

TABLE H98-2—FULL USEFUL LIFE ¹ STANDARDS (G/MI) FOR LIGHT-DUTY VEHICLES

Fuel	THC	NMHC	THCE	NMHCE	CO	NO _x	PM
Gasoline	0.31	.....	.....	4.2	0.6	0.10
Diesel	0.31	.....	.....	4.2	1.25	0.10
Methanol	0.31	4.2	0.6	0.10
Natural Gas	0.31	.....	.....	4.2	0.6	0.10
LPG	0.31	.....	.....	4.2	0.6	0.10

¹The applicable useful life is 10 years or 100,000 miles, whichever first occurs, except that no enforcement testing will be done beyond 7 years or 75,000 miles, whichever first occurs.

(ii)(A) Vehicles subject to the standards of paragraph (a)(1)(i) of this section shall be all actual U.S. sales of light-duty vehicles of the applicable model year by a manufacturer.

(B) A manufacturer cannot use one set of engine families to meet its in-use intermediate useful life standards and another to meet its in-use full useful life standards. The same families which are used to meet the intermediate useful life standards will be required without deviation to meet the corresponding full useful life standards.

(iii) CST emissions from gasoline-fueled Otto-cycle light-duty vehicles measured and calculated in accordance with subpart O of this part may not exceed the standards listed in paragraphs (a)(1)(iii) (A) and (B) of this section.

(A) Hydrocarbons: 220 ppm as hexane.

(B) Carbon monoxide: 1.2 percent.

(2) The standards set forth in paragraph (a)(1) of this section refer to the exhaust emitted over a driving schedule as set forth in subpart B of this part and measured and calculated in accordance with those procedures. The test weight basis for light-duty vehicles, for the purposes of determining equivalent test weight as prescribed in § 86.129-94, shall be loaded vehicle weight.

(3) The standards set forth in paragraph (a)(1)(iii) of this section refer to the exhaust emitted during the CST as set forth in subpart O of this part and measured and calculated in accordance with those provisions.

(b) The provisions of § 86.090-8 (b) through (h) of subpart A of this part apply to this section. The provisions of § 86.096-8 (i) through (j) of subpart A of this part apply to this section.

[56 FR 25781, June 5, 1991, as amended at 58 FR 58424, Nov. 1, 1993; 59 FR 33913, July 1, 1994; 59 FR 48516, Sept. 21, 1994]

§ 86.709-94 In-use emission standards for 1994 and later model year light-duty trucks.

Section 86.709-94 includes text that specifies requirements that differ from § 86.091-9 of subpart A of this part. Where a paragraph in § 86.091-9 is identical and applicable to § 86.709-94, this may be indicated by specifying the corresponding paragraph and the statement “[Reserved]. For guidance see § 86.091-9.” Where a corresponding paragraph of § 86.091-9 is not applicable, this is indicated by the statement “[Reserved].”

(a)(1) *Standards—(i) Light light-duty trucks.* In-use exhaust emissions from 1994 and later model year light light-duty trucks shall meet all standards in tables H94-9 and H94-10 in the rows designated with the applicable fuel type and loaded vehicle weight, according to the implementation schedule in table H94-8, and shall meet all standards in tables H94-12 and H94-13 in the rows designated with the applicable fuel type and loaded vehicle weight, according to the implementation schedules in table H94-11, as follows:

(A)(i)(j) For model year 1994 and 1995, a minimum of the respective percentages shown in the Tier 1₁ column of table H94-8 of a manufacturer’s sales of the applicable model year’s light light-duty trucks shall not exceed the applicable Tier 1₁ standards in tables H94-9 and H94-10. The remaining vehicles, if any, shall not exceed the applicable Tier 0 standards in tables H94-9 and H94-10.

(ii) For model years 1996 and 1997, a minimum of the percentages shown in the Tier 1 percentage column of table H94-8 of a manufacturer’s sales of the applicable model year’s light light-duty trucks shall not exceed the applicable Tier 1 standards in table H94-9 and H94-10, and the remaining vehicles,

if any, shall not exceed the applicable Tier 1₁ standards in tables H94-9 and H94-10.

(iii) For model year 1998 and beyond, a minimum of the percentage shown in the Tier 1 percentage column of table H94-8 of a manufacturer's sales of the applicable model year's light light-duty trucks shall not exceed the applicable Tier 1 standards in tables H94-9 and H94-10.

