

## Chapter NR 485

## CONTROL OF EMISSIONS FROM MOTOR VEHICLES, INTERNAL COMBUSTION ENGINES AND MOBILE SOURCES; TAMPERING PROHIBITION

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NR 485.05	Visible emission limits for motor vehicles, internal combustion engines and mobile sources.		

**Note:** Corrections made under s. 13.93 (2m) (b) 7., Stats., Register, January, 1997, No. 493.

**NR 485.01 Applicability; purpose. (1) APPLICABILITY.** This chapter applies to all motor vehicles, internal combustion engines and mobile air contaminant sources and to their owners and operators.

**(2) PURPOSE.** This chapter is adopted under ss. 285.11, 285.13, 285.30 and 285.39, Stats., to establish emission limitations for motor vehicles, internal combustion engines and mobile air contaminant sources, to prohibit any person from tampering with the air pollution control equipment of a motor vehicle and to require tampering inspections.

**History:** Cr. Register, September, 1986, No. 369, eff. 10-1-86; am. (2), Register, July, 1989, No. 403, eff. 8-1-89; am. (1), Register, February, 1990, No. 410, eff. 3-1-90; am. (1), Register, May, 1992, No. 437, eff. 6-1-92.

**NR 485.02 Definitions.** The definitions contained in ch. NR 400 apply to the terms used in this chapter. In addition, the following definitions apply to the terms used in this chapter:

**(1)** “Adjusted loaded vehicle weight” or “ALVW” means the numerical average of a vehicle’s curb weight and its gross vehicle weight rating.

**(2)** “Air pollution control equipment” has the meaning given in s. 285.30 (6) (a) 1., Stats.

**(5)** “Basic vehicle frontal area” means the area enclosed by the geometric projection of the basic vehicle along the longitudinal axis, which includes tires but excludes mirrors and air deflectors, onto a plane perpendicular to the longitudinal axis of the vehicle.

**(6)** “Curb weight” means the actual or the manufacturer’s estimated weight of the vehicle in operational status with all standard equipment plus the weight of fuel at normal tank capacity and the weight of optional equipment.

**(7)** “DOT” means the Wisconsin department of transportation.

**(10)** “Gross vehicle weight rating” or “GVWR” means the weight specified by the vehicle manufacturer as the maximum allowable loaded weight of a single vehicle.

**(11)** “Heavy-duty vehicle” means any motor vehicle rated at more than 8,500 pounds GVWR or that has a vehicle curb weight of more than 6,000 pounds or that has a basic vehicle frontal area in excess of 45 square feet.

**(12)** “Homemade vehicle” has the meaning given in s. 341.268 (1) (b), Stats.

**(13)** “Light-duty truck” means any motor vehicle rated at 8,500 pounds GVWR or less and which has a vehicle curb weight of 6,000 pounds or less and which has a basic vehicle

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frontal area of 45 square feet or less, and which is one of the following:

(a) Designed primarily for purposes of transportation of property or is a derivation of such a vehicle.

(b) Designed primarily for transportation of persons and has a capacity of more than 12 persons.

(c) Available with special features enabling off-street or off-highway operation and use.

**(14)** “Light-duty vehicle” means a passenger car or passenger car derivative capable of seating 12 passengers or less.

**(15)** “Loaded vehicle weight” or “LVW” means a vehicle’s curb weight, in pounds, plus 300 pounds.

**(16)** “Model year” means the nominal year of manufacture of the original vehicle within the annual production period of the vehicle as designated by the manufacturer, or if a reconstructed or homemade vehicle, the first year of titling. If the manufacturer does not designate a production period, the term “model year” means the calendar year of manufacture.

**(17)** “Reconstructed vehicle” has the meaning given in s. 341.268 (1) (d), Stats.

**(19)** “Tamper” has the meaning given in s. 285.30 (6) (a) 3., Stats.

**(20)** “Tampering inspection” means an inspection for tampering of air pollution control equipment.

**(21)** “Tier 1 emission standards” means the standards for light-duty vehicles of model year 1994 and newer and light-duty trucks of model year 1994 and newer in section 202 (g) and (h) of the federal clean air act, 42 USC 7521 (g) and (h).

**(22)** “Transient driving cycle” means the 240 second driving cycle specified in Appendix E to Subpart S of 40 CFR part 51, incorporated by reference in s. NR 484.04 (8).

**(23)** “Transient emission test” means the emission test specified in 40 CFR 51.357 (a) (11), as in effect on July 1, 1998, which consists of 240 seconds of mass emission measurement while the vehicle is driven on a dynamometer.

**History:** Cr. Register, September, 1986, No. 369, eff. 10-1-86; r. and recr. Register, July, 1989, No. 403, eff. 8-1-89; am. (intro.), Register, June, 1993, No. 450, eff. 7-1-93; r. and recr., Register, December, 1995, No. 480, eff. 1-1-96; am. (8), (9) and (23), Register, November, 1999, No. 527, eff. 12-1-99; correction in (18) and (22) made under s. 13.93 (2m) (b) 7., Stats., Register, January, 2001, No. 541; CR 10-049: r. (3), (4), (8), (9), (18) Register November 2010 No. 659, eff. 12-1-10.

**NR 485.03 General limitations.** No person may cause, allow or permit emissions of particulate matter, sulfur oxides, hydrocarbons, carbon monoxide, nitrogen oxides, or odors from a motor vehicle, internal combustion engine, or mobile source which substantially contribute to the exceeding of an air standard or create air pollution.

**History:** Renum. from NR 154.17 (1), Register, September, 1986, No. 369, eff.

10-1-86; am. Register, July, 1989, No. 403, eff. 8-1-89; am. Register, May, 1992, No. 437, eff. 6-1-92.

**NR 485.04 Motor vehicle emission limitations; exemptions.** (1) **APPLICABILITY.** Except as provided in subs. (9) and (10), the emission limitations in this section apply to motor vehicles subject to inspection under s. 110.20 (6) (a), Stats., when inspected under ch. Trans 131.

(2) **TRANSIENT EMISSION TEST.** Except as provided in sub. (7), any motor vehicle undergoing the transient emission test may not emit from the exhaust system:

(a) Carbon monoxide in rates that exceed both:

1. The applicable composite emission rate in Table 1 when measured over the entire transient driving cycle.

2. The applicable phase 2 emission rate in Table 1 when measured from second 94 to the end of the transient driving cycle.

(b) Hydrocarbons in rates that exceed both:

1. The applicable composite emission rate in Table 1 when measured over the entire transient driving cycle.

2. The applicable phase 2 emission rate in Table 1 when measured from second 94 to the end of the transient driving cycle.

(c) Oxides of nitrogen in a rate that exceeds the applicable composite emission rate in Table 1 when measured over the entire transient driving cycle, except as provided in sub. (9).

(5) **GAS CAP INTEGRITY TEST.** Any motor vehicle gas cap undergoing a test for pressure leaks on a gas cap tester rig may not exhibit a pressure decay of 6 inches of water or more during a 10 second measurement period after the gas cap is pressurized to  $28 \pm 1.0$  inches of water.

(7) **FAST-PASS TRANSIENT EMISSION TEST.** Compliance with the emission limitations in sub. (2) for the transient emission test may be demonstrated prior to the completion of the test if all of the following conditions are met during the same second of the transient driving cycle:

(a) *Hydrocarbons.* For hydrocarbons, one of the following:

1. At least 30 seconds of the transient driving cycle has elapsed and the cumulative emission level of hydrocarbons, measured from the start of the cycle in grams, is less than the applicable composite fast-pass emission limitation in sub. (1) of Table 3.

2. At least 94 seconds of the transient driving cycle has elapsed and the cumulative emission level of hydrocarbons, measured from second 94 of the cycle in grams, is less than the applicable phase 2 fast-pass emission limitation in sub. (1) of Table 3.

(b) *Carbon monoxide.* For carbon monoxide, one of the following:

1. At least 30 seconds of the transient driving cycle has elapsed and the cumulative emission level of carbon monoxide, measured from the start of the cycle in grams, is less than the applicable composite fast-pass emission limitation in sub. (2) of Table 3.

2. At least 94 seconds of the transient driving cycle has elapsed and the cumulative emission level of carbon monoxide, measured from second 94 of the cycle in grams, is less than the applicable phase 2 fast-pass emission limitation in sub. (2) of Table 3.

(c) *Oxides of nitrogen.* Except as provided in sub. (9), at least 30 seconds of the transient driving cycle has elapsed and the cumulative emission level of oxides of nitrogen, measured from the start of the cycle in grams, is less than the applicable composite fast-pass emission limitation in sub. (3) of Table 3.

(9) **EFFECTIVE DATE FOR OXIDES OF NITROGEN REQUIREMENTS.** An inspection under s. 110.20 (6) (a), Stats., shall include an inspection for emissions of oxides of nitrogen. However, the emission limitations for oxides of nitrogen in subs. (2) (c) and (7) (c) shall apply for compliance purposes only to inspections conducted after May 1, 2001.

(10) **EXEMPTIONS.** In addition to the vehicles specified in s. 285.30 (5), Stats., the following motor vehicles are exempt from the emission limitations of this section:

(a) A motor vehicle powered solely by electricity.

(b) A motor vehicle registered under s. 341.266 (2) (a) or 341.268 (2) (a), Stats., except as provided in sub. (11).

(11) **PERIODIC TESTING OF COLLECTOR AND HOBBYIST VEHICLES.** A motor vehicle registered under s. 341.266 (2) (a) or 341.268 (2) (a), Stats., shall be inspected and subject to the emission limitations of this section only in conjunction with any of the following actions:

(a) Initial registration of the vehicle under s. 341.266 (2) (a) or 341.268 (2) (a), Stats.

(b) Any transfer of ownership of the vehicle.

**Table 1**  
**Emission Limitations For The Transient Emission Test**

**(1) MOTOR VEHICLES INSPECTED BETWEEN DECEMBER 1, 1995, AND NOVEMBER 30, 1996.**

(a) *Light-Duty Vehicles.*

Model Years	Hydrocarbons (grams/mile)		Carbon Monoxide (grams/mile)		Oxides of Nitrogen (grams/mile)
	Composite	Phase 2	Composite	Phase 2	Composite
1996 and newer	0.90	0.60	17.5	14.0	2.3
1991-1995	1.40	0.90	23.0	18.5	3.0
1983-1990	2.30	1.40	35.0	28.0	3.5
1981-1982	2.30	1.40	70.0	55.0	3.5
1980	2.30	1.40	70.0	55.0	7.0
1977-1979	8.50	5.30	100	80.0	7.0
1975-1976	8.50	5.30	100	80.0	10.5
1973-1974	11.5	7.25	175	140	10.5
1968-1972	11.5	7.25	175	140	11.5

(b) *Light-Duty Trucks with GVWR of 6,000 pounds or less.*

Model Years	Hydrocarbons (grams/mile)		Carbon Monoxide (grams/mile)		Oxides of Nitrogen (grams/mile)
	Composite	Phase 2	Composite	Phase 2	Composite
1996 and newer	1.15	0.75	23.0	18.5	3.0
1991-1995	2.75	1.75	70.0	55.0	3.5
1988-1990	3.70	2.30	90.0	72.0	4.0
1984-1987	3.70	2.30	90.0	72.0	8.0
1979-1983	8.50	5.30	115	90.0	8.0
1975-1978	9.20	5.80	140	110	10.5
1973-1974	11.5	7.25	175	140	10.5
1968-1972	11.5	7.25	175	140	11.5

(c) *Light-Duty Trucks with GVWR of 6,001 to 8,500 pounds and Heavy-Duty Vehicles with GVWR of 8,500 pounds or less.*

Model Years	Hydrocarbons (grams/mile)		Carbon Monoxide (grams/mile)		Oxides of Nitrogen (grams/mile)
	Composite	Phase 2	Composite	Phase 2	Composite
1997 and newer	1.15	0.75	23.0	18.5	3.0
1991-1996	2.75	1.75	70.0	55.0	5.2
1988-1990	3.70	2.30	90.0	72.0	5.8
1984-1987	3.70	2.30	90.0	72.0	8.0
1979-1983	8.50	5.30	115	90.0	8.0
1975-1978	9.20	5.80	140	110	10.5
1973-1974	11.5	7.25	175	140	10.5
1968-1972	11.5	7.25	175	140	11.5

(d) *Heavy-Duty Vehicles with GVWR of 8,501 to 10,000 pounds.*

Model Years	Hydrocarbons (grams/mile)		Carbon Monoxide (grams/mile)		Oxides of Nitrogen (grams/mile)
	Composite	Phase 2	Composite	Phase 2	Composite
1998 and newer	2.75	1.75	70.0	55.0	4.5
1991-1997	3.70	2.30	70.0	55.0	7.0
1987-1990	3.70	2.30	90.0	72.0	9.0
1985-1986	5.75	3.60	90.0	72.0	9.0
1979-1984	8.50	5.30	115	90.0	9.0
1974-1978	11.5	7.25	175	140	11.5
1970-1973	11.5	7.25	200	160	11.5
1968-1969	23.0	14.5	230	185	17.5

**Table 1 (continued)**  
**Emission Limitations For The Transient Emission Test**

(e) *Heavy-Duty Vehicles with GVWR greater than 10,000 pounds.*

Model Years	Hydrocarbons (grams/mile)		Carbon Monoxide (grams/mile)		Oxides of Nitrogen (grams/mile)
	Composite	Phase 2	Composite	Phase 2	Composite
1998 and newer	5.50	3.50	140	110	9.0
1991-1997	7.40	4.70	140	110	14.0
1987-1990	7.40	4.70	185	150	18.5
1985-1986	11.5	7.25	185	150	18.5
1979-1984	13.0	8.20	205	165	18.5
1974-1978	15.0	9.50	230	185	23.0
1970-1973	15.0	9.50	260	210	23.0
1968-1969	27.0	17.0	290	230	35.0

(2) MOTOR VEHICLES INSPECTED BETWEEN DECEMBER 1, 1996, AND NOVEMBER 30, 1997.

