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AUTOMOTIVE FUEL ECONOMY PROGRAM

ANNUAL UPDATE
CALENDAR YEAR 2002

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SECTION I: INTRODUCTION

The Automotive Fuel Economy Program Annual Update summarizes the fuel economy performance of the vehicle fleet and the activities of the National Highway Traffic Safety Administration (NHTSA) during 2002. Included in this report is a section summarizing rulemaking activities during 2002.

The Secretary of Transportation is required to administer a program for regulating the fuel economy of new passenger cars and light trucks in the United States market. The authority to administer the program was delegated by the Secretary to the Administrator of NHTSA, 49 C.F.R. 1.50(f).

NHTSA's responsibilities in the fuel economy area include:

- (1) establishing and amending average fuel economy standards for manufacturers of passenger cars and light trucks, as necessary;
- (2) promulgating regulations concerning procedures, definitions, and reports necessary to support the fuel economy standards;
- (3) considering petitions for exemption from established fuel economy standards by low volume manufacturers (those producing fewer than 10,000 passenger cars annually worldwide) and establishing alternative standards for them;
- (4) enforcing fuel economy standards and regulations; and
- (5) responding to petitions concerning domestic production by foreign manufacturers, and other matters.

Passenger car fuel economy standards were established by Congress for Model Year (MY) 1985 and thereafter at a level of 27.5 miles per gallon (mpg). NHTSA is authorized to amend the standard above or below that level. The agency has established light truck standards each year, but Congress mandated through the DOT Appropriations Acts for fiscal years 1996 through 2001, no increase from the MY 1996 value of 20.7 mpg for MYs 1998 through 2003. The Congressional freeze on CAFE standards was repealed in mid-December 2001. Given the short lead-time (CAFE standards must be set 18 months prior to the affected model year), in April 2002, the agency set the MY 2004 light truck standard at 20.7 mpg. All fuel economy standards through MY 2004 are listed in Table I-1.

Corporate Average Fuel Economy (CAFE) is the sales weighted average fuel economy, expressed in mpg, of a manufacturer's fleet of passenger cars or light trucks with a gross vehicle weight rating (GVWR) of 8,500 lbs. or less, manufactured for sale in the United States, for any given model year. Fuel economy is defined as the average mileage traveled by an automobile per gallon of gasoline (or equivalent amount of other fuel) consumed as measured in accordance with the testing and evaluation protocol set forth by Environmental Protection Agency (EPA).

Manufacturers perform their own fuel economy tests of new car models and submit the results to EPA. EPA is responsible for conducting its own tests or verifying the manufacturers' dynamometer tests. EPA also is responsible for compiling the production data from manufacturers' reports and furnishing CAFE results to NHTSA.

Fuel economy test data from the manufacturers and EPA serves as the starting point for both CAFE values and real world fuel economy projections. For CAFE, the test data is adjusted upward to account for any credits for dual fuel and dedicated alternative fuel vehicles, and for passenger cars only, is adjusted upward for credits available to manufacturers to account for test procedure changes since the CAFE program was established. This report presents CAFE values since they are used to determine manufacturer compliance with fuel economy standards.

The Federal government provides real world fuel economy projections to consumers in several ways: on new vehicle labels, in the *Fuel Economy Guide*, and on EPA and Department of Energy (DOE) websites. The *Fuel Economy Guide* is published and distributed by DOE based on EPA data. The *Fuel Economy Guide* lists the city and highway fuel economy estimates that are included on the Fuel Economy label on new vehicles. A downloadable version of the *Fuel Economy Guide* can be found at <http://www.fueleconomy.gov>. These estimates are derived from the same dynamometer test values used for CAFE calculation, mentioned above. EPA adjusts these laboratory test results to account for the difference between controlled laboratory conditions and actual driving on the road. The laboratory fuel economy results are adjusted downward to derive the estimates in the *Fuel Economy Guide* and on new passenger cars and light trucks labels. The city test value is lowered 10 percent and the highway test value is reduced 22 percent. Thus, the city and highway fuel economy estimates used to calculate CAFE differ from the numbers in the *Fuel Economy Guide* and on the new car and light truck window labels.

Model Year	Passenger Cars	Light Trucks ⁽¹⁾		
		Two-wheel Drive	Four-wheel Drive	Combined ^{(2), (3)}
1978	18.0 ⁽⁴⁾
1979	19.0 ⁽⁴⁾	17.2	15.8	...
1980	20.0 ⁽⁴⁾	16.0	14.0	... ⁽⁵⁾
1981	22.0	16.7 ⁽⁶⁾	15.0	... ⁽⁵⁾
1982	24.0	18.0	16.0	17.5
1983	26.0	19.5	17.5	19.0
1984	27.0	20.3	18.5	20.0
1985	27.5 ⁽⁴⁾	19.7 ⁽⁷⁾	18.9 ⁽⁷⁾	19.5 ⁽⁷⁾
1986	26.0 ⁽⁸⁾	20.5	19.5	20.0
1987	26.0 ⁽⁹⁾	21.0	19.5	20.5
1988	26.0 ⁽⁹⁾	21.0	19.5	20.5
1989	26.5 ⁽¹⁰⁾	21.5	19.0	20.5
1990	27.5 ⁽⁴⁾	20.5	19.0	20.0
1991	27.5 ⁽⁴⁾	20.7	19.1	20.2
1992	27.5 ⁽⁴⁾	20.2
1993	27.5 ⁽⁴⁾	20.4
1994	27.5 ⁽⁴⁾	20.5
1995	27.5 ⁽⁴⁾	20.6
1996	27.5 ⁽⁴⁾	20.7
1997	27.5 ⁽⁴⁾	20.7
1998	27.5 ⁽⁴⁾	20.7
1999	27.5 ⁽⁴⁾	20.7
2000	27.5 ⁽⁴⁾	20.7
2001	27.5 ⁽⁴⁾	20.7
2002	27.5 ⁽⁴⁾	20.7
2003	27.5 ⁽⁴⁾	20.7
2004	27.5 ⁽⁴⁾	20.7