(2) *Particulates.* For in-use exhaust emissions for 1994 and later, a minimum of the percentage shown in table H94-11 of a manufacturer's sales of the applicable model year's light light-duty trucks shall not exceed the applicable Tier 1 standards in tables H94-12

and H94-13. The remaining light light-duty trucks, if any, shall not exceed the applicable Tier 0 standards in tables H94-12 and H94-13.

(3) Optionally, compliance with the Tier 1₁ and Tier 1 implementation schedules of this section may be based on the combined sales of light-duty vehicles and light light-duty trucks, if such option was taken for certification as allowed in § 86.094-8 and § 86.094-9 of subpart A of this part. Vehicles meeting Tier 1₁ in-use standards shall only be combined for this purpose with other vehicles meeting Tier 1₁ standards, and those meeting Tier 1 standards shall only be combined with those meeting the Tier 1 standards.

TABLE H94-8—IMPLEMENTATION SCHEDULE FOR LIGHT LIGHT-DUTY TRUCKS FOR HCS, CO AND NO_x

Model year	Tier 1 ₁ percentage	Tier 1 percentage
1994	40	0
1995	80	0
1996	60	40
1997	20	80
1998	0	100

TABLE H94-9—INTERMEDIATE USEFUL LIFE¹ STANDARDS (G/M) FOR LIGHT LIGHT-DUTY TRUCKS FOR HCS, CO AND NO_x

Fuel	LVW (lbs)	Standards	THC	NMHC	THCE	NMHCE	CO	NO _x
Gasoline	0-3750	Tier 0	0.80				10	1.2
Gasoline	0-3750	Tier 1	0.80	0.32			5.2	0.4
Gasoline	0-3750	Tier 1	0.80	0.25			3.4	0.4
Gasoline	3751-5750	Tier 0	0.80				10	1.7
Gasoline	3751-5750	Tier 1 ₁	0.80	0.41			6.7	0.7
Gasoline	3751-5750	Tier 1	0.80	0.32			4.4	0.7
Diesel	0-3750	Tier 0	0.80				10	1.2
Diesel	0-3750	Tier 1 ₁	0.80	0.32			5.2	1.2
Diesel	0-3750	Tier 1	0.80	0.25			3.4	1.0
Diesel	3751-5750	Tier 0	0.80				10	1.7
Diesel	3751-5750	Tier 1 ₁	0.80	0.41			6.7	1.7
Diesel	3751-5750	Tier 1	0.80	0.32			4.4	0.97
Methanol	0-3750	Tier 0			0.80		10	1.2
Methanol	0-3750	Tier 1 ₁			0.80	0.32	5.2	0.4
Methanol	0-3750	Tier 1			0.80	0.25	3.4	0.4
Methanol	3751-5750	Tier 0			0.80		10	1.7
Methanol	3751-5750	Tier 1 ₁			0.80	0.41	6.7	0.7
Methanol	3751-5750	Tier 1			0.80	0.32	4.4	0.7
Natural Gas	0-3750	Tier 0		0.67			10	1.2
Natural Gas	0-3750	Tier 1 ₁		0.32			5.2	0.4
Natural Gas	0-3750	Tier 1		0.25			3.4	0.4
Natural Gas	3751-5750	Tier 0		0.67			10	1.7
Natural Gas	3751-5750	Tier 1 ₁		0.41			6.7	0.7
Natural Gas	3751-5750	Tier 1		0.32			4.4	0.7
LPG	0-3750	Tier 0	0.80			10	1.2	
LPG	0-3750	Tier 1 ₁	0.80	0.32			5.2	0.4
LPG	0-3750	Tier 1	0.80	0.25			3.4	0.4
LPG	3751-5750	Tier 0	0.80			10	1.7	
LPG	3751-5750	Tier 1 ₁	0.80	0.41		6.7	0.7	
LPG	3751-5750	Tier 1	0.80	0.32			4.4	0.7

¹ The applicable useful life is 5 years or 50,000 miles, whichever first occurs.

