

Chapter NR 485

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

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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.

(3) "Alternative evaporative system integrity test" means a test procedure approved by the administrator which has been designated as an alternative to the evaporative system integrity test by the department under s. NR 485.04 (8) (a) and which has been published in a list by the department under s. NR 485.04 (8) (c).

(4) "Alternative evaporative system purge test" means a test procedure approved by the administrator which has been designated as an alternative to the evaporative system purge test by the department under s. NR 485.04 (8) (b) and which has been published in a list by the department under s. NR 485.04 (8) (c).

(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.

(8) "Evaporative system integrity test" or "evaporative system pressure integrity test" means the test specified in 40 CFR 51.357 (a) (10), as in effect on January 1, 1996, which checks for leaks in the fuel system by monitoring the pressure decay of a pressurized fuel system for up to 2 minutes.

(9) "Evaporative system purge test" means the test specified in 40 CFR 51.357 (a) (9), as in effect on January 1, 1996, which

consists of measuring the total purge flow occurring in the vehicle's evaporative system during the transient emission test.

(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 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.

(18) "Steady-state test" means any of the 6 test procedures in Appendix B to Subpart S of 40 CFR part 51, incorporated by reference in s. NR 484.04. The 6 test procedures in that appendix are: the idle test, the 2 speed idle test, the loaded test, the preconditioned idle test, the idle test with loaded preconditioning, and the preconditioned 2 speed idle test.

(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.

(23) "Transient emission test" means the emission test specified in 40 CFR 51.357 (a) (11), as in effect on January 1, 1996, 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.

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) (a), 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 rates that exceed the applicable composite emission rate in Table 1 when measured over the entire transient driving cycle, except as provided in sub. (9).

(3) **EVAPORATIVE SYSTEM INTEGRITY (PRESSURE) TEST.** Any motor vehicle undergoing the evaporative system integrity test or any alternative evaporative system integrity test shall be pressurized to an initial pressure of 14.5 ± 1.0 inches of water and, after this initial pressure is achieved, shall demonstrate the ability to maintain for 2 minutes a system pressure which would not drop 6 or more inches of water below the initial pressure achieved.

(4) **EVAPORATIVE SYSTEM PURGE TEST.** Except as provided in sub. (7) (b), any motor vehicle undergoing the evaporative system purge test or any alternative evaporative system purge test may not exhibit a total purge system flow of less than one liter when measured over the entire transient driving cycle. This determination may be made by measuring the level of a tracer gas in the vehicle's exhaust.

(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 ± 1.0 inches of water.

(6) **STEADY-STATE TESTS.** Any motor vehicle undergoing a steady-state test may not emit carbon monoxide (CO) or hydrocarbons (HC) from the exhaust system in concentrations greater than those in Table 2.

(7) **FAST-PASS.** (a) *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:

1. **Hydrocarbons.** For hydrocarbons, one of the following:

a. 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.

b. 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.

2. **Carbon monoxide.** For carbon monoxide, one of the following:

a. 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.

b. 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.

3. **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.

(b) *Purge test.* Compliance with the minimum flow requirement of sub. (4) for the evaporative system purge test or an alternative evaporative system purge test may be demonstrated prior to the completion of the test if at least 30 seconds of the transient driving cycle has elapsed and the cumulative level of purge, measured from the start of the cycle in liters, is greater than the applicable fast-pass minimum flow in Table 4.

(8) **ALTERNATIVE EVAPORATIVE SYSTEM TESTS.** (a) *Pressure test.* The department may designate a test procedure as an alternative evaporative system integrity test if the department determines that the test procedure satisfies the same requirements as those for a federal alternative procedure specified in 40 CFR 51.357 (a) (10) (vi) and (13) as in effect on January 1, 1996.

(b) *Purge test.* The department may designate a test procedure as an alternative evaporative system purge test if the department determines that the test procedure satisfies the same requirements as those for a federal alternative procedure specified in 40 CFR 51.357 (a) (9) and (13) as in effect on January 1, 1996.

(c) *List of alternative tests.* The department shall maintain a list of alternative evaporative system integrity tests and alternative evaporative system purge tests, shall provide DOT with a current list, and shall send a copy of the list to any person upon request. A current copy of the list shall be available for inspection or copying at the department's headquarters office.

Note: The department's headquarters office is located at 101 South Webster Street, Madison, Wisconsin. Mail requests should be addressed to the Department of Natural Resources, Bureau of Air Management, PO Box 7921, Madison WI 53707.

(9) **EFFECTIVE DATE FOR OXIDES OF NITROGEN REQUIREMENTS; EPA WAIVER.** (a) *NO_x emissions.* 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) (a) 3. shall apply only to inspections conducted after November 30, 1997.

(b) *EPA waiver.* Notwithstanding par. (a), the emission limitations for oxides of nitrogen in subs. (2) (c) and (7) (a) 3. do not apply if the inspection is conducted in an ozone nonattain-

ment area for which the administrator has determined, under section 182 (b) (1) (A) (i) or (f) (1) of the act (42 USC 7511a (1)(A)(i) or (f) (1)), that oxides of nitrogen emission reductions in the ozone nonattainment area would not contribute to attainment of the ozone ambient air quality standard.

(10) EXEMPTIONS. In addition to the vehicles specified in s. 144.42 (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

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	2.75	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

(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

Table 1 – Continued
Emission Limitations For The Transient Emission Test

(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

(d) Heavy-Duty Trucks 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 ON AND AFTER DECEMBER 1, 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	0.60	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
1983-1993	0.80	0.50	15.0	12.0	2.0
1981-1982	0.80	0.50	30.0	24.0	2.0
1980	0.80	0.50	30.0	24.0	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

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) ²	0.60	0.40	10.0	8.0	1.5
(>3750 lbs LVW) ²	0.80	0.50	13.0	10.0	1.8
1994-1995					
Tier 1 ³					
(≤3750 lbs LVW) ⁴	0.60	0.40	10.0	8.0	1.5
(>3750 lbs LVW) ⁴	0.80	0.50	13.0	10.0	1.8
Not Tier 1 ³	1.60	1.00	40.0	32.0	2.5
1988-1993	1.60	1.00	40.0	32.0	2.5
1984-1987	1.60	1.00	40.0	32.0	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) ⁵	0.80	0.50	13.0	10.0	1.8
(>5750 lbs ALVW) ⁵	0.80	0.50	15.0	12.0	2.0
1996					
Tier 1 ⁶					
(≤5750 lbs ALVW) ⁷	0.80	0.50	13.0	10.0	1.8
(>5750 lbs ALVW) ⁷	0.80	0.50	15.0	12.0	2.0
Not Tier 1 ⁶	1.60	1.00	40.0	32.0	3.5
1988-1995	1.60	1.00	40.0	32.0	3.5
1984-1987	1.60	1.00	40.0	32.0	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	3.00	2.00	50.0	40.0	6.0
1979-1984	5.00	3.10	75.0	60.0	6.0
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

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	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
1979–1986	5.00	3.10	75.0	60.0	11.0
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

¹Upon 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.

