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INFORMATION
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Model year	Average fuel economy standard (miles per gallon)
1986	16.0
1987	16.0
1988	16.0
1992	17.0
1993	17.0
1994	17.0
1995	17.0

(12) MedNet, Inc.

Model year	Average fuel economy standard (miles per gallon)
1996	17.0
1997	17.0
1998	17.0

(13) Vector Aeromotive Corporation.

Model year	Average fuel economy standard (miles per gallon)
1998	12.1

(14) Qvale Automotive Group Srl.

Model year	Average fuel economy standard (miles per gallon)
2000	22.0
2001	22.0

[43 FR 28204, June 29, 1978, as amended at 46 FR 18721, Mar. 26, 1981; 47 FR 55685, Dec. 13, 1982; 51 FR 35620, Oct. 6, 1986; 53 FR 39302, Oct. 6, 1988; 55 FR 12486, Apr. 4, 1990; 55 FR 34018, Aug. 21, 1990; 56 FR 37479, Aug. 7, 1991; 60 FR 47878, Sept. 15, 1995; 61 FR 4370, Feb. 6, 1996; 61 FR 67492, Dec. 23, 1996; 62 FR 17101, Apr. 9, 1997; 62 FR 37154, July 11, 1997; 64 FR 12092, Mar. 11, 1999; 65 FR 58484, Sept. 29, 2000]

§ 531.6 Measurement and calculation procedures.

(a) The average fuel economy of all passenger automobiles that are manufactured by a manufacturer in a model year shall be determined in accordance with procedures established by the Administrator of the Environmental Protection Agency under section 502(a)(1) of the Act and set forth in 40 CFR part 600.

(b) A manufacturer that is eligible to elect a model year in which to include value added in Mexico as domestic value, under subparagraphs (B)(i) and (B)(iii) of 49 U.S.C. 32904(b)(3), shall notify the Administrators of the Environmental Protection Agency and the National Highway Traffic Safety Administration of its election not later than 60 days before it begins production of automobiles for the model year. If an eligible manufacturer does not elect a model year before January 1, 2004, any value added in Mexico will be considered domestic value for automobiles manufactured in the next model year beginning after January 1, 2004, and in subsequent model years.

[42 FR 33552, June 30, 1977, as amended at 64 FR 27203, May 19, 1999]

PART 533—LIGHT TRUCK FUEL ECONOMY STANDARDS

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533.1 Scope.
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APPENDIX A TO PART 533—EXAMPLE OF CALCULATING COMPLIANCE UNDER § 533.5 PARAGRAPH (G)

AUTHORITY: 49 U.S.C. 32902; delegation of authority at 49 CFR 1.50.

§ 533.1 Scope.

This part establishes average fuel economy standards pursuant to section 502(b) of the Motor Vehicle Information and Cost Savings Act, as amended, for light trucks.

[42 FR 13807, Mar. 14, 1977, as amended at 43 FR 12013, Mar. 23, 1978]

§ 533.2 Purpose.

The purpose of this part is to increase the fuel economy of light trucks by establishing minimum levels of average fuel economy for those vehicles.

[42 FR 13807, Mar. 14, 1977, as amended at 43 FR 12013, Mar. 23, 1978]

§ 533.3 Applicability.

This part applies to manufacturers of light trucks.

[42 FR 13807, Mar. 14, 1977, as amended at 43 FR 12013, Mar. 23, 1978]

§ 533.4 Definitions.

(a) *Statutory terms.* (1) The terms *average fuel economy*, *average fuel economy standard*, *fuel economy*, *import*, *manufacture*, *manufacturer*, and *model year* are used as defined in section 501 of the Act.

(2) The term *automobile* is used as defined in section 501 of the Act and in accordance with the determinations in part 523 of this chapter.

(3) The term *domestically manufactured* is used as defined in section 503(b)(2)(E) of the Act.

(b) *Other terms.* As used in this part, unless otherwise required by the context—

(1) *Act* means the Motor Vehicle Information Cost Savings Act, as amended by Pub. L. 94–163.