1. Standards for MY 1979 light trucks were established for vehicles with a gross vehicle weight rating (GVWR) of 6,000 pounds or less. Standards for MY 1980 and beyond are for light trucks with a GVWR of 8,500 pounds or less.
2. For MY 1979, light truck manufacturers could comply separately with standards for four-wheel drive, general utility vehicles and all other light trucks, or combine their trucks into a single fleet and comply with the standard of 17.2 mpg.
3. For MYs 1982-1991, manufacturers could comply with the two-wheel and four-wheel drive standards or could combine all light trucks and comply with the combined standard.
4. Established by Congress in Title V of the Motor Vehicle Information and Cost Savings Act.
5. A manufacturer whose light truck fleet was powered exclusively by basic engines which were not also used in passenger cars could meet standards of 14 mpg and 14.5 mpg in MYs 1980 and 1981, respectively.
6. Revised in June 1979 from 18.0 mpg.
7. Revised in October 1984 from 21.6 mpg for two-wheel drive, 19.0 mpg for four-wheel drive, and 21.0 mpg for combined.
8. Revised in October 1985 from 27.5 mpg.
9. Revised in October 1986 from 27.5 mpg.
10. Revised in September 1988 from 27.5 mpg.

SECTION II: VEHICLE FUEL ECONOMY PERFORMANCE AND CHARACTERISTICS

A. Fuel Economy Performance by Manufacturer

The fuel economy achievements for domestic and foreign-based manufacturers in MY 2002 were updated to include final EPA calculations, where available, since the publication of the *Automotive Fuel Economy Program, Annual Update Calendar Year 2001*. These fuel economy achievements and current projected data for MY 2002 are listed in Tables II-1 and II-2.

Overall fleet fuel economy for passenger cars was 28.9 mpg in MY 2002, an increase of 0.1 mpg above the MY 2001 level. For MY 2002, CAFE values increased above MY 2001 levels for 11 of 22 passenger car manufacturers' fleets. (See Table II-1.) These 11 companies accounted for more than 57 percent of the total MY 2002 production. Manufacturers continued to introduce new technologies and more fuel-efficient models, and some larger, heavier, or more powerful less fuel-efficient models. For MY 2002, the overall domestic manufacturers' sales weighted passenger car fleet average CAFE was 29.0 mpg. For MY 2002, Ford, General Motors, and Nissan domestic sales weighted passenger car CAFE values rose 0.1 mpg, 0.3 mpg, and 1.0 mpg, respectively, from their MY 2001 levels, while both DaimlerChrysler and Honda domestic sales weighted passenger car CAFE values fell 0.3 mpg from their MY 2001 levels. Overall, the domestic manufacturers' combined sales weighted MY 2002 CAFE increased 0.3 mpg above the MY 2001 level.

Table II-1

PASSENGER CAR FUEL ECONOMY PERFORMANCE BY MANUFACTURER MODEL YEARS 2001 AND 2002		
MANUFACTURER	MODEL YEAR CAFE (MPG)	
	2001	2002
DOMESTIC		
DaimlerChrysler	27.9	27.6
Ford*	27.7	27.8
General Motors	28.3	28.6
Honda.....	32.7	32.4
Nissan	27.9	28.9
Quantum	30.2	...
Toyota** .....	...	33.6
Sales Weighted Average (Domestic)	28.7	29.0
IMPORT		
BMW	25.0	25.8
Daewoo	28.6	28.3
DaimlerChrysler	26.5	26.5
Fiat	13.7	15.1
Ford	27.9	28.1
General Motors	26.5	27.7
Honda	29.3	29.8
Hyundai	31.3	31.2
Kia	30.5	29.7
Lotus	20.8	20.8
Nissan	28.7	29.5
Porsche.....	23.7	23.9
Subaru.....	27.8	27.6
Suzuki	35.1	33.6
Toyota.....	30.6	29.3
Volkswagen	28.5	29.2
SALES WEIGHTED AVERAGE (IMPORT)	29.0	28.7
SALES WEIGHTED TOTAL FLEET AVERAGE	28.8	28.9
FUEL ECONOMY STANDARDS	27.5	27.5

* Ford domestic passenger car fleet CAFE level was 27.1 mpg, for MY 2002. This manufacturer earned CAFE incentives for the sale of alternative fuel vehicles. The incentives raised its CAFE value to the figure shown above.

**The 2001 Fuel Economy Report showed that Toyota had a domestic car fleet CAFE value of 34.2 mpg in 2001. This was based on mid-model year data. Originally, Toyota estimated that the Corolla, Solara, and Avalon would be domestic vehicles in the 2001 model year. During production, the ratio of foreign to domestic parts changed in these vehicles, and they were reclassified as import vehicles.