(a) *Light-Duty Vehicles.*

Model Years	Hydrocarbons (grams/mile)		Carbon Monoxide (grams/mile)		Oxides of Nitrogen (grams/mile)
	Composite	Phase 2	Composite	Phase 2	Composite
1996 and newer	0.80	0.50	15.0	12.0	2.0
1991-1995	1.25	0.75	20.0	16.0	2.5
1983-1990	2.00	1.25	30.0	24.0	3.0
1981-1982	2.00	1.25	60.0	48.0	3.0
1980	2.00	1.25	60.0	48.0	6.0
1977-1979	7.50	5.00	90.0	72.0	6.0
1975-1976	7.50	5.00	90.0	72.0	9.0
1973-1974	10.0	6.00	150	120	9.0
1968-1972	10.0	6.00	150	120	10.0

(b) *Light-Duty Trucks with GVWR of 6,000 pounds or less.*

Model Years	Hydrocarbons (grams/mile)		Carbon Monoxide (grams/mile)		Oxides of Nitrogen (grams/mile)
	Composite	Phase 2	Composite	Phase 2	Composite
1996 and newer	1.00	0.63	20.0	16.0	2.5
1991-1995	2.40	1.50	60.0	48.0	3.0
1988-1990	3.20	2.00	80.0	64.0	3.5
1984-1987	3.20	2.00	80.0	64.0	7.0
1979-1983	7.50	5.00	100	80.0	7.0
1975-1978	8.00	5.00	120	96.0	9.0
1973-1974	10.0	6.00	150	120	9.0
1968-1972	10.0	6.00	150	120	10.0

(c) *Light-Duty Trucks with GVWR of 6,001 to 8,500 pounds and Heavy-Duty Vehicles with GVWR of 8,500 pounds or less.*

Model Years	Hydrocarbons (grams/mile)		Carbon Monoxide (grams/mile)		Oxides of Nitrogen (grams/mile)
	Composite	Phase 2	Composite	Phase 2	Composite
1997 and newer	1.00	0.63	20.0	16.0	2.5
1991-1996	2.40	1.50	60.0	48.0	4.5
1988-1990	3.20	2.00	80.0	64.0	5.0
1984-1987	3.20	2.00	80.0	64.0	7.0
1979-1983	7.50	5.00	100	80.0	7.0
1975-1978	8.00	5.00	120	96.0	9.0
1973-1974	10.0	6.00	150	120	9.0
1968-1972	10.0	6.00	150	120	10.0

**Table 1 (continued)**  
**Emission Limitations For The Transient Emission Test**

(d) *Heavy-Duty Vehicles with GVWR of 8,501 to 10,000 pounds.*

Model Years	Hydrocarbons (grams/mile)		Carbon Monoxide (grams/mile)		Oxides of Nitrogen (grams/mile)
	Composite	Phase 2	Composite	Phase 2	Composite
1998 and newer	2.40	1.50	60.0	48.0	4.0
1991-1997	3.20	2.00	60.0	48.0	6.0
1987-1990	3.20	2.00	80.0	64.0	8.0
1985-1986	5.00	3.10	80.0	64.0	8.0
1979-1984	7.50	5.00	100	80.0	8.0
1974-1978	10.0	6.00	150	120	10.0
1970-1973	10.0	6.00	175	140	10.0
1968-1969	20.0	12.5	200	160	15.0

(e) *Heavy-Duty Vehicles with GVWR greater than 10,000 pounds.*

Model Years	Hydrocarbons (grams/mile)		Carbon Monoxide (grams/mile)		Oxides of Nitrogen (grams/mile)
	Composite	Phase 2	Composite	Phase 2	Composite
1998 and newer	4.80	3.00	120	96.0	8.0
1991-1997	6.40	4.00	120	96.0	12.0
1987-1990	6.40	4.00	160	128	16.0
1985-1986	10.0	6.00	160	128	16.0
1979-1984	11.5	7.00	180	145	16.0
1974-1978	13.0	8.00	200	160	20.0
1970-1973	13.0	8.00	225	180	20.0
1968-1969	24.0	15.0	250	200	30.0

**(3) MOTOR VEHICLES INSPECTED BETWEEN DECEMBER 1, 1997, AND NOVEMBER 30, 1998.**

(a) *Light-Duty Vehicles.*

Model Years	Hydrocarbons (grams/mile)		Carbon Monoxide (grams/mile)		Oxides of Nitrogen (grams/mile)
	Composite	Phase 2	Composite	Phase 2	Composite
1996 and newer	0.60	0.40	10.0	8.0	1.5
1994-1995					
Tier 1	0.60	0.40	10.0	8.0	1.5
Not Tier 1	0.80	0.50	15.0	12.0	2.0
1991-1993	0.80	0.50	15.0	12.0	2.0
1987-1990	1.10	0.70	20.0	16.0	2.5
1983-1986	2.00	1.25	30.0	24.0	3.0
1981-1982	2.00	1.25	60.0	48.0	3.0
1980	2.00	1.25	60.0	48.0	6.0
1977-1979	7.50	5.00	90.0	72.0	6.0
1975-1976	7.50	5.00	90.0	72.0	9.0
1973-1974	10.00	6.00	150	120	9.0
1968-1972	10.00	6.00	150	120	10.0

(b) *Light-Duty Trucks with GVWR of 6,000 pounds or less.*

Model Years	Hydrocarbons (grams/mile)		Carbon Monoxide (grams/mile)		Oxides of Nitrogen (grams/mile)
	Composite	Phase 2	Composite	Phase 2	Composite
1996 and newer					
(≤3750 lbs LVW)	0.60	0.40	10.0	8.0	1.5
(>3750 lbs LVW)	0.80	0.50	13.0	10.0	1.8
1994-1995					
Tier 1					
(≤3750 lbs LVW)	0.60	0.40	10.0	8.0	1.5
(>3750 lbs LVW)	0.80	0.50	13.0	10.0	1.8

**Table 1 (continued)**  
**Emission Limitations For The Transient Emission Test**

Model Years	Hydrocarbons (grams/mile)		Carbon Monoxide (grams/mile)		Oxides of Nitrogen (grams/mile)
	Composite	Phase 2	Composite	Phase 2	Composite
Not Tier 1	1.60	1.00	40.0	32.0	2.5
1991-1993	1.60	1.00	40.0	32.0	2.5
1988-1990	2.20	1.40	55.0	44.0	3.0
1987	2.20	1.40	55.0	44.0	5.5
1984-1986	3.20	2.00	80.0	64.0	7.0
1979-1983	7.50	5.00	100	80.0	7.0
1975-1978	8.00	5.00	120	96.0	9.0
1973-1974	10.0	6.00	150	120	9.0
1968-1972	10.0	6.00	150	120	10.0

(c) *Light-Duty Trucks with GVWR of 6,001 to 8,500 pounds and Heavy-Duty Vehicles with GVWR of 8,500 pounds or less.*

Model Years	Hydrocarbons (grams/mile)		Carbon Monoxide (grams/mile)		Oxides of Nitrogen (grams/mile)
	Composite	Phase 2	Composite	Phase 2	Composite
1997 and newer					
(≤5750 lbs ALVW)	0.80	0.50	13.0	10.0	1.8
(>5750 lbs ALVW)	0.80	0.50	15.0	12.0	2.0
1996					
Tier 1					
(≤5750 lbs ALVW)	0.80	0.50	13.0	10.0	1.8
(>5750 lbs ALVW)	0.80	0.50	15.0	12.0	2.0
Not Tier 1	1.60	1.00	40.0	32.0	3.5
1991-1995	1.60	1.00	40.0	32.0	3.5
1988-1990	2.20	1.40	55.0	44.0	4.0
1987	2.20	1.40	55.0	44.0	5.5
1984-1986	3.20	2.00	80.0	64.0	7.0
1979-1983	7.50	5.00	100	80.0	7.0
1975-1978	8.00	5.00	120	96.0	9.0
1973-1974	10.0	6.00	150	120	9.0
1968-1972	10.0	6.00	150	120	10.0

(d) *Heavy-Duty Vehicles with GVWR of 8,501 to 10,000 pounds.*

Model Years	Hydrocarbons (grams/mile)		Carbon Monoxide (grams/mile)		Oxides of Nitrogen (grams/mile)
	Composite	Phase 2	Composite	Phase 2	Composite
1998 and newer	2.00	1.25	30.0	24.0	4.0
1991-1997	2.00	1.25	40.0	32.0	5.0
1987-1990	2.40	1.50	55.0	44.0	7.0
1985-1986	5.00	3.10	80.0	64.0	8.0
1979-1984	7.50	5.00	100	80.0	8.0
1974-1978	10.0	6.00	150	120	10.0
1970-1973	10.0	6.00	175	140	10.0
1968-1969	20.0	12.5	200	160	15.0

(e) *Heavy-Duty Vehicles with GVWR greater than 10,000 pounds.*

Model Years	Hydrocarbons (grams/mile)		Carbon Monoxide (grams/mile)		Oxides of Nitrogen (grams/mile)
	Composite	Phase 2	Composite	Phase 2	Composite
1998 and newer	3.50	2.00	60.0	48.0	7.0
1991-1997	3.50	2.00	70.0	56.0	9.0
1987-1990	4.50	2.80	100	80.0	13.0
1985-1986	10.0	6.00	160	128	16.0
1979-1984	11.5	7.00	180	145	16.0

**Table 1 (continued)**  
**Emission Limitations For The Transient Emission Test**

Model Years	Hydrocarbons (grams/mile)		Carbon Monoxide (grams/mile)		Oxides of Nitrogen (grams/mile)
	Composite	Phase 2	Composite	Phase 2	Composite
1974-1978	13.0	8.00	200	160	20.0
1970-1973	13.0	8.00	225	180	20.0
1968-1969	24.0	15.0	250	200	30.0

**(4) MOTOR VEHICLES INSPECTED BETWEEN DECEMBER 1, 1998, AND MARCH 31, 2006. (a) Light-Duty Vehicles.**

Model Years	Hydrocarbons (grams/mile)		Carbon Monoxide (grams/mile)		Oxides of Nitrogen (grams/mile)
	Composite	Phase 2	Composite	Phase 2	Composite
1996 and newer	0.60	0.40	10.0	8.0	1.5
1994-1995					
Tier 1	0.60	0.40	10.0	8.0	1.5
Not Tier 1	0.80	0.50	15.0	12.0	2.0
1987-1993	0.80	0.50	15.0	12.0	2.0
1983-1986	2.00	1.25	30.0	24.0	3.0
1981-1982	2.00	1.25	60.0	48.0	3.0
1980	2.00	1.25	60.0	48.0	4.0
1977-1979	3.00	2.00	65.0	52.0	4.0
1975-1976	3.00	2.00	65.0	52.0	6.0
1973-1974	7.00	4.50	120	96.0	6.0
1968-1972	7.00	4.50	120	96.0	7.0

**(b) Light-Duty Trucks with GVWR of 6,000 pounds or less.**

Model Years	Hydrocarbons (grams/mile)		Carbon Monoxide (grams/mile)		Oxides of Nitrogen (grams/mile)
	Composite	Phase 2	Composite	Phase 2	Composite
1996 and newer					
(≤3750 lbs LVW)	0.60	0.40	10.0	8.0	1.5
(>3750 lbs LVW)	0.80	0.50	13.0	10.0	1.8
1994-1995					
Tier 1					
(≤3750 lbs LVW)	0.60	0.40	10.0	8.0	1.5
(>3750 lbs LVW)	0.80	0.50	13.0	10.0	1.8
Not Tier 1	1.60	1.00	40.0	32.0	2.5
1988-1993	1.60	1.00	40.0	32.0	2.5
1987	1.60	1.00	40.0	32.0	4.5
1984-1986	3.20	2.00	70.0	56.0	4.5
1979-1983	3.40	2.00	70.0	56.0	4.5
1975-1978	4.00	2.50	80.0	64.0	6.0
1973-1974	7.00	4.50	120	96.0	6.0
1968-1972	7.00	4.50	120	96.0	7.0

**(c) Light-Duty Trucks with GVWR of 6,001 to 8,500 pounds and Heavy-Duty Vehicles with GVWR of 8,500 pounds or less.**

Model Years	Hydrocarbons (grams/mile)		Carbon Monoxide (grams/mile)		Oxides of Nitrogen (grams/mile)
	Composite	Phase 2	Composite	Phase 2	Composite
1997 and newer					
(≤5750 lbs ALVW)	0.80	0.50	13.0	10.0	1.8
(>5750 lbs ALVW)	0.80	0.50	15.0	12.0	2.0
1996					
Tier 1					
(≤5750 lbs ALVW)	0.80	0.50	13.0	10.0	1.8