²Upon 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.

³Upon 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.

⁴Upon 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.

⁵Upon 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.

⁶Upon 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.

⁷Upon 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 2
Emission Limitations For The Following Steady-State Tests:

- I. Idle Test
- II. 2 Speed Idle Test
- III. Loaded Test
- IV. Preconditioned Idle Test
- V. Idle Test with Loaded Preconditioning
- VI. Preconditioned 2 Speed Idle Test

(1) LIGHT-DUTY VEHICLES.

Model Years	Hydrocarbons (parts per million of exhaust)	Carbon Monoxide (as a percent of exhaust)
1981 and newer	220	1.2
1980	230	2.0
1979	275	3.0
1978	350	4.0
1975-1977	450	5.5
1972-1974	550	7.0
1968-1971	800	8.0

(2) LIGHT-DUTY TRUCKS WITH GVWR OF 6,000 POUNDS OR LESS.

Model Years	Hydrocarbons (parts per million of exhaust)	Carbon Monoxide (as a percent of exhaust)
1985 and newer	220	1.2
1981-1984	250	2.0
1980	275	2.5
1979	300	3.0
1978	450	5.0
1975-1977	500	6.0
1972-1974	700	7.0
1968-1971	800	8.0

(3) 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 (parts per million of exhaust)	Carbon Monoxide (as a percent of exhaust)
1985 and newer	220	1.2
1981-1984	250	2.0
1980	275	2.5
1979	300	3.0
1978	450	5.5
1975-1977	550	6.5
1972-1974	700	7.0
1970-1971	800	8.0
1968-1969	1450	9.0

(4) HEAVY-DUTY VEHICLES WITH GVWR GREATER THAN 8,500 POUNDS.

Model Years	Hydrocarbons (parts per million of exhaust)	Carbon Monoxide (as a percent of exhaust)
1985 and newer	300	3.0
1979-1984	700	7.0
1972-1978	900	9.0
1968-1971	1500	9.5

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 0.80 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	90	0.356	N/A
31	0.126	N/A	91	0.358	N/A
32	0.129	N/A	92	0.360	N/A
33	0.135	N/A	93	0.363	N/A
34	0.140	N/A	94	0.367	0.000
35	0.146	N/A	95	0.370	0.000
36	0.150	N/A	96	0.372	0.000
37	0.153	N/A	97	0.376	0.000
38	0.156	N/A	98	0.388	0.000
39	0.160	N/A	99	0.396	0.000
40	0.165	N/A	100	0.405	0.001
41	0.169	N/A	101	0.410	0.002
42	0.172	N/A	102	0.411	0.003
43	0.173	N/A	103	0.412	0.006
44	0.177	N/A	104	0.413	0.007
45	0.197	N/A	105	0.421	0.008
46	0.200	N/A	106	0.428	0.009
47	0.208	N/A	107	0.430	0.010
48	0.221	N/A	108	0.455	0.013
49	0.232	N/A	109	0.459	0.015
50	0.235	N/A	110	0.462	0.017
51	0.238	N/A	111	0.464	0.021
52	0.240	N/A	112	0.466	0.024
53	0.242	N/A	113	0.468	0.024
54	0.246	N/A	114	0.471	0.025
55	0.249	N/A	115	0.488	0.026
56	0.252	N/A	116	0.513	0.029
57	0.261	N/A	117	0.538	0.032
58	0.271	N/A	118	0.561	0.035
59	0.276	N/A	119	0.577	0.035
60	0.278	N/A	120	0.580	0.036
61	0.280	N/A	121	0.586	0.038
62	0.282	N/A	122	0.594	0.040
63	0.283	N/A	123	0.603	0.041
64	0.284	N/A	124	0.610	0.042
65	0.285	N/A	125	0.615	0.042
66	0.286	N/A	126	0.624	0.042
67	0.288	N/A	127	0.628	0.045
68	0.291	N/A	128	0.632	0.046
69	0.294	N/A	129	0.637	0.046
70	0.296	N/A	130	0.641	0.049
71	0.298	N/A	131	0.643	0.050
72	0.300	N/A	132	0.644	0.052
73	0.302	N/A	133	0.645	0.054
74	0.304	N/A	134	0.647	0.054
75	0.307	N/A	135	0.651	0.054
76	0.308	N/A	136	0.658	0.055
77	0.308	N/A	137	0.663	0.055
78	0.308	N/A	138	0.666	0.056
79	0.314	N/A	139	0.668	0.059
80	0.320	N/A	140	0.670	0.061
81	0.324	N/A	141	0.672	0.061
82	0.327	N/A	142	0.675	0.061
83	0.329	N/A	143	0.678	0.063
84	0.333	N/A	144	0.681	0.064
85	0.336	N/A	145	0.684	0.065
86	0.339	N/A	146	0.686	0.066
87	0.343	N/A	147	0.688	0.067
88	0.347	N/A	148	0.690	0.068
89	0.350	N/A	149	0.692	0.069

Table 3 – Continued
Fast-Pass Emission Limitations For The Transient Emission Test

Second	Composite (grams)	Phase 2 (grams)	Second	Composite (grams)	Phase 2 (grams)
150	0.694	0.070	194	1.255	0.487
151	0.696	0.071	195	1.258	0.501
152	0.698	0.072	196	1.265	0.510
153	0.700	0.073	197	1.280	0.512
154	0.702	0.073	198	1.293	0.514
155	0.704	0.074	199	1.301	0.516
156	0.706	0.077	200	1.313	0.518
157	0.708	0.079	201	1.324	0.527
158	0.710	0.082	202	1.332	0.540
159	0.712	0.082	203	1.341	0.547
160	0.716	0.086	204	1.357	0.553
161	0.750	0.095	205	1.375	0.559
162	0.784	0.107	206	1.392	0.563
163	0.805	0.115	207	1.408	0.567
164	0.840	0.122	208	1.422	0.571
165	0.853	0.127	209	1.433	0.575
166	0.874	0.159	210	1.443	0.579
167	0.903	0.186	211	1.453	0.595
168	0.910	0.189	212	1.463	0.605
169	0.914	0.200	213	1.468	0.614
170	0.916	0.220	214	1.470	0.622
171	0.919	0.236	215	1.474	0.627
172	0.931	0.247	216	1.478	0.638
173	0.948	0.257	217	1.481	0.643
174	0.983	0.267	218	1.484	0.643
175	1.018	0.283	219	1.487	0.645
176	1.027	0.295	220	1.490	0.651
177	1.035	0.312	221	1.493	0.655
178	1.051	0.318	222	1.504	0.663
179	1.074	0.323	223	1.522	0.671
180	1.084	0.337	224	1.547	0.675
181	1.099	0.345	225	1.549	0.684
182	1.121	0.350	226	1.562	0.694
183	1.132	0.359	227	1.574	0.701
184	1.152	0.387	228	1.579	0.702
185	1.161	0.398	229	1.584	0.708
186	1.168	0.400	230	1.589	0.708
187	1.175	0.402	231	1.590	0.709
188	1.181	0.405	232	1.596	0.710
189	1.188	0.418	233	1.598	0.710
190	1.203	0.429	234	1.604	0.711
191	1.219	0.442	235	1.610	0.712
192	1.233	0.457	236	1.612	0.712
193	1.251	0.473	237	1.613	0.712
			238	1.614	0.713
			239	1.615	0.716