Table II-2

LIGHT TRUCK FUEL ECONOMY PERFORMANCE BY MANUFACTURER MODEL YEARS 2001 AND 2002		
MANUFACTURER	MODEL YEAR CAFE (MPG)	
	Combined	
	2001	2002
BMW	19.2	19.7
DaimlerChrysler*.....	20.8	21.2
Ford*	20.4	20.7
General Motors*.....	20.7	21.1
Honda	25.0	25.4
Hyundai	25.0	24.8
Isuzu	21.1	21.0
Kia	23.0	21.4
Nissan.....	20.7	20.7
Suzuki.....	22.1	21.8
Toyota.....	22.1	22.1
Volkswagen.....	20.4	20.6
SALES WEIGHTED TOTAL FLEET AVERAGE	20.9	21.3
FUEL ECONOMY STANDARDS	20.7	20.7

*The MY 2002 light truck fuel economy values for DaimlerChrysler, Ford, and General Motors light truck fleets were 20.1 mpg, 20.3 mpg, and 20.2 mpg, respectively. These manufacturers earned CAFE incentives for the sale of alternative fuel vehicles. These incentives raised their CAFE values to the figures shown above.

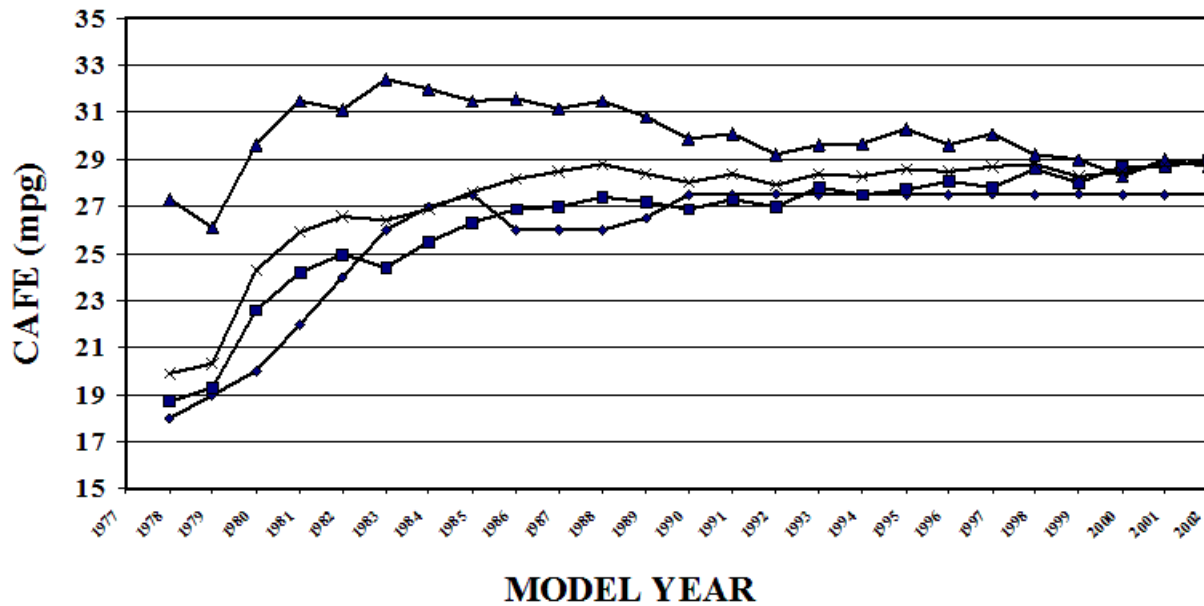
In MY 2002, the sales weighted fleet average CAFE for import passenger cars decreased by 0.3 mpg below the MY 2001 CAFE level to 28.7 mpg. Eight of the 16 import car manufacturers increased their CAFE values between MYs 2001 and 2002. Figure II-1 illustrates the changes in total new passenger car fleet CAFE from MY 1978 to MY 2002.

The total sales weighted light truck fleet CAFE increased 0.4 mpg above the MY 2001 CAFE level of 20.9 mpg (see Table II-2). For MY 2002, CAFE values increased above MY 2001 values for six of 12 light truck manufacturers' fleets. These six companies accounted for 83.3 percent of the total MY 2002 light truck production. Figure II-2 illustrates the trends in total light truck fleet CAFE from MY 1979 to MY 2002.

Five passenger car (BMW, DaimlerChrysler import, Fiat, Lotus, and Porsche) and two light truck manufacturers (BMW and Volkswagen) are projected to fail to achieve the levels of the MY 2002 CAFE standards. Some MY 2002 CAFE values may change when final figures are provided to NHTSA by EPA in 2003. In addition, several manufacturers are not expected to pay civil penalties because the credits they earned by exceeding the fuel economy standards in earlier years offset later shortfalls. Other manufacturers may file carryback plans to demonstrate that they anticipate earning credits in future model years to offset current deficits.

