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## ABSTRACT

This paper is primarily a printed listing of the National Highway Traffic Safety Administration's (NHTSA) Light Vehicle Inertial Parameter Database. This database contains measured vehicle inertial parameters from SAE Paper 930897, "Measured Vehicle Inertial Parameters - NHTSA's Data Through September 1992" (1), as well as parameters obtained by NHTSA since 1992.

The proceeding paper contained 414 entries. This paper contains 82 new entries, for a total of 496. The majority of the entries contain complete vehicle inertial parameters, some of the entries contain tilt table results only, and some entries contain both inertia and tilt table results.

This paper provides a brief discussion of the accuracy of inertial measurements. Also included are selected graphs of quantities listed in the database for some of the 1998 model year vehicles tested.

## INTRODUCTION

Knowledge of a vehicle's inertial parameters is essential for safety research and accident reconstruction. Some inertial parameters, such as a vehicle's wheelbase and track width, can be measured using only minimal equipment (a tape measure). The determination of a vehicle's weight and lateral and longitudinal coordinates of its center of gravity needs special, but widely available, equipment (high capacity scales). Unfortunately, accurate measurement of several important parameters (vehicle center of gravity height, and pitch, roll, and yaw moments of inertia about the vehicle's center of gravity) requires highly specialized test devices.

Inertia and tilt table results obtained prior to September 1992 were measured with NHTSA's Inertial Parameter Measurement Device (IPMD) (2) and NHTSA's Tilt Table (3), respectively, both which are housed at NHTSA's Vehicle Research and Test Center. Between September 1992 and September 1996, no new entries were made to the database. Inertia and tilt table results obtained from September 1996 to November 1998 were measured with S.E.A., Inc.'s Vehicle Inertia Measurement Facility (VIMF) (4,5) and S.E.A., Inc.'s Tilt Table, respectively.

## LIGHT VEHICLE INERTIAL PARAMETER DATABASE

Due to the difficulty of obtaining such inertial parameters as center of gravity height, pitch, roll, and yaw moments of inertia, and tilt table ratio, NHTSA decided to place its measured values for these parameters into a database. The purpose of the predecessor paper (1) was to make the content of the Light Vehicle Inertial Parameter Database available to other people and organizations that need to know values of inertial parameters. The purpose of the current paper is same.

The timing of the current paper is based on the fact that NHTSA revived its research efforts in the area of light vehicle rollover. As part of this recent research, NHTSA collected a significant amount of inertia and tilt table data on late model year vehicles. NHTSA's VRTC performed field tests on 12 vehicles (including three passenger cars, three vans, three pickup trucks, and three sport utility vehicles) as part of their rollover research activity. Complete inertia and tilt table results for these vehicles loaded with a driver, and with a driver and VRTC outriggers, are contained in this paper and in (6). NHTSA also procured

complete inertia measurements for 32, 1998 model year vehicles (including eight passenger cars, six vans, eight pickup trucks, and ten sport utility vehicles) that were mostly a subset of 1998 vehicles subject to New Car Assessment Program (NCAP) testing. All 32 vehicles were tested with a driver only and 20 of the 32 vehicles were also tested at their Gross Vehicle Weight Rating (GVWR). For the GVWR tests all vehicles were loaded with up to seven occupants in all seating positions which had original equipment seat belts. Ballast was then added to the roof rack (if present on the test vehicle) and to the cargo areas to bring the vehicles up to GVWR. The test protocol specified that no front or rear axle weight ratings should be exceeded and no ballast should be added outside of a vehicle's cargo area, so some tests were done at somewhat less than GVWR. Details of the test vehicles and loading conditions can be found in NHTSA Docket 3206 (DOT Docket Management System number) (7). This paper also contains data on several other vehicles NHTSA had tested in the past two years as part of their ongoing crash avoidance research.

## ACCURACY OF THE INERTIA MEASUREMENTS

While the meanings of most of the column headings in the Light Vehicle Inertial Parameter Database listing are self explanatory, one, IPMD Ver., is not. This column is used to indicate the configuration or model of the test device used to perform a particular test.

Since its completion in 1987, NHTSA's IPMD has undergone several modifications that have increased its accuracy. A number 1 in this column indicates that, when this test was performed, the IPMD was in its original, as-built configuration. A 2 shows that one major set of improvements had been made to the IPMD before this test, etc. A VIMF indicates that the inertia measurements were obtained using S.E.A., Inc.'s VIMF. A TT means that this test was only performed on the Tilt Table and not on the IPMD or VIMF.

Table 1 provides a summary of center of gravity (C.G.) height measurement error bounds for the VIMF and various IPMD configurations.

Table 1. Inertia Test Device/Configuration

IPMD Ver.	Date	C.G. Error Bounds
VIMF	Aug. 1995 to present	$\pm 0.5\%$ C.G. Value
5	3/14/91 to Sept. 1992	$\pm 6$ mm
3 and 4	5/18/89 to 3/13/91	$\pm 19$ mm
2	2/04/88 to 4/17/89	$\pm 25$ mm
1	3/10/87 to 2/3/88	$> \pm 25$ mm

For the IPMD and VIMF, the errors in the measurements of pitch and roll moments of inertia are strongly a function of the errors in the measurement of C.G. height. The error bounds for pitch, roll, and yaw inertia measurements for the IPMD Version 5 are in the range of 3%

(1,8,9). For the older IPMD versions, the pitch and roll inertia measurement errors are progressively greater, while the yaw inertia error bounds are believed to be in the range of 3-5%. The quoted error bounds for the VIMF are 1% for pitch and yaw inertia, 2% for roll inertia, and 6.8 kg-m<sup>2</sup> for roll/yaw product of inertia (4).

## OVERVIEW OF 1998 NCAP VEHICLE RESULTS

Table 2 lists 32 vehicles, referred to here as "1998 NCAP" vehicles, tested by NHTSA; and this section contains graphs and discussion concerning the results of inertia measurements of these vehicles. (Four of these vehicles, the Chevrolet Astro, Mazda Protégé, Mazda MPV, and Toyota Tercel, were not actually tested in the 1998 NCAP program.) All of the passenger cars, pickup trucks, and vans listed in Table 2 were two-wheel-drive vehicles; while all of the sport utility vehicles listed were four-wheel-drive vehicles.

These vehicles covered a wide range of vehicle classes and weights. Passenger cars, vans, light trucks, and sport utility vehicles were tested with vehicle masses ranging from roughly 1050 to 2700 kg. In addition to the measurements contained in the database, Critical Sliding Velocity (CSV) and the ratio of the distance from the C.G. to the front wheels over the vehicle wheelbase (a/L) were calculated. All of the vehicles were measured with a driver only, and 20 were also measured at GVWR, and they are indicated on Table 2.

The Static Stability Factor (SSF) values for the driver only loading condition are plotted as a function of vehicle mass in Figure 1. As a vehicle class, the passenger cars clearly have the highest SSF. The SUV class had the lowest SSF values, but some of the SUV models had SSF values similar to those found for light trucks and vans.

The Critical Sliding Velocity (CSV) values are shown in Figure 2. CSV values are not provided in the database, but the calculation of CSV is provided in Table 3. As was the case for SSF, the passenger cars had the highest CSV values while the SUV class had the lowest values. Some of the light trucks had CSV values similar to those found for the lower end of SUV class.

The SSF is plotted versus CSV for the driver only configuration in Figure 3. As would be expected given the information in Figures 1 and 2, the passenger cars are clumped at the upper right portion of the graph. Most of the SUV's are in the lower left, but some are in the mid-range of the light truck and van values. A linear fit of this data produces a slope of 0.070 and an r<sup>2</sup> value of 0.91.

The C.G. height over roof height ratio is plotted as a function of mass in Figure 4. The results in Figure 4 do not discriminate between vehicle classes or mass. One of the SUV's had a relatively high ratio. Excluding this one point, all the vehicle classes had a similar range of values.

Table 2. 1998 NCAP Vehicles Tested

Make	Model	GVWR
<b>Passenger Cars</b>		
Honda	Civic	
Mazda	Protégé	X
Nissan	Sentra	
Saturn	SL	
Toyota	Tercel	X
Dodge	Neon	X
Chevrolet	Lumina	X
Mercury	Tracer	
<b>Pickup Trucks</b>		
Ford	Ranger	
Ford	F150	
Chevrolet	C1500	X
Dodge	1500	
Chevrolet	S10	X
Toyota	Tacoma	X
Dodge	Dakota	X
Nissan	Frontier	
<b>Sport Utility Vehicles</b>		
Ford	Explorer	X
Ford	Expedition	X
Jeep	Grand Cherokee	X
Chevrolet	Blazer	X
Toyota	4Runner	X
Dodge	Durango	X
Chevrolet	Suburban	
Isuzu	Rodeo	
Nissan	Pathfinder	
Honda	CR-V	X
<b>Vans</b>		
Plymouth	Grand Voyager	
Ford	Windstar	X
Dodge	Caravan	X
Chevrolet	Venture	X
Mazda	MPV	X
Chevrolet	Astro	X

The effect of loading on SSF is shown in Figures 5a and 5b (passenger cars and vans are plotted in Figure 5a while light trucks and SUV's are plotted in Figure 5b). The passenger car SSF values were minimally effected by loading the vehicles to GVWR. One passenger car SSF value was unchanged when the vehicle was fully loaded, while another actually increased. All of the light truck, van, and SUV SSF values decreased with loading to GVWR. The amount of decrease ranged from 0.02 to 0.15 for these three vehicle classes.

The ratio a/L is plotted as a function of mass for the driver only and GVWR cases in Figures 6a and 6b. Loading the vehicles to GVWR always causes this ratio to increase, i.e. the longitudinal C.G. location always moves rearward. The a/L ratio was found to be lowest for the passenger cars in both the driver only and GVWR conditions. One

van had driver only and GVWR values in the range of those found for passenger cars. One truck had a driver only value that was only slightly above and a GVWR value within the range of those found for passenger cars. The Ford Expedition had the largest change in value (1.2 m/m), but the Mazda Protégé, a passenger car, had a relatively large change in value also (1.0 m/m).

Figures 7 through 10 provide normalized roll, pitch, yaw, and roll/yaw inertia values, respectively, as a function of vehicle mass for the driver only condition. The roll inertia was normalized by vehicle mass times track width/2 squared, the pitch and yaw inertias were normalized by vehicle mass times wheelbase/2 squared, and the roll/yaw product of inertia was normalized by vehicle mass times track width times wheelbase divided by four. The values were normalized to provide general ranges of values for the vehicle classes. As a class, vans have the highest normalized roll inertia. Trucks in the driver only condition have the smallest normalized pitch and yaw inertias as a class. The trucks in the driver only condition also have negative roll/yaw products of inertia, while the other vehicles are positive valued. This is because the mass loading in an unladen pickup truck is generally high in the front and low in the rear.

Table 3. Equations for CSV, SSF, and TTR

<b>Critical Sliding Velocity, CSV</b>	
$\text{Critical Sliding Velocity} = \sqrt{\frac{2gI_{\text{ox}}}{MH^2} \left( \sqrt{\frac{T^2}{4} + H^2} - H \right)}$	
where,	
<i>g</i>	gravitational constant
<i>M</i>	vehicle mass
<i>T</i>	vehicle track width
<i>H</i>	vehicle center of gravity height
<i>I<sub>ox</sub></i>	roll moment of inertia of the vehicle about a pivot point at the outside of the tires, computed using the parallel axis theorem
$I_{\text{ox}} = I_{\text{xx}} + M \left( \frac{T^2}{4} + H^2 \right)$	
where,	
<i>I<sub>xx</sub></i>	roll moment of inertia of the vehicle about the vehicle center of gravity
<b>Static Stability Factor, SSF</b>	
$\text{Static Stability Factor} = \frac{T}{2H}$	
<b>Tilt Table Ratio, TTR</b>	
$\text{Tilt Table Ratio} = \tan(\text{Tilt Table Angle})$	

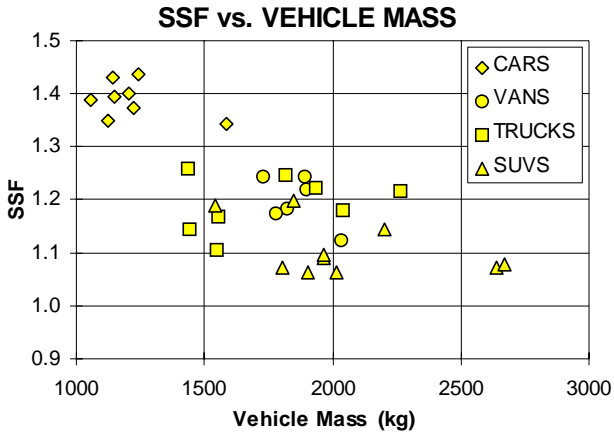


Figure 1. Driver Only SSF vs. Vehicle Mass

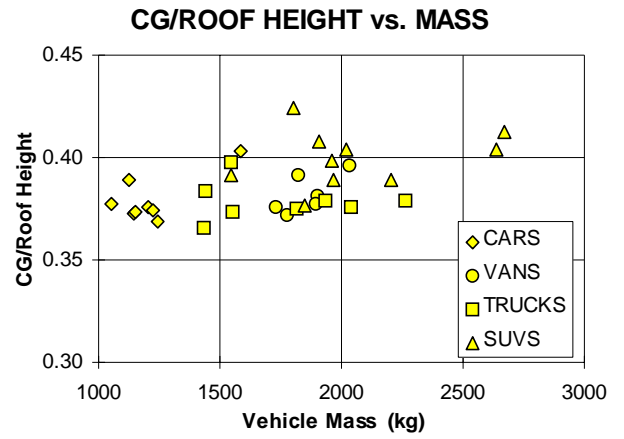


Figure 4. Driver Only CG/Roof Height

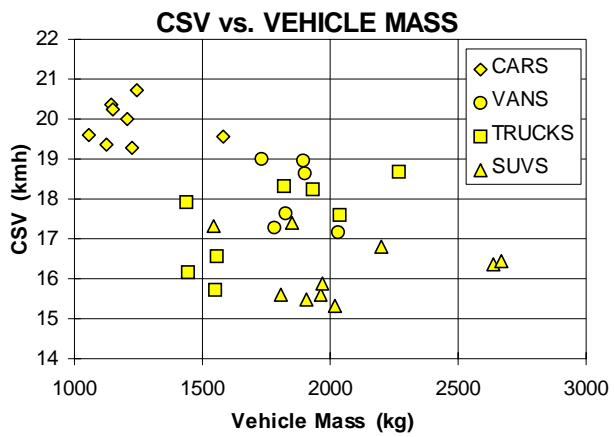
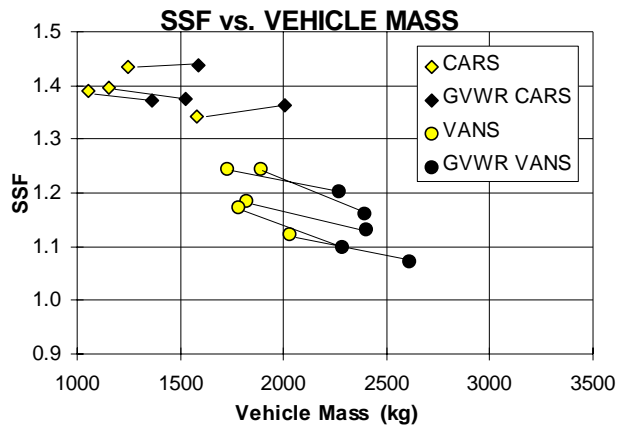