(2) *Light truck* is used in accordance with the determinations in part 523 of this chapter.

Captive import means with respect to a light truck, one which is not domestically manufactured but which is imported in the 1980 model year or thereafter by a manufacturer whose principal place of business is in the United States.

4-wheel drive, general utility vehicle means a 4-wheel drive, general purpose automobile capable of off-highway operation that has a wheelbase of not more than 280 centimeters, and that has a body shape similar to 1977 Jeep CJ–5 or CJ–7, or the 1977 Toyota Land Cruiser.

Basic engine means a unique combination of manufacturer, engine displacement, number of cylinders, fuel system (as distinguished by number of carburetor barrels or use of fuel injection), and catalyst usage.

Limited product line light truck means a light truck manufactured by a manufacturer whose light truck fleet is powered exclusively by basic engines which are not also used in passenger automobiles.

[42 FR 13807, Mar. 14, 1977, as amended at 43 FR 12013, Mar. 23, 1978; 43 FR 46547, Oct. 10, 1978; 58 FR 18029, Apr. 7, 1993]

§ 533.5 Requirements.

(a) Each manufacturer of light trucks shall comply with the following average fuel economy standards, expressed in miles per gallon, in the model year specified as applicable:

TABLE I

Model year	2-wheel drive light trucks		4-wheel drive light trucks		Limited product line light trucks
	Captive imports	Other	Captive imports	Other	
1979	.....	17.2	.....	15.8	.....
1980	16.0	16.0	14.0	14.0	14.0
1981	16.7	16.7	15.0	15.0	14.5

TABLE II

Model year	Combined standard		2-wheel drive light trucks		4-wheel drive light trucks	
	Captive imports	Others	Captive imports	Others	Captive imports	Others
1982	17.5	17.5	18.0	18.0	16.0	16.0
1983	19.0	19.0	19.5	19.5	17.5	17.5
1984	20.0	20.0	20.3	20.3	18.5	18.5
1985	19.5	19.5	19.7	19.7	18.9	18.9
1986	20.0	20.0	20.5	20.5	19.5	19.5
1987	20.5	20.5	21.0	21.0	19.5	19.5
1988	20.5	20.5	21.0	21.0	19.5	19.5
1989	20.5	20.5	21.5	21.5	19.0	19.0
1990	20.0	20.0	20.5	20.5	19.0	19.0
1991	20.2	20.2	20.7	20.7	19.1	19.1

TABLE III

Model Year	Combined standard	
	Captive imports	Other
1992	20.2	20.2
1993	20.4	20.4
1994	20.5	20.5
1995	20.6	20.6

TABLE IV

Model year	Standard
2001	20.7
2002	20.7
2003	20.7
2004	20.7
2005	21.0
2006	21.6
2007	22.2
2008	22.5
2009	23.1
2010	23.5

FIGURE 1

$$Required_Fuel_Economy_Level = \frac{N}{\sum_i \frac{N_i}{T_i}}$$

Where:

N is the total number (sum) of light trucks produced by a manufacturer, N_i is the number (sum) of the ith light truck model type produced by the manufacturer, and

T_i is fuel economy target of the ith light truck model type, which is determined according to the following formula, rounded to the nearest hundredth:

$$T = \frac{1}{\frac{1}{a} + \left(\frac{1}{b} - \frac{1}{a}\right)\frac{e^{(x-c)/d}}{1+e^{(x-c)/d}}}$$

Where:

Parameters a, b, c, and d are defined in § 533.3 Table V;

e = 2.718; and

x = footprint (in square feet, rounded to the nearest tenth) of the model type

TABLE V.—PARAMETERS FOR THE REFORMED CAFE FUEL ECONOMY TARGETS

Model year	Parameters			
	a	b	c	d
2008	28.56	19.99	49.30	5.58
2009	30.07	20.87	48.00	5.81
2010	29.96	21.20	48.49	5.50
2011	30.42	21.79	47.74	4.65

(b)(1) For model year 1979, each manufacturer may:

(i) Combine its 2- and 4-wheel drive light trucks and comply with the average fuel economy standard in paragraph (a) of this section for 2-wheel drive light trucks; or

(ii) Comply separately with the two standards specified in paragraph (a) of this section.