**Table 1 (continued)**  
**Emission Limitations For The Transient Emission Test**

Model Years	Hydrocarbons (grams/mile)		Carbon Monoxide (grams/mile)		Oxides of Nitrogen (grams/mile)
	Composite	Phase 2	Composite	Phase 2	Composite
(>5750 lbs ALVW)	0.80	0.50	15.0	12.0	2.0
Not Tier 1	1.60	1.00	40.0	32.0	3.5
1988-1995	1.60	1.00	40.0	32.0	3.5
1987	1.60	1.00	40.0	32.0	4.5
1984-1986	3.20	2.00	70.0	56.0	4.5
1979-1983	3.40	2.00	70.0	56.0	4.5
1975-1978	4.00	2.50	80.0	64.0	6.0
1973-1974	7.00	4.50	120	96.0	6.0
1968-1972	7.00	4.50	120	96.0	7.0

(d) *Heavy-Duty Vehicles with GVWR of 8,501 to 10,000 pounds.*

Model Years	Hydrocarbons (grams/mile)		Carbon Monoxide (grams/mile)		Oxides of Nitrogen (grams/mile)
	Composite	Phase 2	Composite	Phase 2	Composite
1998 and newer	2.00	1.25	30.0	24.0	4.0
1991-1997	2.00	1.25	40.0	32.0	5.0
1987-1990	2.00	1.25	40.0	32.0	6.0
1985-1986	5.00	3.10	80.0	64.0	8.0
1979-1984	7.50	5.00	100	80.0	8.0
1974-1978	10.0	6.00	150	120	10.0
1970-1973	10.0	6.00	175	140	10.0
1968-1969	20.0	12.5	200	160	15.0

(e) *Heavy-Duty Vehicles with GVWR greater than 10,000 pounds.*

Model Years	Hydrocarbons (grams/mile)		Carbon Monoxide (grams/mile)		Oxides of Nitrogen (grams/mile)
	Composite	Phase 2	Composite	Phase 2	Composite
1998 and newer	3.50	2.00	60.0	48.0	7.0
1991-1997	3.50	2.00	70.0	56.0	9.0
1987-1990	3.50	2.00	70.0	56.0	11.0
1985-1986	10.0	6.00	150	120	16.0
1979-1984	11.5	7.00	150	120	16.0
1974-1978	13.0	8.00	150	120	20.0
1970-1973	13.0	8.00	175	140	20.0
1968-1969	24.0	15.0	200	160	30.0

**(5) MOTOR VEHICLES INSPECTED ON AND AFTER APRIL 1, 2006. (a) Light-Duty Vehicles.**

Model Years	Hydrocarbons (grams/mile)		Carbon Monoxide (grams/mile)		Oxides of Nitrogen (grams/mile)
	Composite	Phase 2	Composite	Phase 2	Composite
1996 and newer	0.60	0.40	10.0	8.0	1.5
1987-1995	0.80	0.50	15.0	12.0	2.0
1983-1986	2.00	1.25	30.0	24.0	3.0
1981-1982	2.00	1.25	60.0	48.0	3.0
1980	2.00	1.25	60.0	48.0	5.0
1977-1979	3.00	2.00	65.0	52.0	5.0
1975-1976	3.00	2.00	65.0	52.0	6.0
1973-1974	7.00	4.50	120	96.0	6.0
1968-1972	7.00	4.50	120	96.0	7.0

**Table 1 (continued)**  
**Emission Limitations For The Transient Emission Test**

(b) *Light-Duty Trucks with GVWR of 6,000 pounds or less.*

Model Years	Hydrocarbons (grams/mile)		Carbon Monoxide (grams/mile)		Oxides of Nitrogen (grams/mile)
	Composite	Phase 2	Composite	Phase 2	Composite
1996 and newer					
(≤3750 lbs LVW)	0.60	0.40	10.0	8.0	1.5
(>3750 lbs LVW)	0.80	0.50	13.0	10.0	1.8
1988-1995					
(≤3750 lbs LVW)	1.60	1.00	40.0	32.0	2.5
(>3750 lbs LVW)	1.60	1.00	40.0	32.0	3.5
1987	1.60	1.00	40.0	32.0	5.5
1984-1986	3.20	2.00	70.0	56.0	5.5
1979-1983	3.40	2.00	70.0	56.0	5.5
1975-1978	4.00	2.50	80.0	64.0	6.0
1973-1974	7.00	4.50	120	96.0	6.0
1968-1972	7.00	4.50	120	96.0	7.0

(c) *Light-Duty Trucks with GVWR of 6,001 to 8,500 pounds and Heavy-Duty Vehicles with GVWR of 8,500 pounds or less.*

Model Years	Hydrocarbons (grams/mile)		Carbon Monoxide (grams/mile)		Oxides of Nitrogen (grams/mile)
	Composite	Phase 2	Composite	Phase 2	Composite
1997 and newer					
(≤5750 lbs ALVW)	0.80	0.50	13.0	10.0	1.8
(>5750 lbs ALVW)	0.80	0.50	15.0	12.0	2.0
1990-1996	1.60	1.00	40.0	32.0	3.5
1987-1989	1.60	1.00	40.0	32.0	5.5
1984-1986	3.20	2.00	70.0	56.0	5.5
1979-1983	3.40	2.00	70.0	56.0	5.5
1975-1978	4.00	2.50	80.0	64.0	6.0
1973-1974	7.00	4.50	120	96.0	6.0
1968-1972	7.00	4.50	120	96.0	7.0

(d) *Heavy-Duty Vehicles with GVWR of 8,501 to 10,000 pounds.*

Model Years	Hydrocarbons (grams/mile)		Carbon Monoxide (grams/mile)		Oxides of Nitrogen (grams/mile)
	Composite	Phase 2	Composite	Phase 2	Composite
2005 and newer	1.00	0.63	30.0	24.0	3.0
1998-2004	2.00	1.25	30.0	24.0	7.0
1991-1997	2.00	1.25	40.0	32.0	9.0
1987-1990	2.00	1.25	40.0	32.0	11.0
1985-1986	5.00	3.10	80.0	64.0	16.0
1979-1984	7.50	5.00	100	80.0	16.0
1974-1978	10.0	6.00	150	120	20.0
1970-1973	10.0	6.00	175	140	20.0
1968-1969	20.0	12.5	200	160	30.0

(e) *Heavy-Duty Vehicles with GVWR greater than 10,000 pounds.*

Model Years	Hydrocarbons (grams/mile)		Carbon Monoxide (grams/mile)		Oxides of Nitrogen (grams/mile)
	Composite	Phase 2	Composite	Phase 2	Composite
2005 and newer	1.00	0.63	60.0	48.0	3.0
1998-2004	3.50	2.00	60.0	48.0	7.0
1991-1997	3.50	2.00	70.0	56.0	9.0
1987-1990	3.50	2.00	70.0	56.0	11.0
1985-1986	10.0	6.00	150	120	16.0

**Table 1 (continued)**  
**Emission Limitations For The Transient Emission Test**

Model Years	Hydrocarbons (grams/mile)		Carbon Monoxide (grams/mile)		Oxides of Nitrogen (grams/mile)
	Composite	Phase 2	Composite	Phase 2	Composite
1979-1984	11.5	7.00	150	120	16.0
1974-1978	13.0	8.00	150	120	20.0
1970-1973	13.0	8.00	175	140	20.0
1968-1969	24.0	15.0	200	160	30.0

Upon written department approval granted to DOT, the emission limitations for “Not Tier 1” may be applied to all 1994-1995 model year light-duty vehicles. (Note: On January 7, 1998, the department issued to DOT written approval for this use of the “Not Tier 1” emission limitations until November 30, 1999.)

Upon written department approval granted to DOT, the emission limitations for “>3750 lbs LVW” may be applied to all 1996 model year and newer light-duty trucks with GVWR of 6,000 pounds or less.

Upon written department approval granted to DOT, the emission limitations for “Not Tier 1” may be applied to all 1994-1995 model year light-duty trucks with GVWR of 6,000 pounds or less. (Note: On January 7, 1998, the department issued to DOT written approval for this use of the “Not Tier 1” emission limitations until November 30, 1999.)

Upon written department approval granted to DOT, the emission limitations for “>3750 lbs LVW” may be applied to all 1994-1995 model year light-duty trucks with GVWR of 6,000 pounds or less which are certified to meet Tier 1 emission standards.

Upon written department approval granted to DOT, the emission limitations for “>5750 lbs ALVW” may be applied to all 1997 model year and newer light-duty trucks with GVWR of 6,001 to 8,500 pounds and to all 1997 model year and newer heavy-duty vehicles with GVWR of 8,500 pounds or less.

Upon written department approval granted to DOT, the emission limitations for “Not Tier 1” may be applied to all 1996 model year light-duty trucks with GVWR of 6,001 to 8,500 pounds and to all 1996 model year heavy-duty vehicles with GVWR of 8,500 pounds or less. (Note: On January 7, 1998, the department issued to DOT written approval for this use of the “Not Tier 1” emission limitations until November 30, 1999.)

Upon written department approval granted to DOT, the emission limitations for “>5750 lbs ALVW” may be applied to all 1996 model year light-duty trucks with GVWR of 6,001 to 8,500 pounds which are certified to meet Tier 1 emission standards and to all 1996 model year heavy-duty vehicles with GVWR of 8,500 pounds or less which are certified to meet Tier 1 emission standards.

**Table 3**  
**Fast-Pass Emission Limitations For The Transient Emission Test**

**(1) HYDROCARBON EXHAUST EMISSIONS.**

(a) *Motor vehicles having composite hydrocarbon emission limitations in Table 1 of at least 0.60 grams/mile but less than 0.80 grams/mile.*

Second	Composite (grams)	Phase 2 (grams)	Second	Composite (grams)	Phase 2 (grams)
30	0.093	N/A	105	0.316	N/A
31	0.095	N/A	106	0.321	N/A
32	0.097	N/A	107	0.323	N/A
33	0.101	N/A	108	0.341	N/A
34	0.105	N/A	109	0.344	0.012
35	0.110	N/A	110	0.347	0.014
36	0.113	N/A	111	0.348	0.017
37	0.115	N/A	112	0.350	0.019
38	0.117	N/A	113	0.351	0.019
39	0.120	N/A	114	0.353	0.020
40	0.124	N/A	115	0.366	0.021
41	0.127	N/A	116	0.385	0.023
42	0.129	N/A	117	0.404	0.026
43	0.130	N/A	118	0.421	0.028
44	0.133	N/A	119	0.433	0.028
45	0.148	N/A	120	0.435	0.029
46	0.150	N/A	121	0.440	0.031
47	0.156	N/A	122	0.446	0.032
48	0.166	N/A	123	0.452	0.033
49	0.174	N/A	124	0.458	0.034
50	0.176	N/A	125	0.461	0.034
51	0.179	N/A	126	0.468	0.034
52	0.180	N/A	127	0.471	0.036
53	0.182	N/A	128	0.474	0.037
54	0.185	N/A	129	0.478	0.037
55	0.187	N/A	130	0.481	0.040
56	0.189	N/A	131	0.482	0.041
57	0.196	N/A	132	0.483	0.042
58	0.203	N/A	133	0.484	0.044
59	0.207	N/A	134	0.485	0.044
60	0.209	N/A	135	0.488	0.044
61	0.210	N/A	136	0.494	0.045
62	0.212	N/A	137	0.497	0.045
63	0.212	N/A	138	0.500	0.045
64	0.213	N/A	139	0.501	0.048
65	0.214	N/A	140	0.503	0.049
66	0.215	N/A	141	0.504	0.049
67	0.216	N/A	142	0.506	0.049
68	0.218	N/A	143	0.509	0.051
69	0.221	N/A	144	0.511	0.052
70	0.222	N/A	145	0.513	0.053
71	0.224	N/A	146	0.515	0.053
72	0.225	N/A	147	0.516	0.054
73	0.227	N/A	148	0.518	0.055
74	0.228	N/A	149	0.519	0.056
75	0.230	N/A	150	0.521	0.057
76	0.231	N/A	151	0.522	0.058
77	0.231	N/A	152	0.524	0.058
78	0.231	N/A	153	0.525	0.059
79	0.236	N/A	154	0.527	0.059
80	0.240	N/A	155	0.528	0.060
81	0.243	N/A	156	0.530	0.062
82	0.245	N/A	157	0.531	0.064
83	0.247	N/A	158	0.533	0.066
84	0.250	N/A	159	0.534	0.066
85	0.252	N/A	160	0.537	0.070
86	0.254	N/A	161	0.563	0.077
87	0.257	N/A	162	0.588	0.087
88	0.260	N/A	163	0.604	0.093
89	0.263	N/A	164	0.630	0.099
90	0.267	N/A	165	0.640	0.103
91	0.269	N/A	166	0.656	0.129
92	0.270	N/A	167	0.677	0.151
93	0.272	N/A	168	0.683	0.153
94	0.275	N/A	169	0.686	0.162
95	0.278	N/A	170	0.687	0.178
96	0.279	N/A	171	0.689	0.191
97	0.282	N/A	172	0.698	0.200
98	0.291	N/A	173	0.711	0.208
99	0.297	N/A	174	0.737	0.216
100	0.304	N/A	175	0.764	0.229
101	0.308	N/A	176	0.770	0.239
102	0.308	N/A	177	0.776	0.253
103	0.309	N/A	178	0.788	0.258
104	0.310	N/A	179	0.806	0.262