Figure 2. Driver Only CSV vs. Vehicle Mass



(a) Driver Only and GVWR SSF vs. Vehicle Mass

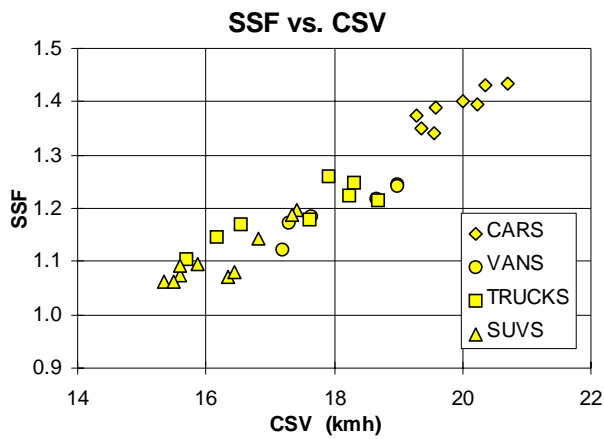
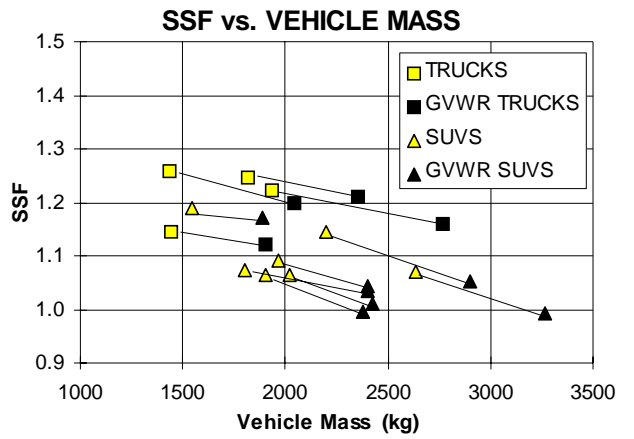
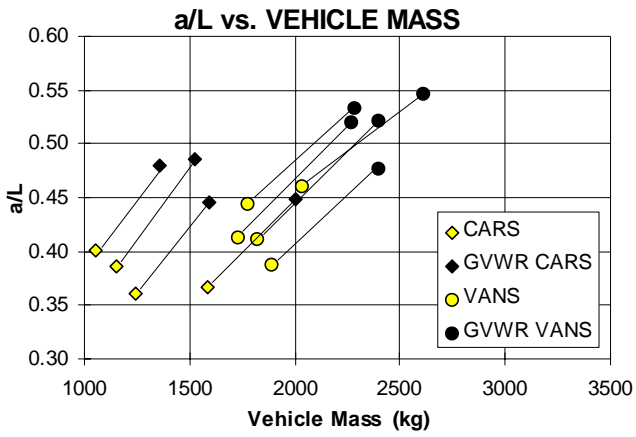


Figure 3. Driver Only SSF vs. CSV

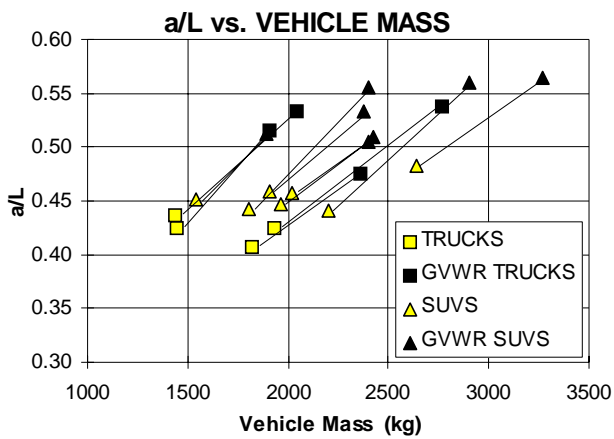


(b) Driver Only and GVWR SSF vs. Vehicle Mass

Figure 5.



(a) Driver Only and GVWR a/L vs. Vehicle Mass



(b) Driver Only and GVWR a/L vs. Vehicle Mass

Figure 6.

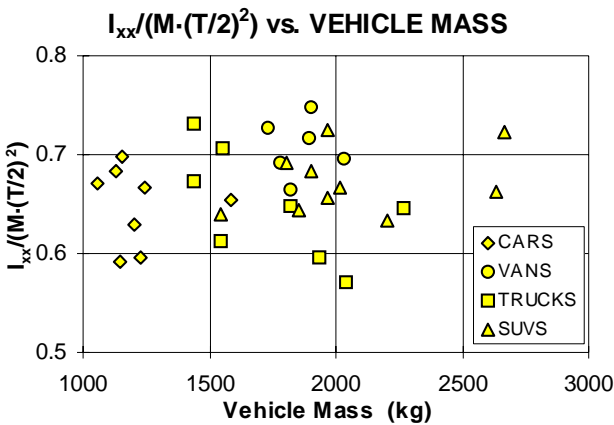


Figure 7. Driver Only Normalized Roll Inertia

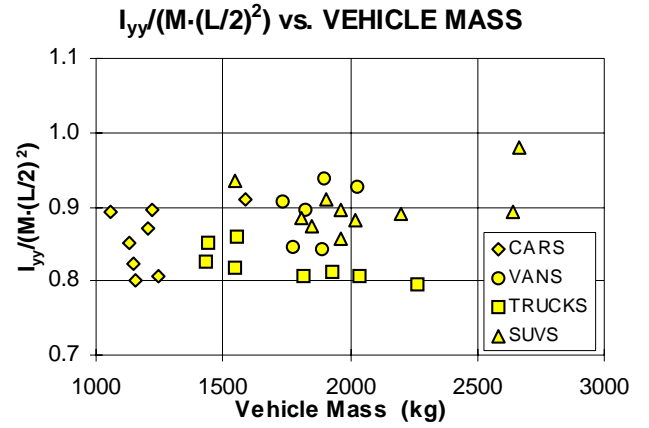


Figure 8. Driver Only Normalized Pitch Inertia

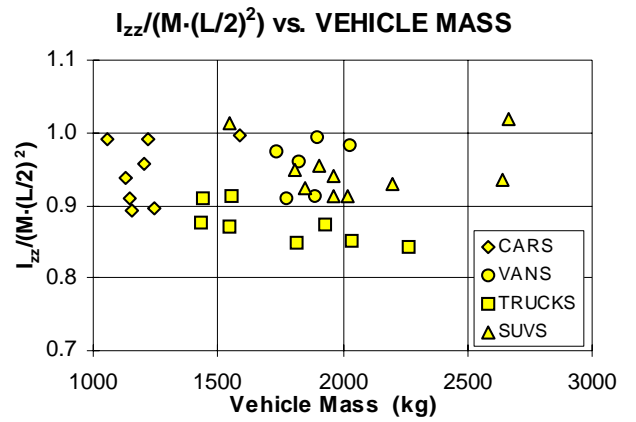


Figure 9. Driver Only Normalized Yaw Inertia

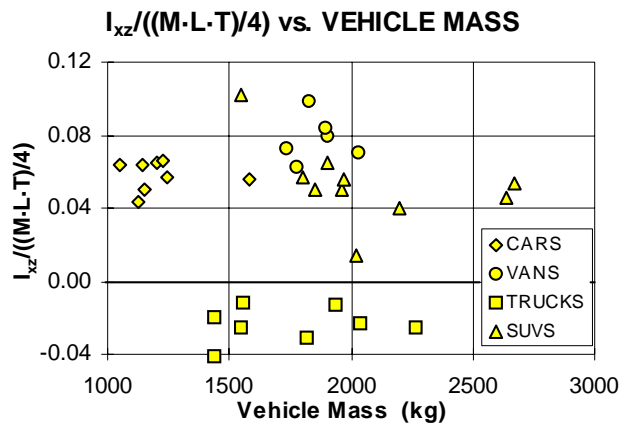


Figure 10. Driver Only Normalized Roll/Yaw Product of Inertia

## OVERVIEW OF NHTSA ROLLOVER TEST VEHICLES

The Tilt Table Ratio (TTR), CSV (CSV in mph/10), and SSF values for the 12 NHTSA rollover test vehicles are given in Table 4 and shown in Figure 11. Seven of the vehicles listed in Table 4 are common to Table 2. All of the vehicles are 1998 models with the exception of the Ford Ranger, which is a 1997. The 1997 Ford Ranger is a four-wheel-drive vehicle. The vehicles are sorted first by vehicle class and then by vehicle mass (lightest vehicle first when reading from left to right). All three ratios have the same trend. A linear regression of SSF versus TTR produces a slope of 1.09 and an  $r^2$  value of 0.90. A linear regression of SSF versus CSV produces an  $r^2$  value of 0.85. This is similar to that found earlier for all 32 vehicles (0.90).

Table 4. TTR, CSV/10, and SSF for 12 NHTSA Rollover Test Vehicles

	TTR	CSV/10 (mph)	SSF
98 Metro	1.13	1.11	1.29
98 Neon	1.27	1.29	1.44
98 Lumina	1.12	1.22	1.34
98 S10	1.05	1.00	1.14
97 Ranger	0.92	0.95	1.07
98 C1500	1.07	1.13	1.22
98 Tracker	1.01	0.99	1.13
98 Explorer	0.90	0.95	1.06
98 Tahoe	0.97	1.06	1.12
98 Caravan	1.02	1.18	1.24
98 Astro	0.97	1.07	1.12
98 Club Wagon	0.99	1.08	1.11

## INERTIAL PARAMETERS DATABASE

A two-part listing of the inertial parameter database follows. Part 1 contains vehicle description and configuration data plus wheelbase, track width, roof height, weight, and test comments. Part 2 contains vehicle description and configuration data, C.G. position, moments of inertia, roll/yaw products of inertia, tilt table ratio and static stability factor data. Electronic copies of the Light Vehicle Inertial Parameter Database, which also contain Vehicle Identification Numbers (VIN) for the vehicles tested, may be obtained by contacting:

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 NHTSA/VRTC  
 P.O. Box B37  
 East Liberty, OH 43319-0337

Phone: 937-666-4511  
 Fax: 937-666-3590  
 e-mail: riley.garrott@nhtsa.dot.gov

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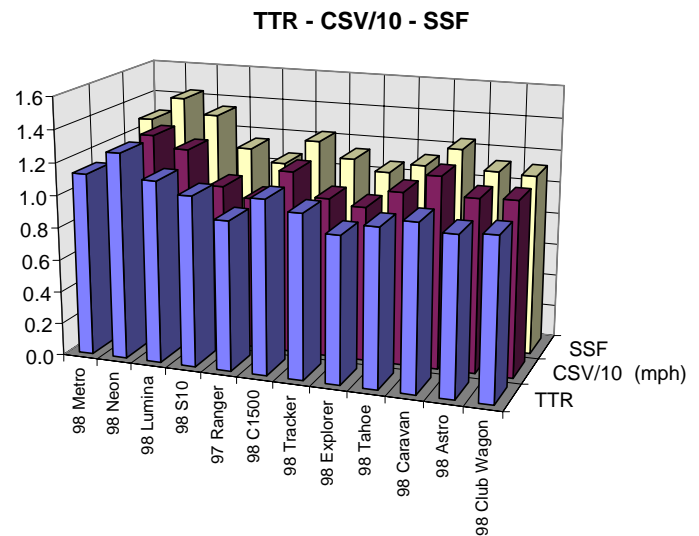