Figure II-1

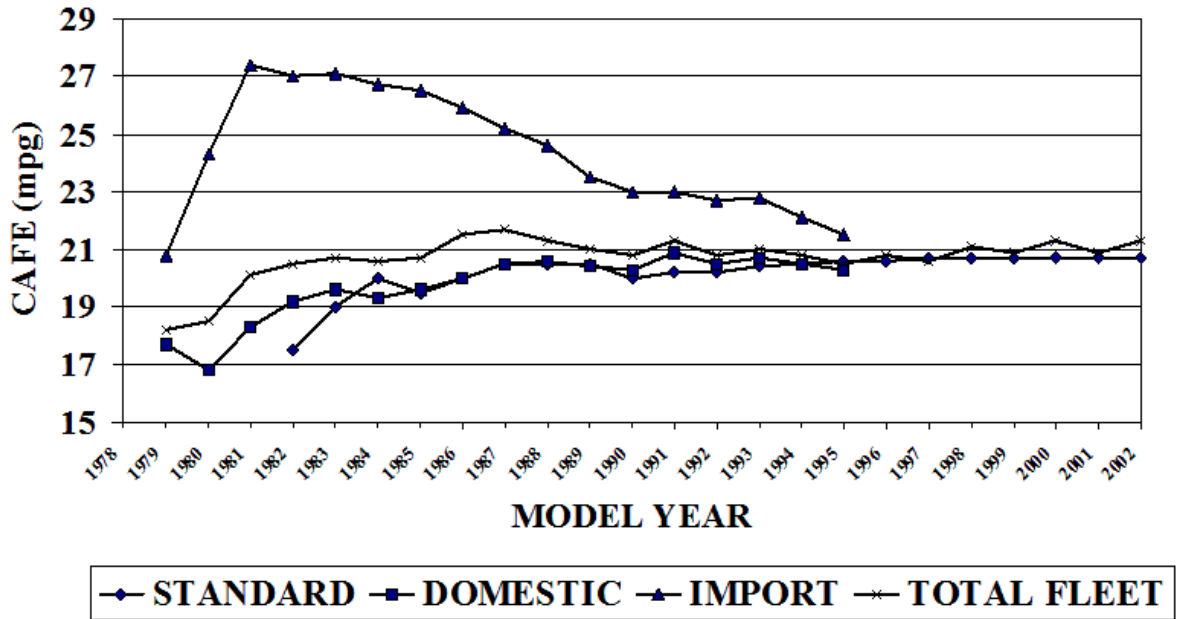
CAFE PERFORMANCE PASSENGER CARS



◆ STANDARD ■ DOMESTIC ▲ IMPORT × TOTAL FLEET

Figure II-2

CAFE PERFORMANCE LIGHT TRUCKS



CAFE levels may be impacted because of changes made to a manufacturer's vehicle fleet. Changes that occur such as an increase or decrease in vehicle weights, manufacturer's use of materials like high- and medium-strength steel, plastic and plastic composites, or aluminum to build its vehicles, market-mix shifts due to changes in consumer demand, and the use of advanced technology may potentially impact CAFE levels.

B. Characteristics of the MY 2002 Passenger Car Fleet

The characteristics of the MY 2002 passenger car fleet reflect a continuing trend toward satisfying consumer demand for heavier cars. (See Table II-3.) Compared with MY 2001, the average curb weight for MY 2002 decreased by 16 pounds for the domestic fleet and increased by 47 pounds for the import fleet. The average curb weight for the total fleet of passenger cars increased from 3,148 pounds in MY 2001 to 3,159 pounds in MY 2002, primarily because of the average curb weight increase for the import fleet. Average engine displacement decreased from 179 to 175 cubic inches for domestic passenger cars and increased from 148 to 152 cubic inches for import passenger cars from MY 2001 to MY 2002. Overall, the average engine displacement increased from 165 to 166 cubic inches. From MY 2001 to MY 2002, horsepower/100 pounds, a measure of vehicle performance, increased from 5.35 to 5.44 for domestic passenger cars and from 5.24 to 5.36 for import passenger cars. The total fleet average for passenger cars increased from 5.30 horsepower/100 pounds in MY 2001 to 5.41 in MY 2002.

The 0.3 mpg CAFE improvement for the MY 2002 domestic passenger car fleet may be attributed in part to increased use of automatic transmissions with four or more forward speeds.

Table II-3

PASSENGER CAR FLEET CHARACTERISTICS FOR MYs 2001 AND 2002						
CHARACTERISTICS	TOTAL FLEET		DOMESTIC FLEET		IMPORT FLEET	
	2001	2002	2001	2002	2001	2002
Fleet Average Fuel Economy, mpg	28.8	28.9	28.7	29.0	29.0	28.7
Fleet Average Curb Weight, lbs.	3148	3159	3167	3151	3124	3171
Fleet Average Equivalent Test Weight, lbs.	3445	3454	3461	3443	3426	3479
Fleet Average Engine Displacement, cu. in.	165	166	179	175	148	152
Fleet Average Horsepower/Weight ratio, HP/100 lbs.	5.30	5.41	5.35	5.44	5.24	5.36
% of Fleet	100	100	55.2	60.3	44.8	39.7
Segmentation by EPA Size Class, %						
Two-Seater	1.5	1.6	0.8	1.3	2.4	2.0
Minicompact	1.0	1.4	0.0	0.4	2.1	3.1
Subcompact*	8.1	8.3	8.0	8.1	8.3	8.6
Compact*	40.0	37.1	36.9	35.4	43.7	39.6
Mid-Size*	32.4	36.2	26.6	30.3	39.6	45.0
Large*	17.0	15.5	27.7	24.6	3.8	1.7
Diesel Engines	0.27	0.38	0.0	0.0	0.6	1.0
Turbo or Supercharged Engines	3.9	4.3	0.0	0.0	7.93	7.82
Fuel Injection	100	100	100	100	100	100
Front-Wheel Drive	84.5	83.8	89.9	91.1	78.0	72.7
Automatic Transmissions	87.4	87.9	92.0	91.5	81.7	82.5
Automatic Transmissions with Lockup Clutches	99.3	99.6	99.6	100.0	98.9	98.8
Automatic Transmissions with Four or more Forward Speeds	95.5	98.4	94.3	98.4	97.2	98.3
% Electric	0.0	0.0	0.0	0.0	0.0	0.0

*Includes associated station wagons.