(b) 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)
			43	0.342	N/A
			44	0.360	N/A
			45	0.376	N/A
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

Table 3 – Continued
Fast-Pass Emission Limitations For The Transient Emission Test

Second	Composite (grams)	Phase 2 (grams)	Second	Composite (grams)	Phase 2 (grams)
			122	1.071	0.100
59	0.514	N/A	123	1.081	0.103
60	0.537	N/A	124	1.091	0.106
61	0.540	N/A	125	1.102	0.108
62	0.543	N/A	126	1.110	0.110
63	0.546	N/A	127	1.116	0.112
64	0.551	N/A	128	1.121	0.114
65	0.559	N/A	129	1.125	0.116
66	0.567	N/A	130	1.128	0.118
67	0.575	N/A	131	1.130	0.120
68	0.588	N/A	132	1.132	0.122
69	0.595	N/A	133	1.134	0.123
70	0.601	N/A	134	1.135	0.124
71	0.606	N/A	135	1.143	0.127
72	0.610	N/A	136	1.147	0.130
73	0.617	N/A	137	1.156	0.134
74	0.631	N/A	138	1.163	0.139
75	0.643	N/A	139	1.186	0.146
76	0.651	N/A	140	1.253	0.149
77	0.659	N/A	141	1.262	0.151
78	0.667	N/A	142	1.271	0.153
79	0.676	N/A	143	1.277	0.155
80	0.681	N/A	144	1.283	0.157
81	0.685	N/A	145	1.291	0.162
82	0.689	N/A	146	1.294	0.164
83	0.694	N/A	147	1.296	0.166
84	0.700	N/A	148	1.298	0.168
85	0.705	N/A	149	1.303	0.169
86	0.709	N/A	150	1.316	0.170
87	0.713	N/A	151	1.330	0.171
88	0.717	N/A	152	1.342	0.172
89	0.721	N/A	153	1.348	0.173
90	0.724	N/A	154	1.353	0.175
91	0.727	N/A	155	1.362	0.178
92	0.729	N/A	156	1.365	0.180
93	0.731	N/A	157	1.366	0.189
94	0.734	0.000	158	1.373	0.198
95	0.740	0.000	159	1.397	0.203
96	0.748	0.001	160	1.423	0.207
97	0.759	0.001	161	1.440	0.214
98	0.771	0.002	162	1.452	0.221
99	0.783	0.003	163	1.465	0.229
100	0.793	0.005	164	1.509	0.247
101	0.810	0.007	165	1.533	0.274
102	0.823	0.009	166	1.555	0.309
103	0.836	0.011	167	1.576	0.318
104	0.853	0.016	168	1.598	0.322
105	0.871	0.017	169	1.618	0.333
106	0.887	0.022	170	1.636	0.343
107	0.899	0.029	171	1.666	0.356
108	0.931	0.036	172	1.685	0.385
109	0.947	0.040	173	1.726	0.409
110	0.957	0.047	174	1.742	0.433
111	0.965	0.052	175	1.756	0.453
112	0.971	0.056	176	1.769	0.463
113	0.977	0.061	177	1.784	0.507
114	0.983	0.064	178	1.802	0.523
115	1.003	0.072	179	1.822	0.528
116	1.030	0.081	180	1.843	0.541
117	1.041	0.082	181	1.864	0.549
118	1.050	0.083	183	1.896	0.571
119	1.052	0.092	184	1.915	0.584
120	1.055	0.094	185	1.940	0.598
121	1.061	0.097			

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

Second	Composite (grams)	Phase 2 (grams)	Second	Composite (grams)	Phase 2 (grams)
186	1.958	0.613	212	2.316	0.924
187	1.972	0.624	213	2.332	0.938
188	1.985	0.629	214	2.345	0.941
189	1.991	0.629	215	2.354	0.951
190	1.993	0.638	216	2.362	0.966
191	1.995	0.648	217	2.368	0.979
192	2.001	0.659	218	2.376	0.980
193	2.015	0.663	219	2.384	0.981
194	2.031	0.671	220	2.391	1.005
195	2.047	0.681	221	2.395	1.016
196	2.063	0.693	222	2.400	1.022
197	2.079	0.709	223	2.405	1.028
198	2.094	0.725	224	2.409	1.035
199	2.109	0.740	225	2.413	1.041
200	2.122	0.754	226	2.417	1.045
201	2.130	0.767	227	2.426	1.051
202	2.137	0.775	228	2.428	1.055
203	2.157	0.787	229	2.431	1.059
204	2.172	0.795	230	2.433	1.064
205	2.194	0.803	231	2.441	1.069
206	2.222	0.854	232	2.461	1.071
207	2.245	0.859	233	2.476	1.072
208	2.268	0.872	234	2.488	1.073
209	2.279	0.892	235	2.498	1.081
210	2.288	0.896	236	2.508	1.083
211	2.301	0.903	237	2.516	1.084
			238	2.520	1.085
			239	2.523	1.086

(c) 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	63	0.887	N/A
31	0.415	N/A	64	0.895	N/A
32	0.423	N/A	65	0.903	N/A
33	0.436	N/A	66	0.925	N/A
34	0.451	N/A	67	0.933	N/A
35	0.464	N/A	68	0.945	N/A
36	0.468	N/A	69	0.959	N/A
37	0.475	N/A	70	0.970	N/A
38	0.487	N/A	71	0.980	N/A
39	0.506	N/A	72	0.988	N/A
40	0.530	N/A	73	0.997	N/A
41	0.549	N/A	74	1.022	N/A
42	0.569	N/A	75	1.037	N/A
43	0.588	N/A	76	1.051	N/A
44	0.609	N/A	77	1.064	N/A
45	0.621	N/A	78	1.075	N/A
46	0.636	N/A	79	1.087	N/A
47	0.649	N/A	80	1.097	N/A
48	0.666	N/A	81	1.105	N/A
49	0.679	N/A	82	1.114	N/A
50	0.696	N/A	83	1.136	N/A
51	0.712	N/A	84	1.160	N/A
52	0.727	N/A	85	1.182	N/A
53	0.745	N/A	86	1.201	N/A
54	0.760	N/A	87	1.217	N/A
55	0.776	N/A	88	1.233	N/A
56	0.797	N/A	89	1.248	N/A
57	0.814	N/A	90	1.262	N/A
58	0.826	N/A	91	1.271	N/A
59	0.837	N/A	92	1.279	N/A
60	0.849	N/A	93	1.287	N/A
61	0.862	N/A	94	1.295	0.001
62	0.872	N/A	95	1.302	0.002
			96	1.309	0.003