(2) For model year 1979, the standard specified in paragraph (a) of this section for 4-wheel drive light trucks applies only to 4-wheel drive general utility vehicles. All other 4-wheel drive light trucks in that model year shall be included in the 2-wheel drive category for compliance purposes.

(c) For model years 1980 and 1981, manufacturers of limited product line light trucks may:

(1) Comply with the separate standard for limited product line light trucks, or

(2) Comply with the other standards specified in § 533.5(a), as applicable.

(d) For model years 1982–91, each manufacture may:

(1) Combine its 2- and 4-wheel drive light trucks (segregating captive import and other light trucks) and comply with the combined average fuel economy standard specified in paragraph (a) of this section; or

(2) Comply separately with the 2-wheel drive standards and the 4-wheel drive standards (segregating captive import and other light trucks) specified in paragraph (a) of this section.

(e) For model year 1992, each manufacturer shall comply with the average fuel economy standard specified in paragraph (a) of this section (segregating captive import and other light trucks).

(f) For model year 1996 and thereafter, each manufacturer shall combine its captive imports with its other light trucks and comply with the average fuel economy standard in paragraph (a) of this section.

(g) For model years 2008–2010, at a manufacturer's option, a manufacturer's light truck fleet may comply with the fuel economy level calculated according to Figure I and the appropriate values in Table V, with said option being irrevocably chosen for that model year and reported as specified in § 537.8.

(h) For model year 2011, a manufacturer's light truck fleet shall comply with the fuel economy level, calculated according to Figure I and the appropriate values in Table V.

[43 FR 12014, Mar. 23, 1978, as amended at 45 FR 20878, Mar. 31, 1980; 47 FR 7250, Feb. 18, 1982; 47 FR 32721, July 29, 1982; 53 FR 11090, Apr. 5, 1988; 55 FR 12497, Apr. 4, 1990; 56 FR 13784, Apr. 4, 1991; 58 FR 18029, Apr. 7, 1993; 59 FR 16323, Apr. 6, 1994; 61 FR 14682, Apr. 3, 1996; 62 FR 15860, Apr. 3, 1997; 63 FR 16701, Apr. 6, 1998; 64 FR 16862, Apr. 7, 1999; 65 FR 17778, Apr. 5, 2000; 66 FR 17516, Apr. 2, 2001; 67 FR 16060, Apr. 4, 2002; 68 FR 16899, Apr. 7, 2003; 71 FR 17676, Apr. 6, 2006; 71 FR 19450, Apr. 14, 2006]

§ 533.6 Measurement and calculation procedures.

(a) Any reference to a class of light trucks manufactured by a manufacturer shall be deemed—

(1) To include all light trucks in that class manufactured by persons who control, are controlled by, or are under common control with, such manufacturer; and

(2) To exclude all light trucks in that class manufactured (within the meaning of paragraph (a)(1) of this section) during a model year by such manufacturer which are exported prior to the expiration of 30 days following the end of such model year.

(b) The average fuel economy of all nonpassenger automobiles that are manufactured by a manufacturer and are subject to § 533.5(b) or to § 533.5(c) shall be determined in accordance with procedures established by the Administrator of the Environmental Protection Agency under section 503(a)(2) of the Act.

[42 FR 13807, Mar. 14, 1977, as amended at 43 FR 12013, Mar. 23, 1978]

APPENDIX A—EXAMPLE OF CALCULATING COMPLIANCE UNDER § 533.5 PARAGRAPH (G)

Assume a hypothetical manufacturer (Manufacturer X) produces a fleet of light trucks in MY 2008 as follows:

Model	Fuel economy	Volume	Footprint (ft^2)
A	27.0	1,000	42.0
B	25.6	1,500	44.0
C	25.4	1,000	46.0
D	22.1	2,000	50.0
E	22.4	3,000	55.0
F	20.2	1,000	66.0