The size/class breakdown shows an increased trend primarily toward two-seater, minicompact, subcompact, and mid-size passenger cars with the reduction of compact and large passenger cars for the overall fleet. The size/class mix in the domestic fleet showed an increase in two-seater, minicompact, subcompact, and mid-size passenger cars and a decrease in compact and large passenger cars. The size/class mix in the import fleet showed an increase in minicompact, subcompact, and mid-size passenger cars and a decrease in two-seater, compact, and large passenger cars. The domestic share of the passenger car market increased 5.1 percentage points in MY 2002 to over 60 percent of the market.

The import fleet rose above its MY 2001 level in the share of diesel engines. Diesel engines were offered on certain Mercedes and Volkswagen models during MY 2002. The share of diesel engines in the import fleet increased from 0.6 percent in MY 2001 to 1.0 percent in MY 2002.

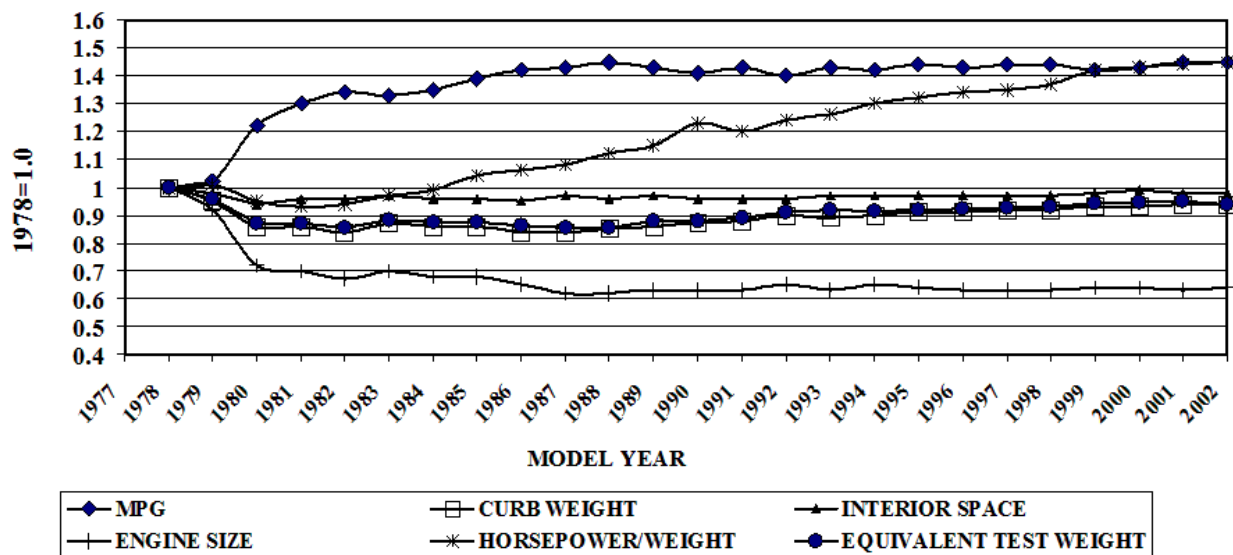
Passenger car fleet average characteristics have changed significantly since MY 1978 (the first year of fuel economy standards). (See Table II-4.) After an initial trend in weight loss (from MY 1978 to MY 1982, the average passenger car fleet curb weight decreased from 3,349 to 2,808 pounds), the curb weight stabilized between 2,800 and 3,161 pounds. However, since MY 1993, the average passenger car fleet curb weight has steadily increased and has reached a level only exceeded by the initial two years of the CAFE program. The average horsepower to weight ratio (hp/100 lb.) of the passenger car fleet has increased each year since 1981. The average horsepower to weight ratio for MY 2002 passenger car was 5.41, compared to the average of 3.43 in MY 1981. Table II-4 shows that the MY 2002 passenger car fleet has nearly equal interior volume and more than 45 percent better CAFE than the MY 1978 fleet. (See Figure II-3.)

Table II-4

New Passenger Car Fleet Average Characteristics Model Years 1978-2002						
Model Year	Fuel Economy (mpg)	Curb Weight (lbs.)	Equivalent Test Weight (lbs.)	Interior Space (cu. ft.)	Engine Size (cu. in.)	Horsepower/Curb Weight (hp/100 lb.)
1978	19.9	3349	3627	112	260	3.68
1979	20.3	3180	3481	110	238	3.72
1980	24.3	2867	3162	105	187	3.51
1981	25.9	2883	3154	108	182	3.43
1982	26.6	2808	3098	107	173	3.47
1983	26.4	2908	3204	109	182	3.57
1984	26.9	2878	3170	108	178	3.66
1985	27.6	2867	3177	108	177	3.84
1986	28.2	2821	3127	106	169	3.89
1987	28.5	2805	3100	109	162	3.98
1988	28.8	2831	3100	108	161	4.11
1989	28.4	2879	3181	109	163	4.22
1990	28.0	2906	3192	108	162	4.53
1991	28.4	2934	3229	108	164	4.42
1992	27.9	3007	3307	109	169	4.56
1993	28.4	2980	3328	109	166	4.64
1994	28.3	3012	3318	109	169	4.79
1995	28.6	3047	3335	109	166	4.87
1996	28.5	3049	3352	109	165	4.93
1997	28.7	3068	3362	109	163	4.94
1998	28.8	3075	3372	109	161	5.05
1999	28.3	3116	3418	110	166	5.21
2000	28.5	3126	3433	111	166	5.25
2001	28.8	3148	3445	110	165	5.30
2002	28.9	3159	3454	111	166	5.41

Figure II-3

PASSENGER CAR FLEET AVERAGE CHARACTERISTICS



C. Characteristics of the MY 2002 Light Truck Fleet

The characteristics of the MY 2002 light truck fleet are shown in Table II-5. Unlike passenger cars, light truck manufacturers are not required to divide their fleets into domestic and import fleets. For comparison purposes, Table II-5 subdivides the light truck fleet into two-wheel drive and four-wheel drive classifications.