Table 3 – Continued
Fast-Pass Emission Limitations For The Transient Emission Test

Second	Composite (grams)	Phase 2 (grams)	Second	Composite (grams)	Phase 2 (grams)
97	1.316	0.004	160	2.242	0.568
98	1.325	0.008	161	2.268	0.586
99	1.339	0.015	162	2.308	0.610
100	1.356	0.021	163	2.352	0.648
101	1.365	0.026	164	2.406	0.677
102	1.378	0.039	165	2.421	0.699
103	1.397	0.044	166	2.435	0.720
104	1.420	0.055	167	2.470	0.738
105	1.445	0.094	168	2.501	0.767
106	1.470	0.110	169	2.537	0.828
107	1.491	0.116	170	2.571	0.855
108	1.506	0.132	171	2.625	0.869
109	1.517	0.151	172	2.657	0.885
110	1.528	0.159	173	2.683	0.900
111	1.542	0.172	174	2.701	0.941
112	1.559	0.186	175	2.717	0.979
113	1.578	0.199	176	2.732	1.002
114	1.594	0.207	177	2.756	1.025
115	1.605	0.216	178	2.781	1.047
116	1.615	0.229	179	2.811	1.065
117	1.625	0.235	180	2.853	1.089
118	1.642	0.240	181	2.898	1.109
119	1.670	0.245	182	2.946	1.133
120	1.694	0.261	183	2.988	1.158
121	1.705	0.267	184	3.023	1.184
122	1.717	0.277	185	3.057	1.209
123	1.732	0.287	186	3.076	1.222
124	1.747	0.298	187	3.101	1.231
125	1.763	0.308	188	3.120	1.239
126	1.779	0.316	189	3.136	1.254
127	1.795	0.322	190	3.151	1.278
128	1.810	0.329	191	3.163	1.300
129	1.823	0.338	192	3.209	1.313
130	1.835	0.346	193	3.223	1.324
131	1.845	0.354	194	3.237	1.340
132	1.854	0.356	195	3.263	1.367
133	1.862	0.357	196	3.302	1.387
134	1.870	0.359	197	3.338	1.402
135	1.883	0.362	198	3.372	1.417
136	1.888	0.364	199	3.390	1.432
137	1.896	0.368	200	3.428	1.446
138	1.911	0.378	201	3.470	1.460
139	1.928	0.391	202	3.493	1.477
140	1.949	0.402	203	3.509	1.492
141	1.969	0.408	204	3.522	1.501
142	1.982	0.422	205	3.533	1.510
143	1.999	0.428	206	3.550	1.522
144	2.011	0.432	207	3.578	1.561
145	2.022	0.434	208	3.607	1.585
146	2.035	0.439	209	3.630	1.597
147	2.043	0.450	210	3.658	1.607
148	2.049	0.460	211	3.701	1.627
149	2.063	0.467	212	3.745	1.645
150	2.085	0.472	213	3.778	1.656
151	2.104	0.480	214	3.814	1.663
152	2.117	0.491	215	3.825	1.669
153	2.127	0.503	216	3.835	1.674
154	2.138	0.505	217	3.844	1.685
155	2.152	0.515	218	3.853	1.705
156	2.168	0.522	219	3.864	1.711
157	2.186	0.527	220	3.874	1.735
158	2.205	0.537	221	3.891	1.752
159	2.224	0.549	222	3.928	1.760

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

Second	Composite (grams)	Phase 2 (grams)	Second	Composite (grams)	Phase 2 (grams)
223	3.966	1.774	231	4.072	1.827
224	4.008	1.778	232	4.081	1.833
225	4.010	1.797	233	4.104	1.837
226	4.012	1.802	234	4.124	1.841
227	4.016	1.804	235	4.128	1.845
228	4.019	1.806	236	4.132	1.851
229	4.057	1.810	237	4.137	1.855
230	4.065	1.814	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 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	81	2.221	N/A
31	0.773	N/A	82	2.222	N/A
32	0.837	N/A	83	2.227	N/A
33	0.851	N/A	84	2.236	N/A
34	0.853	N/A	85	2.243	N/A
35	0.857	N/A	86	2.262	N/A
36	0.900	N/A	87	2.271	N/A
37	0.960	N/A	88	2.284	N/A
38	1.034	N/A	89	2.299	N/A
39	1.070	N/A	90	2.308	N/A
40	1.076	N/A	91	2.326	N/A
41	1.083	N/A	92	2.330	N/A
42	1.102	N/A	93	2.331	N/A
43	1.111	N/A	94	2.344	0.000
44	1.114	N/A	95	2.347	0.000
45	1.157	N/A	96	2.355	0.000
46	1.344	N/A	97	2.395	0.000
47	1.482	N/A	98	2.451	0.000
48	1.530	N/A	99	2.508	0.004
49	1.542	N/A	100	2.590	0.008
50	1.553	N/A	101	2.660	0.015
51	1.571	N/A	102	2.749	0.026
52	1.595	N/A	103	2.913	0.038
53	1.633	N/A	104	3.162	0.038
54	1.685	N/A	105	3.170	0.039
55	1.689	N/A	106	3.197	0.061
56	1.693	N/A	107	3.288	0.062
57	1.700	N/A	108	3.419	0.108
58	1.723	N/A	109	3.587	0.168
59	1.852	N/A	110	3.595	0.173
60	1.872	N/A	111	3.640	0.237
61	1.872	N/A	112	3.740	0.266
62	1.872	N/A	113	3.868	0.280
63	1.900	N/A	114	3.877	0.291
64	1.917	N/A	115	3.934	0.314
65	1.944	N/A	116	4.015	0.331
66	2.000	N/A	117	4.061	0.345
67	2.060	N/A	118	4.063	0.350
68	2.064	N/A	119	4.079	0.356
69	2.076	N/A	120	4.140	0.367
70	2.104	N/A	121	4.185	0.388
71	2.117	N/A	122	4.199	0.407
72	2.125	N/A	123	4.205	0.463
73	2.130	N/A	124	4.212	0.480
74	2.138	N/A	125	4.232	0.506
75	2.152	N/A	126	4.298	0.518
76	2.170	N/A	127	4.344	0.522
77	2.188	N/A	128	4.361	0.525
78	2.200	N/A	129	4.366	0.528
79	2.212	N/A	130	4.369	0.530
80	2.212	N/A	131	4.372	0.530
			132	4.435	0.534
			133	4.523	0.550