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**Table 3 (continued)**  
**Fast-Pass Emission Limitations For The Transient Emission Test**

Second	Composite (grams)	Phase 2 (grams)	Second	Composite (grams)	Phase 2 (grams)
180	0.813	0.273	210	1.082	0.469
181	0.824	0.280	211	1.090	0.482
182	0.841	0.284	212	1.097	0.490
183	0.849	0.291	213	1.101	0.497
184	0.864	0.314	214	1.103	0.504
185	0.871	0.322	215	1.106	0.508
186	0.876	0.324	216	1.109	0.517
187	0.881	0.326	217	1.111	0.521
188	0.886	0.328	218	1.113	0.521
189	0.891	0.339	219	1.115	0.523
190	0.902	0.348	220	1.118	0.527
191	0.914	0.358	221	1.120	0.531
192	0.925	0.370	222	1.128	0.537
193	0.938	0.383	223	1.142	0.544
194	0.941	0.395	224	1.160	0.547
195	0.944	0.406	225	1.162	0.554
196	0.949	0.413	226	1.172	0.562
197	0.960	0.415	227	1.181	0.568
198	0.970	0.416	228	1.184	0.569
199	0.976	0.418	229	1.188	0.574
200	0.985	0.420	230	1.192	0.574
201	0.993	0.427	231	1.193	0.574
202	0.999	0.438	232	1.197	0.575
203	1.006	0.443	233	1.199	0.575
204	1.018	0.448	234	1.203	0.576
205	1.031	0.453	235	1.208	0.577
206	1.044	0.456	236	1.209	0.577
207	1.056	0.459	237	1.210	0.577
208	1.067	0.463	238	1.211	0.578
209	1.075	0.466	239	1.211	0.580

(b) *Motor vehicles having composite hydrocarbon emission limitations in Table 1 of at least 0.80 grams/mile but less than 1.25 grams/mile.*

Second	Composite (grams)	Phase 2 (grams)	Second	Composite (grams)	Phase 2 (grams)
30	0.124	N/A	75	0.307	N/A
31	0.126	N/A	76	0.308	N/A
32	0.129	N/A	77	0.308	N/A
33	0.135	N/A	78	0.308	N/A
34	0.140	N/A	79	0.314	N/A
35	0.146	N/A	80	0.320	N/A
36	0.150	N/A	81	0.324	N/A
37	0.153	N/A	82	0.327	N/A
38	0.156	N/A	83	0.329	N/A
39	0.160	N/A	84	0.333	N/A
40	0.165	N/A	85	0.336	N/A
41	0.169	N/A	86	0.339	N/A
42	0.172	N/A	87	0.343	N/A
43	0.173	N/A	88	0.347	N/A
44	0.177	N/A	89	0.350	N/A
45	0.197	N/A	90	0.356	N/A
46	0.200	N/A	91	0.358	N/A
47	0.208	N/A	92	0.360	N/A
48	0.221	N/A	93	0.363	N/A
49	0.232	N/A	94	0.367	0.000
50	0.235	N/A	95	0.370	0.000
51	0.238	N/A	96	0.372	0.000
52	0.240	N/A	97	0.376	0.000
53	0.242	N/A	98	0.388	0.000
54	0.246	N/A	99	0.396	0.000
55	0.249	N/A	100	0.405	0.001
56	0.252	N/A	101	0.410	0.002
57	0.261	N/A	102	0.411	0.003
58	0.271	N/A	103	0.412	0.006
59	0.276	N/A	104	0.413	0.007
60	0.278	N/A	105	0.421	0.008
61	0.280	N/A	106	0.428	0.009
62	0.282	N/A	107	0.430	0.010
63	0.283	N/A	108	0.455	0.013
64	0.284	N/A	109	0.459	0.015
65	0.285	N/A	110	0.462	0.017
66	0.286	N/A	111	0.464	0.021
67	0.288	N/A	112	0.466	0.024
68	0.291	N/A	113	0.468	0.024
69	0.294	N/A	114	0.471	0.025
70	0.296	N/A	115	0.488	0.026
71	0.298	N/A	116	0.513	0.029
72	0.300	N/A	117	0.538	0.032
73	0.302	N/A	118	0.561	0.035
74	0.304	N/A	119	0.577	0.035

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**Table 3 (continued)**  
**Fast-Pass Emission Limitations For The Transient Emission Test**

Second	Composite (grams)	Phase 2 (grams)	Second	Composite (grams)	Phase 2 (grams)
120	0.580	0.036	180	1.084	0.337
121	0.586	0.038	181	1.099	0.345
122	0.594	0.040	182	1.121	0.350
123	0.603	0.041	183	1.132	0.359
124	0.610	0.042	184	1.152	0.387
125	0.615	0.042	185	1.161	0.398
126	0.624	0.042	186	1.168	0.400
127	0.628	0.045	187	1.175	0.402
128	0.632	0.046	188	1.181	0.405
129	0.637	0.046	189	1.188	0.418
130	0.641	0.049	190	1.203	0.429
131	0.643	0.050	191	1.219	0.442
132	0.644	0.052	192	1.233	0.457
133	0.645	0.054	193	1.251	0.473
134	0.647	0.054	194	1.255	0.487
135	0.651	0.054	195	1.258	0.501
136	0.658	0.055	196	1.265	0.510
137	0.663	0.055	197	1.280	0.512
138	0.666	0.056	198	1.293	0.514
139	0.668	0.059	199	1.301	0.516
140	0.670	0.061	200	1.313	0.518
141	0.672	0.061	201	1.324	0.527
142	0.675	0.061	202	1.332	0.540
143	0.678	0.063	203	1.341	0.547
144	0.681	0.064	204	1.357	0.553
145	0.684	0.065	205	1.375	0.559
146	0.686	0.066	206	1.392	0.563
147	0.688	0.067	207	1.408	0.567
148	0.690	0.068	208	1.422	0.571
149	0.692	0.069	209	1.433	0.575
150	0.694	0.070	210	1.443	0.579
151	0.696	0.071	211	1.453	0.595
152	0.698	0.072	212	1.463	0.605
153	0.700	0.073	213	1.468	0.614
154	0.702	0.073	214	1.470	0.622
155	0.704	0.074	215	1.474	0.627
156	0.706	0.077	216	1.478	0.638
157	0.708	0.079	217	1.481	0.643
158	0.710	0.082	218	1.484	0.643
159	0.712	0.082	219	1.487	0.645
160	0.716	0.086	220	1.490	0.651
161	0.750	0.095	221	1.493	0.655
162	0.784	0.107	222	1.504	0.663
163	0.805	0.115	223	1.522	0.671
164	0.840	0.122	224	1.547	0.675
165	0.853	0.127	225	1.549	0.684
166	0.874	0.159	226	1.562	0.694
167	0.903	0.186	227	1.574	0.701
168	0.910	0.189	228	1.579	0.702
169	0.914	0.200	229	1.584	0.708
170	0.916	0.220	230	1.589	0.708
171	0.919	0.236	231	1.590	0.709
172	0.931	0.247	232	1.596	0.710
173	0.948	0.257	233	1.598	0.710
174	0.983	0.267	234	1.604	0.711
175	1.018	0.283	235	1.610	0.712
176	1.027	0.295	236	1.612	0.712
177	1.035	0.312	237	1.613	0.712
178	1.051	0.318	238	1.614	0.713
179	1.074	0.323	239	1.615	0.716

(c) Motor vehicles having composite hydrocarbon emission limitations in Table 1 of at least 1.25 grams/mile but less than 2.00 grams/mile.

Second	Composite (grams)	Phase 2 (grams)	Second	Composite (grams)	Phase 2 (grams)
30	0.247	N/A	46	0.389	N/A
31	0.253	N/A	47	0.408	N/A
32	0.258	N/A	48	0.423	N/A
33	0.263	N/A	49	0.434	N/A
34	0.268	N/A	50	0.444	N/A
35	0.277	N/A	51	0.454	N/A
36	0.283	N/A	52	0.465	N/A
37	0.293	N/A	53	0.472	N/A
38	0.297	N/A	54	0.478	N/A
39	0.298	N/A	55	0.485	N/A
40	0.313	N/A	56	0.493	N/A
41	0.320	N/A	57	0.500	N/A
42	0.327	N/A	58	0.505	N/A
43	0.342	N/A	59	0.514	N/A
44	0.360	N/A	60	0.537	N/A
45	0.376	N/A	61	0.540	N/A

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**Table 3 (continued)**  
**Fast-Pass Emission Limitations For The Transient Emission Test**

<b>Second</b>	<b>Composite (grams)</b>	<b>Phase 2 (grams)</b>	<b>Second</b>	<b>Composite (grams)</b>	<b>Phase 2 (grams)</b>
62	0.543	N/A	141	1.262	0.151
63	0.546	N/A	142	1.271	0.153
64	0.551	N/A	143	1.277	0.155
65	0.559	N/A	144	1.283	0.157
66	0.567	N/A	145	1.291	0.162
67	0.575	N/A	146	1.294	0.164
68	0.588	N/A	147	1.296	0.166
69	0.595	N/A	148	1.298	0.168
70	0.601	N/A	149	1.303	0.169
71	0.606	N/A	150	1.316	0.170
72	0.610	N/A	151	1.330	0.171
73	0.617	N/A	152	1.342	0.172
74	0.631	N/A	153	1.348	0.173
75	0.643	N/A	154	1.353	0.175
76	0.651	N/A	155	1.362	0.178
77	0.659	N/A	156	1.365	0.180
78	0.667	N/A	157	1.366	0.189
79	0.676	N/A	158	1.373	0.198
80	0.681	N/A	159	1.397	0.203
81	0.685	N/A	160	1.423	0.207
82	0.689	N/A	161	1.440	0.214
83	0.694	N/A	162	1.452	0.221
84	0.700	N/A	163	1.465	0.229
85	0.705	N/A	164	1.509	0.247
86	0.709	N/A	165	1.533	0.274
87	0.713	N/A	166	1.555	0.309
88	0.717	N/A	167	1.576	0.318
89	0.721	N/A	168	1.598	0.322
90	0.724	N/A	169	1.618	0.333
91	0.727	N/A	170	1.636	0.343
92	0.729	N/A	171	1.666	0.356
93	0.731	N/A	172	1.685	0.385
94	0.734	0.000	173	1.726	0.409
95	0.740	0.000	174	1.742	0.433
96	0.748	0.001	175	1.756	0.453
97	0.759	0.001	176	1.769	0.463
98	0.771	0.002	177	1.784	0.507
99	0.783	0.003	178	1.802	0.523
100	0.793	0.005	179	1.822	0.528
101	0.810	0.007	180	1.843	0.541
102	0.823	0.009	181	1.864	0.549
103	0.836	0.011	182	1.884	0.559
104	0.853	0.016	183	1.896	0.571
105	0.871	0.017	184	1.915	0.584
106	0.887	0.022	185	1.940	0.598
107	0.899	0.029	186	1.958	0.613
108	0.931	0.036	187	1.972	0.624
109	0.947	0.040	188	1.985	0.629
110	0.957	0.047	189	1.991	0.629
111	0.965	0.052	190	1.993	0.638
112	0.971	0.056	191	1.995	0.648
113	0.977	0.061	192	2.001	0.659
114	0.983	0.064	193	2.015	0.663
115	1.003	0.072	194	2.031	0.671
116	1.030	0.081	195	2.047	0.681
117	1.041	0.082	196	2.063	0.693
118	1.050	0.083	197	2.079	0.709
119	1.052	0.092	198	2.094	0.725
120	1.055	0.094	199	2.109	0.740
121	1.061	0.097	200	2.122	0.754
122	1.071	0.100	201	2.130	0.767
123	1.081	0.103	202	2.137	0.775
124	1.091	0.106	203	2.157	0.787
125	1.102	0.108	204	2.172	0.795
126	1.110	0.110	205	2.194	0.803
127	1.116	0.112	206	2.222	0.854
128	1.121	0.114	207	2.245	0.859
129	1.125	0.116	208	2.268	0.872
130	1.128	0.118	209	2.279	0.892
131	1.130	0.120	210	2.288	0.896
132	1.132	0.122	211	2.301	0.903
133	1.134	0.123	212	2.316	0.924
134	1.135	0.124	213	2.332	0.938
135	1.143	0.127	214	2.345	0.941
136	1.147	0.130	215	2.354	0.951
137	1.156	0.134	216	2.362	0.966
138	1.163	0.139	217	2.368	0.979
139	1.186	0.146	218	2.376	0.980
140	1.253	0.149	219	2.384	0.981
			220	2.391	1.005
			221	2.395	1.016

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**Table 3 (continued)**  
**Fast-Pass Emission Limitations For The Transient Emission Test**