The MY 2002 average equivalent test weight of the total light truck fleet increased by 97 pounds over that for MY 2001. The average CAFE of the fleet increased by 0.4 mpg to 21.3 mpg. Diesel engine usage rose in light trucks to 1.97 percent in MY 2002. The share of the MY 2002 two-wheel drive fleet decreased by 2.9 percentage points below the MY 2001 level of 57.0 percent; thus the share of the MY 2002 four-wheel drive fleet increased by 2.9 percentage points above the MY 2001 level of 43.0 percent.

Light truck fuel economy levels increased from 18.5 mpg in MY 1980 to 21.7 mpg in MY 1987. From 1988 until 2002, fuel economy stabilized at around 21.0 mpg (see Table II-6). Light truck production increased from 1.9 million units in MY 1980 to 7.9 million units in MY 2002. Light trucks comprised 49 percent of the total light duty vehicle fleet production in MY 2002, mpg above the MY 2001 level.

The size/class breakdown shows an increased trend primarily toward special purpose (both two-wheel drive and four-wheel drive) vehicles, with a reduction of passenger van, cargo van, small pickup, and large pickup vehicles for the overall fleet. The size/class mix in the two-wheel drive showed an increase in special purpose vehicles and a decrease in passenger van, cargo van, and small pickup, and large pickup vehicles. The size/class mix in the four-wheel drive showed an increase in special purpose vehicles and a decrease in large pickup vehicles, while passenger van and cargo van vehicles remained stable.

Table II-5

LIGHT TRUCK FLEET CHARACTERISTICS FOR MYs 2001 AND 2002						
CHARACTERISTICS	TOTAL FLEET		Two-wheel Drive		Four-wheel Drive	
	2001	2002	2001	2002	2001	2002
Fleet Average Fuel Economy, mpg	20.9	21.3	22.1	22.6	19.3	20.0
Fleet Average Equivalent Test Weight, lbs.	4538	4635	4387	4483	4737	4815
Fleet Average Engine Displacement, cu. in.	242	242	232	232	255	254
Fleet Average Horsepower/ Weight ratio, HP/100 lbs.	4.40	4.44	4.43	4.47	4.36	4.39
% of Fleet	100	100	57.0	54.1	43.0	45.9
% of Fleet from Foreign-based Manufacturers	22.9	19.8	18.4	16.9	23.9	19.4
Segmentation by Type, %						
Passenger Van	15.1	13.6	25.8	24.4	0.9	0.9
Cargo Van	1.8	1.6	3.1	2.8	0.1	0.1
Small Pickup	2.2	1.5	3.8	2.8	0.0	0.0
Large Pickup						
Two-Wheel Drive	19.6	17.2	34.5	31.9	0.0	0.0
Four-Wheel Drive	13.8	12.5	0.0	0.0	32.0	27.2
Special Purpose						
Two-Wheel Drive	18.7	20.6	32.8	38.1	0.0	0.0
Four-Wheel Drive	28.8	33.0	0.0	0.0	67.0	71.8
Diesel Engines	0.06	1.97	0.0	0.0	0.13	4.3
Turbo/Supercharged Engines	0.33	0.48	0.0	0.1	0.76	0.93
Fuel Injection	100	100	100	100	100	100
Automatic Transmissions	93.5	94.6	92.8	94.2	94.5	95.0
Automatic Transmissions with Lockup Clutches	99.7	99.7	99.4	99.5	100	100
Automatic Transmissions with Four or More Forward Speeds	99.0	99.4	99.0	99.5	99.0	99.1
% Electric	0.00	0.00	0.00	0.01	0.00	0.00

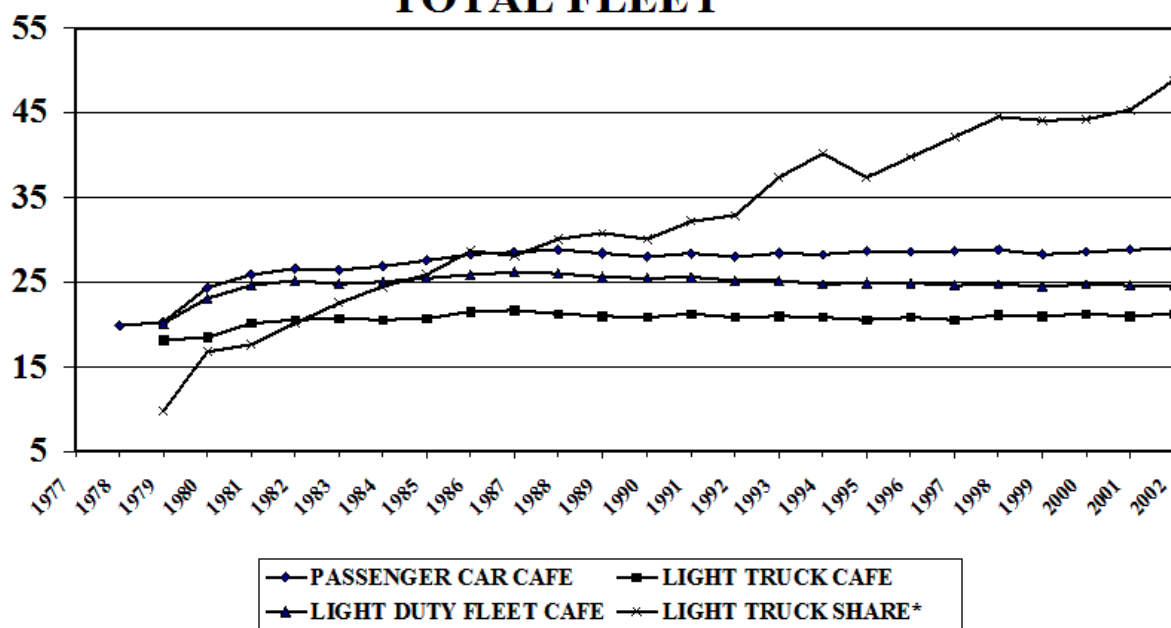
D. Passenger Car and Light Truck Fleet Economy Averages