Table 3 – Continued
Fast-Pass Emission Limitations For The Transient Emission Test

Second	Composite (grams)	Phase 2 (grams)	Second	Composite (grams)	Phase 2 (grams)
134	4.524	0.554	186	22.650	11.206
135	4.525	0.590	187	22.989	11.514
136	4.531	0.616	188	23.535	11.894
137	4.534	0.639	189	23.876	12.019
138	4.542	0.653	190	24.018	12.170
139	4.553	0.662	191	24.464	12.517
140	4.554	0.683	192	24.685	12.598
141	4.554	0.696	193	24.931	12.625
142	4.554	0.708	194	25.188	12.653
143	4.554	0.721	195	25.468	12.777
144	4.554	0.739	196	25.627	12.906
145	4.554	0.742	197	25.746	12.989
146	4.554	0.743	198	25.850	13.060
147	4.554	0.745	199	25.974	13.165
148	4.554	0.748	200	26.141	13.242
149	4.554	0.751	201	26.225	13.412
150	4.554	0.762	202	26.338	13.662
151	4.556	0.789	203	26.547	13.773
152	4.556	0.790	204	26.818	13.942
153	4.565	0.794	205	27.052	14.090
154	4.612	0.799	206	27.393	14.224
155	4.834	0.805	207	27.501	14.426
156	5.702	0.842	208	27.632	14.498
157	5.841	0.990	209	27.803	14.776
158	6.170	1.038	210	27.953	14.907
159	6.670	1.357	211	28.205	14.916
160	7.425	1.455	212	28.543	15.014
161	8.379	1.546	213	28.997	15.221
162	9.648	1.824	214	29.000	15.472
163	10.918	2.746	215	29.005	15.555
164	12.127	3.073	216	29.081	15.652
165	12.731	3.633	217	29.281	15.969
166	12.831	4.505	218	29.483	16.028
167	12.892	4.952	219	29.734	16.375
168	12.932	5.254	220	29.803	16.487
169	13.702	5.730	221	29.821	16.524
170	14.139	6.051	222	29.847	16.578
171	14.964	6.333	223	29.862	16.684
172	15.704	6.490	224	29.873	16.755
173	16.253	6.796	225	30.008	16.770
174	16.907	7.205	226	30.126	16.805
175	17.655	8.151	227	30.127	16.960
176	18.020	8.230	228	30.127	16.960
177	18.349	8.584	229	30.208	16.960
178	18.671	8.800	230	30.314	16.962
179	18.972	8.847	231	30.323	16.988
180	19.228	8.913	232	30.325	17.072
181	20.123	9.122	233	30.368	17.094
182	20.405	9.532	234	30.411	17.184
183	20.754	10.256	235	30.416	17.187
184	21.684	10.862	236	30.428	17.188
185	21.955	10.996	237	30.430	17.189
			238	30.452	17.241
			239	30.488	17.370

(b) 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	36	1.621	N/A
31	1.546	N/A	37	1.631	N/A
32	1.568	N/A	38	1.702	N/A
33	1.582	N/A	39	1.784	N/A
34	1.593	N/A	40	1.879	N/A
35	1.602	N/A	41	2.162	N/A
			42	2.307	N/A
			43	2.343	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)
44	2.376	N/A	107	6.473	0.191
45	2.406	N/A	108	7.037	0.234
46	2.433	N/A	109	7.419	0.246
47	2.458	N/A	110	7.643	0.257
48	2.483	N/A	111	7.759	0.286
49	2.774	N/A	112	7.824	0.379
50	2.844	N/A	113	7.889	0.425
51	2.900	N/A	114	7.960	0.457
52	2.936	N/A	115	8.024	0.477
53	3.133	N/A	116	8.076	0.494
54	3.304	N/A	117	8.111	0.504
55	3.407	N/A	118	8.130	0.512
56	3.456	N/A	119	8.148	0.519
57	3.480	N/A	120	8.211	0.529
58	3.518	N/A	121	8.478	0.529
59	3.560	N/A	122	8.548	0.530
60	3.593	N/A	123	8.561	0.531
61	3.628	N/A	124	8.568	0.532
62	3.641	N/A	125	8.572	0.533
63	3.655	N/A	126	8.584	0.548
64	3.680	N/A	127	8.592	0.610
65	3.700	N/A	128	8.596	0.614
66	3.728	N/A	129	8.597	0.622
67	3.857	N/A	130	8.601	0.631
68	3.894	N/A	131	8.605	0.640
69	3.943	N/A	132	8.608	0.646
70	3.983	N/A	133	8.626	0.650
71	4.009	N/A	134	8.650	0.652
72	4.023	N/A	135	8.660	0.738
73	4.023	N/A	136	8.767	0.754
74	4.053	N/A	137	9.029	0.780
75	4.063	N/A	138	9.238	0.795
76	4.077	N/A	139	9.389	0.804
77	4.225	N/A	140	9.493	0.810
78	4.243	N/A	141	9.583	0.815
79	4.260	N/A	142	9.626	0.818
80	4.282	N/A	143	9.669	0.821
81	4.322	N/A	144	9.716	0.825
82	4.398	N/A	145	9.763	0.840
83	4.482	N/A	146	9.809	0.847
84	4.515	N/A	147	9.852	0.855
85	4.518	N/A	148	9.885	0.865
86	4.520	N/A	149	9.932	0.874
87	4.522	N/A	150	9.986	0.891
88	4.522	N/A	151	10.039	0.914
89	4.523	N/A	152	10.072	0.929
90	4.526	N/A	153	10.090	0.937
91	4.527	N/A	154	10.105	0.942
92	4.527	N/A	155	10.146	0.949
93	4.528	N/A	156	10.245	1.375
94	4.528	0.000	157	10.397	1.576
95	4.528	0.000	158	10.923	1.943
96	4.529	0.000	159	11.970	2.820
97	4.575	0.000	160	13.421	3.281
98	4.703	0.002	161	15.289	3.483
99	4.805	0.005	162	15.912	3.620
100	4.886	0.010	163	16.530	4.168
101	4.957	0.017	164	17.622	4.338
102	5.104	0.052	165	18.266	4.682
103	5.340	0.085	166	19.869	5.633
104	5.496	0.094	167	20.711	6.137
105	5.625	0.122	168	22.319	6.853
106	5.815	0.151	169	23.751	7.136

Table 3 – Continued
Fast-Pass Emission Limitations For The Transient Emission Test