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TABLE H94-10—FULL USEFUL LIFE STANDARDS (G/MI) FOR LIGHT LIGHT-DUTY TRUCKS FOR HCS, CO AND NO_x

Fuel	LVW (lbs)	Standards	THC ²	NMHC ¹	THCE ²	NMHCE ¹	CO ¹	NO _x ¹
Gasoline	0-3750	Tier 0	0.80				10	1.2
Gasoline	0-3750	Tier 1	0.80	0.31			4.2	0.60
Gasoline	3751-5750	Tier 0	0.80				10	1.7
Gasoline	3751-5750	Tier 1	0.80	0.40			5.5	0.97
Diesel	0-3750	Tier 0	0.80				10	1.2
Diesel	0-3750	Tier 1	0.80	0.31			4.2	1.25
Diesel	3751-5750	Tier 0	0.80				10	1.7
Diesel	3751-5750	Tier 1	0.80	0.40			5.5	0.97
Methanol	0-3750	Tier 0			0.80		10	1.2
Methanol	0-3750	Tier 1			0.80	0.31	4.2	0.60
Methanol	3751-5750	Tier 0			0.80		10	1.7
Methanol	3751-5750	Tier 1			0.80	0.40	5.5	0.97
Natural Gas	0-3750	Tier 0	2.93	0.67			10	1.2
Natural Gas	0-3750	Tier 1	2.93	0.31			4.2	0.60
Natural Gas	3751-5750	Tier 0	2.93	0.67			10	1.7
Natural Gas	3751-5750	Tier 1	2.93	0.40			5.5	0.97
LPG	0-3750	Tier 0	0.80				10	1.2
LPG	0-3750	Tier 1	0.80	0.31			4.2	0.60
LPG	3751-5750	Tier 0	0.80				10	1.7
LPG	3751-5750	Tier 1	0.80	0.40			5.5	0.97

¹The applicable useful life is 10 years or 100,000 miles, which ever first occurs, except that no enforcement testing will be done beyond 7 years or 75,000 miles, whichever first occurs.
²The applicable useful life is 11 years or 120,000 miles, whichever first occurs.

TABLE H94-11—IMPLEMENTATION SCHEDULE FOR LIGHT LIGHT-DUTY TRUCKS FOR PM

Model year	Tier 1 percentage
1994	0%
1995	40%
1996	80%
after 1996	100%

TABLE H94-12—INTERMEDIATE USEFUL LIFE ¹ STANDARDS (G/MI) FOR LIGHT LIGHT-DUTY TRUCKS FOR PM

Fuel	LVW (lbs)	Standards	PM
Gasoline	0-3750	Tier 0	
Gasoline	0-3750	Tier 1	0.08
Gasoline	3751-5750	Tier 0	
Gasoline	3751-5750	Tier 1	0.08
Diesel	0-3750	Tier 0	0.26
Diesel	0-3750	Tier 1	0.08
Diesel	3751-5750	Tier 0	0.13
Diesel	3751-5750	Tier 1	0.08
Methanol	0-3750	Tier 0	
Methanol	0-3750	Tier 1	0.08
Methanol	3751-5750	Tier 0	
Methanol	3751-5750	Tier 1	0.08
Natural Gas	0-3750	Tier 0	² 0.26
Natural Gas	0-3750	Tier 1	0.08
Natural Gas	3751-5750	Tier 0	² 0.13
Natural Gas	3751-5750	Tier 1	0.08
LPG	0-3750	Tier 0	² 0.26
LPG	0-3750	Tier 1	0.08
LPG	3751-5750	Tier 0	² 0.13
LPG	3751-5750	Tier 1	0.08

¹The applicable useful life is 5 years or 50,000 miles, whichever first occurs.
²Applicable only to diesel-cycle vehicles.

TABLE H94-13—FULL USEFUL LIFE ¹ STANDARDS (G/MI) FOR LIGHT LIGHT-DUTY TRUCKS FOR PM

Fuel	LVW (lbs)	Standards	PM
Gasoline	0-3750	Tier 0	
Gasoline	0-3750	Tier 1	0.10
Gasoline	3751-5750	Tier 0	

TABLE H94-13—FULL USEFUL LIFE¹ STANDARDS (G/MI) FOR LIGHT LIGHT-DUTY TRUCKS FOR PM—Continued

Fuel	LVW (lbs)	Standards	PM
Gasoline	3751-5750	Tier 1	0.10
Diesel	0-3750	Tier 0	0.26
Diesel	0-3750	Tier 1	0.10
Diesel	3751-5750	Tier 0	0.13
Diesel	3751-5750	Tier 1	0.10
Methanol	0-3750	Tier 0 .....	.....
Methanol	0-3750	Tier 1	0.10
Methanol	3751-5750	Tier 0 .....	.....
Methanol	3751-5750	Tier 1	0.10
Natural Gas	0-3750	Tier 0	² 0.26
Natural Gas	0-3750	Tier 1	0.10
Natural Gas	3751-5750	Tier 0	² 0.13
Natural Gas	3751-5750	Tier 1	0.10
LPG	0-3750	Tier 0	² 0.26
LPG	0-3750	Tier 1	0.10
LPG	3751-5750	Tier 0	² 0.13
LPG	3751-5750	Tier 1	0.10