Figure 11. TTR, CSV, and SSF for 12 Rollover Test Vehicles



# Vehicle Research and Test Center

# National Highway Traffic Safety Administration

Model Year	Vehicle Make	Vehicle Model	Veh. No.	IPMD Ver.	Veh. Type	Occu- pants	Ballast (N)	Drive Axle	Wheel- base (in)	Front (in)	Rear (in)	Roof Height (in)	Weight (N)	Fuel Tank	Comments
1984	Audi	Quattro 4000	V210	2	4S	0	0	4	2,520	1,389	1,405	1,35	12,161	F	
1980	BMW	320i	N/A	TT	2S	1	0	R	2,591	1,384	1,384	1,36	11,766	F	
1986	BMW	V107	N/A	1	2S	0	0	R	2,570	1,402	1,394	1,37	12,277	F	
1986	Buick	Century Estate	V383	5	SW	1	0	F	2,667	1,505	1,454	1,38	14,897	F	
1986	Buick	Electra	V106H	2	4S	0	0	F	2,814	1,532	1,519	1,38	14,777	F	
1986	Buick	Electra	V106B	1	4S	0	0	F	2,814	1,532	1,519	1,38	14,679	N/A	
1986	Buick	Electra	V106I	2	4S	0	0	F	2,814	1,532	1,519	1,38	14,635	F	
1986	Buick	Electra	V106A	1	4S	0	0	F	2,814	1,532	1,519	1,38	14,724	F	
1986	Buick	Electra	V106E	1	4S	0	0	F	2,814	1,532	1,519	1,38	14,679	F	
1986	Buick	Electra	V106G	1	4S	0	0	F	2,814	1,532	1,519	1,38	14,777	F	
1980	Buick	LeSabre S/C	N/A	TT	2S	1	0	R	2,946	1,568	1,544	1,43	17,415	F	
1986	Buick	SkyLark	V101	1	4S	0	0	F	2,616	1,412	1,402	1,33	12,379	F	
1991	Chevrolet	1500 Silverado	T325	5	PU	0	0	R	3,340	1,585	1,621	1,77	18,598	F	
1979	Chevrolet	20 Beauville	N/A	TT	VN	1	0	R	3,162	1,758	1,702	2,02	22,286	F	
1998	Chevrolet	Astro	493	VIMF	VN	1	0	R	2,821	1,643	1,659	1,86	19,921	F	
1998	Chevrolet	Astro	491	VIMF	VN	7	1300	R	2,821	1,643	1,659	1,80	25,625	F	GVWR
1998	Chevrolet	Astro Van	V139C	1	VN	N/A	0	R	2,837	1,651	1,664	1,82	20,380	F	VRTC Outriggers
1987	Chevrolet	Astro Van	V139A	1	VN	0	0	R	2,837	1,651	1,664	1,87	23,451	F	
1987	Chevrolet	Astro Van	V139B	1	VN	0	0	R	2,837	1,651	1,664	1,85	19,701	F	
1988	Chevrolet	Astro Van	V238A	4	VN	N/A	0	R	2,845	1,638	1,657	1,87	17,637	F	
1988	Chevrolet	Astro Van	V238C	4	VN	1	0	R	2,845	1,638	1,657	1,87	17,188	E	
1988	Chevrolet	Astro Van	V238B	4	VN	6	0	R	2,845	1,638	1,657	1,83	21,325	F	
1998	Chevrolet	Blazer	444	VIMF	MP	1	0	4	2,718	1,445	1,402	1,67	19,257	F	GVWR - including 445 N on Roof Rack
1998	Chevrolet	Blazer	539	VIMF	MP	5	1330	4	2,705	1,448	1,402	1,67	23,546	F	
1982	Chevrolet	C-10 Blazer	V211	2	MP	0	0	R	2,705	1,679	1,618	1,77	18,353	F	
1988	Chevrolet	C-10 pickup	V155	1	PU	0	0	R	3,353	1,651	1,607	1,75	18,371	F	
1988	Chevrolet	C-10 pickup	T209A	2	PU	0	0	R	2,985	1,618	1,646	1,77	18,180	E	
1987	Chevrolet	C-15 pickup	V142B	1	PU	N/A	0	R	3,353	1,588	1,613	1,73	20,591	F	
1981	Chevrolet	C-15 pickup	V142A	1	PU	0	0	R	3,353	1,588	1,613	1,76	18,198	F	
1981	Chevrolet	C-20 pickup	V384B	5	PU	1	0	R	3,327	1,676	1,670	1,82	21,983	F	
1981	Chevrolet	C-20 pickup	V384A	TT	PU	1	0	R	3,340	1,689	1,676	1,82	21,707	F	V8 engine
1998	Chevrolet	C1500	510	VIMF	PU	1	0	R	3,340	1,610	1,646	1,76	19,577	F	GVWR
1998	Chevrolet	C1500	509	VIMF	PU	3	6709	R	3,340	1,610	1,646	1,69	21,136	F	VRTC Outriggers
1983	Chevrolet	Caprice	V105	1	4S	0	0	R	2,934	1,562	1,543	1,46	15,186	F	
1984	Chevrolet	Caprice Classic	V387	5	SW	1	0	R	2,972	1,575	1,626	1,50	19,403	F	
1983	Chevrolet	Cavalier	V381	5	SW	1	0	F	2,578	1,410	1,403	1,40	12,313	F	
1986	Chevrolet	Cavalier	N/A	TT	4S	1	0	F	2,591	1,410	1,403	1,38	12,099	F	
1983	Chevrolet	Chevette Scooter	N/A	TT	3H	1	0	R	2,413	1,295	1,308	1,33	9,786	F	
1978	Chevrolet	K-10 Blazer	V196	2	MP	0	0	4	2,705	1,740	1,651	1,86	22,165	F	
1982	Chevrolet	K-20 pickup	V149	1	PU	0	0	4	3,337	1,740	1,670	1,86	21,854	F	
1985	Chevrolet	K-20 pickup	V220	2	PU	0	0	4	3,327	1,727	1,671	1,88	25,043	F	Dual 37 gal fuel tanks
1985	Chevrolet	K-5 Blazer	N/A	TT	MP	1	0	4	2,692	1,753	1,664	1,89	22,286	F	
1991	Chevrolet	K1500 pickup	V328B	4	PU	3	0	4	3,004	1,613	1,615	1,80	21,076	F	
1991	Chevrolet	K1500 pickup	V328A	4	PU	1	0	4	3,004	1,613	1,615	1,82	19,648	F	
1998	Chevrolet	Lumina	466	VIMF	4S	1	0	F	2,736	1,511	1,501	1,39	15,534	F	GVWR
1998	Chevrolet	Lumina	537	VIMF	4S	6	449	F	2,736	1,511	1,501	1,37	19,661	F	VRTC Outriggers
1998	Chevrolet	Lumina	465	VIMF	4S	1	0	F	2,736	1,511	1,501	1,39	16,055	F	
1990	Chevrolet	Lumina APV	V331B	5	VN	7	0	F	2,794	1,492	1,549	1,62	21,351	F	
1990	Chevrolet	Lumina APV	V331C	5	VN	0	0	F	2,794	1,492	1,549	1,69	16,174	F	
1990	Chevrolet	Lumina APV	V331E	5	VN	2	0	F	2,794	1,492	1,549	1,68	16,957	F	"Cargo version" (bench seats removed)
1990	Chevrolet	Lumina APV	V331A	5	VN	1	0	F	2,794	1,492	1,549	1,68	16,921	F	
1990	Chevrolet	Lumina APV	V331F	5	VN	2	4226	F	2,794	1,492	1,549	1,63	21,120	F	"Cargo version"; GVWR on floor

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Model Year	Vehicle Make	Vehicle Model	Vehicle No.	IPMD Ver.	Veh. Type	Occu- pants	Ballast (N)	Drive Axle	Wheel- base (m)	Front (m)	Track Width (m)	Roof Height (m)	Weight (N)	Fuel Tank	Comments
1990	Chevrolet	Lumina APV	V331D	5	VN	1	0	F	2.794	1.492	1.549	1.63	16209	F	"Cargo version" (bench seats removed)
1990	Chevrolet	Lumina APV	V331H	5	VN	0	0	F	2.794	1.492	1.549	1.68	15444	F	"Cargo version" (bench seats removed)
1990	Chevrolet	Lumina APV	V331G	5	VN	2	4226	F	2.794	1.492	1.549	1.63	21098	F	"Cargo version", GVWR in cargo area
1995	Chevrolet	Lumina LS	361	VIMF	4S	0	0	F	2.731	1.506	1.300	1.42	15635	F	
1981	Chevrolet	Luv	V208	2	4U	0	0	R	3.002	1.372	1.359	1.49	12615	F	Diesel engine (2.2 L)
1998	Chevrolet	Metro	505	VIMF	2S	1	0	F	2.365	1.387	1.359	1.40	8627	F	
1998	Chevrolet	Metro	504	VIMF	2S	1	0	F	2.365	1.387	1.359	1.40	9237	F	VRTC Outriggers
1983	Chevrolet	S-10 Blazer	V150	1	MP	0	0	R	2.543	1.372	1.372	1.61	13656	F	
1983	Chevrolet	S-10 Blazer	N/A	TT	MP	4	2224	R	2.565	1.391	1.397	1.64	19368	I/2	Ballast to GVWR
1983	Chevrolet	S-10 Blazer	N/A	TT	MP	1	0	R	2.565	1.391	1.397	1.64	15302	F	
1984	Chevrolet	S-10 Blazer	V194	2	MP	0	0	4	2.540	1.435	1.402	1.65	15591	F	
1984	Chevrolet	S-10 Blazer	V195	2	MP	0	0	4	2.540	1.372	1.377	1.64	14305	F	
1989	Chevrolet	S-10 Blazer	V339	5	MP	1	0	4	2.565	1.448	1.403	1.65	17553	F	
1992	Chevrolet	S-10 Blazer	V501	5	MP	0	0	4	2.558	1.438	1.400	1.67	16957	F	
1986	Chevrolet	S-10 pickup	V197	2	PU	0	0	R	2.985	1.397	1.384	1.54	14902	F	No tailgate; fiberglass cap
1986	Chevrolet	S-10 pickup	N/A	TT	PU	1	0	R	2.997	1.379	1.379	1.56	11783	F	
1986	Chevrolet	S-10 pickup	N/A	TT	PU	1	0	R	2.997	1.379	1.384	1.54	14902	F	
1991	Chevrolet	S-10 Tahoe	T322	5	PU	0	0	R	2.997	1.377	1.378	1.56	14056	F	Long bed
1992	Chevrolet	S-10 pickup	T506	5	PU	0	0	4	2.758	1.440	1.397	1.61	14386	F	
1986	Chevrolet	S-10 Tahoe	N/A	TT	PU	1	0	4	3.137	1.448	1.397	1.61	16903	F	
1986	Chevrolet	S-10 Tahoe	V128B	1	PU	N/A	LiLd	4	3.124	1.448	1.397	1.59	17957	F	
1987	Chevrolet	S-10 Tahoe	V128C	1	PU	N/A	GVWR	4	3.124	1.448	1.397	1.53	22579	F	
1987	Chevrolet	S-10 Tahoe	V128A	1	PU	0	0	4	3.124	1.448	1.397	1.61	15747	F	
1998	Chevrolet	S10	457	VIMF	PU	1	0	R	2.750	1.379	1.387	1.57	14144	F	
1998	Chevrolet	S10	536	VIMF	PU	3	3065	R	2.750	1.379	1.387	1.54	18684	F	GVWR
1998	Chevrolet	S10	456	VIMF	PU	1	0	R	2.750	1.379	1.387	1.57	14666	F	VRTC Outriggers
1992	Chevrolet	Sportside K-10 pickup	T505	5	PU	0	0	4	2.985	1.616	1.619	1.85	19995	F	Z71 off-road package
1998	Chevrolet	Suburban	447	VIMF	MP	1	0	4	3.339	1.623	1.623	1.82	26163	F	
1998	Chevrolet	Tahoe	477	VIMF	MP	1	0	4	2.977	1.626	1.621	1.83	24887	F	
1998	Chevrolet	Tahoe	476	VIMF	MP	1	0	4	2.977	1.626	1.621	1.83	25524	F	VRTC Outriggers
1998	Chevrolet	Tracker	526	VIMF	MP	1	0	4	2.200	1.387	1.397	1.66	11702	F	
1998	Chevrolet	Tracker	525	VIMF	MP	1	0	4	2.200	1.387	1.397	1.66	12323	F	VRTC Outriggers
1998	Chevrolet	Venture	534	VIMF	MP	1	0	F	3.047	1.560	1.603	1.71	17886	F	
1998	Chevrolet	Venture	535	VIMF	VN	7	1255	F	3.047	1.560	1.603	1.64	23543	F	GVWR - Including 445 N on Roof Rack
1985	Chrysler	LeBaron	V156	1	4S	0	0	F	2.623	1.448	1.435	1.39	12144	F	
1987	Chrysler	LeBaron	V136	1	2S	0	0	F	2.550	1.463	1.463	1.32	11966	F	
1979	Datsun	210	V212	2	SW	0	0	R	2.337	1.341	1.306	1.33	10066	F	
1979	Datsun	280ZX	V193	2	3H	0	0	R	2.327	1.394	1.394	1.26	12704	F	
1981	Datsun	510	N/A	TT	SW	1	0	R	2.413	1.334	1.334	1.38	11521	F	
1974	Datsun	B210	V222	2	3H	0	0	R	2.344	1.321	1.285	1.30	9275	F	
1981	Datsun	pickup	V200	2	PU	0	0	R	2.565	1.313	1.283	1.53	11379	F	
1998	Dodge	458	VIMF	VIMF	PU	1	0	R	3.518	1.687	1.699	1.84	22224	F	
1998	Dodge	Caravan	517	VIMF	VN	1	0	F	2.885	1.595	1.631	1.72	16975	F	GVWR
1998	Dodge	Caravan	518	VIMF	VN	7	863	F	2.885	1.595	1.631	1.66	22242	F	VRTC Outriggers
1998	Dodge	Caravan	516	VIMF	VN	1	0	F	2.845	1.524	1.562	1.67	15182	F	
1987	Dodge	Caravan	V141A	1	VN	0	0	F	2.845	1.524	1.562	1.61	17522	F	
1987	Dodge	Caravan	V141C	1	VN	N/A	GVWR	F	2.845	1.524	1.562	1.65	17121	F	
1987	Dodge	Caravan	V141B	1	VN	N/A	LiLd	F	2.845	1.524	1.562	1.61	121618	F	
1988	Dodge	Caravan	T187B	2	VN	1	0	F	2.845	1.524	1.577	1.68	15231	E	
1988	Dodge	Caravan	V177	2	VN	0	0	F	2.845	1.524	1.575	1.68	15035	F	
1990	Dodge	Caravan	V247	4	VN	0	0	F	3.026	1.524	1.575	1.68	15507	F	
1991	Dodge	Caravan	V392	5	VN	1	0	F	2.845	1.524	1.575	1.66	16361	F	Baseline K25 model, 3.0 V6 engine
1991	Dodge	Caravan	V391	5	VN	1	0	F	2.845	1.524	1.575	1.68	16365	F	Baseline H25 model, 3.0 V6 engine
1991	Dodge	Caravan	V390	5	VN	1	0	F	2.858	1.524	1.575	1.68	16334	F	Baseline H25 model, 3.0 V6 engine
1992	Dodge	Caravan	V374	5	VN	1	0	F	2.845	1.524	1.581	1.68	16409	F	