Second	Composite (grams)	Phase 2 (grams)	Second	Composite (grams)	Phase 2 (grams)
170	24.842	7.320	204	34.969	17.922
171	25.410	7.685	205	35.144	18.484
172	25.798	8.052	206	35.418	18.553
173	26.122	8.344	207	35.766	18.658
174	26.353	8.602	208	35.949	18.953
175	26.638	8.898	209	36.010	19.266
176	27.219	9.251	210	36.548	19.309
177	27.279	10.253	211	37.179	19.731
178	27.320	10.828	212	37.651	19.902
179	27.352	10.933	213	38.041	20.012
180	27.822	11.060	214	38.591	20.260
181	28.763	11.188	215	38.852	20.739
182	29.402	11.345	216	38.861	21.346
183	29.971	11.733	217	38.926	21.810
184	30.276	12.598	218	39.194	22.001
185	30.988	12.953	219	39.474	22.290
186	31.095	13.213	220	39.668	22.324
187	31.314	14.131	221	39.781	22.343
188	31.833	14.839	222	39.890	22.522
189	32.239	15.137	223	39.954	22.683
190	32.547	15.138	224	39.984	22.850
191	32.855	15.141	225	39.989	22.853
192	33.153	15.595	226	39.990	22.853
193	33.444	15.658	227	39.990	22.853
194	33.482	15.704	228	39.990	22.872
195	33.516	15.729	229	39.991	22.872
196	33.549	16.058	230	40.012	22.872
197	33.653	16.987	231	40.061	22.895
198	33.973	17.064	232	40.116	22.911
199	34.159	17.073	233	40.249	22.922
200	34.191	17.153	234	40.253	22.939
201	34.250	17.332	235	40.290	23.010
202	34.469	17.406	236	40.385	23.010
203	34.716	17.641	237	40.488	23.010
			238	40.720	23.010
			239	40.763	23.010

(c) *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	55	7.722	N/A
31	3.985	N/A	56	8.017	N/A
32	4.215	N/A	57	8.249	N/A
33	4.440	N/A	58	8.425	N/A
34	4.579	N/A	59	8.563	N/A
35	4.688	N/A	60	8.686	N/A
36	4.749	N/A	61	8.804	N/A
37	4.783	N/A	62	8.916	N/A
38	4.813	N/A	63	9.025	N/A
39	4.876	N/A	64	9.138	N/A
40	5.104	N/A	65	9.250	N/A
41	5.217	N/A	66	9.354	N/A
42	5.383	N/A	67	9.457	N/A
43	5.571	N/A	68	9.575	N/A
44	5.888	N/A	69	9.728	N/A
45	6.199	N/A	70	9.938	N/A
46	6.245	N/A	71	10.140	N/A
47	6.318	N/A	72	10.222	N/A
48	6.418	N/A	73	10.261	N/A
49	6.540	N/A	74	10.278	N/A
50	6.690	N/A	75	10.290	N/A
51	6.875	N/A	76	10.715	N/A
52	7.029	N/A	77	10.790	N/A
53	7.129	N/A	78	10.844	N/A
54	7.359	N/A	79	10.921	N/A
			80	11.010	N/A
			81	11.090	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)
82	11.136	N/A	145	22.922	3.588
83	11.136	N/A	146	22.951	3.600
84	11.165	N/A	147	22.976	3.616
85	11.191	N/A	148	23.017	3.627
86	11.205	N/A	149	23.073	3.636
87	11.211	N/A	150	23.161	3.676
88	11.211	N/A	151	23.218	3.882
89	11.211	N/A	152	23.253	4.011
90	11.211	N/A	153	23.337	4.047
91	11.220	N/A	154	23.425	4.067
92	11.294	N/A	155	23.534	4.081
93	11.332	N/A	156	23.652	4.116
94	11.355	0.000	157	23.739	4.251
95	11.383	0.000	158	24.606	5.099
96	11.410	0.001	159	25.615	5.383
97	11.433	0.006	160	26.073	6.362
98	11.516	0.020	161	28.496	7.926
99	11.820	0.051	162	29.772	8.429
100	12.104	0.092	163	31.056	9.201
101	12.344	0.131	164	33.351	10.825
102	12.781	0.200	165	34.890	12.291
103	13.472	0.307	166	35.937	13.366
104	14.405	0.582	167	37.012	14.428
105	14.808	0.800	168	37.892	15.318
106	14.965	0.925	169	39.028	15.699
107	15.121	0.973	170	40.406	16.073
108	15.372	1.091	171	41.379	16.475
109	15.530	1.113	172	42.033	17.158
110	15.687	1.213	173	42.432	17.532
111	16.018	1.344	174	42.742	17.965
112	16.527	1.399	175	43.399	18.242
113	16.810	1.520	176	43.895	18.283
114	16.961	1.640	177	44.227	18.480
115	17.120	1.684	178	44.926	19.576
116	17.135	1.693	179	45.256	20.015
117	17.249	1.786	180	45.553	20.203
118	17.451	2.007	181	45.753	20.433
119	17.509	2.084	182	46.210	21.025
120	17.605	2.179	183	47.017	21.882
121	17.734	2.264	184	48.185	22.204
122	18.049	2.328	185	48.741	22.859
123	18.447	2.375	186	49.462	23.533
124	18.592	2.437	187	50.313	24.281
125	18.657	2.543	188	51.285	25.078
126	18.796	2.593	189	52.076	25.276
127	18.952	2.641	190	52.857	25.578
128	19.137	2.663	191	52.876	25.859
129	19.329	2.672	192	53.067	25.985
130	19.519	2.676	193	53.777	26.153
131	19.707	2.683	194	54.242	26.582
132	19.882	2.817	195	54.489	27.067
133	19.905	2.992	196	54.601	27.456
134	20.049	3.111	197	54.912	27.805
135	20.460	3.234	198	55.588	28.070
136	20.746	3.304	199	56.266	28.590
137	21.068	3.310	200	56.617	28.914
138	21.380	3.320	201	56.863	29.063
139	21.748	3.354	202	57.204	29.502
140	22.046	3.436	203	57.371	29.697
141	22.348	3.443	204	57.487	29.713
142	22.397	3.452	205	57.728	29.783
143	22.407	3.490	206	58.097	29.942
144	22.417	3.552	207	58.572	30.284

Table 3 – Continued
Fast-Pass Emission Limitations For The Transient Emission Test

Second	Composite (grams)	Phase 2 (grams)	Second	Composite (grams)	Phase 2 (grams)
208	59.024	30.755	223	63.150	34.054
209	59.321	31.287	224	63.150	34.061
210	59.715	31.549	225	63.150	34.082
211	60.045	31.820	226	63.150	34.100
212	60.453	32.250	227	63.150	34.109
213	60.935	32.546	228	63.150	34.129
214	61.307	32.808	229	63.150	34.284
215	61.666	33.142	230	63.150	34.397
216	62.148	33.529	231	63.150	34.463
217	62.532	33.763	232	63.150	34.465
218	62.546	33.921	233	63.150	34.466
219	62.559	33.961	234	63.153	34.468
220	62.570	33.983	235	63.159	34.470
221	62.846	34.007	236	63.173	34.471
222	63.097	34.032	237	63.193	34.472
			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 2.0 grams/mile but less than 2.5 grams/mile.*