¹The applicable useful life is 10 years or 100,000 miles, whichever first occurs, except that no enforcement testing will be done beyond 7 years or 75,000 miles, whichever first occurs.
²Applicable only to diesel-cycle vehicles.

(B)(1)(i) Sales percentages for the purposes of determining compliance with paragraph (a)(1)(i)(A) of this section shall be based on total actual U.S. sales of light-duty vehicles of the applicable model year by a manufacturer to a dealer, distributor, fleet operator, broker, or any other entity which comprises the point of first sale. If the option of paragraph (a)(1)(i)(A)(3) is taken, such sales percentages shall be based on the total actual combined U.S. sales of light-duty vehicles and light light-duty trucks of the applicable model year by a manufacturer to a dealer, distributor, fleet operator, broker, or any other entity which comprises the point of first sale.

(ii) The manufacturer may petition the Administrator to allow actual volume produced for U.S. sale to be used in lieu of actual U.S. sales for purposes of determining compliance with the implementation schedule sales percentages of tables H94-8 and H94-11 of this section. Such petition shall be submitted within 30 days of the end of the model year to the Manufacturers Operations Division. For the petition to be granted, the manufacturer must establish to the satisfaction of the Administrator that actual production volume is functionally equivalent to actual sales volume.

(iii) The vehicles that are counted toward the implementation schedule sales percentage, or toward the total

on which such percentage is based, for certification purposes as prescribed by § 86.094-9(a)(1)(i)(B)(1)(iii) of subpart A of this part, shall be the same vehicles that are counted toward the implementation schedule sales percentage, or the total on which it is based, for in-use purposes.

(iv) Small volume manufacturers, as defined in § 86.092-14(b) (1) and (2), are exempt from the implementation schedules of table H94-8 of this section for model years 1994 through 1997 and from the implementation schedules of table H94-11 of this section for model years 1995 and 1996. For small volume manufacturers, Tier 0 standards of tables H94-9 and H94-10 continue to apply until model year 1998 and the Tier 0 standards of tables H94-12 and H94-13 continue to apply until model year 1997, when one hundred percent compliance with the Tier 1 standards of such tables is required. This exemption does not apply to small volume engine families as defined in § 86.092-14 (b)(5).

(2)(i) For 1994 and 1995 model year light light-duty trucks, the engine families which comprise the required implementation schedule percentage of sales meeting Tier 1 standards for HCs, CO, and NO_x, for purposes of certification, shall be the same engine families which comprise the required implementation schedule percentage of sales meeting the interim in-use standards

(labeled "Tier 1₁" in the tables of in-use standards) for in-use purposes.

(ii) For 1996 and 1997 model year light light-duty trucks, the engine families which comprise the required implementation schedule percentage of sales meeting interim in-use standards (labeled "Tier 1₁" in the tables of in-use standards) and final in-use standards (labeled "Tier 1" in the tables of in-use standards) respectively, for HCs, CO, and NO_x, for in-use purposes, shall be designated by the manufacturer at the time of certification.

(iii) For 1995 and 1996 model year light light-duty trucks, the engine families which comprise the required implementation schedule percentage of sales meeting Tier 1 standards, for PM, for purposes of certification, shall be the same engine families which comprise the required implementation schedule percentage of sales meeting the final in-use standards (labeled "Tier 1" in the tables of in-use standards) for PM for in-use purposes.

(3) The manufacturer must state at the time of Application for Certification, based on projected U.S. sales or projected production for U.S. sale, which families will be used to attain the required implementation schedule sales percentages for in-use purposes.

(4) A manufacturer can not use one set of engine families to meet its in-use intermediate useful life standards and another to meet its in-use full useful life standards. The same families which are used to meet the intermediate useful life standards will be required without deviation to meet the corresponding full useful life standards.