Passenger car CAFE increased substantially between 1978 and 1988, from 19.9 mpg to 28.8 mpg, but has remained relatively constant since (see Figure II-4 and Table II-6). Light truck CAFE increased from 18.5 mpg in 1980 to a high of 21.7 mpg in 1987. Since 1987, the light truck average has never been greater than 21.3 mpg.

Figure II-4 illustrates an increase in the light duty fleet (combined passenger cars and light trucks) average CAFE through MY 1987, followed by a gradual decline. (Also, see Table II-6.) The shift to light trucks for general transportation has had a significant effect on fuel consumption, and may continue to do so in the future if sales of light trucks remain relatively constant or increase. In fact, due largely to the increasing proportion of light trucks in the fleet, the overall light vehicle fleet CAFE average was 24.6 mpg in MY 2002. The all-time high CAFE level for the overall light vehicle fleet was 26.2 mpg in MY 1987.

Figure II-4

CAFE PERFORMANCE TOTAL FLEET



*The light truck share represents the percentage of the total light duty fleet.

Table II-6

DOMESTIC AND IMPORT PASSENGER CAR AND LIGHT TRUCK FUEL ECONOMY AVERAGES FOR MODEL YEARS 1978-2002 (in MPG)										
Model Year	Domestic			Import			All Cars	All Light Trucks	Total Fleet	Light Truck Share of Fleet (%)
	Car	Light Truck	Combined	Car	Light Truck*	Combined				
1978	18.7	...	...	27.3	...	...	19.9	...	...	...
1979	19.3	17.7	19.1	26.1	20.8	25.5	20.3	18.2	20.1	9.8
1980	22.6	16.8	21.4	29.6	24.3	28.6	24.3	18.5	23.1	16.7
1981	24.2	18.3	22.9	31.5	27.4	30.7	25.9	20.1	24.6	17.6
1982	25.0	19.2	23.5	31.1	27.0	30.4	26.6	20.5	25.1	20.1
1983	24.4	19.6	23.0	32.4	27.1	31.5	26.4	20.7	24.8	22.5
1984	25.5	19.3	23.6	32.0	26.7	30.6	26.9	20.6	25.0	24.4
1985	26.3	19.6	24.0	31.5	26.5	30.3	27.6	20.7	25.4	25.9
1986	26.9	20.0	24.4	31.6	25.9	29.8	28.2	21.5	25.9	28.6
1987	27.0	20.5	24.6	31.2	25.2	29.6	28.5	21.7	26.2	28.1
1988	27.4	20.6	24.5	31.5	24.6	30.0	28.8	21.3	26.0	30.1
1989	27.2	20.4	24.2	30.8	23.5	29.2	28.4	21.0	25.6	30.8
1990	26.9	20.3	23.9	29.9	23.0	28.5	28.0	20.8	25.4	30.1
1991	27.3	20.9	24.4	30.1	23.0	28.4	28.4	21.3	25.6	32.2
1992	27.0	20.5	23.8	29.2	22.7	27.9	27.9	20.8	25.1	32.9
1993	27.8	20.7	24.2	29.6	22.8	28.1	28.4	21.0	25.2	37.4
1994	27.5	20.5	23.5	29.7	22.0	27.8	28.3	20.8	24.7	40.2
1995	27.7	20.3	23.8	30.3	21.5	27.9	28.6	20.5	24.9	37.4
1996	28.1	20.5	24.1	29.6	22.2	27.7	28.5	20.8	24.9	39.7
1997	27.8	20.2	23.3	30.1	22.1	27.5	28.7	20.6	24.6	42.1
1998	28.6	20.5	23.3	29.2	22.9	27.6	28.8	21.1	24.7	44.5
1999	28.0	...	...	29.0	...	...	28.3	20.9	24.5	44.0
2000	28.7	...	...	28.3	...	...	28.5	21.3	24.8	44.2
2001	28.7	...	...	29.0	...	...	28.8	20.9	24.6	45.4
2002	29.0	...	...	28.7	...	...	28.9	21.3	24.6	48.9

*Light trucks from foreign-based manufacturers. NOTE: Beginning with MY 1999, the agency ceased categorizing the total light truck fleet by either domestic or import fleets.