Second	Composite (grams)	Phase 2 (grams)	Second	Composite (grams)	Phase 2 (grams)
222	2.400	1.022	230	2.433	1.064
223	2.405	1.028	231	2.441	1.069
224	2.409	1.035	232	2.461	1.071
225	2.413	1.041	233	2.476	1.072
226	2.417	1.045	234	2.488	1.073
227	2.426	1.051	235	2.498	1.081
228	2.428	1.055	236	2.508	1.083
229	2.431	1.059	237	2.516	1.084
			238	2.520	1.085
			239	2.523	1.086

(d) *Motor vehicles having composite hydrocarbon emission limitations in Table 1 of 2.00 grams/mile or greater.*

Second	Composite (grams)	Phase 2 (grams)	Second	Composite (grams)	Phase 2 (grams)
30	0.407	N/A	97	1.316	0.004
31	0.415	N/A	98	1.325	0.008
32	0.423	N/A	99	1.339	0.015
33	0.436	N/A	100	1.356	0.021
34	0.451	N/A	101	1.365	0.026
35	0.464	N/A	102	1.378	0.039
36	0.468	N/A	103	1.397	0.044
37	0.475	N/A	104	1.420	0.055
38	0.487	N/A	105	1.445	0.094
39	0.506	N/A	106	1.470	0.110
40	0.530	N/A	107	1.491	0.116
41	0.549	N/A	108	1.506	0.132
42	0.569	N/A	109	1.517	0.151
43	0.588	N/A	110	1.528	0.159
44	0.609	N/A	111	1.542	0.172
45	0.621	N/A	112	1.559	0.186
46	0.636	N/A	113	1.578	0.199
47	0.649	N/A	114	1.594	0.207
48	0.666	N/A	115	1.605	0.216
49	0.679	N/A	116	1.615	0.229
50	0.696	N/A	117	1.625	0.235
51	0.712	N/A	118	1.642	0.240
52	0.727	N/A	119	1.670	0.245
53	0.745	N/A	120	1.694	0.261
54	0.760	N/A	121	1.705	0.267
55	0.776	N/A	122	1.717	0.277
56	0.797	N/A	123	1.732	0.287
57	0.814	N/A	124	1.747	0.298
58	0.826	N/A	125	1.763	0.308
59	0.837	N/A	126	1.779	0.316
60	0.849	N/A	127	1.795	0.322
61	0.862	N/A	128	1.810	0.329
62	0.872	N/A	129	1.823	0.338
63	0.887	N/A	130	1.835	0.346
64	0.895	N/A	131	1.845	0.354
65	0.903	N/A	132	1.854	0.356
66	0.925	N/A	133	1.862	0.357
67	0.933	N/A	134	1.870	0.359
68	0.945	N/A	135	1.883	0.362
69	0.959	N/A	136	1.888	0.364
70	0.970	N/A	137	1.896	0.368
71	0.980	N/A	138	1.911	0.378
72	0.988	N/A	139	1.928	0.391
73	0.997	N/A	140	1.949	0.402
74	1.022	N/A	141	1.969	0.408
75	1.037	N/A	142	1.982	0.422
76	1.051	N/A	143	1.999	0.428
77	1.064	N/A	144	2.011	0.432
78	1.075	N/A	145	2.022	0.434
79	1.087	N/A	146	2.035	0.439
80	1.097	N/A	147	2.043	0.450
81	1.105	N/A	148	2.049	0.460
82	1.114	N/A	149	2.063	0.467
83	1.136	N/A	150	2.085	0.472
84	1.160	N/A	151	2.104	0.480
85	1.182	N/A	152	2.117	0.491
86	1.201	N/A	153	2.127	0.503
87	1.217	N/A	154	2.138	0.505
88	1.233	N/A	155	2.152	0.515
89	1.248	N/A	156	2.168	0.522
90	1.262	N/A	157	2.186	0.527
91	1.271	N/A	158	2.205	0.537
92	1.279	N/A	159	2.224	0.549
93	1.287	N/A	160	2.242	0.568
94	1.295	0.001			
95	1.302	0.002			
96	1.309	0.003			

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**Table 3 (continued)**  
**Fast-Pass Emission Limitations For The Transient Emission Test**

Second	Composite (grams)	Phase 2 (grams)	Second	Composite (grams)	Phase 2 (grams)
161	2.268	0.586	200	3.428	1.446
162	2.308	0.610	201	3.470	1.460
163	2.352	0.648	202	3.493	1.477
164	2.406	0.677	203	3.509	1.492
165	2.421	0.699	204	3.522	1.501
166	2.435	0.720	205	3.533	1.510
167	2.470	0.738	206	3.550	1.522
168	2.501	0.767	207	3.578	1.561
169	2.537	0.828	208	3.607	1.585
170	2.571	0.855	209	3.630	1.597
171	2.625	0.869	210	3.658	1.607
172	2.657	0.885	211	3.701	1.627
173	2.683	0.900	212	3.745	1.645
174	2.701	0.941	213	3.778	1.656
175	2.717	0.979	214	3.814	1.663
176	2.732	1.002	215	3.825	1.669
177	2.756	1.025	216	3.835	1.674
178	2.781	1.047	217	3.844	1.685
179	2.811	1.065	218	3.853	1.705
180	2.853	1.089	219	3.864	1.711
181	2.898	1.109	220	3.874	1.735
182	2.946	1.133	221	3.891	1.752
183	2.988	1.158	222	3.928	1.760
184	3.023	1.184	223	3.966	1.774
185	3.057	1.209	224	4.008	1.778
186	3.076	1.222	225	4.010	1.797
187	3.101	1.231	226	4.012	1.802
188	3.120	1.239	227	4.016	1.804
189	3.136	1.254	228	4.019	1.806
190	3.151	1.278	229	4.057	1.810
191	3.163	1.300	230	4.065	1.814
192	3.209	1.313	231	4.072	1.827
193	3.223	1.324	232	4.081	1.833
194	3.237	1.340	233	4.104	1.837
195	3.263	1.367	234	4.124	1.841
196	3.302	1.387	235	4.128	1.845
197	3.338	1.402	236	4.132	1.851
198	3.372	1.417	237	4.137	1.855
199	3.390	1.432	238	4.147	1.857
			239	4.158	1.860

**(2) CARBON MONOXIDE EXHAUST EMISSIONS.** (a) *Motor vehicles having composite carbon monoxide emission limitations in Table 1 of at least 10.0 grams/mile but less than 15.0 grams/mile.*

Second	Composite (grams)	Phase 2 (grams)	Second	Composite (grams)	Phase 2 (grams)
30	0.462	N/A	65	1.296	N/A
31	0.515	N/A	66	1.333	N/A
32	0.558	N/A	67	1.373	N/A
33	0.567	N/A	68	1.376	N/A
34	0.569	N/A	69	1.384	N/A
35	0.571	N/A	70	1.403	N/A
36	0.600	N/A	71	1.411	N/A
37	0.640	N/A	72	1.417	N/A
38	0.689	N/A	73	1.420	N/A
39	0.713	N/A	74	1.425	N/A
40	0.717	N/A	75	1.435	N/A
41	0.722	N/A	76	1.447	N/A
42	0.735	N/A	77	1.459	N/A
43	0.741	N/A	78	1.467	N/A
44	0.743	N/A	79	1.475	N/A
45	0.771	N/A	80	1.475	N/A
46	0.896	N/A	81	1.481	N/A
47	0.988	N/A	82	1.481	N/A
48	1.020	N/A	83	1.485	N/A
49	1.028	N/A	84	1.491	N/A
50	1.035	N/A	85	1.495	N/A
51	1.047	N/A	86	1.508	N/A
52	1.063	N/A	87	1.514	N/A
53	1.089	N/A	88	1.523	N/A
54	1.123	N/A	89	1.533	N/A
55	1.126	N/A	90	1.539	N/A
56	1.129	N/A	91	1.551	N/A
57	1.133	N/A	92	1.553	N/A
58	1.149	N/A	93	1.554	N/A
59	1.235	N/A	94	1.563	N/A
60	1.248	N/A	95	1.565	N/A
61	1.248	N/A	96	1.570	N/A
62	1.248	N/A	97	1.597	N/A
63	1.267	N/A	98	1.634	N/A
64	1.278	N/A	99	1.672	N/A

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**Table 3 (continued)**  
**Fast-Pass Emission Limitations For The Transient Emission Test**

Second	Composite (grams)	Phase 2 (grams)	Second	Composite (grams)	Phase 2 (grams)
100	1.727	N/A	170	9.426	4.157
101	1.773	N/A	171	9.976	4.351
102	1.833	N/A	172	10.469	4.459
103	1.942	N/A	173	10.835	4.669
104	2.108	N/A	174	11.271	4.950
105	2.113	N/A	175	11.770	5.600
106	2.131	N/A	176	12.013	5.654
107	2.192	N/A	177	12.233	5.898
108	2.279	N/A	178	12.447	6.046
109	2.391	0.115	179	12.648	6.078
110	2.397	0.119	180	12.819	6.124
111	2.427	0.163	181	13.415	6.267
112	2.493	0.183	182	13.603	6.549
113	2.579	0.192	183	13.836	7.046
114	2.585	0.200	184	14.456	7.463
115	2.623	0.216	185	14.637	7.555
116	2.677	0.227	186	15.100	7.699
117	2.707	0.237	187	15.326	7.911
118	2.709	0.240	188	15.690	8.172
119	2.719	0.245	189	15.917	8.258
120	2.760	0.252	190	16.012	8.361
121	2.790	0.267	191	16.309	8.600
122	2.799	0.280	192	16.457	8.655
123	2.803	0.318	193	16.621	8.674
124	2.808	0.330	194	16.792	8.693
125	2.821	0.348	195	16.979	8.778
126	2.865	0.356	196	17.085	8.867
127	2.896	0.359	197	17.164	8.924
128	2.907	0.361	198	17.233	8.973
129	2.911	0.363	199	17.316	9.045
130	2.913	0.364	200	17.427	9.098
131	2.915	0.364	201	17.483	9.215
132	2.957	0.367	202	17.559	9.386
133	3.015	0.378	203	17.698	9.463
134	3.016	0.381	204	17.879	9.579
135	3.017	0.405	205	18.035	9.680
136	3.021	0.423	206	18.262	9.773
137	3.023	0.439	207	18.334	9.911
138	3.028	0.449	208	18.421	9.961
139	3.035	0.455	209	18.535	10.152
140	3.036	0.469	210	18.635	10.242
141	3.036	0.478	211	18.803	10.248
142	3.036	0.486	212	19.029	10.315
143	3.036	0.495	213	19.331	10.458
144	3.036	0.508	214	19.333	10.630
145	3.036	0.510	215	19.337	10.687
146	3.036	0.510	216	19.387	10.754
147	3.036	0.512	217	19.521	10.971
148	3.036	0.514	218	19.655	11.012
149	3.036	0.516	219	19.823	11.250
150	3.036	0.524	220	19.869	11.327
151	3.037	0.542	221	19.881	11.353
152	3.037	0.543	222	19.898	11.390
153	3.043	0.546	223	19.908	11.463
154	3.075	0.549	224	19.915	11.511
155	3.223	0.553	225	20.005	11.522
156	3.801	0.578	226	20.084	11.546
157	3.894	0.680	227	20.085	11.587
158	4.113	0.713	228	20.085	11.652
159	4.447	0.932	229	20.139	11.652
160	4.950	1.000	230	20.209	11.654
161	5.586	1.062	231	20.215	11.672
162	6.432	1.253	232	20.217	11.729
163	7.279	1.887	233	20.245	11.744
164	8.105	2.111	234	20.274	11.806
165	8.487	2.496	235	20.277	11.808
166	8.554	3.095	236	20.285	11.809
167	8.595	3.402	237	20.287	11.810
168	8.621	3.610	238	20.301	11.845
169	9.135	3.937	239	20.325	11.934

(b) Motor vehicles having composite carbon monoxide emission limitations in Table 1 of at least 15.0 grams/mile but less than 20.0 grams/mile.