(ii) *Heavy light-duty trucks.* In-use exhaust emissions from 1994 and later model year heavy light-duty trucks shall meet all standards in tables H94-15 and H94-16 in the rows designated with the applicable fuel type and loaded vehicle weight or adjusted loaded

vehicle weight, as applicable, according to the implementation schedule in table H94-14, and shall meet all standards in tables H94-18 and H94-19 in the rows designated with the applicable fuel type and loaded vehicle weight or adjusted loaded vehicle weight, as applicable, according to the implementation schedules in table H94-17, as follows:

(A)(1)(i) For model years 1994 through 1997, a minimum of the percentage shown in the Tier 1₁ column of table H94-14 of a manufacturer's sales of the applicable model year's heavy light-duty trucks shall not exceed the applicable Tier 1₁ standards in tables H94-15 and H94-16. The remaining vehicles, if any, shall not exceed the applicable Tier 0 standards in tables H94-15 and H94-16.

(ii) For model year 1998, a minimum of the percentage shown in table H94-14 of a manufacturer's sales of the applicable model year's heavy light-duty trucks shall not exceed the applicable Tier 1 standards in tables H94-15 and H94-16. The remaining vehicles shall not exceed the applicable Tier 1₁ standards in tables H94-15 and H94-16.

(iii) For model years 1999 and later, a minimum of the percentage shown in table H94-14 of a manufacturer's sales of the applicable model year's heavy light-duty trucks shall not exceed the applicable Tier 1 standards in tables H94-15 and H94-16.

(2) *Particulates.* For in-use exhaust emissions for model year 1994 and later, a minimum of the percentage shown in table H94-17 of a manufacturer's sales of the applicable model year's heavy light-duty trucks shall not exceed the applicable Tier 1 standards in tables H94-18 and H94-19. The remaining heavy light-duty trucks, if any, shall not exceed the applicable Tier 0 standards in tables H94-18 and H94-19.

TABLE H94-14—IMPLEMENTATION SCHEDULE FOR HEAVY LIGHT-DUTY TRUCKS FOR HCS, CO AND NO_x

Model year	Tier 1 ₁ percentage	Tier 1 percentage
1994	0%	0%
1995	0%	0%
1996	50%	0%
1997	100%	0%
1998	50%	50%

TABLE H94-14—IMPLEMENTATION SCHEDULE FOR HEAVY LIGHT-DUTY TRUCKS FOR HCS, CO AND NO_x—Continued

Model year	Tier 1 ₁ percentage	Tier 1 percentage
after 1998	0%	100%

TABLE H94-15—INTERMEDIATE USEFUL LIFE¹ STANDARDS (G/MI) FOR HEAVY LIGHT-DUTY TRUCKS FOR HCS, CO AND NO_x

Fuel	LVW (lbs)	ALVW (lbs)	Standards	THC	NMHC	THCE	NMHCE	CO	NO _x
Gasoline	0-3750		Tier 0	0.80				10	1.2
Gasoline	>3750		Tier 0	0.80				10	1.7
Gasoline		3751-5750	Tier 1 ₁	0.80	0.40			5.5	0.88
Gasoline		3751-5750	Tier 1	0.80	0.32			4.4	0.7
Gasoline		>5750	Tier 1 ₁	0.80	0.49			6.2	1.38
Gasoline		>5750	Tier 1	0.80	0.39			5.0	1.1
Diesel	0-3750		Tier 0	0.80				10	1.2
Diesel	>3750		Tier 0	0.80				10	1.7
Diesel	0-3750	3751-5750	Tier 1 ₁	0.80	0.40			5.5	1.2
Diesel	>3750	3751-5750	Tier 1 ₁	0.80	0.40			5.5	1.7
Diesel		3751-5750	Tier 1	0.80	0.32			4.4	0.98
Diesel	0-3750	>5750	Tier 1 ₁	0.80	0.49			6.2	1.2
Diesel	>3750	>5750	Tier 1 ₁	0.80	0.49			6.2	1.7
Diesel		>5750	Tier 1	0.80	0.39			5.0	1.53
Methanol	0-3750		Tier 0	0.80				10	1.2
Methanol	>3750		Tier 0	0.80				10	1.7
Methanol		3751-5750	Tier 1 ₁			0.80	0.40	5.5	0.88
Methanol		3751-5750	Tier 1			0.80	0.32	4.4	0.7
Methanol		>5750	Tier 1 ₁			0.80	0.49	6.2	1.38
Methanol		>5750	Tier 1			0.80	0.39	5.0	1.1
Natural Gas	0-3570		Tier 0		0.67			10	1.2
Natural Gas	>3750		Tier 0		0.67			10	1.7
Natural Gas		3751-5750	Tier 1 ₁		0.40			5.5	0.88
Natural Gas		3751-5750	Tier 1		0.32			4.4	0.7
Natural Gas		>5750	Tier 1 ₁		0.49			6.2	1.38
Natural Gas		>5750	Tier 1		0.39			5.0	1.1
LPG	0-3570		Tier 0	0.80				10	1.2
LPG	>3750		Tier 0	0.80				10	1.7
LPG		3751-5750	Tier 1 ₁	0.80	0.40			5.5	0.88
LPG		3751-5750	Tier 1	0.80	0.32			4.4	0.7
LPG		>5750	Tier 1 ₁	0.80	0.49			6.2	1.38
LPG		>5750	Tier 1	0.80	0.39			5.0	1.1