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1992	Dodge	Caravan	V399	5	VN	1	0	F	2.858	1.518	1.575	1.70	14750	F	Cargo van H11 model, 2.5 L4 engine
1992	Dodge	Caravan	V394	5	VN	1	0	F	2.870	1.524	1.575	1.68	17197	F	Loaded LE H55 model, 3.3 V6 engine
1992	Dodge	Caravan	V395	5	VN	1	0	F	2.870	1.524	1.575	1.68	16227	F	Stripped H25 model, 2.5 L4 engine
1989	Dodge	Caravan C/V	T235A	3	VN	1	0	F	2.847	1.516	1.577	1.68	15622	E	Van conversion, Mark III
1989	Dodge	Caravan C/V	N/A	TT	VN	1	0	F	3.023	1.524	1.581	1.70	17615	E	
1989	Dodge	Colt	T233B	3	3H	1	0	F	2.383	1.435	1.422	1.36	10774	E	
1998	Dodge	Dakota	521	VIMF	PU	1	0	R	3.326	1.524	1.560	1.65	17832	F	
1998	Dodge	Dakota	522	VIMF	PU	5	2344	R	3.326	1.524	1.560	1.61	23132	F	GVWR
1987	Dodge	Dakota	V114B	1	PU	N/A	GVWR	R	2.845	1.499	1.518	1.55	18104	F	
1987	Dodge	Dakota	V114C	1	PU	N/A	LtLd	R	2.845	1.499	1.518	1.57	14679	F	
1987	Dodge	Dakota	V114A	1	PU	0	0	R	2.845	1.499	1.518	1.65	12544	F	
1991	Dodge	Dakota	T508	5	PU	0	0	F	3.147	1.549	1.511	1.71	17375	F	
1992	Dodge	Dakota	T510	5	PU	0	0	R	3.327	1.489	1.511	1.69	17112	F	
1978	Dodge	Diplomat	V202	2	4S	0	0	R	2.860	1.542	1.483	1.45	16178	F	Extended cab
1998	Dodge	Durango	498	VIMF	MP	1	0	4	2.936	1.547	1.575	1.75	21590	F	GVWR - Including 445 N on Roof Rack
1998	Dodge	Durango	V337	5	VIMF	MP	7	2478	4	1.547	1.575	1.70	28470	F	
1989	Dodge	Dynasty LE	499	5	4S	1	0	F	2.659	1.461	1.461	1.40	15297	F	
1985	Dodge	Lancer	V170	2	5H	0	0	F	2.619	1.467	1.457	1.39	12099	F	
1998	Dodge	Neon	496	VIMF	4S	1	0	F	2.642	1.458	1.455	1.38	12199	F	
1998	Dodge	Neon	497	VIMF	4S	5	437	F	2.642	1.458	1.455	1.33	15592	F	GVWR
1998	Dodge	Neon	495	VIMF	4S	1	0	F	2.642	1.458	1.455	1.38	12763	F	VRTC Outriggers
1983	Dodge	Omni	N/A	4	5H	1	0	F	2.515	1.435	1.410	1.38	10382	F	
1983	Dodge	Omni	N/A	4	5H	1	0	F	2.515	1.435	1.410	1.40	10031	E	
1983	Dodge	Omni	N/A	4	5H	2	0	F	2.515	1.435	1.410	1.37	11081	F	
1983	Dodge	Omni	N/A	4	5H	4	0	F	2.515	1.435	1.410	1.34	12495	F	
1987	Dodge	Raider	V144	1	MP	0	0	4	2.350	1.372	1.384	1.85	14946	F	Ballast to GVW on floor
1989	Dodge	Raider	V332C	5	MP	4	2335	4	2.356	1.410	1.422	1.77	21569	F	Ballast to GVW at cargo centroid
1989	Dodge	Raider	V332B	5	MP	4	2335	4	2.356	1.410	1.422	1.77	21569	F	Ballast to GVW at cargo centroid
1989	Dodge	Raider	V332D	5	MP	4	2335	4	2.356	1.410	1.422	1.83	17037	F	
1989	Dodge	Raider	V332A	5	MP	1	0	4	2.356	1.410	1.422	1.76	15800	F	Ballast to GVW on floor
1981	Dodge	Ram	V206	2	PU	0	0	R	3.327	1.659	1.615	1.76	15800	F	
1987	Dodge	Ram B-150	V333A	5	VN	1	0	R	2.781	1.727	1.657	2.00	20088	F	
1987	Dodge	Ram B-150	V333C	5	VN	8	1557	R	2.781	1.727	1.657	1.95	26747	F	
1987	Dodge	Ram B-150	V333B	5	VN	8	1557	R	2.781	1.727	1.657	1.97	25204	F	
1987	Dodge	Ram B-150	V333D	5	VN	8	1557	R	2.781	1.727	1.657	1.95	26747	F	Ballast to GVW at cargo centroid
1991	Dodge	Ram D-150	V338D	5	PU	3	4226	R	3.327	1.702	1.638	1.74	24470	F	Ballast to GVW at cargo centroid
1991	Dodge	Ram D-150	V338B	5	PU	3	0	R	3.327	1.702	1.638	1.76	20110	F	
1991	Dodge	Ram D-150	V338A	5	PU	1	0	R	3.327	1.702	1.638	1.77	18674	F	
1991	Dodge	Ram D-150	V338C	5	PU	3	4226	R	3.327	1.702	1.638	1.74	24470	F	Ballast to GVW on floor
1991	Dodge	Ramcharger	V334D	5	MP	5	1112	4	2.699	1.715	1.645	1.85	26676	F	Ballast to GVW at cargo centroid
1991	Dodge	Ramcharger	V334A	5	MP	1	0	4	2.699	1.715	1.645	1.87	22673	F	Ballast to GVW at cargo centroid
1991	Dodge	Ramcharger	V334C	5	MP	5	1112	4	2.699	1.715	1.645	1.85	26676	F	Ballast to GVW on floor
1991	Dodge	Ramcharger	V334B	5	MP	5	0	4	2.699	1.715	1.645	1.86	25555	F	Ballast to GVW on floor
1988	Ford	Aerostar	V169	2	VN	0	0	R	3.016	1.561	1.527	1.83	15747	F	
1989	Ford	Aerostar	N/A	TT	VN	7	890	R	3.023	1.562	1.524	1.83	21863	I/2	Ballast to GVWR
1991	Ford	Aerostar	T507	5	VN	0	0	R	3.018	1.557	1.524	1.84	17517	F	
1992	Ford	Aerostar	T519	5	VN	0	0	R	3.023	1.560	1.527	1.84	17828	F	
1986	Ford	Aerostar XL	V380	5	VN	1	0	R	3.010	1.524	1.524	1.82	16779	F	
1989	Ford	Aerostar XL	N/A	TT	VN	1	0	R	3.023	1.549	1.524	1.84	17081	F	
1992	Ford	Aerostar XL	V192	5	VN	0	0	4	3.025	1.557	1.633	1.86	18642	F	Extended length
1978	Ford	Bronco	T518	5	MP	0	0	4	2.642	1.651	1.633	1.84	23727	F	
1988	Ford	Bronco Custom	N/A	TT	MP	1	0	4	2.673	1.676	1.651	1.89	21485	F	
1984	Ford	Bronco II	395	VIMF	MP	1	0	4	2.398	1.435	1.448	1.75	15706	F	
1984	Ford	Bronco II	396	VIMF	MP	1	0	4	2.398	1.435	1.448	1.75	16261	F	VRTC Outriggers
1983	Ford	Bronco II	N/A	TT	MP	1	0	4	2.403	1.454	1.454	1.71	16325	F	

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1983	Ford	Bronco II	N/A	TT	MP	1	0	4	2.403	1.454	1.454	1.71	16325	F	
1985	Ford	Bronco II	N/A	TT	MP	4	1446	4	2.400	1.435	1.441	1.75	19078	1/2	Ballast to 1552 N above GVWR
1985	Ford	Bronco II	N/A	TT	MP	1	0	4	2.400	1.435	1.441	1.75	15747	F	Evidence of side impact damage
1985	Ford	Bronco II	N/A	TT	MP	4	111	4	2.400	1.435	1.441	1.75	17522	1/2	Ballast to GVWR
1987	Ford	Bronco II	V117	1	MP	0	0	R	2.388	1.445	1.445	1.73	14501	F?	
1988	Ford	Bronco II	T191	2	MP	1	0	4	2.390	1.448	1.448	1.74	16770	E	
1988	Ford	Bronco II	T219A	2	MP	1	0	4	2.393	1.435	1.448	1.74	16948	E	
1989	Ford	Bronco II XL	T232A	3	MP	1	0	R	2.388	1.455	1.443	1.70	17468	E	
1983	Ford	Bronco XLT	V176	2	MP	0	0	4	2.680	1.702	1.695	1.89	21218	F	
1998	Ford	Club Wagon	468	VIMF	VN	1	0	R	3.505	1.768	1.773	2.03	24809	F	
1998	Ford	Club Wagon	467	VIMF	VN	1	0	R	3.505	1.768	1.773	2.03	25399	F	VRTC Outriggers
1985	Ford	E150	V251E	TT	VN	8	2113	R	3.505	1.753	1.708	2.06	29381	1/2	Ballast to GVWR
1985	Ford	E150	V251D	4	VN	0	0	R	3.512	1.753	1.689	2.03	21939	F	Club Wagon XLT
1985	Ford	E150	V251A	4	VN	1	0	R	3.518	1.759	1.689	2.04	22517	F	Club Wagon XLT
1985	Ford	E150	V251B	4	VN	4	1557	R	3.518	1.759	1.689	1.99	26369	F	Club Wagon XLT
1987	Ford	E150	V181	2	VN	0	LtLd	R	3.454	1.727	1.727	N/A	22241	F	Instrumented for handling testing
1992	Ford	E150	T319	5	VN	0	0	R	3.515	1.770	1.699	2.02	22139	F	Econoline
1978	Ford	E150 Club Wag XLT	V223	2	VN	0	0	R	3.157	1.758	1.699	2.06	20186	F	
1988	Ford	E250	V393	5	VN	1	0	R	3.518	1.765	1.702	2.01	23669	F	
1977	Ford	E250	V227	2	VN	0	0	R	3.183	1.760	1.709	2.01	21449	F	
1987	Ford	Escort	V121	1	VN	0	LtLd	R	3.505	1.759	1.676	2.01	22419	F	
1985	Ford	Escort	V124	1	2S	0	0	F	2.393	1.389	1.422	1.35	9875	F	
1986	Ford	Escort L	N/A	TT	3H	1	0	F	2.381	1.379	1.377	1.40	10787	F	
1986	Ford	Escort XR3i	V112	1	2S	0	0	F	2.400	1.422	1.440	1.35	10186	F	
1998	Ford	Expedition	451	VIMF	MP	1	0	4	3.025	1.664	1.664	1.92	25871	F	
1998	Ford	Expedition	538	VIMF	MP	7	1753	4	3.025	1.664	1.664	1.87	32029	F	GVWR - Including 667 N on Roof Rack
1998	Ford	Explorer	485	VIMF	MP	1	0	4	2.827	1.481	1.486	1.73	19792	F	GVWR - Including 445 N on Roof Rack
1998	Ford	Explorer	486	VIMF	MP	5	1005	4	2.827	1.481	1.486	1.70	23755	F	VRTC Outriggers
1998	Ford	Explorer	484	VIMF	MP	1	0	4	2.827	1.481	1.486	1.73	20109	F	Light load, nonstandard front wheels
1992	Ford	Explorer	T521	5	MP	0	N/A	R	2.845	1.468	1.473	1.71	19795	F	
1992	Ford	Explorer Sport	V398	5	MP	1	0	4	2.591	1.486	1.486	1.73	18696	F	
1991	Ford	Explorer XL	V397	5	MP	1	0	4	2.832	1.499	1.499	1.71	19332	F	
1991	Ford	Explorer XL	V329B	5	MP	5	0	4	2.845	1.486	1.486	1.71	22219	F	
1991	Ford	Explorer XL	V329D	5	MP	5	1268	4	2.845	1.486	1.486	1.70	23491	F	
1991	Ford	Explorer XL	V329C	5	MP	5	1268	4	2.845	1.486	1.486	1.70	23491	F	
1991	Ford	Explorer XL	V329A	5	MP	1	0	4	2.845	1.486	1.486	1.73	19287	F	
1982	Ford	F100	V171	2	PU	0	0	R	2.985	1.689	1.667	1.78	15213	F	
1998	Ford	F150	478	VIMF	PU	1	0	R	3.517	1.656	1.651	1.86	20005	F	
1984	Ford	F150	V386	5	PU	1	0	4	3.378	1.702	1.689	1.87	18256	F	
1985	Ford	F150	V147B	1	PU	N/A	LtLd	4	3.391	1.715	1.689	1.77	21725	F	
1985	Ford	F150	V147C	1	PU	N/A	GVWR	4	3.391	1.715	1.689	1.75	26191	F	391 N in excess of GVWR
1985	Ford	F150	V147A	1	PU	0	0	4	3.391	1.715	1.689	1.80	19652	F	
1987	Ford	F150	V108M	4	PU	0	0	R	2.959	1.657	1.632	1.79	16885	F	
1987	Ford	F150	V108C	1	PU	N/A	GVWR	R	2.967	1.661	1.641	1.80	21930	F	
1987	Ford	F150	V108A	1	PU	0	0	R	2.967	1.661	1.641	1.80	16859	F	
1987	Ford	F150	V108B	1	PU	0	LtLd	R	2.967	1.661	1.641	1.80	18816	F	
1987	Ford	F150	V108D	1	PU	0	0	R	2.967	1.661	1.641	1.80	16681	F	Single fuel tank; no rear bumper
1987	Ford	F150	V160	2	PU	0	0	R	2.972	1.638	1.626	1.78	18193	F	Dual fuel tanks
1987	Ford	F150	V108K	4	PU	3	0	R	2.972	1.651	1.638	1.78	18820	F	
1987	Ford	F150	V108E	4	PU	1	0	R	2.972	1.651	1.638	1.80	17317	F	
1987	Ford	F150	V108F	4	PU	1	0	R	2.972	1.651	1.638	1.80	17312	F	
1987	Ford	F150	V108I	4	PU	1	0	R	2.972	1.651	1.638	1.80	17286	F	
1987	Ford	F150	V108H	4	PU	1	0	R	2.972	1.651	1.638	1.80	17277	F	
1987	Ford	F150	V108G	4	PU	1	0	R	2.972	1.651	1.638	1.80	17304	F	
1987	Ford	F150	V108J	4	PU	1	0	R	2.972	1.651	1.638	1.80	17295	F	