Second	Composite (grams)	Phase 2 (grams)	Second	Composite (grams)	Phase 2 (grams)
30	0.693	N/A	36	0.900	N/A
31	0.773	N/A	37	0.960	N/A
32	0.837	N/A	38	1.034	N/A
33	0.851	N/A	39	1.070	N/A
34	0.853	N/A	40	1.076	N/A
35	0.857	N/A	41	1.083	N/A

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**Table 3 (continued)**  
**Fast-Pass Emission Limitations For The Transient Emission Test**

Second	Composite (grams)	Phase 2 (grams)	Second	Composite (grams)	Phase 2 (grams)
42	1.102	N/A	121	4.185	0.388
43	1.111	N/A	122	4.199	0.407
44	1.114	N/A	123	4.205	0.463
45	1.157	N/A	124	4.212	0.480
46	1.344	N/A	125	4.232	0.506
47	1.482	N/A	126	4.298	0.518
48	1.530	N/A	127	4.344	0.522
49	1.542	N/A	128	4.361	0.525
50	1.553	N/A	129	4.366	0.528
51	1.571	N/A	130	4.369	0.530
52	1.595	N/A	131	4.372	0.530
53	1.633	N/A	132	4.435	0.534
54	1.685	N/A	133	4.523	0.550
55	1.689	N/A	134	4.524	0.554
56	1.693	N/A	135	4.525	0.590
57	1.700	N/A	136	4.531	0.616
58	1.723	N/A	137	4.534	0.639
59	1.852	N/A	138	4.542	0.653
60	1.872	N/A	139	4.553	0.662
61	1.872	N/A	140	4.554	0.683
62	1.872	N/A	141	4.554	0.696
63	1.900	N/A	142	4.554	0.708
64	1.917	N/A	143	4.554	0.721
65	1.944	N/A	144	4.554	0.739
66	2.000	N/A	145	4.554	0.742
67	2.060	N/A	146	4.554	0.743
68	2.064	N/A	147	4.554	0.745
69	2.076	N/A	148	4.554	0.748
70	2.104	N/A	149	4.554	0.751
71	2.117	N/A	150	4.554	0.762
72	2.125	N/A	151	4.556	0.789
73	2.130	N/A	152	4.556	0.790
74	2.138	N/A	153	4.565	0.794
75	2.152	N/A	154	4.612	0.799
76	2.170	N/A	155	4.834	0.805
77	2.188	N/A	156	5.702	0.842
78	2.200	N/A	157	5.841	0.990
79	2.212	N/A	158	6.170	1.038
80	2.212	N/A	159	6.670	1.357
81	2.221	N/A	160	7.425	1.455
82	2.222	N/A	161	8.379	1.546
83	2.227	N/A	162	9.648	1.824
84	2.236	N/A	163	10.918	2.746
85	2.243	N/A	164	12.127	3.073
86	2.262	N/A	165	12.731	3.633
87	2.271	N/A	166	12.831	4.505
88	2.284	N/A	167	12.892	4.952
89	2.299	N/A	168	12.932	5.254
90	2.308	N/A	169	13.702	5.730
91	2.326	N/A	170	14.139	6.051
92	2.330	N/A	171	14.964	6.333
93	2.331	N/A	172	15.704	6.490
94	2.344	0.000	173	16.253	6.796
95	2.347	0.000	174	16.907	7.205
96	2.355	0.000	175	17.655	8.151
97	2.395	0.000	176	18.020	8.230
98	2.451	0.000	177	18.349	8.584
99	2.508	0.004	178	18.671	8.800
100	2.590	0.008	179	18.972	8.847
101	2.660	0.015	180	19.228	8.913
102	2.749	0.026	181	20.123	9.122
103	2.913	0.038	182	20.405	9.532
104	3.162	0.038	183	20.754	10.256
105	3.170	0.039	184	21.684	10.862
106	3.197	0.061	185	21.955	10.996
107	3.288	0.062	186	22.650	11.206
108	3.419	0.108	187	22.989	11.514
109	3.587	0.168	188	23.535	11.894
110	3.595	0.173	189	23.876	12.019
111	3.640	0.237	190	24.018	12.170
112	3.740	0.266	191	24.464	12.517
113	3.868	0.280	192	24.685	12.598
114	3.877	0.291	193	24.931	12.625
115	3.934	0.314	194	25.188	12.653
116	4.015	0.331	195	25.468	12.777
117	4.061	0.345	196	25.627	12.906
118	4.063	0.350	197	25.746	12.989
119	4.079	0.356	198	25.850	13.060
120	4.140	0.367	199	25.974	13.165
			200	26.141	13.242

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**Table 3 (continued)**  
**Fast-Pass Emission Limitations For The Transient Emission Test**

Second	Composite (grams)	Phase 2 (grams)	Second	Composite (grams)	Phase 2 (grams)
201	26.225	13.412	220	29.803	16.487
202	26.338	13.662	221	29.821	16.524
203	26.547	13.773	222	29.847	16.578
204	26.818	13.942	223	29.862	16.684
205	27.052	14.090	224	29.873	16.755
206	27.393	14.224	225	30.008	16.770
207	27.501	14.426	226	30.126	16.805
208	27.632	14.498	227	30.127	16.865
209	27.803	14.776	228	30.127	16.960
210	27.953	14.907	229	30.208	16.960
211	28.205	14.916	230	30.314	16.962
212	28.543	15.014	231	30.323	16.988
213	28.997	15.221	232	30.325	17.072
214	29.000	15.472	233	30.368	17.094
215	29.005	15.555	234	30.411	17.184
216	29.081	15.652	235	30.416	17.187
217	29.281	15.969	236	30.428	17.188
218	29.483	16.028	237	30.430	17.189
219	29.734	16.375	238	30.452	17.241
			239	30.488	17.370

(c) Motor vehicles having composite carbon monoxide emission limitations in Table 1 of at least 20.0 grams/mile but less than 30.0 grams/mile.

Second	Composite (grams)	Phase 2 (grams)	Second	Composite (grams)	Phase 2 (grams)
30	1.502	N/A	83	4.482	N/A
31	1.546	N/A	84	4.515	N/A
32	1.568	N/A	85	4.518	N/A
33	1.582	N/A	86	4.520	N/A
34	1.593	N/A	87	4.522	N/A
35	1.602	N/A	88	4.522	N/A
36	1.621	N/A	89	4.523	N/A
37	1.631	N/A	90	4.526	N/A
38	1.702	N/A	91	4.527	N/A
39	1.784	N/A	92	4.527	N/A
40	1.879	N/A	93	4.528	N/A
41	2.162	N/A	94	4.528	0.000
42	2.307	N/A	95	4.528	0.000
43	2.343	N/A	96	4.529	0.000
44	2.376	N/A	97	4.575	0.000
45	2.406	N/A	98	4.703	0.002
46	2.433	N/A	99	4.805	0.005
47	2.458	N/A	100	4.886	0.010
48	2.483	N/A	101	4.957	0.017
49	2.774	N/A	102	5.104	0.052
50	2.844	N/A	103	5.340	0.085
51	2.900	N/A	104	5.496	0.094
52	2.936	N/A	105	5.625	0.122
53	3.133	N/A	106	5.815	0.151
54	3.304	N/A	107	6.473	0.191
55	3.407	N/A	108	7.037	0.234
56	3.456	N/A	109	7.419	0.246
57	3.480	N/A	110	7.643	0.257
58	3.518	N/A	111	7.759	0.286
59	3.560	N/A	112	7.824	0.379
60	3.593	N/A	113	7.889	0.425
61	3.628	N/A	114	7.960	0.457
62	3.641	N/A	115	8.024	0.477
63	3.655	N/A	116	8.076	0.494
64	3.680	N/A	117	8.111	0.504
65	3.700	N/A	118	8.130	0.512
66	3.728	N/A	119	8.148	0.519
67	3.857	N/A	120	8.211	0.529
68	3.894	N/A	121	8.478	0.529
69	3.943	N/A	122	8.548	0.530
70	3.983	N/A	123	8.561	0.531
71	4.009	N/A	124	8.568	0.532
72	4.023	N/A	125	8.572	0.533
73	4.023	N/A	126	8.584	0.548
74	4.053	N/A	127	8.592	0.610
75	4.063	N/A	128	8.596	0.614
76	4.077	N/A	129	8.597	0.622
77	4.225	N/A	130	8.601	0.631
78	4.243	N/A	131	8.605	0.640
79	4.260	N/A	132	8.608	0.646
80	4.282	N/A	133	8.626	0.650
81	4.322	N/A	134	8.650	0.652
82	4.398	N/A			

**Table 3 (continued)**  
**Fast-Pass Emission Limitations For The Transient Emission Test**

Second	Composite (grams)	Phase 2 (grams)	Second	Composite (grams)	Phase 2 (grams)
135	8.660	0.738	187	31.314	14.131
136	8.767	0.754	188	31.833	14.839
137	9.029	0.780	189	32.239	15.137
138	9.238	0.795	190	32.547	15.138
139	9.389	0.804	191	32.855	15.141
140	9.493	0.810	192	33.153	15.595
141	9.583	0.815	193	33.444	15.658
142	9.626	0.818	194	33.482	15.704
143	9.669	0.821	195	33.516	15.729
144	9.716	0.825	196	33.549	16.058
145	9.763	0.840	197	33.653	16.987
146	9.809	0.847	198	33.973	17.064
147	9.852	0.855	199	34.159	17.073
148	9.885	0.865	200	34.191	17.153
149	9.932	0.874	201	34.250	17.332
150	9.986	0.891	202	34.469	17.406
151	10.039	0.914	203	34.716	17.641
152	10.072	0.929	204	34.969	17.922
153	10.090	0.937	205	35.144	18.484
154	10.105	0.942	206	35.418	18.553
155	10.146	0.949	207	35.766	18.658
156	10.245	1.375	208	35.949	18.953
157	10.397	1.576	209	36.010	19.266
158	10.923	1.943	210	36.548	19.309
159	11.970	2.820	211	37.179	19.731
160	13.421	3.281	212	37.651	19.902
161	15.289	3.483	213	38.041	20.012
162	15.912	3.620	214	38.591	20.260
163	16.530	4.168	215	38.852	20.739
164	17.622	4.338	216	38.861	21.346
165	18.366	4.682	217	38.926	21.810
166	19.869	5.633	218	39.194	22.001
167	20.711	6.137	219	39.474	22.290
168	22.319	6.853	220	39.668	22.324
169	23.751	7.136	221	39.781	22.343
170	24.842	7.320	222	39.890	22.522
171	25.410	7.685	223	39.954	22.683
172	25.798	8.052	224	39.984	22.850
173	26.122	8.344	225	39.989	22.853
174	26.353	8.602	226	39.990	22.853
175	26.638	8.898	227	39.990	22.853
176	27.219	9.251	228	39.990	22.872
177	27.279	10.253	229	39.991	22.872
178	27.320	10.828	230	40.012	22.872
179	27.352	10.933	231	40.061	22.895
180	27.822	11.060	232	40.116	22.911
181	28.763	11.188	233	40.249	22.922
182	29.402	11.345	234	40.253	22.939
183	29.971	11.733	235	40.290	23.010
184	30.276	12.598	236	40.385	23.010
185	30.988	12.953	237	40.488	23.010
186	31.095	13.213	238	40.720	23.010
			239	40.763	23.010

(d) Motor vehicles having composite carbon monoxide emission limitations in Table 1 of 30.0 grams/mile or greater.

Second	Composite (grams)	Phase 2 (grams)	Second	Composite (grams)	Phase 2 (grams)
30	3.804	N/A	54	7.359	N/A
31	3.985	N/A	55	7.722	N/A
32	4.215	N/A	56	8.017	N/A
33	4.440	N/A	57	8.249	N/A
34	4.579	N/A	58	8.425	N/A
35	4.688	N/A	59	8.563	N/A
36	4.749	N/A	60	8.686	N/A
37	4.783	N/A	61	8.804	N/A
38	4.813	N/A	62	8.916	N/A
39	4.876	N/A	63	9.025	N/A
40	5.104	N/A	64	9.138	N/A
41	5.217	N/A	65	9.250	N/A
42	5.383	N/A	66	9.354	N/A
43	5.571	N/A	67	9.457	N/A
44	5.888	N/A	68	9.575	N/A
45	6.199	N/A	69	9.728	N/A
46	6.245	N/A	70	9.938	N/A
47	6.318	N/A	71	10.140	N/A
48	6.418	N/A	72	10.222	N/A
49	6.540	N/A	73	10.261	N/A
50	6.690	N/A	74	10.278	N/A
51	6.875	N/A	75	10.290	N/A
52	7.029	N/A	76	10.715	N/A
53	7.129	N/A	77	10.790	N/A
			78	10.844	N/A

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**Table 3 (continued)**  
**Fast-Pass Emission Limitations For The Transient Emission Test**