Second	Composite (grams)	Second	Composite (grams)
30	0.167	74	0.604
31	0.177	75	0.613
32	0.188	76	0.624
33	0.214	77	0.646
34	0.232	78	0.651
35	0.240	79	0.659
36	0.243	80	0.673
37	0.245	81	0.696
38	0.246	82	0.706
40	0.250	83	0.716
41	0.260	84	0.724
42	0.277	85	0.737
43	0.311	86	0.747
44	0.328	87	0.748
45	0.343	88	0.748
46	0.359	89	0.748
47	0.373	90	0.748
48	0.383	91	0.748
49	0.385	92	0.748
50	0.400	93	0.748
51	0.410	94	0.748
52	0.434	95	0.748
53	0.464	96	0.748
54	0.472	97	0.748
55	0.480	98	0.748
56	0.491	99	0.751
57	0.500	100	0.764
58	0.506	101	0.789
59	0.509	102	0.822
60	0.512	103	0.867
61	0.516	104	0.905
62	0.519	105	0.925
63	0.523	106	0.955
64	0.529	107	0.985
65	0.533	108	0.993
66	0.535	109	0.995
67	0.540	110	0.996
68	0.551	111	1.010
69	0.563	112	1.028
70	0.575	113	1.034
71	0.588	114	1.044
72	0.600	115	1.059
73	0.603	116	1.075

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

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

Table 3 – Continued
Fast-Pass Emission Limitations For The Transient Emission Test

(b) *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	91	0.915
31	0.275	92	0.916
32	0.301	93	0.917
33	0.317	94	0.918
34	0.327	95	0.919
35	0.330	96	0.920
36	0.332	97	0.921
37	0.334	98	0.922
38	0.336	99	0.924
39	0.337	100	0.929
40	0.354	101	0.941
41	0.366	102	0.970
42	0.410	103	1.027
43	0.414	104	1.093
44	0.438	105	1.155
45	0.477	106	1.234
46	0.506	107	1.275
47	0.518	108	1.305
48	0.522	109	1.320
49	0.526	110	1.332
50	0.554	111	1.346
51	0.574	112	1.358
52	0.587	113	1.378
53	0.601	114	1.406
54	0.615	115	1.426
55	0.629	116	1.438
56	0.643	117	1.448
57	0.667	118	1.460
58	0.678	119	1.462
59	0.683	120	1.467
60	0.686	121	1.476
61	0.693	122	1.494
62	0.699	123	1.505
63	0.703	124	1.517
64	0.707	125	1.546
65	0.711	126	1.569
66	0.716	127	1.586
67	0.721	128	1.596
68	0.726	129	1.603
69	0.742	130	1.605
70	0.759	131	1.606
71	0.773	132	1.607
72	0.784	133	1.607
73	0.790	134	1.608
74	0.794	135	1.614
75	0.799	136	1.616
76	0.809	137	1.631
77	0.821	138	1.643
78	0.833	139	1.656
79	0.839	140	1.673
80	0.844	141	1.703
81	0.857	142	1.739
82	0.870	143	1.767
83	0.883	144	1.774
84	0.894	145	1.785
85	0.902	146	1.806
86	0.907	147	1.830
87	0.910	148	1.844
88	0.912	149	1.845
89	0.913	150	1.846
90	0.914	151	1.852

Table 3 – Continued
Fast-Pass Emission Limitations For The Transient Emission Test

Second	Composite (grams)	Second	Composite (grams)
152	1.868	194	3.997
153	1.877	195	4.035
154	1.879	196	4.089
154	1.879	197	4.146
155	1.886	198	4.206
156	1.900	199	4.243
157	1.910	200	4.295
158	1.936	201	4.351
159	1.954	202	4.398
160	1.986	203	4.410
161	2.050	204	4.419
162	2.131	205	4.426
163	2.235	206	4.429
164	2.320	207	4.453
165	2.395	208	4.486
166	2.488	209	4.542
167	2.563	210	4.598
168	2.645	211	4.638
169	2.746	212	4.715
170	2.778	213	4.774
171	2.792	214	4.829
172	2.810	215	4.872
173	2.847	216	4.931
174	2.874	217	4.981
175	2.905	218	5.017
176	2.950	219	5.029
177	3.001	220	5.033
178	3.047	221	5.037
179	3.104	222	5.047
180	3.173	223	5.057
181	3.238	224	5.061
182	3.302	225	5.062
183	3.372	226	5.063
184	3.452	227	5.063
185	3.545	228	5.063
186	3.648	229	5.063
187	3.701	230	5.064
188	3.759	231	5.065
189	3.821	232	5.066
190	3.870	233	5.067
191	3.892	234	5.068
192	3.914	235	5.069
193	3.955	236	5.070
		237	5.070
		238	5.070
		239	5.070

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

Second	Composite (grams)	Second	Composite (grams)
30	0.419	44	0.645
31	0.425	45	0.670
32	0.431	46	0.691
33	0.449	47	0.716
34	0.476	48	0.735
35	0.497	49	0.765
36	0.515	50	0.802
37	0.516	51	0.836
38	0.519	52	0.868
39	0.527	53	0.890
40	0.542	54	0.918
41	0.560	55	0.936
42	0.598	56	0.947
43	0.616	57	0.958
		58	0.970
		59	0.982
		60	0.994

Table 3 – Continued
Fast-Pass Emission Limitations For The Transient Emission Test

Second	Composite (grams)	Second	Composite (grams)
61	1.019	123	2.012
62	1.042	124	2.040
63	1.049	125	2.060
64	1.058	126	2.069
65	1.062	127	2.092
66	1.064	128	2.114
67	1.070	129	2.132
68	1.077	130	2.144
69	1.085	131	2.152
70	1.092	132	2.157
71	1.101	133	2.160
72	1.111	134	2.163
73	1.121	135	2.165
74	1.131	136	2.168
75	1.141	137	2.171
76	1.159	138	2.186
76	1.159	139	2.235
77	1.164	140	2.298
78	1.186	141	2.333
79	1.221	142	2.373
80	1.260	143	2.406
81	1.268	144	2.416
82	1.272	145	2.420
83	1.277	146	2.424
84	1.288	147	2.435
85	1.310	148	2.455
86	1.319	149	2.471
87	1.320	150	2.484
88	1.337	151	2.495
89	1.348	152	2.509
90	1.361	153	2.522
91	1.366	154	2.533
92	1.369	155	2.541
93	1.373	156	2.552
94	1.375	157	2.589
95	1.377	158	2.631
96	1.379	159	2.704
97	1.381	160	2.758
98	1.383	161	2.802
99	1.385	162	2.904
100	1.399	163	2.960
101	1.405	164	3.027
102	1.466	165	3.127
103	1.485	166	3.187
104	1.546	167	3.306
105	1.623	168	3.384
106	1.699	169	3.467
107	1.760	170	3.565
108	1.788	171	3.640
109	1.798	172	3.718
110	1.842	173	3.781
111	1.864	174	3.827
112	1.888	175	3.852
113	1.905	176	3.903
114	1.920	177	3.930
115	1.926	178	3.970
116	1.939	179	4.015
117	1.958	180	4.074
118	1.972	181	4.159
119	1.981	182	4.230
120	1.987	183	4.286
121	1.991	184	4.334
122	1.996	185	4.388