¹ The applicable useful life is 5 years or 50,000 miles, whichever first occurs.

TABLE H94-16—FULL USEFUL LIFE STANDARDS (G/MI) FOR HEAVY LIGHT-DUTY TRUCKS FOR HCS, CO AND NO_x

Fuel	LVW (lbs)	ALVW (lbs)	Standards	THC ²	NMHC ¹	THCE ²	NMHCE ¹	CO ¹	NO _x ¹
Gasoline	0-3750		Tier 0	0.80				10	1.2
Gasoline	>3750		Tier 0	0.80				10	1.7
Gasoline		3751-5750	Tier 1	0.80	0.46			6.4	0.98
Gasoline		>5750	Tier 1	0.80	0.56			7.3	1.53
Diesel	0-3750		Tier 0	0.80				10	1.2
Diesel	>3750		Tier 0	0.80				10	1.7
Diesel		3751-5750	Tier 1	0.80	0.46			6.4	0.98

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TABLE H94-16—FULL USEFUL LIFE STANDARDS (G/M) FOR HEAVY LIGHT-DUTY TRUCKS FOR HCS, CO AND NO_x—Continued

Fuel	LVW (lbs)	ALVV (lbs)	Standards	THC ²	NMHC ¹	THCE ²	NMHCE ¹	CO ¹	NO _x ¹
Diesel		>5750	Tier 1	0.80	0.56			7.3	1.53
Methanol	0-3750		Tier 0			0.80		10	1.2
Methanol	>3750		Tier 0			0.80		10	1.7
Methanol		3751-5750	Tier 1			0.80	0.46	6.4	0.98
Methanol		>5750	Tier 1			0.80	0.56	7.3	1.53
Natural Gas	0-3750		Tier 0		0.67			10	1.2
Natural Gas	>3750		Tier 0		0.67			10	1.7
Natural Gas		3751-5750	Tier 1		0.46			6.4	0.98
Natural Gas		>5750	Tier 1		0.56			7.3	1.53
LPG	0-3750		Tier 0	0.80				10	1.2
LPG	>3750		Tier 0	0.80				10	1.7
LPG		3751-5750	Tier 1	0.80	0.46			6.4	0.98
LPG		>5750	Tier 1	0.80	0.56			7.3	1.53

¹ The applicable useful life is 11 years or 120,000 miles, whichever first occurs, except that no enforcement testing will be done beyond 7 years or 90,000 miles, whichever first occurs.
² The applicable useful life is 11 years or 120,000 miles, whichever first occurs.