Second	Composite (grams)	Phase 2 (grams)	Second	Composite (grams)	Phase 2 (grams)
79	10.921	N/A	159	25.615	5.383
80	11.010	N/A	160	26.073	6.362
81	11.090	N/A	161	28.496	7.926
82	11.136	N/A	162	29.772	8.429
83	11.136	N/A	163	31.056	9.201
84	11.165	N/A	164	33.351	10.825
85	11.191	N/A	165	34.890	12.291
86	11.205	N/A	166	35.937	13.366
87	11.211	N/A	167	37.012	14.428
88	11.211	N/A	168	37.892	15.318
89	11.211	N/A	169	39.028	15.699
90	11.211	N/A	170	40.406	16.073
91	11.220	N/A	171	41.379	16.475
92	11.294	N/A	172	42.033	17.158
93	11.332	N/A	173	42.432	17.532
94	11.355	0.000	174	42.742	17.965
95	11.383	0.000	175	43.399	18.242
96	11.410	0.001	176	43.895	18.283
97	11.433	0.006	177	44.227	18.480
98	11.516	0.020	178	44.926	19.576
99	11.820	0.051	179	45.256	20.015
100	12.104	0.092	180	45.553	20.203
101	12.344	0.131	181	45.753	20.433
102	12.781	0.200	182	46.210	21.025
103	13.472	0.307	183	47.017	21.882
104	14.405	0.582	184	48.185	22.204
105	14.808	0.800	185	48.741	22.859
106	14.965	0.925	186	49.462	23.533
107	15.121	0.973	187	50.313	24.281
108	15.372	1.091	188	51.285	25.078
109	15.530	1.113	189	52.076	25.276
110	15.687	1.213	190	52.857	25.578
111	16.018	1.344	191	52.876	25.859
112	16.527	1.399	192	53.067	25.985
113	16.810	1.520	193	53.777	26.153
114	16.961	1.640	194	54.242	26.582
115	17.120	1.684	195	54.489	27.067
116	17.135	1.693	196	54.601	27.456
117	17.249	1.786	197	54.912	27.805
118	17.451	2.007	198	55.588	28.070
119	17.509	2.084	199	56.266	28.590
120	17.605	2.179	200	56.617	28.914
121	17.734	2.264	201	56.863	29.063
122	18.049	2.328	202	57.204	29.502
123	18.447	2.375	203	57.371	29.697
124	18.592	2.437	204	57.487	29.713
125	18.657	2.543	205	57.728	29.783
126	18.796	2.593	206	58.097	29.942
127	18.952	2.641	207	58.572	30.284
128	19.137	2.663	208	59.024	30.755
129	19.329	2.672	209	59.321	31.287
130	19.519	2.676	210	59.715	31.549
131	19.707	2.683	211	60.045	31.820
132	19.882	2.817	212	60.453	32.250
133	19.905	2.992	213	60.935	32.546
134	20.049	3.111	214	61.307	32.808
135	20.460	3.234	215	61.666	33.142
136	20.746	3.304	216	62.148	33.529
137	21.068	3.310	217	62.532	33.763
138	21.380	3.320	218	62.546	33.921
139	21.748	3.354	219	62.559	33.961
140	22.046	3.436	220	62.570	33.983
141	22.348	3.443	221	62.846	34.007
142	22.397	3.452	222	63.097	34.032
143	22.407	3.490	223	63.150	34.054
144	22.417	3.552	224	63.150	34.061
145	22.922	3.588	225	63.150	34.082
146	22.951	3.600	226	63.150	34.100
147	22.976	3.616	227	63.150	34.109
148	23.017	3.627	228	63.150	34.129
149	23.073	3.636	229	63.150	34.284
150	23.161	3.676	230	63.150	34.397
151	23.218	3.882	231	63.150	34.463
152	23.253	4.011	232	63.150	34.465
153	23.337	4.047	233	63.150	34.466
154	23.425	4.067	234	63.153	34.468
155	23.534	4.081	235	63.159	34.470
156	23.652	4.116	236	63.173	34.471
157	23.739	4.251	237	63.193	34.472
158	24.606	5.099			

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**Table 3 (continued)**  
**Fast-Pass Emission Limitations For The Transient Emission Test**

Second	Composite (grams)	Phase 2 (grams)
238	63.214	34.472
239	63.233	34.473

**(3)** OXIDES OF NITROGEN EXHAUST EMISSIONS. (a) *Motor vehicles having composite oxides of nitrogen emission limitations in Table 1 of at least 1.5 grams/mile but less than 2.0 grams/mile.*

Second	Composite (grams)	Second	Composite (grams)
30	0.125	102	0.617
31	0.133	103	0.650
32	0.141	104	0.679
33	0.161	105	0.694
34	0.174	106	0.716
35	0.180	107	0.739
36	0.182	108	0.745
37	0.184	109	0.746
38	0.185	110	0.747
39	0.185	111	0.758
40	0.188	112	0.771
41	0.195	113	0.776
42	0.208	114	0.783
43	0.233	115	0.794
44	0.246	116	0.806
45	0.257	117	0.810
46	0.269	118	0.810
47	0.280	119	0.811
48	0.287	120	0.818
49	0.289	121	0.822
50	0.300	122	0.833
51	0.308	123	0.842
52	0.326	124	0.851
53	0.348	125	0.854
54	0.354	126	0.854
55	0.360	127	0.854
56	0.368	128	0.854
57	0.375	129	0.854
58	0.380	130	0.854
59	0.382	131	0.854
60	0.384	132	0.854
61	0.387	133	0.854
62	0.389	134	0.854
63	0.392	135	0.854
64	0.397	136	0.870
65	0.400	137	0.881
66	0.401	138	0.887
67	0.405	139	0.898
68	0.413	140	0.917
69	0.422	141	0.941
70	0.431	142	0.954
71	0.441	143	0.965
72	0.450	144	0.978
73	0.452	145	0.980
74	0.453	146	0.984
75	0.460	147	0.988
76	0.468	148	0.991
77	0.485	149	0.994
78	0.488	150	0.996
79	0.494	151	0.999
80	0.505	152	1.004
81	0.522	153	1.008
82	0.530	154	1.013
83	0.536	155	1.018
84	0.543	156	1.024
85	0.553	157	1.034
86	0.560	158	1.061
87	0.561	159	1.100
88	0.561	160	1.136
89	0.561	161	1.169
90	0.561	162	1.193
91	0.561	163	1.231
92	0.561	164	1.289
93	0.561	165	1.333
94	0.561	166	1.374
95	0.561	167	1.439
96	0.561	168	1.479
97	0.561	169	1.510
98	0.561	170	1.575
99	0.563	171	1.650
100	0.573	172	1.688
101	0.592	173	1.703

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**Table 3 (continued)**  
**Fast-Pass Emission Limitations For The Transient Emission Test**

Second	Composite (grams)	Second	Composite (grams)
174	1.726	207	2.659
175	1.739	208	2.678
176	1.751	209	2.700
177	1.762	210	2.714
178	1.790	211	2.729
179	1.817	212	2.765
180	1.847	213	2.799
181	1.877	214	2.843
182	1.909	215	2.875
183	1.940	216	2.918
184	1.970	217	2.949
185	2.005	218	2.970
186	2.062	219	2.998
187	2.103	220	3.010
188	2.138	221	3.026
189	2.171	222	3.029
190	2.198	223	3.038
191	2.228	224	3.050
192	2.265	225	3.053
193	2.308	226	3.054
194	2.349	227	3.054
195	2.389	228	3.055
196	2.414	229	3.055
197	2.451	230	3.055
198	2.474	231	3.055
199	2.513	232	3.056
200	2.555	233	3.056
201	2.600	234	3.056
202	2.623	235	3.056
203	2.636	236	3.057
204	2.638	237	3.057
205	2.639	238	3.057
206	2.642	239	3.057

(b) Motor vehicles having composite oxides of nitrogen emission limitations in Table 1 of at least 2.0 grams/mile but less than 2.5 grams/mile.

Second	Composite (grams)	Second	Composite (grams)
30	0.167	71	0.588
31	0.177	72	0.600
32	0.188	73	0.603
33	0.214	74	0.604
34	0.232	75	0.613
35	0.240	76	0.624
36	0.243	77	0.646
37	0.245	78	0.651
38	0.246	79	0.659
39	0.246	80	0.673
40	0.250	81	0.696
41	0.260	82	0.706
42	0.277	83	0.716
43	0.311	84	0.724
44	0.328	85	0.737
45	0.343	86	0.747
46	0.359	87	0.748
47	0.373	88	0.748
48	0.383	89	0.748
49	0.385	90	0.748
50	0.400	91	0.748
51	0.410	92	0.748
52	0.434	93	0.748
53	0.464	94	0.748
54	0.472	95	0.748
55	0.480	96	0.748
56	0.491	97	0.748
57	0.500	98	0.748
58	0.506	99	0.751
59	0.509	100	0.764
60	0.512	101	0.789
61	0.516	102	0.822
62	0.519	103	0.867
63	0.523	104	0.905
64	0.529	105	0.925
65	0.533	106	0.955
66	0.535	107	0.985
67	0.540	108	0.993
68	0.551	109	0.995
69	0.563	110	0.996
70	0.575		

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**Table 3 (continued)**  
**Fast-Pass Emission Limitations For The Transient Emission Test**

Second	Composite (grams)	Second	Composite (grams)
111	1.010	176	2.335
112	1.028	177	2.349
113	1.034	178	2.387
114	1.044	179	2.423
115	1.059	180	2.462
116	1.075	181	2.503
117	1.080	182	2.545
118	1.080	183	2.586
119	1.081	184	2.627
120	1.091	185	2.673
121	1.096	186	2.749
122	1.111	187	2.804
123	1.122	188	2.851
124	1.135	189	2.894
125	1.138	190	2.931
126	1.139	191	2.971
127	1.139	192	3.020
128	1.139	193	3.077
129	1.139	194	3.132
130	1.139	195	3.185
131	1.139	196	3.219
132	1.139	197	3.268
133	1.139	198	3.299
134	1.139	199	3.350
135	1.139	200	3.406
136	1.160	201	3.466
137	1.174	202	3.497
138	1.183	203	3.514
139	1.197	204	3.517
140	1.223	205	3.519
141	1.255	206	3.523
142	1.272	207	3.545
143	1.286	208	3.570
144	1.304	209	3.600
145	1.307	210	3.619
146	1.312	211	3.639
147	1.317	212	3.686
148	1.321	213	3.732
149	1.325	214	3.791
150	1.328	215	3.833
151	1.332	216	3.890
152	1.338	217	3.932
153	1.344	218	3.960
154	1.350	219	3.997
155	1.357	220	4.013
156	1.365	221	4.035
157	1.379	222	4.038
158	1.414	223	4.050
159	1.466	224	4.066
160	1.514	225	4.070
161	1.559	226	4.072
162	1.591	227	4.072
163	1.641	228	4.073
164	1.719	229	4.073
165	1.777	230	4.073
166	1.832	231	4.073
167	1.919	232	4.074
168	1.972	233	4.074
169	2.013	234	4.075
170	2.100	235	4.075
171	2.200	236	4.076
172	2.251	237	4.076
173	2.270	238	4.076
174	2.301	239	4.076
175	2.318		

(c) Motor vehicles having composite oxides of nitrogen emission limitations in Table 1 of at least 2.5 grams/mile but less than 3.0 grams/mile.

Second	Composite (grams)	Second	Composite (grams)
30	0.262	39	0.337
31	0.275	40	0.354
32	0.301	41	0.366
33	0.317	42	0.410
34	0.327	43	0.414
35	0.330	44	0.438
36	0.332	45	0.477
37	0.334	46	0.506
38	0.336	47	0.518

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**Table 3 (continued)**  
**Fast-Pass Emission Limitations For The Transient Emission Test**

Second	Composite (grams)	Second	Composite (grams)
48	0.522	128	1.596
49	0.526	129	1.603
50	0.554	130	1.605
51	0.574	131	1.606
52	0.587	132	1.607
53	0.601	133	1.607
54	0.615	134	1.608
55	0.629	135	1.614
56	0.643	136	1.616
57	0.667	137	1.631
58	0.678	138	1.643
59	0.683	139	1.656
60	0.686	140	1.673
61	0.693	141	1.703
62	0.699	142	1.739
63	0.703	143	1.767
64	0.707	144	1.774
65	0.711	145	1.785
66	0.716	146	1.806
67	0.721	147	1.830
68	0.726	148	1.844
69	0.742	149	1.845
70	0.759	150	1.846
71	0.773	151	1.852
72	0.784	152	1.868
73	0.790	153	1.877
74	0.794	154	1.879
75	0.799	155	1.886
76	0.809	156	1.900
77	0.821	157	1.910
78	0.833	158	1.936
79	0.839	159	1.954
80	0.844	160	1.986
81	0.857	161	2.050
82	0.870	162	2.131
83	0.883	163	2.235
84	0.894	164	2.320
85	0.902	165	2.395
86	0.907	166	2.488
87	0.910	167	2.563
88	0.912	168	2.645
89	0.913	169	2.746
90	0.914	170	2.778
91	0.915	171	2.792
92	0.916	172	2.810
93	0.917	173	2.847
94	0.918	174	2.874
95	0.919	175	2.905
96	0.920	176	2.950
97	0.921	177	3.001
98	0.922	178	3.047
99	0.924	179	3.104
100	0.929	180	3.173
101	0.941	181	3.238
102	0.970	182	3.302
103	1.027	183	3.372
104	1.093	184	3.452
105	1.155	185	3.545
106	1.234	186	3.648
107	1.275	187	3.701
108	1.305	188	3.759
109	1.320	189	3.821
110	1.332	190	3.870
111	1.346	191	3.892
112	1.358	192	3.914
113	1.378	193	3.955
114	1.406	194	3.997
115	1.426	195	4.035
116	1.438	196	4.089
117	1.448	197	4.146
118	1.460	198	4.206
119	1.462	199	4.243
120	1.467	200	4.295
121	1.476	201	4.351
122	1.494	202	4.398
123	1.505	203	4.410
124	1.517	204	4.419
125	1.546	205	4.426
126	1.569	206	4.429
127	1.586		

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**Table 3 (continued)**  
**Fast-Pass Emission Limitations For The Transient Emission Test**

<b>Second</b>	<b>Composite (grams)</b>	<b>Second</b>	<b>Composite (grams)</b>
207	4.453	223	5.057
208	4.486	224	5.061
209	4.542	225	5.062
210	4.598	226	5.063
211	4.638	227	5.063
212	4.715	228	5.063
213	4.774	229	5.063
214	4.829	230	5.064
215	4.872	231	5.065
216	4.931	232	5.066
217	4.981	233	5.067
218	5.017	234	5.068
219	5.029	235	5.069
220	5.033	236	5.070
221	5.037	237	5.070
222	5.047	238	5.070
		239	5.070

(d) *Motor vehicles having composite oxides of nitrogen emission limitations in Table 1 of 3.0 grams/mile or greater.*