NOTE TO APPENDIX A TABLE 1. Manufacturer X's required corporate average fuel economy level under § 533.5(g) would be calculated by first determining the fuel economy target applicable to each vehicle as illustrated in ''Appendix A Figure 1:''

''APPENDIX A FIGURE 1''

Model	Footprint (ft^2)	MY 2008 fuel economy target (mpg)
A	42.0	26.20
B	44.0	25.50
C	46.0	24.80
D	50.0	23.30
E	55.0	21.70
F	66.0	20.30

NOTE TO APPENDIX A FIGURE 1. Accordingly, vehicle models A, B, C, D, E, and F would be compared to fuel economy values of 26.20, 25.50, 24.80, 23.30, 21.70, and 20.30 mpg, respectively. With the appropriate fuel economy targets calculated, Manufacturer X's required fuel economy would be calculated as illustrated in ''Appendix A Figure 2.''

Appendix A Figure 2

Manufacturer's Light Truck Production for Applicable Model Year

$$= \frac{\text{Model A Volume}}{\text{Model A Target}} + \frac{\text{Model B Volume}}{\text{Model B Target}} + \frac{\text{Model C Volume}}{\text{Model C Target}} + \frac{\text{Model D Volume}}{\text{Model D Target}} + \frac{\text{Model E Volume}}{\text{Model E Target}} + \frac{\text{Model F Volume}}{\text{Model F Target}}$$

$$= \frac{1{,}000}{26.20} + \frac{1{,}500}{25.50} + \frac{1{,}000}{24.80} + \frac{2{,}000}{23.30} + \frac{3{,}000}{21.70} + \frac{1{,}000}{20.30}$$

$$= 23.1 \text{ mpg}$$

Appendix A Figure 3

Manufacturer's Light Truck Production for Applicable Model Year

$$= \frac{9{,}500}{\frac{\text{Model A Volume}}{\text{Model A Fuel Econ.}} + \frac{\text{Model B Volume}}{\text{Model B Fuel Econ.}} + \frac{\text{Model C Volume}}{\text{Model C Fuel Econ.}} + \frac{\text{Model D Volume}}{\text{Model D Fuel Econ.}} + \frac{\text{Model E Volume}}{\text{Model E Fuel Econ.}} + \frac{\text{Model F Volume}}{\text{Model F Fuel Econ.}}}$$

$$= \frac{9{,}500}{\frac{1{,}000}{27.0} + \frac{1{,}500}{25.6} + \frac{1{,}000}{25.4} + \frac{2{,}000}{22.1} + \frac{3{,}000}{22.4} + \frac{1{,}000}{20.2}}$$

$$= 23.2 \text{ mpg}$$

NOTE TO APPENDIX A FIGURE 3. Since the actual average fuel economy of Manufacturer X's fleet is 23.2 mpg, as compared to its required fuel economy level of 23.1 mpg, Manufacturer X complies with the Reformed CAFE standard for MY 2008 as set forth in § 533.7(g).

[71 FR 17677, Apr. 6, 2006; 71 FR 19451, Apr. 14, 2006]

PART 534—RIGHTS AND RESPONSIBILITIES OF MANUFACTURERS IN THE CONTEXT OF CHANGES IN CORPORATE RELATIONSHIPS

Sec.

534.1 Scope.
534.2 Applicability.
534.3 Definitions.
534.4 Successors and predecessors.
534.5 Manufacturers within control relationships.
534.6 Reporting corporate transactions.
535.7 Situations not directly addressed by this part.

AUTHORITY: 49 U.S.C. 32901; delegation of authority at 49 CFR 1.50.

SOURCE: 69 FR 77671, Dec. 28, 2004, unless otherwise noted.

§ 534.1 Scope.

This part defines the rights and responsibilities of manufacturers in the context of changes in corporate relationships for purposes of the automotive fuel economy program established by 49 U.S.C. Chapter 329.

§ 534.2 Applicability.

This part applies to manufacturers of passenger automobiles and non-passenger automobiles.