Table 3 – Continued
Fast-Pass Emission Limitations For The Transient Emission Test

Second	Composite (grams)	Second	Composite (grams)
186	4.447	212	5.698
187	4.505	213	5.762
188	4.561	214	5.836
189	4.625	215	5.944
190	4.696	216	6.008
191	4.731	217	6.040
192	4.780	218	6.072
193	4.837	219	6.089
194	4.876	220	6.101
195	4.928	221	6.118
196	4.972	222	6.126
197	5.025	223	6.139
198	5.104	224	6.145
199	5.189	225	6.148
200	5.275	226	6.150
201	5.336	227	6.151
202	5.366	228	6.152
203	5.387	229	6.153
204	5.427	230	6.154
205	5.444	231	6.156
206	5.447	232	6.157
207	5.477	233	6.159
208	5.520	234	6.160
209	5.560	235	6.162
210	5.603	236	6.163
211	5.657	237	6.164
		238	6.166
		239	6.168

Table 4
Fast-Pass Minimum Flow For The Evaporative System Purge Test Or Any Alternative Evaporative System Purge Test

Second	Purge Level (liters)	Second	Purge Level (liters)
30	0.14	58	0.25
31	0.14	59	0.25
32	0.15	60	0.25
33	0.15	61	0.26
34	0.16	62	0.26
35	0.16	63	0.26
36	0.16	64	0.27
37	0.17	65	0.27
38	0.18	66	0.27
39	0.18	67	0.28
40	0.19	68	0.28
41	0.19	69	0.29
42	0.19	70	0.29
43	0.20	71	0.29
44	0.20	72	0.29
45	0.20	73	0.30
46	0.21	74	0.30
47	0.22	75	0.30
48	0.22	76	0.31
49	0.22	77	0.31
50	0.23	78	0.32
51	0.24	79	0.32
52	0.24	80	0.32
53	0.24	81	0.32
54	0.24	82	0.33
55	0.24	83	0.33
56	0.24	84	0.34
57	0.24	85	0.34

Table 4 - Continued
 Fast-Pass Minimum Flow For The Evaporative System Purge Test Or Any Alternative Evaporative System Purge Test

Second	Purge Level (liters)	Second	Purge Level (liters)
86	0.34	149	0.59
87	0.35	150	0.59
88	0.35	151	0.59
89	0.35	152	0.59
90	0.36	153	0.59
91	0.36	154	0.59
92	0.37	155	0.60
93	0.37	156	0.60
94	0.37	157	0.61
95	0.38	158	0.61
96	0.38	159	0.61
97	0.39	160	0.61
98	0.39	161	0.62
99	0.39	162	0.62
100	0.40	163	0.63
101	0.40	164	0.63
102	0.40	165	0.64
103	0.41	166	0.64
104	0.41	167	0.64
105	0.41	168	0.65
106	0.42	169	0.65
107	0.42	170	0.66
108	0.43	171	0.66
109	0.43	172	0.67
110	0.43	173	0.67
111	0.44	174	0.68
112	0.44	175	0.68
113	0.44	176	0.68
114	0.44	177	0.68
115	0.45	178	0.68
116	0.46	179	0.68
117	0.46	180	0.68
118	0.47	181	0.68
119	0.47	182	0.68
120	0.47	183	0.68
121	0.48	184	0.68
122	0.48	185	0.68
123	0.48	186	0.69
124	0.49	187	0.70
125	0.49	188	0.72
126	0.50	189	0.72
127	0.50	190	0.73
128	0.50	191	0.73
129	0.50	192	0.74
130	0.51	193	0.74
131	0.52	194	0.74
132	0.52	195	0.75
133	0.52	196	0.76
134	0.53	197	0.76
135	0.53	198	0.76
136	0.54	199	0.76
137	0.54	200	0.77
138	0.54	201	0.77
139	0.55	202	0.77
140	0.55	203	0.78
141	0.56	204	0.79
142	0.56	205	0.79
143	0.56	206	0.80
144	0.56	207	0.81
145	0.57	208	0.81
146	0.57	209	0.82
147	0.58	210	0.83
148	0.58	211	0.83

Table 4 – Continued
Fast-Pass Minimum Flow For The Evaporative System
Purge Test Or Any Alternative Evaporative
System Purge Test

Second	Purge Level (liters)
212	0.84
213	0.85
214	0.85
215	0.85
216	0.86
217	0.86
218	0.87
219	0.87
220	0.88
221	0.88
222	0.88
223	0.89
224	0.90
225	0.90
226	0.91
227	0.91
228	0.92
229	0.92
230	0.92
231	0.92
232	0.93
233	0.93
234	0.93
235	0.93
236	0.94
237	0.94
238	0.94
239	0.94

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. 1-1-95; am. (9) (b), Register, January, 1997, No. 493, eff. 2-1-97.

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 following amounts:

(b) Effective January 1, 1993, \$75 for vehicles older than model year 1981 and \$200 for vehicles of a 1981 or newer model year.

(c) Effective July 1, 1994, for all vehicles in the counties of Kenosha, Milwaukee, Ozaukee, Racine, Washington and Waukesha, an amount established annually by the U.S. environmental protection agency. That limit shall be equal to the higher of \$450 or an amount calculated from a base of \$450 in 1989 by adjusting for inflation through the use of the federal Consumer Price Index.

(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) (c) 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.

NR 485.05 Visible emission limits for motor vehicles, internal combustion engines and mobile sources. No person may cause, allow or permit visible emis-

sions 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.

(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) Notwithstanding sub. (1), any person may replace the catalytic converter on a vehicle older than 5 model years or more with more than 50,000 miles on the odometer with aftermarket equipment certified by the U.S. environmental protection agency (EPA). 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 am. cr. (2), Register, July, 1989, No. 403, eff. 8-1-89.

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 restricter; 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 restricter 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 restricter 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 restricter 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.