TABLE H94-17—IMPLEMENTATION SCHEDULE FOR HEAVY LIGHT-DUTY TRUCKS FOR PM

Model year	Tier 1 percentage
1994	0
1995	0
1996	50
after 1996	100

TABLE H94-18—INTERMEDIATE USEFUL LIFE¹ STANDARDS (G/M) FOR HEAVY LIGHT-DUTY TRUCKS FOR PM

Fuel	LVW (lbs)	ALVV (lbs)	Standards	PM
Gasoline	0-3750		Tier 0	
Gasoline	>3750		Tier 0	
Gasoline		3751-5750	Tier 1	0.10
Gasoline		>5750	Tier 1	0.12
Diesel	0-3750		Tier 0	0.26
Diesel	>3750		Tier 0	0.13
Diesel		3751-5750	Tier 1	0.10
Diesel		>5750	Tier 1	0.12
Methanol	0-3750		Tier 0	
Methanol	>3750		Tier 0	
Methanol		3751-5750	Tier 1	0.10
Methanol		>5750	Tier 1	0.12
Natural Gas	0-3750		Tier 0	² 0.26
Natural Gas	>3750		Tier 0	² 0.13
Natural Gas		3751-5750	Tier 1	0.10
Natural Gas		>5750	Tier 1	0.12
LPG	0-3750		Tier 0	² 0.26
LPG	>3750		Tier 0	² 0.13
LPG		3751-5750	Tier 1	0.10
LPG		>5750	Tier 1	0.12

¹ The applicable useful life is 5 years or 50,000 miles, whichever first occurs.
² Applicable only to diesel-cycle vehicles.

TABLE H94-19—FULL USEFUL LIFE¹ STANDARDS (G/M) FOR HEAVY LIGHT-DUTY TRUCKS FOR PM

Fuel	LVW (lbs)	ALVV (lbs)	Standards	PM
Gasoline	0-3750		Tier 0	
Gasoline	>3750		Tier 0	
Gasoline		3751-5750	Tier 1	0.10
Gasoline		>5750	Tier 1	0.12
Diesel	0-3750		Tier 0	0.26
Diesel	>3750		Tier 0	0.13

TABLE H94-19—FULL USEFUL LIFE ¹ STANDARDS (G/Ml) FOR HEAVY LIGHT-DUTY TRUCKS FOR PM—
Continued

Fuel	LVW (lbs)	ALVW (lbs)	Standards	PM
Diesel .....	.....	3751-5750	Tier 1	0.10
Diesel .....	.....	>5750	Tier 1	0.12
Methanol	0-3750	.....	Tier 0 .....	.....
Methanol	>3750	.....	Tier 0 .....	.....
Methanol .....	.....	3751-5750	Tier 1	0.10
Methanol .....	.....	>5750	Tier 1	0.12

¹The applicable useful life is 11 years or 120,000 miles, whichever first occurs, except that no enforcement testing will be done beyond 7 years or 90,000 miles, whichever first occurs.

(B)(1)(i) Sales percentages for the purposes of determining compliance with paragraph (a)(1)(ii)(A) of this section shall be based on total actual U.S. sales of light-duty vehicles of the applicable model year by a manufacturer to a dealer, distributor, fleet operator, broker, or any other entity which comprises the point of first sale.

(ii) The manufacturer may petition the Administrator to allow actual volume produced for U.S. sales to be used in lieu of actual U.S. sales for purposes of determining compliance with the implementation schedule sales percentages of tables H94-14 and H94-17 of this section. Such petition shall be submitted within 30 days of the end of the model year to the Manufacturers Operations Division. For the petition to be granted, the manufacturer must establish to the satisfaction of the Administrator that actual production volume is functionally equivalent to actual sales volume.

(iii) The vehicles that are counted toward the implementation schedule sales percentage, or toward the total on which such percentage is based, for certification purposes as prescribed by § 86.094-9(a)(1)(ii)(B)(1)(iii) of subpart A of this part, shall be the same vehicles that are counted toward the implementation schedule sales percentage, or the total on which it is based, for in-use purposes.

(iv) Small volume manufacturers, as defined in § 86.092-14(b) (1) and (2), are exempt from the implementation schedules of tables H94-14 of this section for model years 1996 through 1998 and from the implementation schedules of table H94-17 of this section for model year 1996. For small volume manufacturers, Tier 0 standards of tables H94-15 and H94-16 continue to

apply until model year 1999 and the Tier 0 standards of tables H94-18 and H94-19 continue to apply until model year 1997, when one hundred percent compliance with the Tier 1 standards of such tables is required. This exemption does not apply to small volume engine families as defined in § 86.092-14(b)(5).

(2)(i) For 1996 and 1997 model year heavy light-duty trucks, the engine families which comprise the required implementation schedule percentage of sales meeting Tier 1 standards for HCs, CO, and NO_x, for purposes of certification, shall be the same engine families which comprise the required implementation schedule percentage of sales meeting the interim in-use standards (labeled "Tier 1_i" in the tables of in-use standards) for in-use purposes.