E. Domestic and Import Fleet Fuel Economy Averages

Domestic and import passenger car fleet average CAFE values have improved since MY 1978, although the increase is far more dramatic for the domestic fleet. In MY 2002, the domestic passenger car fleet average CAFE improved to an all-time high of 29.0 mpg. The import passenger car fleet average CAFE was 28.7 mpg. Compared with MY 1978, this reflects an increase of 10.3 mpg for domestic cars and 1.4 mpg for import cars.

The disparity between the average CAFEs of the import and domestic manufacturers has declined in recent years as domestic manufacturers have maintained relatively stable CAFE values and vehicle offerings, while the import manufacturers have introduced new vehicle offerings that feature larger passenger cars and light trucks to the market.

SECTION III: 2002 ACTIVITIES

A. Light Truck CAFE Standards

On April 4, 2002, NHTSA published a final rule establishing a standard of 20.7 mpg for light trucks for MY 2004 (67 FR 16052). Under Federal law, NHTSA had to issue a final rule setting a MY 2004 light truck CAFE standard by April 1, 2002 (by statute, CAFE standards must be issued at least 18 months before the beginning of the affected MY). Because the Congressional freeze was not lifted until mid-December 2001, the agency lacked sufficient time to complete its research and lay the factual and analytical foundation needed to change the standard from the MY 2003 level of 20.7 mpg.

In December 2002, NHTSA proposed new CAFE standards for MYs 2005 through 2007 light trucks. The proposed standards were 21.0 mpg for MY 2005, 21.6 mpg for MY 2006, and 22.2 mpg for MY 2007.

B. Low Volume Petitions

49 U.S.C. 32902(d) provides that a low volume manufacturer of passenger cars may be exempted from the generally applicable passenger car fuel economy standards, if these standards are more stringent than the maximum feasible average fuel economy for that manufacturer, and if NHTSA establishes an alternative standard for that manufacturer at its maximum feasible level. A low volume manufacturer is one that manufactured fewer than 10,000 passenger cars

worldwide, in the model year for which the exemption is sought (the affected model year) and in the second model year preceding that model year. In 2002, NHTSA did not act on any low volume petitions.

C. Enforcement

49 U.S.C. 32912(b) imposes a civil penalty of \$5.50 for each tenth of a mpg by which a manufacturer's CAFE level falls short of the standard, multiplied by the total number of passenger automobiles or light trucks produced by the manufacturer in that model year. Credits earned for exceeding the standard, in any of the three model years immediately before or subsequent to the model years in question, can be used to offset the penalty.

Table III-1 shows CAFE fines paid by manufacturers in calendar year 2002. In calendar year 2002, manufacturers paid civil penalties totaling \$52,976,726 for failing to comply with the CAFE standards of 27.5 mpg for passenger cars and 20.7 mpg for light trucks in MYs 2000 and 2001.

Table III-1

CAFE FINES COLLECTED DURING CALENDAR YEAR 2002			
Model Year	Manufacturer	Amount Fined	Date Paid
2000	Lotus Cars USA, Inc.	\$43,758	04/02
	Mercedes-Benz of North America, Inc.	18,959,292	09/02
2001	Porsche Cars North America, Inc.	4,997,190	08/02
	Volkswagen of America, Inc. ¹	173,118	08/02
	Fiat Motors of North America	817,443	09/02
	BMW of North America	27,985,925	10/02

¹Volkswagen light truck fleet

D. Carryback Plans

49 U.S.C. 32903 allows an automobile manufacturer to earn fuel economy credits during any model year in which the manufacturer's fleet exceeds the established CAFE standard. The amount of credits a manufacturer earns is determined by multiplying the number of tenths of a mile per gallon by which the average fuel economy of the manufacturer's fleet in the model year exceeds the standard by the total number of vehicles in the manufacturer's fleet for the model year.

Already earned CAFE credits are carried forward by the agency (with affected manufacturers given an opportunity to comment on the agency's allocation of credits), and distributed to any of the three succeeding model years in which the manufacturer's fleet falls below the CAFE standard. For example, credits earned in MY 1999 may be used to offset deficiencies in MYs 2000, 2001, and/or 2002. A manufacturer also may submit to the agency a carryback plan to demonstrate that it will earn sufficient credits within the following three model years, which can be allocated to offset penalties in the model year involved.

Ford submitted a carryback plan dated April 2, 2002 to the agency for its MY 2001 light truck fleet CAFE compliance, using credits it projects to earn in MYs 2003 and 2004 to offset its MY 2001 shortfall liability. Ford's carryback plan was approved December 5, 2002. BMW also submitted a carryback plan dated October 10, 2002 to the agency for its MY 2001 light truck

fleet CAFE compliance, using credits it projects to earn in MY 2004 to offset its MY 2001 shortfall liability. NHTSA is reviewing this carryback plan and will respond in 2003.

E. Manufacturing Incentives for Alternative Fuel Vehicles

The Alternative Motor Fuels Act of 1988 (AMFA) provides CAFE incentives for the manufacture of vehicles that use alcohol or natural gas fuels, either exclusively or as an alternate fuel in conjunction with gasoline or diesel fuel. AMFA instructed that NHTSA either extend the incentive program for dual fueled vehicles for up to four years beyond MY 2004, with a maximum allowable increase in average fuel economy per manufacturer of 0.9 miles per gallon, or issue a *Federal Register* explaining why the incentive program was not extended. On March 11, 2002, NHTSA published a notice of proposed rulemaking that solicited comments on the agency's proposal to extend the dual-fuel incentives program by four years, i.e., through the end of the 2008 MY (67 FR 10873). The agency will issue a final rule in 2003.