Model	Year	Vehicle Make	Vehicle Model	Veh. No.	IPMD Ver.	Veh. Type	Occu-pants	Ballast (N)	Drive Axle	Wheel-base (m)	Track Width Front (m)	Track Width Rear (m)	Roof Height (m)	Weight (N)	Fuel Tank	Comments
1987	Ford	F150	F150	V108L	4	PU	1	0	R	2.972	1.651	1.638	1.80	16854	E	
1990	Ford	F150	F150	N/A	TT	PU	1	0	4	3.378	1.702	1.670	1.87	18771	F	
1990	Ford	F150	F150	V244	4	PU	0	0	R	3.385	1.664	1.638	1.78	18029	F	
1992	Ford	F150 Sport	F150 Sport	T503	5	PU	0	0	R	2.972	1.687	1.654	1.77	18349	F	Without roll bar (same veh as T502)
1992	Ford	F150 Sport	F150 Sport	T502	5	PU	0	0	R	2.972	1.687	1.654	1.77	18838	F	With roll bar (same veh as T503)
1992	Ford	F150 XLT	F150 XLT	T514	5	PU	0	0	R	3.378	1.684	1.659	1.80	18536	F	
1991	Ford	F150 XLT Lariat	F150 XLT Lariat	T321	5	PU	0	0	R	3.378	1.664	1.667	1.80	18700	F	Dual fuel tanks (both full)
1973	Ford	F250	F250	V224	TT	PU	0	0	R	3.381	1.661	1.659	1.83	19790	F	Tailgate missing
1984	Ford	F250	F250	N/A	TT	PU	1	0	R	3.366	1.676	1.638	1.87	18638	F	
1985	Ford	F250	F250	V385	5	PU	1	0	R	3.378	1.670	1.638	1.85	18776	F	
1985	Ford	F250	F250	V157	1	PU	0	0	4	3.385	1.695	1.651	1.87	25622	F	
1991	Ford	Festiva	Festiva	V340C	5	3H	4	556	F	2.299	1.403	1.403	1.36	11761	F	Ballast to GVW on floor
1991	Ford	Festiva	Festiva	V340B	5	3H	4	0	F	2.299	1.403	1.403	1.38	11210	F	
1991	Ford	Festiva	Festiva	V340D	5	3H	4	556	F	2.299	1.403	1.403	1.36	11761	F	Ballast to GVW at cargo centroid
1991	Ford	Festiva	Festiva	V340A	5	3H	1	0	F	2.299	1.403	1.403	1.42	9017	F	
1980	Ford	LTD	LTD	V204	2	4S	0	0	R	2.906	1.598	1.593	1.44	17081	F	
1988	Ford	Mustang GL	Mustang GL	V167	2	2S	0	0	R	2.553	1.454	1.445	1.37	12322	F	
1988	Ford	Mustang GT	Mustang GT	V168	2	2S	0	0	R	2.559	1.467	1.461	1.37	14412	F	
1981	Ford	Ranchero	Ranchero	V226	2	PU	0	0	R	3.002	1.613	1.610	1.42	18620	F	
1997	Ford	Ranger	Ranger	461	VIMF	PU	1	0	4	2.755	1.476	1.455	1.73	16559	F	
1998	Ford	Ranger	Ranger	479	VIMF	PU	1	0	4	2.985	1.486	1.458	1.68	15185	F	VRTC Outriggers
1997	Ford	Ranger	Ranger	460	VIMF	PU	1	0	4	2.755	1.476	1.455	1.73	16982	F	
1985	Ford	Ranger	Ranger	V148B	1	PU	N/A	LtLd	R	2.743	1.391	1.375	1.61	14012	F	
1985	Ford	Ranger	Ranger	N/A	TT	PU	1	0	R	2.743	1.410	1.384	1.59	12722	F	
1985	Ford	Ranger	Ranger	V148C	1	PU	N/A	GVWR	R	2.743	1.391	1.375	1.57	16903	F	
1985	Ford	Ranger	Ranger	V148A	1	PU	0	0	R	2.743	1.391	1.375	1.60	12144	F	
1985	Ford	Ranger	Ranger	V148D	TT	PU	3	3114	R	2.743	1.422	1.372	1.60	17010	1/2	Ballast to GVWR
1985	Ford	Ranger	Ranger	N/A	TT	PU	3	2224	R	2.896	1.430	1.397	1.68	17971	1/2	Ballast to GVWR
1985	Ford	Ranger	Ranger	N/A	TT	PU	1	0	4	2.908	1.397	1.384	1.61	13434	F	Stripped shortbed model, 2.3 L4 engine
1991	Ford	Ranger	Ranger	V378	5	PU	1	0	R	2.743	1.410	1.379	1.61	13278	F	Loaded XLT model, 3.0 V6 engine
1991	Ford	Ranger	Ranger	V376	5	PU	1	0	R	2.896	1.410	1.359	1.63	14733	F	Baseline XLT model, 2.3 L4 engine
1991	Ford	Ranger	Ranger	V373	5	PU	1	0	R	2.896	1.435	1.403	1.61	13865	F	Baseline XLT model, 2.3 L4 engine
1991	Ford	Ranger	Ranger	V372	5	PU	1	0	R	2.896	1.435	1.403	1.63	14096	F	Baseline XLT model, 2.3 L4 engine
1991	Ford	Ranger	Ranger	V370	5	PU	1	0	R	2.896	1.435	1.403	1.63	14043	F	Baseline XLT model, 2.3 L4 engine
1991	Ford	Ranger	Ranger	V371	5	PU	1	0	R	2.896	1.435	1.410	1.60	14047	F	Baseline XLT model, 2.3 L4 engine
1991	Ford	Ranger	Ranger	V375	5	PU	1	0	R	2.896	1.435	1.403	1.61	14034	F	Baseline XLT model, 2.3 L4 engine
1991	Ford	Ranger	Ranger	V377	5	PU	1	0	R	3.175	1.435	1.403	1.65	16187	F	Loaded Supercab model, 4.0 V6 engine
1991	Ford	Ranger	Ranger	V388	5	PU	1	0	R	2.756	1.410	1.372	1.63	14159	F	Shortbed XLT model, 3.0 V6 engine
1992	Ford	Ranger	Ranger	V389	5	PU	1	0	R	3.175	1.435	1.403	1.64	15364	F	Stripped Supercab model, 3.0 V6 engine
1985	Ford	Ranger XL	Ranger XL	N/A	TT	PU	1	0	4	2.896	1.430	1.397	1.68	14546	F	
1992	Ford	Ranger XLT	Ranger XLT	T511	5	PU	0	0	R	2.903	1.400	1.372	1.63	13358	F	
1988	Ford	Taurus	Taurus	V162	2	4S	0	0	F	2.685	1.562	1.530	1.44	13923	F	
1988	Ford	Taurus	Taurus	V336	5	4S	1	0	F	2.692	1.568	1.524	1.40	14612	F	
1992	Ford	Taurus	Taurus	T509	5	4S	0	0	F	2.686	1.557	1.527	1.43	14221	F	
1987	Ford	Tempo	Tempo	V166	2	4S	0	0	F	2.532	1.407	1.454	1.39	11788	F	
1987	Ford	Thunderbird LX	Thunderbird LX	V119A	2	2C	1	LtLd	R	2.637	1.499	1.486	1.37	17437	F	Instrumented for handling testing
1987	Ford	Thunderbird LX	Thunderbird LX	V119B	4	2C	1	0	R	2.654	1.492	1.480	1.40	15996	F	
1987	Ford	Thunderbird LX	Thunderbird LX	V119C	4	2C	2	0	R	2.654	1.492	1.480	1.38	16708	F	
1987	Ford	Thunderbird LX	Thunderbird LX	V119D	4	2C	1	0	R	2.654	1.492	1.480	1.40	15991	F	
1998	Ford	Windstar	Windstar	446	VIMF	VN	1	525	F	3.076	1.626	1.603	1.72	18561	F	GVWR - Including 445 N on Roof Rack
1998	Ford	Windstar	Windstar	529	VIMF	VN	7	0	F	3.076	1.626	1.603	1.66	23488	F	
1991	Geo	Metro	Metro	V342	5	3H	1	0	F	2.286	1.359	1.340	1.33	7993	F	
1991	Geo	Tracker LSI	Tracker LSI	V330B	5	MP	4	0	4	2.197	1.397	1.403	1.62	13505	F	
1991	Geo	Tracker LSI	Tracker LSI	V330E	5	MP	0	0	4	2.197	1.397	1.403	1.67	10596	F	
1991	Geo	Tracker LSI	Tracker LSI	V330C	5	MP	4	667	4	2.197	1.397	1.403	1.61	14203	F	Ballast to GVW on floor

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1991	Geo		Tracker LSI	V330D	5	MP	4	667	4	2.197	1.397	1.403	1.61	14234	F	Ballast to GVW at cargo centroid
1991	Geo		Tracker LSI	V330A	5	MP	1	0	4	2.197	1.397	1.403	1.65	11356	F	
1987	GMC		1500 Sierra	V120	1	PU	0	0	4	3.346	1.600	1.619	1.80	20035	F	
1977	GMC		1500 Sierra Grande	N/A	TT	PU	1	0	R	3.340	1.664	1.626	1.77	19572	F	F44 option
1985	GMC		C-15 pickup	V151	1	PU	0	0	R	3.340	1.638	1.613	1.75	17312	F	
1982	GMC		C-20 Suburban	V228	2	MP	0	0	4	3.296	1.740	1.676	1.99	23807	F	
1984	GMC		C-20 Suburban	V225	2	MP	0	0	R	3.284	1.676	1.521	1.91	23620	F	
1990	GMC		Jimmy ST	V246	4	MP	0	0	4	2.572	1.441	1.397	1.70	16801	F	
1987	GMC		Sierra	V140	1	PU	0	0	4	3.340	1.708	1.727	1.87	25720	F	Dual rear wheels
1991	GMC		Sierra C-10 1500	V326A	4	PU	1	0	R	2.985	1.593	1.621	1.78	18167	F	Shortbed "C-10"
1991	GMC		Sierra C-10 1500	V326B	4	PU	3	0	R	2.985	1.593	1.621	1.75	19528	F	Shortbed "C-10"
1991	GMC		Sierra SLE 1500	V327B	4	PU	3	0	R	3.340	1.581	1.621	N/A	20809	F	Longbed "C-10"
1991	GMC		Sierra SLE 1500	V327A	4	PU	1	0	R	3.340	1.581	1.621	1.77	19439	F	Longbed "C-10"
1990	GMC		Suburban 1500	V335B	TT	MP	8	0	4	3.289	1.727	1.651	1.86	30239	F	
1990	GMC		Suburban 1500	V335A	5	MP	1	0	4	3.289	1.727	1.651	1.88	25146	F	
1990	GMC		Suburban 1500	V335C	TT	MP	8	810	4	3.289	1.727	1.651	1.85	31133	F	Ballast to GVW on floor
1990	GMC		Suburban 1500	V335D	TT	MP	8	810	4	3.289	1.727	1.651	1.85	31133	F	Ballast to GVW at cargo centroid
1991	Honda		Accord LX	V341D	5	4S	5	200	F	2.718	1.480	1.480	1.34	16979	F	Ballast to GVW at cargo centroid
1991	Honda		Accord LX	V341A	5	4S	1	0	F	2.718	1.480	1.480	1.37	13847	F	
1991	Honda		Accord LX	V341B	5	4S	5	0	F	2.718	1.480	1.480	1.34	16779	F	
1991	Honda		Accord LX	V341C	5	4S	5	200	F	2.718	1.480	1.480	1.34	16979	F	Ballast to GVW on floor
1996	Honda		Acura SLX	323	VIMF	MP	0	0	4	2.764	1.519	1.521	1.79	19078	F	
1996	Honda		Acura SLX	324	VIMF	MP	0	0	4	2.764	1.519	1.521	1.79	19581	F	VRTC Single Beam Outriggers
1996	Honda		Acura SLX	297	VIMF	MP	1	0	4	2.764	1.519	1.521	1.79	19868	F	
1996	Honda		Acura SLX	295	VIMF	MP	4	2477	4	2.764	1.519	1.521	1.79	24491	F	GVWR
1998	Honda		Civic	452	VIMF	2S	1	0	F	2.621	1.471	1.468	1.38	11217	F	
1981	Honda		Civic	N/A	TT	4S	1	0	F	2.311	1.378	1.384	1.33	9653	F	
1983	Honda		Civic	T526	5	3H	0	0	F	2.235	1.377	1.379	1.34	8621	F	
1987	Honda		Civic	N/A	TT	3H	1	0	F	2.375	1.387	1.415	1.33	9252	F	
1985	Honda		Civic CRX	N/A	TT	3H	1	0	F	2.197	1.410	1.422	1.27	8630	F	
1998	Honda		CR-V	487	VIMF	MP	1	0	4	2.616	1.534	1.529	1.65	15152	F	
1998	Honda		CR-V	488	VIMF	MP	5	418	4	2.616	1.534	1.529	1.61	18528	F	GVWR
1986	Hyundai		Excel	V103	1	3H	0	0	F	2.381	1.397	1.340	1.36	9208	F	Instrumented for handling testing
1987	Hyundai		Excel	V118	2	4S	1	LtLd	F	2.381	1.378	1.346	1.33	12384	N/A	
1987	Hyundai		Excel	V250B	4	4S	4	0	F	2.388	1.391	1.346	1.33	13874	F	
1987	Hyundai		Excel	V250A	4	4S	1	0	F	2.388	1.391	1.346	1.36	11579	F	
1978	IH		Scout	V188	2	MP	0	0	4	2.540	1.499	1.463	1.75	20235	F	
1991	Isuzu		Amigo XL pickup	V347	5	MP	1	0	4	2.337	1.461	1.467	1.68	15831	F	
1986	Isuzu		Rodeo	V207	2	PU	0	0	R	2.654	1.374	1.300	1.49	10974	F	
1998	Isuzu		Rodeo	490	VIMF	MP	1	0	4	2.697	1.514	1.519	1.68	18142	F	
1991	Isuzu		Rodeo	V366	5	MP	1	0	4	2.769	1.448	1.448	1.65	18073	F	XS model with small tires
1991	Isuzu		Rodeo	V369	5	MP	1	0	4	2.769	1.448	1.448	1.65	18135	F	LS model with small tires
1991	Isuzu		Rodeo	V365	5	MP	1	0	4	2.769	1.448	1.448	1.65	18135	F	LS model with small tires
1991	Isuzu		Rodeo	V367	5	MP	1	0	4	2.769	1.448	1.448	1.65	17788	F	Stripped S model with small tires
1991	Isuzu		Rodeo	V361	5	MP	1	0	4	2.769	1.473	1.461	1.68	18318	F	S model with large tires
1991	Isuzu		Rodeo	V402	5	MP	1	0	4	2.769	1.461	1.461	1.68	18318	F	Baseline LS model with large tires
1991	Isuzu		Rodeo	V368	5	MP	1	0	4	2.769	1.448	1.448	1.68	18304	F	Baseline LS model with large tires
1991	Isuzu		Rodeo	V400	5	MP	1	0	4	2.769	1.461	1.473	1.68	17975	F	LS model with small tires
1991	Isuzu		Rodeo	V364	5	MP	1	0	4	2.769	1.448	1.448	1.65	17975	F	Baseline LS model with large tires
1991	Isuzu		Rodeo	V396	5	MP	1	0	4	2.769	1.448	1.448	1.65	18198	F	Baseline LS model with large tires
1992	Isuzu		Rodeo	V401	5	MP	1	0	4	2.769	1.461	1.473	1.68	18727	F	XS model with large tires
1992	Isuzu		Rodeo	310	VIMF	MP	1	0	4	2.761	1.461	1.471	1.83	18696	F	Baseline LS model with large tires
1994	Isuzu		Trooper	311	VIMF	MP	4	2545	4	2.761	1.463	1.471	1.83	18696	F	Baseline LS model with large tires
1994	Isuzu		Trooper	311	VIMF	MP	1	0	4	2.761	1.463	1.471	1.83	18696	F	Baseline LS model with large tires
1988	Isuzu		Trooper	V186B	2	MP	2	0	4	2.661	1.397	1.397	1.82	24521	F	GVWR
1988	Isuzu		Trooper	V186C	2	MP	4	0	4	2.661	1.397	1.397	1.79	17793	F	
1988	Isuzu		Trooper	V186C	2	MP	4	0	4	2.661	1.397	1.397	1.79	19212	F	