<b>Second</b>	<b>Composite (grams)</b>	<b>Second</b>	<b>Composite (grams)</b>
30	0.419	90	1.361
31	0.425	91	1.366
32	0.431	92	1.369
33	0.449	93	1.373
34	0.476	94	1.375
35	0.497	95	1.377
36	0.515	96	1.379
37	0.516	97	1.381
38	0.519	98	1.383
39	0.527	99	1.385
40	0.542	100	1.399
41	0.560	101	1.405
42	0.598	102	1.466
43	0.616	103	1.485
44	0.645	104	1.546
45	0.670	105	1.623
46	0.691	106	1.699
47	0.716	107	1.760
48	0.735	108	1.788
49	0.765	109	1.798
50	0.802	110	1.842
51	0.836	111	1.864
52	0.868	112	1.888
53	0.890	113	1.905
54	0.918	114	1.920
55	0.936	115	1.926
56	0.947	116	1.939
57	0.958	117	1.958
58	0.970	118	1.972
59	0.982	119	1.981
60	0.994	120	1.987
61	1.019	121	1.991
62	1.042	122	1.996
63	1.049	123	2.012
64	1.058	124	2.040
65	1.062	125	2.060
66	1.064	126	2.069
67	1.070	127	2.092
68	1.077	128	2.114
69	1.085	129	2.132
70	1.092	130	2.144
71	1.101	131	2.152
72	1.111	132	2.157
73	1.121	133	2.160
74	1.131	134	2.163
75	1.141	135	2.165
76	1.159	136	2.168
77	1.164	137	2.171
78	1.186	138	2.186
79	1.221	139	2.235
80	1.260	140	2.298
81	1.268	141	2.333
82	1.272	142	2.373
83	1.277	143	2.406
84	1.288	144	2.416
85	1.310	145	2.420
86	1.319	146	2.424
87	1.320	147	2.435
88	1.337	148	2.455
89	1.348	149	2.471

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**Table 3 (continued)**  
**Fast-Pass Emission Limitations For The Transient Emission Test**

Second	Composite (grams)	Second	Composite (grams)
150	2.484	195	4.928
151	2.495	196	4.972
152	2.509	197	5.025
153	2.522	198	5.104
154	2.533	199	5.189
155	2.541	200	5.275
156	2.552	201	5.336
157	2.589	202	5.366
158	2.631	203	5.387
159	2.704	204	5.427
160	2.758	205	5.444
161	2.802	206	5.447
162	2.904	207	5.477
163	2.960	208	5.520
164	3.027	209	5.560
165	3.127	210	5.603
166	3.187	211	5.657
167	3.306	212	5.698
168	3.384	213	5.762
169	3.467	214	5.836
170	3.565	215	5.944
171	3.640	216	6.008
172	3.718	217	6.040
173	3.781	218	6.072
174	3.827	219	6.089
175	3.852	220	6.101
176	3.903	221	6.118
177	3.930	222	6.126
178	3.970	223	6.139
179	4.015	224	6.145
180	4.074	225	6.148
181	4.159	226	6.150
182	4.230	227	6.151
183	4.286	228	6.152
184	4.334	229	6.153
185	4.388	230	6.154
186	4.447	231	6.156
187	4.505	232	6.157
188	4.561	233	6.159
189	4.625	234	6.160
190	4.696	235	6.162
191	4.731	236	6.163
192	4.780	237	6.164
193	4.837	238	6.166
194	4.876	239	6.168

**History:** Renum. from NR 154.17 (3) and am. [Register, September, 1986, No. 369](#), eff. 11-1-86; am. Table, [Register, February, 1990, No. 410](#), eff. 3-1-90; r. and recr. [Register, December, 1995, No. 480](#), eff. 1-1-96; am. (9) (b), [Register, January, 1997, No. 493](#), eff. 2-1-97; r. and recr. Table 1 (3), renum. Table 3, (1) (a) to (c), (2) (a) to (c) and (3) (a) to (c) to be (1) (b) to (d), (2) (b) to (d) and (3) (b) to (d), [Register, November, 1998, No. 515](#), eff. 12-1-98; am. (2) (c), (8) (a), (b), (10) (intro.), r. and recr. Table 3 (1) (a), (2) (a) and (3) (a), r. Table 1 (5), [Register, November, 1999, No. 527](#), eff. 12-1-99; renum. (9) (a) to be (9), r. (9) (b), [Register, January, 2001, No. 541](#), eff. 2-1-01; CR 05-072: am. Table 1 (4) (title) and cr. Table 1 (5) [Register March 2006 No. 603](#), eff. 4-1-06; CR 10-049: am. (2) (intro.), (7) (title), (9), r. (3), (4), (6), (7) (a) (title), (b), (8), Table 2, 4, [Register November 2010 No. 659](#), eff. 12-1-10.

**NR 485.045 Repair cost limit for vehicle inspection program.** (1) REPAIR COST LIMIT. For vehicles subject to the motor vehicle emission inspection program under s. [110.20 \(6\)](#), Stats., the repair cost limit for determining eligibility for a waiver of compliance under s. [110.20 \(13\)](#), Stats., from the emission limitations of s. [NR 485.04](#), shall be established in accordance with [42 USC 7511a](#) (b) (4) or (c) (3) (C), and regulations promulgated thereunder, and shall equal the higher of \$450 or an amount calculated from a base of \$450 and adjusted annually, beginning in 1989, by the percentage, if any, by which the consumer price index, as defined in section 502 (b) (3) (B) (v) of the Act ([42 USC 7661a](#) (b) (3) (B) (v)), has been adjusted.

(2) CERTIFICATION OF REPAIR COST LIMIT. Beginning in 1994, by April 1 of each year the department shall certify to DOT the amount of the repair cost limit calculated under sub.

(1) for determining eligibility for a waiver of compliance under s. [110.20 \(13\)](#), Stats., for the subsequent 12 month period of July 1 through June 30.

**History:** Emerg. cr. eff. 11-15-92; cr. [Register, June, 1993, No. 450](#), eff. 7-1-93; r. (1) (a), [Register, December, 1995, No. 480](#), eff. 1-1-96; CR 10-049: renum. (1) (intro.) to be (1) and am., r. (1) (b), (c) [Register November 2010 No. 659](#), eff. 12-1-10; correction in (2) made under s. [13.92](#). (4) (b) 7., Stats., [Register November 2010 No. 659](#).

**NR 485.05 Visible emission limits for motor vehicles, internal combustion engines and mobile sources.** No person may cause, allow or permit visible emissions in amounts greater than the following limitations, except when uncombined water is the cause for violation:

(1) Gasoline-powered internal combustion engines of 25 HP or more, or gasoline-powered motor vehicles: no visible emissions for longer than 5 consecutive seconds.

(2) Diesel-powered motor vehicles of model year 1970 or later: emissions of shade or density greater than number 1 on the Ringelmann chart or 20% opacity for longer than 10 consecutive seconds.

(3) Diesel-powered motor vehicles of model year 1969 or earlier: emissions of shade or density greater than number 2 on the Ringelmann chart or 40% opacity for longer than 10 consecutive seconds.

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(4) Ships, locomotives, or semistationary diesel engines: emissions of shade or density greater than number 2 on the Ringelmann chart or 40% opacity for longer than an aggregate time of 5 minutes in any 30-minute period. At no time may emissions exceed a shade or density greater than number 4 on the Ringelmann chart or 80% opacity.

**History:** Renum. from NR 154.17 (4), Register, September, 1986, No. 369, eff. 10-1-86; am. (intro.) Register, July, 1989, No. 403, eff. 8-1-89; am. (intro.) and (4), Register, May, 1992, No. 437, eff. 6-1-92.

**NR 485.055 Particulate emission limit for gasoline and diesel internal combustion engines.** No person may cause, allow or permit the emissions of particulate matter to the ambient air from stationary or semistationary gasoline or diesel powered internal combustion reciprocating engines in excess of 0.50 pound of particulate per million Btu heat input.

**History:** Cr. Register, June, 1994, No. 462, eff. 7-1-94.

**NR 485.06 Tampering with air pollution control equipment.** (1) No person may tamper with or fail to maintain in good working order any air pollution control equipment which has been installed on a motor vehicle by the manufacturer prior to sale unless the person repairs or restores the equipment or replaces the equipment with new identical or comparable tested replacement equipment. Catalytic converters must be original equipment or EPA-certified equipment except as specified in sub. (2). Air pollution control equipment includes but is not limited to:

- (a) Positive crankcase ventilation equipment.
- (b) Exhaust emission control equipment.
- (c) Evaporative fuel loss control equipment.
- (d) Any control equipment operating on principles such as thermal decomposition, catalytic oxidation or reduction, absorption, or adsorption.

(2) (a) Notwithstanding sub. (1), any person may replace the catalytic converter with aftermarket equipment certified by the U.S. environmental protection agency (EPA) on the following categories of vehicles:

1. All vehicles of model year 1994 or earlier.
2. For vehicles of model year 1995 or later, those vehicles which are at least 8 model years older than the current model year, or those vehicles with more than 80,000 miles on the odometer.

(b) If the catalytic converter is replaced, the owner of the vehicle shall provide a receipt or other evidence showing that the replacement converter has been certified by EPA.

**History:** Renum. from NR 154.17 (2), Register, September, 1986, No. 369, eff. 10-1-86; renum. (intro.) to (4) to (1) (a) to (d) and cr. (2), Register, July, 1989, No. 403, eff. 8-1-89; CR 05-072: am. (2) Register March 2006 No. 603, eff. 4-1-06.

**NR 485.07 Inspection requirement for motor vehicle tampering.** (1) **APPLICABILITY.** This section applies to any motor vehicle which is subject to an air pollution control equipment inspection under s. 110.20 (6) (b), Stats., or which is inspected for tampering of air pollution control equipment.

(2) **RECORDS AND COMPLIANCE.** DOT or its designee shall maintain a record of vehicles failing the tampering inspection conducted under either s. 110.20 (6) (b), Stats., or any other enforcement mechanism. DOT may not register or renew registration of a failed vehicle until evidence of repair, replacement or restoration of the failed or missing parts is provided to DOT or

its designee, and DOT or its designee reinspects the vehicle for the failed or missing parts.

(3) **FULL TAMPERING INSPECTION PROCEDURE.** (a) Full tampering inspections shall consist of a visual check for the presence and proper connection of the following air pollution control equipment: the positive crankcase ventilation (PCV) valve and connections; the evaporative emissions control canister; the exhaust system catalytic converter and oxygen sensor; the exhaust gas recirculation (EGR) assembly; the air pump, belts and hoses or the air injector assembly; the fuel inlet restrictor; a properly seated gas tank fill cap; and the thermostatic air cleaner/filter assembly. A vehicle shall fail the tampering inspection if this check indicates any evidence of tampering.

(b) Full tampering inspections shall also include a visual check of the status and operation of any emission service indicator light which has been installed on the motor vehicle by the manufacturer prior to sale. A vehicle shall fail the tampering inspection if the status of this light indicates an emission malfunction or if the light is not operational.

(c) Full tampering inspections may also include a test for the presence of lead deposits in the tailpipe if the vehicle is required to use unleaded gasoline. Evidence of the use of leaded fuel in vehicles requiring the use of unleaded fuel as shown by the presence of lead in the tailpipe, the presence of leaded fuel in the gas tank or evidence of current or previous tampering with the fuel inlet restrictor shall constitute tampering with the catalytic converter and the exhaust oxygen sensor if the vehicle originally had that equipment. When evidence of fuel inlet tampering is found, and a tailpipe lead test indicates the absence of lead deposits, DOT or its designee may waive the requirement to repair, replace or restore the catalytic converter and oxygen sensor equipment if the following conditions are met:

1. A full tampering inspection of the vehicle indicates no additional tampering.
2. The owner of the vehicle provides evidence to DOT or its designee that the catalytic converter and oxygen sensor were replaced subsequent to April 1, 1988, or the owner provides evidence to DOT or its designee that a previously tampered with but partially restored and functional fuel inlet restrictor was installed in the vehicle prior to or concurrently with the replacement of the catalytic converter and oxygen sensor, or DOT or its designee determines that the particular vehicle model is on a list of vehicle models that chronically fail the fuel inlet restrictor test due to improper new vehicle equipment design, improper new vehicle equipment installation or normal extended wear.

(4) **SUBSTITUTE PROCEDURE.** Upon written department approval granted to DOT, a partial tampering inspection procedure may be substituted for the full inspection procedure in sub. (3), provided that use of the substitute procedure maintains the inspection program effectiveness in terms of adequate pollution reduction and adequate identification and repair of tampered and misfueled vehicles and improperly maintained emission control equipment.

(5) **PROCEDURE REVIEW.** The department shall review the tampering inspection procedure in effect prior to each DOT inspection contract or contract extension. Upon such review, the department may withdraw or alter any substitute procedure approved under sub. (4).

**History:** Cr. Register, July, 1989, No. 403, eff. 8-1-89; am. (4) (a) (intro.), Register, May, 1992, No. 437, eff. 6-1-92; am. (1), (2), (3) (a) and (5), r. (3) (c), renum. (3) (b) to be (3) (c) and am. (intro.), cr. (3) (b), r. and recr. (4), Register, December, 1995, No. 480, eff. 1-1-96; am. (3) (c) (intro.), Register, January, 1997, No. 493, eff. 2-1-97.