985	1.9	1986	1.9	1987	1.9	1988	1.9	1989	1.9	1990	1.9		
		1975	1.9	1976	1.9	1977	1.9	1978	1.9	1979	1.9	1980	1.9	1981	1.9	1982	1.9	1983	1.9	1984	1.9	1985	1.9	1986	1.9	1987	1.9	1988	1.9	1989	1.9	1990	1.9	1991	1.9		
		1976	1.9	1977	1.9	1978	1.9	1979	1.9	1980	1.9	1981	1.9	1982	1.9	1983	1.9	1984	1.9	1985	1.9	1986	1.9	1987	1.9	1988	1.9	1989	1.9	1990	1.9	1991	1.9	1992	1.9		
		1977	1.8	1978	1.8	1979	1.8	1980	1.8	1981	1.8	1982	1.8	1983	1.8	1984	1.8	1985	1.8	1986	1.8	1987	1.8	1988	1.8	1989	1.8	1990	1.8	1991	1.8	1992	1.8	1993	1.8		
		1978	1.8	1979	1.8	1980	1.8	1981	1.8	1982	1.8	1983	1.8	1984	1.8	1985	1.8	1986	1.8	1987	1.8	1988	1.8	1989	1.8	1990	1.8	1991	1.8	1992	1.8	1993	1.8	1994	1.8		
		1979	1.7	1980	1.7	1981	1.7	1982	1.7	1983	1.7	1984	1.7	1985	1.7	1986	1.7	1987	1.7	1988	1.7	1989	1.7	1990	1.7	1991	1.7	1992	1.7	1993	1.7	1994	1.7	1995	1.7		
		1980	1.7	1981	1.5	1982	1.5	1983	1.5	1984	1.5	1985	1.5	1986	1.5	1987	1.5	1988	1.5	1989	1.5	1990	1.5	1991	1.5	1992	1.5	1993	1.5	1994	1.5	1995	1.5	1996	1.5		
		1981	1.5	1982	1.5	1983	1.5	1984	1.5	1985	1.5	1986	1.5	1987	1.5	1988	1.5	1989	1.5	1990	1.5	1991	1.5	1992	1.5	1993	1.5	1994	1.5	1995	1.5	1996	1.5	1997	1.5		
		1982	1.4	1983	1.4	1984	1.4	1985	1.4	1986	1.4	1987	1.4	1988	1.4	1989	1.4	1990	1.4	1991	1.4	1992	1.4	1993	1.4	1994	1.4	1995	1.4	1996	1.4	1997	1.4	1998	1.4		
		1983	1.4	1984	1.4	1985	1.4	1986	1.4	1987	1.4	1988	1.4	1989	1.4	1990	1.4	1991	1.4	1992	1.4	1993	1.4	1994	1.4	1995	1.4	1996	1.4	1997	1.4	1998	1.4	1999	1.4		
		1984	1.4	1985	0.9	1986	0.9	1987	0.9	1988	0.9	1989	0.9	1990	0.9	1991	0.9	1992	0.9	1993	0.9	1994	0.9	1995	0.9	1996	0.9	1997	0.9	1998	0.9	1999	0.9	2000	0.9		
		1985	0.9	1986	0.9	1987	0.9	1988	0.9	1989	0.9	1990	0.9	1991	0.9	1992	0.9	1993	0.9	1994	0.9	1995	0.9	1996	0.9	1997	0.9	1998	0.9	1999	0.9	2000	0.9	2001	0.9		

*MY -- Indicates the model year.

**E -- Indicates the average grams/mile emission level for model year "MY" on January 1 of the given calendar year. These emission levels are calculated for the FTP test conditions:

19.6 MPH, TEMP=75 Degrees F
20.6% of VMT traveled in cold start,
52.1% of VMT in stabilized,
27.3% of VMT in hot start.

Emissions are based on January 1 mileage accumulation figures given in Table 2.4A.5

Continued on the next page.