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1988	Isuzu	Trooper	V186A	2	MP	0	0	4	2.661	1.397	1.397	1.82	16285	F	
1984	Isuzu	Trooper II	N/A	TT	MP	5	1446	4	2.642	1.378	1.353	1.78	19150	I/2	Ballast to GVWR
1991	Isuzu	U-15 pickup	V346	5	PU	1	0	4	2.692	1.461	1.461	1.68	15707	F	
1997	Jeep	Cherokee	386	VIMF	MP	1	0	4	2.578	1.466	1.468	1.66	16311	F	
1997	Jeep	Cherokee	N/A	TT	MP	1	0	4	2.578	1.466	1.468	1.66	N/A		
1977	Jeep	Cherokee	V218	2	MP	0	0	4	2.769	1.626	1.544	1.68	19532	F	
1984	Jeep	Cherokee	V252D	4	MP	0	0	4	2.565	1.473	1.473	1.60	14572	F	
1984	Jeep	Cherokee	V252E	4	MP	1	0	4	2.565	1.473	1.473	1.60	15355	F	
1984	Jeep	Cherokee	V252F	4	MP	1	1446	4	2.565	1.473	1.473	1.59	17499	F	
1984	Jeep	Cherokee	V252A	4	MP	1	0	4	2.572	1.473	1.473	1.59	15382	F	
1984	Jeep	Cherokee	V252B	4	MP	4	0	4	2.572	1.473	1.473	1.58	17677	F	
1986	Jeep	Cherokee	V182	2	MP	0	0	4	2.565	1.461	1.461	1.61	14399	F	
1987	Jeep	Cherokee	V125C	1	MP	N/A	0	4	2.576	1.448	1.448	1.61	19826	F	
1987	Jeep	Cherokee	V125A	1	MP	0	GVWR	4	2.576	1.448	1.448	1.61	14946	F	
1987	Jeep	Cherokee	V125B	1	MP	N/A	0	4	2.576	1.448	1.448	1.61	16703	F	
1988	Jeep	Cherokee	V185B	2	MP	2	0	4	2.572	1.476	1.476	1.63	16979	F	
1988	Jeep	Cherokee	V185C	2	MP	4	0	4	2.572	1.476	1.476	1.60	18451	F	
1988	Jeep	Cherokee	V185A	2	MP	0	0	4	2.572	1.476	1.476	1.63	15475	F	
1981	Jeep	CJ-5	N/A	4	MP	0	0	4	2.116	1.328	1.275	1.70	11739	F	
1981	Jeep	CJ-5	N/A	4	MP	1	0	4	2.116	1.328	1.275	1.70	12451	F	
1981	Jeep	CJ-5	N/A	TT	MP	4	2224	4	2.134	1.334	1.283	1.72	16708	I/2	Ballast to GVWR
1981	Jeep	CJ-7	N/A	TT	MP	4	2224	4	2.375	1.308	1.283	1.78	16730	I/2	Ballast to GVWR
1983	Jeep	CJ-7	V190	2	MP	0	0	4	2.372	1.410	1.405	1.82	13643	F	
1983	Jeep	CJ-7	V172	2	MP	0	0	4	2.378	1.461	1.457	1.82	14457	F	
1983	Jeep	Grand Cherokee	443	VIMF	MP	1	0	4	2.691	1.486	1.499	1.64	17704	F	
1998	Jeep	Grand Cherokee	530	VIMF	MP	5	2914	4	2.691	1.486	1.499	1.57	23577	F	
1987	Jeep	Wrangler	V113	1	MP	0	0	4	2.362	1.473	1.473	1.83	13300	F	
1988	Jeep	Wrangler	V184C	2	MP	4	0	4	2.375	1.467	1.467	1.80	15858	F	
1988	Jeep	Wrangler	V184A	2	MP	0	0	4	2.375	1.467	1.467	1.82	14417	F	
1988	Jeep	Wrangler	V184B	2	MP	2	0	4	2.375	1.467	1.467	1.82	14417	F	
1990	Jeep	Wrangler	N/A	TT	MP	1	0	4	2.375	1.448	1.448	1.77	14390	F	
1992	Lincoln	Continental	T520	5	4S	0	0	F	2.769	1.585	1.549	1.41	16067	F	Active suspension off during test
1986	Mazda	323	V109	1	3H	0	0	F	2.400	1.397	1.422	1.41	9030	F	
1984	Mazda	B2000	V221	2	PU	0	0	R	2.713	1.331	1.318	1.54	11872	F	
1979	Mazda	GLC	V213	2	3H	0	0	R	2.314	1.303	1.316	1.37	8856	F	
1998	Mazda	MPV	502	VIMF	VN	1	0	F	2.811	1.519	1.537	1.75	17444	F	
1998	Mazda	MPV	503	VIMF	VN	7	556	F	2.811	1.519	1.537	1.68	22404	F	GVWR - Including 445 N on Roof Rack
1991	Mazda	MPV	V345	5	MP	1	0	F	2.819	1.549	1.543	1.78	18896	F	
1998	Mazda	Protégé	482	VIMF	4S	1	0	F	2.601	1.453	1.461	1.40	11289	F	
1998	Mazda	Protégé	481	VIMF	4S	5	703	F	2.601	1.453	1.461	1.40	11289	F	
1987	Mercedes	190	V158	2	4S	0	0	R	2.664	1.438	1.417	1.39	12766	F	
1987	Mercedes	190	V159	2	4S	0	0	R	2.664	1.438	1.417	1.39	12766	F	
1987	Mercedes	190 E	V164	2	4S	0	0	R	2.653	1.419	1.400	1.39	12766	F	
1987	Mercedes	190 E	V165	2	4S	0	0	R	2.664	1.429	1.400	1.39	12811	F	
1984	Mercury	Grand Marquis	V173	2	4S	0	0	R	2.894	1.589	1.578	1.45	17170	F	
1998	Mercury	Tracer	454	VIMF	4S	1	0	F	2.494	1.430	1.435	1.39	12007	F	
1998	Mercury	Tracer	489	VIMF	PU	1	0	R	2.954	1.405	1.405	1.61	15244	F	
1986	Nissan	Frontier	V110	1	4S	0	0	F	2.550	1.461	1.461	1.39	13834	F	
1988	Nissan	Maxima	V161	2	4S	0	0	F	2.550	1.461	1.461	1.39	14101	F	
1998	Nissan	Maxima	445	VIMF	MP	1	0	F	2.703	1.494	1.506	1.76	19290	F	
1987	Nissan	Pathfinder	V133	1	MP	0	0	4	2.649	1.425	1.410	1.67	15257	F	
1991	Nissan	Pathfinder	V343	5	MP	1	0	4	2.648	1.473	1.448	1.68	19523	F	
1985	Nissan	pickup	V152	1	PU	0	0	R	2.572	1.314	1.349	1.54	12050	F	
1985	Nissan	pickup	N/A	TT	PU	1	0	R	2.576	1.314	1.353	1.54	12500	F	
1986	Nissan	pickup	N/A	TT	PU	1	0	R	2.654	1.499	1.486	1.56	13567	F	1985.5 model year

Model Year	Vehicle Make	Vehicle Model	Veh. No.	IPMD Ver.	Veh. Type	Occupants	Ballast (N)	Drive Axle	Wheelbase (mm)	Track Width Front (mm)	Track Width Rear (mm)	Roof Height (m)	Weight (N)	Fuel Tank	Comments
1988	Nissan	pickup	T183A	2	PU	1	0	R	2.662	1.397	1.387	1.54	13967	E	Instrumented for rollover testing
1989	Nissan	pickup	N/A	TT	PU	1	0	R	2.642	1.435	1.377	1.69	15569	F	
1989	Nissan	pickup	T236A	3	PU	1	0	R	2.652	1.400	1.384	1.56	13834	E	
1989	Nissan	pickup	T242A	3	PU	1	0	R	2.654	1.394	1.389	1.56	14114	E	
1989	Nissan	pickup	T231A	3	PU	1	0	R	2.654	1.394	1.387	1.56	14039	E	
1998	Nissan	Sentra	453	VIMF	4S	1	0	F	2.532	1.478	1.435	1.38	11808	F	
1983	Nissan	Sentra	N/A	TT	4S	1	0	F	2.407	1.384	1.384	1.37	9475	F	
1987	Nissan	Sentra	V134	1	2S	0	0	F	2.431	1.430	1.430	1.38	9519	F	
1987	Nissan	Sentra	V111	1	2S	0	0	F	2.431	1.430	1.430	1.38	9386	F	
1985	Nissan	Stanza	N/A	TT	4S	1	0	F	2.477	1.441	1.422	1.36	11832	F	
1987	Nissan	Van	V116	1	VN	0	0	R	2.350	1.430	1.400	1.84	14991	F?	
1987	Nissan	XE King Cab	V123C	1	PU	N/A	GVWR	R	2.949	1.394	1.384	1.50	19425	F	
1987	Nissan	XE King Cab	V123B	1	PU	N/A	LiLd	R	2.949	1.394	1.384	1.52	15498	F	
1987	Nissan	XE King Cab	V123A	1	PU	0	0	R	2.949	1.394	1.384	1.57	13612	F	
1980	Oldsmobile	98	V154	1	4S	0	0	R	3.023	1.518	1.562	1.46	18522	F	
1976	Oldsmobile	98 Regency	V163	1	4S	0	0	R	3.216	1.619	1.626	1.44	22552	F	
1990	Oldsmobile	Cutlass Calais	V359	5	2S	1	0	F	2.642	1.422	1.410	1.35	12540	F	
1990	Oldsmobile	Cutlass Calais	V350	5	4S	1	0	F	2.642	1.429	1.410	1.35	13767	F	
1990	Oldsmobile	Cutlass Calais	V358	5	4S	1	0	F	2.642	1.422	1.410	1.35	13078	F	
1991	Oldsmobile	Cutlass Calais	V356	5	2S	1	0	F	2.642	1.422	1.410	1.35	12170	F	
1991	Oldsmobile	Cutlass Calais	V357	5	4S	1	0	F	2.642	1.422	1.410	1.35	13322	F	
1991	Oldsmobile	Cutlass Calais	V354	5	4S	1	0	F	2.642	1.422	1.410	1.35	12802	F	
1991	Oldsmobile	Cutlass Calais	V352	5	4S	1	0	F	2.642	1.422	1.410	1.35	12806	F	
1991	Oldsmobile	Cutlass Calais	V353	5	4S	1	0	F	2.642	1.422	1.410	1.35	12811	F	
1991	Oldsmobile	Cutlass Calais	V355	5	4S	1	0	F	2.642	1.422	1.410	1.35	12780	F	
1991	Oldsmobile	Cutlass Calais	V351	5	4S	1	0	F	2.642	1.422	1.410	1.35	12802	F	
1985	Oldsmobile	Cutlass Calais	V122A	1	4S	0	0	F	2.664	1.491	1.448	1.37	12544	F	
1985	Oldsmobile	Cutlass Calais	V122E	4	4S	1	0	F	2.667	1.499	1.435	1.38	12918	E	
1985	Oldsmobile	Cutlass Calais	V122C	4	4S	4	0	F	2.667	1.499	1.435	1.36	15471	F	
1985	Oldsmobile	Cutlass Calais	V122D	4	4S	1	0	F	2.667	1.499	1.435	1.38	12918	E	
1985	Oldsmobile	Cutlass Calais	V122B	4	4S	1	0	F	2.667	1.499	1.435	1.39	13358	F	
1980	Plymouth	Arrow	V215	2	PU	0	0	R	2.789	1.372	1.339	1.51	12166	F	
1998	Plymouth	Grand Voyager	459	VIMF	VN	1	0	F	3.040	1.593	1.621	1.73	18625	F	
1985	Plymouth	Reliant	V130	1	SW	0	0	F	2.553	1.461	1.448	1.35	11810	F	
1987	Plymouth	Sundance	V132	1	4S	0	0	F	2.464	1.463	1.453	1.34	11476	F	
1991	Plymouth	Voyager	V363	5	VN	1	0	F	2.845	1.524	1.575	1.66	16934	F	
1991	Plymouth	Voyager	V362	5	VN	1	0	F	3.048	1.524	1.575	1.68	17788	F	
1992	Plymouth	Voyager	V379	5	VN	1	0	F	2.845	1.527	1.581	1.66	16423	F	
1990	Plymouth	Voyager SE	N/A	TT	VN	1	0	F	3.035	1.530	1.581	1.69	16992	F	
1984	Pontiac	Fiero	N/A	TT	2C	1	0	R	2.375	1.486	1.511	1.22	12322	F	
1985	Pontiac	Fiero	N/A	TT	2C	1	0	R	2.362	1.492	1.518	1.21	12633	F	
1985	Pontiac	Fiero	V104	1	2C	0	0	R	2.375	1.473	1.499	1.18	12322	F	
1985	Pontiac	Fiero	N/A	TT	2C	1	0	R	2.388	1.473	1.503	1.19	12322	F	
1985	Pontiac	Grand Am	V174	2	2C	0	0	R	2.634	1.422	1.403	1.35	11432	F	
1989	Pontiac	Grand Am	T243A	3	2C	1	0	F	2.629	1.417	1.405	1.35	12615	E	
1978	Pontiac	LeMans	V203	2	2C	0	0	R	2.743	1.476	1.466	1.40	14679	F	
1988	Pontiac	LeMans	V131	1	3H	0	0	F	2.520	1.397	1.407	1.39	9208	F	
1982	Renault	LeCar	N/A	TT	4S	1	0	F	2.438	1.295	1.257	1.38	8985	F	
1998	Saturn	SL	455	VIMF	4S	1	0	F	2.598	1.450	1.430	1.37	11055	F	
1984	Subaru	Brat	V214	2	MP	0	0	4	2.443	1.367	1.364	1.44	10235	F	
1991	Subaru	Justy GL	V348	5	3H	1	0	F	2.273	1.308	1.340	1.40	9399	F	
1987	Subaru	XT Coupe	V137	1	2C	0	0	F	2.451	1.410	1.435	1.28	10155	F	
1988	Suzuki	Samurai	V179C	2	MP	4	0	4	2.032	1.308	1.308	1.65	12055	F	
1988	Suzuki	Samurai	V179A	2	MP	0	0	4	2.032	1.308	1.308	1.66	9159	F	1988.5 model year
1988	Suzuki	Samurai	V180N	TT	MP	4	1112	4	2.032	1.295	1.308	1.66	13064	F	1988.5 model year Ballast to GVWR