(ii) For 1998 model year heavy light-duty trucks the engine families which comprise the required implementation schedule percentage of sales meeting interim in-use standards (labeled "Tier 1_i" in the tables of in-use standards) and final in-use standards (labeled "Tier 1" in the tables of in-use standards) for HCs, CO, and NO_x, for in-use purposes, shall be designated by the manufacturer at the time of certification.

(iii) For 1996 model year heavy light-duty trucks, the engine families which comprise the required implementation schedule percentage of sales meeting Tier 1 standards, for PM, for purposes of certification, shall be the same engine families which comprise the required implementation schedule percentage of sales meeting the final in-use standards (labeled "Tier 1" in the tables of in-use standards) for PM for in-use purposes.

(3) The manufacturer must state at the time of Application for Certification, based on projected U.S. sales or projected production for U.S. sale, which families will be used to attain the required implementation schedule sales percentages.

(4) A manufacturer can not use one set of engine families to meet its in-use intermediate useful life standards and another to meet its in-use full useful life standards. The same families which are used to meet the intermediate useful life standards will be required without deviation to meet the corresponding full useful life standards.

(iii) Exhaust emissions of carbon monoxide from 1994 and later model year light-duty trucks shall not exceed 0.50 percent of exhaust gas flow at curb idle at a useful life of 11 years or 120,000 miles, whichever first occurs (for Otto-cycle and methanol-fueled diesel-cycle light-duty trucks only).

(iv)(A) Engine families participating in the applicable NO_x averaging program as specified in §86.094-9(a)(1)(iv)(A) shall be subject, for purposes of in-use compliance, to the NO_x family emission limit determined for that engine family for certification purposes, in lieu of the appropriate NO_x standard shown in the tables of in-use standards in this section.

(B) Engine families participating in the applicable particulate averaging program as specified in §86.094-9(a)(1)(iv)(B) shall be subject, for purposes of in-use compliance, to the particulate family emission limit determined for that engine family for certification purposes, in lieu of the appropriate particulate standard shown in the tables of in-use standards in this section.

(v) CST emissions from model year 1996 and later gasoline-fueled Otto-cycle light-duty trucks measured and calculated in accordance with subpart O of this part may not exceed the standards listed in paragraphs (a)(1)(v)(A) and (B) of this section.

(A) Hydrocarbons: 220 ppm as hexane.

(B) Carbon monoxide: 1.2 percent.

(2) The standards set forth in paragraphs (a)(1)(i) and (a)(1)(ii) of this section refer to the exhaust emitted over a driving schedule as set forth in sub-

part B of this part and measured and calculated in accordance with those procedures. The test weight basis for light light-duty trucks, and for heavy light-duty trucks certified to the Tier 0 standards of this section, for the purposes of determining equivalent test weight as prescribed in §86.129-94, shall be loaded vehicle weight. The test weight basis for heavy light-duty trucks certified to the Tier 1 or Tier 1₁ standards of this section, for the purposes of determining equivalent test weight as prescribed in §86.129-94, shall be adjusted loaded vehicle weight. The standard set forth in paragraph (a)(1)(iii) of this section refers to the exhaust emitted at curb idle and measured and calculated in accordance with the procedures set forth in subpart P of this part.

(3) The standards set forth in paragraph (a)(1)(v) of this section refer to the exhaust emitted during the CST as set forth in subpart O of this part and measured and calculated in accordance with those provisions.

(b) The provision of §86.090-8(b) through (k) of subpart A of this part apply to this section.

[56 FR 25781, June 5, 1991, as amended at 57 FR 31922, July 17, 1992; 58 FR 33211, June 16, 1993; 58 FR 58424, Nov. 1, 1993; 59 FR 48516, Sept. 21, 1994]

§ 86.709-99 In-use emission standards for 1999 and later model year light-duty trucks.

Section 86.709-99 includes text that specifies requirements that differ from §86.091-9 of subpart A of this part. Where a paragraph in §86.091-9 is identical and applicable to §86.709-99, this may be indicated by specifying the corresponding paragraph and the statement “[Reserved]. For guidance see §86.091-9.” Where a corresponding paragraph of §86.091-9 is not applicable, this is indicated by the statement “[Reserved].”

(a)(1)(i)(A) *Light light-duty trucks.* In-use exhaust emissions from 1999 and later model year light light-duty trucks shall meet all standards in tables H99-1 and H99-2 in the rows designated with the applicable fuel type and loaded vehicle weight.