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Model Year	Vehicle Make	Vehicle Model	Veh. No.	IPMD Ver.	Veh. Type	Occupants	Ballast (N)	Drive Axle	Wheelbase (in)	Track Width Front (in)	Track Width Rear (in)	Roof Height (in)	Weight (N)	Fuel Tank	Comments
1988	Suzuki	Samurai	V180	2	MP	0	0	4	2,032	1,308	1,308	1.67	9186	F	
1988	Suzuki	Samurai	V180A	2	MP	2	0	4	2,032	1,308	1,311	1.66	10702	F	
1988	Suzuki	Samurai	V180F	4	MP	1	0	4	2,032	1,308	1,308	1.66	9884	F	
1988	Suzuki	Samurai	V179B	4	MP	2	0	4	2,032	1,308	1,308	1.65	10582	F	
1988	Suzuki	Samurai	V146	1	MP	0	0	4	2,032	1,308	1,308	1.65	9230	F	1988.5 model year
1988	Suzuki	Samurai	V180K	4	MP	1	0	4	2,032	1,308	1,308	1.66	9884	F	Soft roof; height is to roll bar
1988	Suzuki	Samurai	V180B	2	MP	4	0	4	2,032	1,308	1,311	1.64	12179	F	
1988	Suzuki	Samurai	V180G	4	MP	1	0	4	2,038	1,302	1,308	1.66	9902	F	
1988	Suzuki	Samurai	V180M	4	MP	1	0	4	2,038	1,302	1,308	1.66	9902	F	
1988	Suzuki	Samurai	V180L	4	MP	1	0	4	2,045	1,302	1,308	1.66	9599	E	
1988	Suzuki	Samurai	V180I	4	MP	4	0	4	2,045	1,302	1,308	1.64	12019	F	
1988	Suzuki	Samurai	V180H	4	MP	1	0	4	2,045	1,302	1,308	1.66	9911	F	
1990	Toyota	4Runner	385	VIMF	MP	1	0	4	2,621	1,468	1,473	1.79	19616	F	
1990	Toyota	4Runner	N/A	TT	MP	1	0	4	2,621	1,468	1,473	1.79	N/A	F	
1998	Toyota	4Runner	507	VIMF	MP	1	0	4	2,670	1,499	1,509	1.73	18695	F	
1998	Toyota	4Runner	508	VIMF	MP	5	1703	4	2,670	1,499	1,509	1.68	23354	F	
1987	Toyota	4Runner	V129C	1	MP	N/A	GVWR+	4	2,624	1,430	1,410	1.66	23042	F	
1987	Toyota	4Runner	V129A	1	MP	0	0	4	2,624	1,430	1,410	1.80	15618	F	
1987	Toyota	4Runner	V129B	1	MP	N/A	Lt.Ld	4	2,624	1,430	1,410	1.78	17570	F	
1989	Toyota	4Runner	V382	5	MP	1	0	4	2,629	1,518	1,499	1.71	16441	F	
1989	Toyota	4Runner	N/A	TT	MP	1	0	4	2,642	1,524	1,499	1.71	16352	F	
1983	Toyota	Camry	V145A	1	5H	0	0	F	2,601	1,466	1,420	1.39	10952	F	
1983	Toyota	Camry	V145C	4	5H	4	0	F	2,616	1,480	1,416	1.31	13758	F	
1983	Toyota	Camry	V145B	4	5H	1	0	F	2,616	1,480	1,416	1.34	11614	F	
1987	Toyota	Camry	V102	1	4S	0	0	F	2,597	1,480	1,448	1.35	12940	F	
1976	Toyota	Corolla	V201	2	2C	0	0	R	2,372	1,372	1,349	1.33	10462	F	
1987	Toyota	Corolla FX	V143A	1	3H	0	0	F	2,431	1,425	1,405	1.35	9768	F	
1985	Toyota	Coventry	N/A	TT	VN	1	0	R	2,235	1,448	1,387	1.80	14768	F	
1982	Toyota	V115	1	4S	0	0	0	R	2,644	1,389	1,384	1.38	12855	F	
1979	Toyota	Land Cruiser	V189	2	MP	0	0	4	2,692	1,422	1,397	1.86	19230	F	
1991	Toyota	Land Cruiser	V349	5	MP	1	0	4	2,858	1,588	1,588	1.87	22748	F	
1987	Toyota	LE Van	V127A	1	VN	0	0	R	2,442	1,429	1,384	1.80	14817	F	
1987	Toyota	LE Van	V127B	1	VN	N/A	Lt.Ld	R	2,242	1,429	1,384	1.78	16694	F	
1987	Toyota	LE Van	V127C	1	VN	N/A	GVWR	R	2,242	1,429	1,384	1.75	21142	F	
1986	Toyota	MR2	V153A	1	2C	0	0	R	2,319	1,440	1,440	1.23	10507	F	
1986	Toyota	MR2	V153B	2	2C	0	0	R	2,319	1,445	1,441	1.24	10689	F	
1989	Toyota	pickup	T513	5	PU	0	0	R	2,858	1,359	1,369	1.52	12313	F	
1991	Toyota	Previo LE	V360	5	VN	1	0	R	2,858	1,575	1,562	1.78	17486	F	
1986	Toyota	RN50 pickup	V234B	4	PU	2	0	R	2,623	1,368	1,349	1.52	12593	F	
1986	Toyota	RN50 pickup	V234A	4	PU	1	0	R	2,623	1,368	1,349	1.52	12019	F	
1988	Toyota	RN50 pickup	V205	2	PU	0	0	R	2,621	1,361	1,354	1.53	11801	F	
1986	Toyota	RN60 pickup	V217	2	PU	0	0	4	2,621	1,430	1,405	1.71	14065	F	
1983	Toyota	Starlet	N/A	TT	3H	1	0	R	2,311	1,285	1,276	1.37	8985	F	
1998	Toyota	Tacoma	523	VIMF	PU	1	0	R	3,101	1,425	1,438	1.55	14090	F	GVWR
1998	Toyota	Tacoma	524	VIMF	PU	5	2972	R	3,101	1,425	1,438	1.50	20018	F	GVWR
1998	Toyota	Tercel	527	VIMF	2S	1	0	F	2,375	1,400	1,389	1.33	10332	F	
1998	Toyota	Tercel	528	VIMF	2S	5	58	F	2,375	1,400	1,389	1.31	13345	F	
1971	Volkswagen	Beetle	V199	2	2S	0	0	R	2,408	1,313	1,328	1.50	8403	F	
1987	Volkswagen	Vanagon	N/A	TT	VN	7	2780	R	2,464	1,600	1,562	1.96	23429	I/2	Ballast to GVWR
1987	Volkswagen	Vanagon GL	N/A	TT	VN	1	0	R	2,464	1,588	1,568	1.94	16503	F	
1991	Volvo	240	T323	5	4S	1	0	R	2,647	1,435	1,356	1.46	14403	F	
1991	Volvo	740	T324	5	4S	1	0	R	2,779	1,471	1,458	1.41	14715	F	
1987	Yugo	GV	V135	1	3H	0	0	F	2,134	1,321	1,270	1.37	8051	F	
1988	Yugo	GV	V344	5	3H	1	0	F	2,159	1,321	1,270	1.40	9065	F	

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Model Year	Vehicle Make	Vehicle Model	Veh. No.	IPMD Ver.	Veh. Type	Occu- pants	Ballast (N)	Drive Axle	CG Location (m)		Moments of Inertia (kg-m <sup>2</sup> )			Roll/Yaw Product (kg-m <sup>2</sup> )	Tilt Table Ratio	Static Stability Factor
									From Front Axle	Above Ground	Pitch	Roll	Yaw			
1984	Audi	Quattro 4000	V210	2	4S	0	0	4	1.124	0.506	2328	404	2352	N/A	N/A	1.381
1980	BMW	320i	N/A	TT	2S	1	0	R	1.175	N/A	N/A	N/A	N/A	1.156	N/A	1.311
1986	BMW	325i	V107	1	2S	0	0	R	1.201	0.533	2011	381	2027	N/A	N/A	1.335
1986	Buick	Century Estate	V383	5	SW	1	0	F	1.120	0.554	2991	551	3162	1.121	N/A	1.398
1986	Buick	Electra	V106H	2	4S	0	0	F	1.043	0.546	2978	582	3073	N/A	N/A	1.381
1986	Buick	Electra	V106B	1	4S	0	0	F	1.050	0.539	2994	578	2991	N/A	N/A	1.416
1986	Buick	Electra	V106A	2	4S	0	0	F	1.037	0.560	2965	605	3005	N/A	N/A	1.361
1986	Buick	Electra	V106E	1	4S	0	0	F	1.035	0.553	3045	628	3045	N/A	N/A	1.378
1986	Buick	Electra	V106C	1	4S	0	0	F	1.040	0.553	3065	672	2977	N/A	N/A	1.380
1986	Buick	Electra	V106G	1	4S	0	0	F	1.045	0.555	2992	623	3103	N/A	N/A	1.374
1980	Buick	LeSabre S/C	N/A	TT	2S	1	0	R	1.322	N/A	N/A	N/A	N/A	1.199	N/A	N/A
1986	Buick	Skylark	V101	1	4S	0	0	F	0.942	0.543	2032	431	2082	N/A	N/A	1.296
1991	Chevrolet	1500 Silverado	T325	5	PU	0	0	R	1.398	0.671	4802	705	4924	N/A	N/A	1.195
1979	Chevrolet	20 Beauville	N/A	TT	VN	1	0	R	1.420	N/A	N/A	N/A	N/A	1.020	N/A	N/A
1998	Chevrolet	Astro	492	VIMF	VN	1	0	R	1.298	0.736	3741	963	3973	168	0.973	1.122
1998	Chevrolet	Astro	493	VIMF	VN	7	1300	R	1.543	0.770	4653	1137	4876	212	N/A	1.072
1998	Chevrolet	Astro	491	VIMF	VN	1	0	R	1.303	0.732	4004	1076	4342	164	0.977	1.128
1987	Chevrolet	Astro Van	V139C	1	VN	N/A	GVWR	R	1.469	0.764	N/A	N/A	N/A	N/A	N/A	1.084
1987	Chevrolet	Astro Van	V139A	1	VN	0	0	R	1.236	0.722	N/A	N/A	N/A	N/A	N/A	1.148
1987	Chevrolet	Astro Van	V139B	1	VN	N/A	LtLd	R	1.231	0.773	N/A	N/A	N/A	N/A	N/A	1.072
1988	Chevrolet	Astro Van	V238A	4	VN	1	0	R	1.217	0.736	3391	962	3413	N/A	N/A	1.120
1988	Chevrolet	Astro Van	V238C	4	VN	1	0	R	1.192	0.741	3357	1070	3390	N/A	N/A	1.112
1988	Chevrolet	Astro Van	V238B	4	VN	6	0	R	1.355	0.791	3246	1267	3836	N/A	N/A	1.042
1998	Chevrolet	Blazer	444	VIMF	MP	1	0	4	1.216	0.653	3246	722	3415	95	N/A	1.091
1998	Chevrolet	Blazer	539	VIMF	MP	5	1330	4	1.373	0.682	3753	897	3864	222	N/A	1.044
1982	Chevrolet	C-10 Blazer	V211	2	MP	0	0	R	1.308	0.703	3976	878	3980	N/A	N/A	1.172
1982	Chevrolet	C-10 pickup	V155	1	PU	0	0	R	1.445	0.654	4423	1089	4324	N/A	N/A	1.246
1988	Chevrolet	C-10 pickup	T209A	2	PU	1	0	R	1.360	0.700	3531	694	3756	N/A	N/A	1.166
1987	Chevrolet	C-15 pickup	V142B	1	PU	N/A	LtLd	R	1.440	0.712	5364	796	5364	N/A	N/A	1.123
1987	Chevrolet	C-15 pickup	V142A	1	PU	0	0	R	1.403	0.673	5572	891	4858	N/A	N/A	1.188
1981	Chevrolet	C-20 pickup	V384B	5	PU	1	0	R	1.543	0.685	5801	887	5959	N/A	N/A	1.149
1981	Chevrolet	C-20 pickup	V384A	TT	PU	1	0	R	1.540	N/A	N/A	N/A	N/A	1.177	N/A	N/A
1998	Chevrolet	C1500	510	VIMF	PU	1	0	R	1.418	0.665	4382	762	4705	-33	1.073	1.223
1998	Chevrolet	C1500	511	VIMF	PU	3	6709	R	1.797	0.702	5947	980	6327	67	N/A	1.160
1998	Chevrolet	C1500	509	VIMF	PU	1	0	R	1.415	0.661	4848	900	5331	-61	1.082	1.232
1983	Chevrolet	Caprice Classic	V105	1	4S	0	0	R	1.296	0.599	3377	751	3796	N/A	N/A	1.396
1984	Chevrolet	Caprice Classic	V387	5	SW	1	0	R	0.955	0.573	5050	806	5241	N/A	N/A	1.276
1983	Chevrolet	Cavalier	V381	5	SW	1	0	F	0.943	0.551	1994	409	2131	1.147	1.123	1.396
1986	Chevrolet	Cavalier	N/A	TT	4S	1	0	F	0.943	N/A	N/A	N/A	N/A	1.168	N/A	N/A
1983	Chevrolet	Chevette Scooter	N/A	TT	3H	1	0	R	1.108	N/A	N/A	N/A	N/A	1.071	N/A	N/A
1978	Chevrolet	K-10 Blazer	V196	2	MP	0	0	4	1.318	0.756	4823	1076	4613	N/A	N/A	1.121
1982	Chevrolet	K-20 pickup	V149	1	PU	0	0	4	1.415	0.718	N/A	N/A	N/A	N/A	N/A	1.187
1985	Chevrolet	K-20 pickup	V220	2	PU	0	0	4	1.412	0.747	6394	N/A	N/A	N/A	N/A	1.138
1985	Chevrolet	K-5 Blazer	N/A	TT	MP	1	0	4	1.306	N/A	N/A	N/A	N/A	1.054	N/A	N/A
1991	Chevrolet	K1500 pickup	V328B	4	PU	3	0	4	1.215	0.732	4013	856	4106	1.068	N/A	1.103
1991	Chevrolet	K1500 pickup	V328A	4	PU	1	0	4	1.201	0.706	3915	850	4037	1.097	N/A	1.144
1998	Chevrolet	Lumina	466	VIMF	4S	1	0	F	1.004	0.561	2699	588	2952	92	N/A	1.342
1998	Chevrolet	Lumina	537	VIMF	4S	6	449	F	1.227	0.553	3269	684	3553	91	N/A	1.363
1998	Chevrolet	Lumina	465	VIMF	4S	1	0	F	1.021	0.551	3001	679	3326	84	N/A	1.366
1990	Chevrolet	Lumina APV	V331B	5	VN	7	0	F	1.404	0.698	4225	895	4147	0.901	1.131	1.089
1990	Chevrolet	Lumina APV	V331C	5	VN	0	0	F	1.162	0.667	3487	726	3544	1.036	N/A	1.140
1990	Chevrolet	Lumina APV	V331E	5	VN	2	0	F	1.099	0.679	3331	761	3300	1.017	N/A	1.120
1990	Chevrolet	Lumina APV	V331A	5	VN	1	0	F	1.162	0.677	3534	764	3515	0.984	N/A	1.123
1990	Chevrolet	Lumina APV	V331F	5	VN	2	4226	F	1.389	0.626	4209	822	4136	0.979	N/A	1.215

Vehicle Research and Test Center

National Highway Traffic Safety Administration

Model Year	Vehicle Make	Vehicle Model	Veh. No.	IPMD Ver.	Veh. Type	Occu- pants	Ballast (N)	Drive Axle	CG Location (m) From Front Axle	Above Ground	Moments of Inertia (kg-m <sup>2</sup> )			Roll/Yaw Product (kg-m <sup>2</sup> )	Tilt Table Ratio	Static Stability Factor
											Pitch	Roll	Yaw			
1990	Chevrolet	Lumina APV	V331D	5	VN	1	0	F	1.093	0.674	3291	727	3323		1.009	1.128
1990	Chevrolet	Lumina APV	V331H	5	VN	0	0	F	1.094	0.660	3309	728	3379		N/A	1.152
1990	Chevrolet	Lumina APV	V331G	5	VN	2	4226	F	1.393	0.719	4321	910	4158		0.864	1.057
1995	Chevrolet	Lumina LS	361	VIMF	4S	0	0	F	0.973	0.554	2841	602	3130	69	N/A	1.357
1981	Chevrolet	Luv	V208	2	PU	0	0	R	1.257	0.539	2611	344	2721		N/A	1.240
1998	Chevrolet	Metro	505	VIMF	2S	1	0	F	0.965	0.534	987	274	1102	32	1.127	1.286
1998	Chevrolet	Metro	504	VIMF	2S	1	0	F	0.979	0.538	1150	378	1426	29	1.141	1.275
1983	Chevrolet	S-10 Blazer	V150	1	MP	0	0	R	1.251	0.634	2622	646	2500		N/A	1.081
1983	Chevrolet	S-10 Blazer	N/A	TT	MP	4	2224	R	1.419	N/A	N/A	N/A	N/A		0.825	N/A
1983	Chevrolet	S-10 Blazer	N/A	TT	MP	1	0	R	1.275	N/A	N/A	N/A	N/A		0.949	N/A
1984	Chevrolet	S-10 Blazer	V194	2	MP	0	0	4	1.162	0.640	2777	555	2798		N/A	1.108
1984	Chevrolet	S-10 Blazer	V195	2	MP	0	0	R	1.257	0.665	2682	523	2702		N/A	1.033
1989	Chevrolet	S-10 Blazer	V339	5	MP	1	0	4	1.209	0.650	3153	604	3187		0.991	1.096
1992	Chevrolet	S-10 Blazer	T501	5	MP	0	0	4	1.209	0.664	3204	580	3245		N/A	1.069
1986	Chevrolet	S-10 pickup	V197	2	PU	0	0	R	1.181	0.570	2133	380	2208		N/A	1.210
1986	Chevrolet	S-10 pickup	N/A	TT	PU	1	0	R	1.399	N/A	N/A	N/A	N/A		0.996	N/A
1986	Chevrolet	S-10 pickup	N/A	TT	PU	1	0	R	1.205	N/A	N/A	N/A	N/A		1.113	N/A
1991	Chevrolet	S-10 pickup	T322	5	PU	0	0	R	1.266	0.554	2779	401	2776		N/A	1.242
1986	Chevrolet	S-10 pickup	T506	5	PU	0	0	4	1.031	0.573	2513	436	2576		N/A	1.237
1987	Chevrolet	S-10 Tahoe	V128B	1	PU	N/A	Lt.Ld	4	1.288	0.638	3732	659	3594		N/A	1.115
1987	Chevrolet	S-10 Tahoe	V128C	1	PU	N/A	GVWR	4	1.595	0.690	4241	749	4567		N/A	1.031
1987	Chevrolet	S-10 Tahoe	V128A	1	PU	0	0	4	1.253	0.610	3401	560	3323	-57	N/A	1.165
1998	Chevrolet	S10	457	VIMF	PU	1	0	R	1.169	0.604	2321	504	2477		1.052	1.145
1998	Chevrolet	S10	456	VIMF	PU	3	3065	R	1.416	0.597	2973	592	3169	-5	N/A	1.120
1998	Chevrolet	S10	456	VIMF	PU	1	0	R	1.175	0.577	2633	613	2897	-55	1.056	1.159
1992	Chevrolet	Sportside K-10 pickup	T505	5	PU	0	0	4	1.179	0.709	3947	772	4045		N/A	1.140
1998	Chevrolet	Suburban	447	VIMF	MP	1	0	4	1.721	0.752	7284	1271	7582	192	N/A	1.079
1998	Chevrolet	Tahoe	477	VIMF	MP	1	0	4	1.441	0.722	5004	1197	5445	103	0.973	1.124
1998	Chevrolet	Tahoe	476	VIMF	MP	1	0	4	1.446	0.718	5593	1320	6004	97	0.978	1.130
1998	Chevrolet	Tracker	526	VIMF	MP	1	0	4	1.005	0.616	1300	397	1416	48	1.011	1.130
1998	Chevrolet	Tracker	525	VIMF	MP	1	0	4	1.011	0.611	1515	526	1743	48	1.009	1.139
1998	Chevrolet	Venture	534	VIMF	VN	1	0	F	1.255	0.668	3797	757	4065	217	N/A	1.184
1998	Chevrolet	Venture	535	VIMF	VN	7	1255	F	1.586	0.699	5070	953	5212	297	N/A	1.132
1985	Chrysler	LeBaron	V156	1	4S	0	0	F	0.990	0.583	2091	410	2160		N/A	1.236
1987	Chrysler	LeBaron	V136	1	2S	0	0	F	0.967	0.550	2071	469	2110		N/A	1.329
1979	Datsun	210	V212	2	SW	0	0	R	1.131	0.520	1623	307	1739		N/A	1.272
1979	Datsun	280ZX	V193	2	3H	0	0	R	1.157	0.489	1948	360	2058		N/A	1.424
1981	Datsun	510	N/A	TT	SW	1	0	R	1.188	N/A	N/A	N/A	N/A		1.066	N/A
1974	Datsun	B210	V222	2	3H	0	0	R	1.102	0.510	1413	265	1527		N/A	1.278
1981	Datsun	pickup	V200	2	PU	0	0	R	1.140	0.533	2006	331	2098		N/A	1.217
1998	Dodge	1500	458	VIMF	PU	1	0	R	1.478	0.696	5575	1049	5207	-87	N/A	1.216
1998	Dodge	Caravan	517	VIMF	VN	1	0	F	1.189	0.649	3267	818	3508	146	1.021	1.243
1998	Dodge	Caravan	518	VIMF	VN	7	863	F	1.500	0.641	4241	954	4463	203	N/A	1.204
1998	Dodge	Caravan	516	VIMF	VN	1	0	F	1.199	0.641	3592	942	3923	146	1.070	1.258
1987	Dodge	Caravan	V141A	1	VN	0	0	F	1.190	0.684	3098	832	3202		N/A	1.128
1987	Dodge	Caravan	V141C	1	VN	N/A	GVWR	F	1.439	0.654	4058	1101	3633		N/A	1.179
1987	Dodge	Caravan	V141B	1	VN	N/A	Lt.Ld	F	1.205	0.688	3301	965	3357		N/A	1.121
1988	Dodge	Caravan	T1187B	2	VN	1	0	F	1.218	0.655	2916	695	3090		N/A	1.183
1988	Dodge	Caravan	V177	2	VN	0	0	F	1.180	0.664	3062	756	3136		N/A	1.167
1990	Dodge	Caravan	V247	4	VN	0	0	F	1.260	0.642	3756	816	3736		N/A	1.206
1991	Dodge	Caravan	V392	5	VN	1	0	F	1.074	0.635	3270	743	3427		1.047	1.220
1991	Dodge	Caravan	V391	5	VN	1	0	F	1.175	0.638	3298	733	3468		1.052	1.214
1991	Dodge	Caravan	V390	5	VN	1	0	F	1.180	0.637	3304	741	3439		1.031	1.216
1992	Dodge	Caravan	V374	5	VN	1	0	F	1.154	0.634	3270	740	3433		1.054	1.225

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									From Front Axle	Above Ground	Pitch	Roll	Yaw			
1992	Dodge	Caravan	V399	5	VN	1	0	F	1.097	0.659	2888	693	3051	1.054	1.173	
1992	Dodge	Caravan	V394	5	VN	1	0	F	1.148	0.643	3400	801	3552	1.033	1.205	
1992	Dodge	Caravan	V395	5	VN	1	0	F	1.201	0.654	3212	740	3365	1.032	1.184	
1989	Dodge	Caravan C/V	T235A	3	VN	1	0	F	1.232	0.633	3276	815	3268	N/A	1.222	
1989	Dodge	Caravan C/V	N/A	TT	VN	1	0	F	1.328	N/A	N/A	N/A	N/A	1.126	N/A	
1989	Dodge	Colt	T233B	3	3H	1	0	F	1.004	0.515	1632	380	1673	N/A	1.388	
1998	Dodge	Dakota	521	VIMF	PU	1	0	R	1.353	0.618	4061	699	4271	-73	1.247	
1998	Dodge	Dakota	522	VIMF	PU	5	2344	R	1.582	0.637	4763	937	4960	-21	1.211	
1987	Dodge	Dakota	V114B	1	PU	N/A	GYWR	R	1.419	0.627	3084	792	3212	N/A	1.202	
1987	Dodge	Dakota	V114C	1	PU	N/A	LtLd	R	1.302	0.625	2826	608	2972	N/A	1.206	
1987	Dodge	Dakota	V114A	1	PU	0	0	R	1.245	0.599	2476	509	2452	N/A	1.259	
1991	Dodge	Dakota	T508	5	PU	0	0	F	1.245	0.632	4200	586	4194	N/A	1.211	
1992	Dodge	Dakota	T510	5	PU	0	0	R	1.346	0.608	4352	592	4329	N/A	1.235	
1978	Dodge	Diplomat	V202	2	4S	0	0	R	1.239	0.543	3786	614	3904	N/A	1.393	
1998	Dodge	Durango	498	VIMF	MP	1	0	4	1.296	0.682	4222	848	4409	101	1.144	
1998	Dodge	Durango	499	VIMF	MP	7	2478	4	1.642	0.741	5732	1092	5849	331	1.053	
1989	Dodge	Dynasty LE	V337	5	4S	1	0	F	0.967	0.533	2630	560	2728	68	1.370	
1985	Dodge	Lancer	V170	2	5H	0	0	F	0.982	0.532	2139	472	2236	81	1.375	
1998	Dodge	Neon	496	VIMF	4S	1	0	F	0.954	0.507	1748	441	1945	69	1.435	
1998	Dodge	Neon	497	VIMF	4S	5	437	F	1.178	0.506	2131	522	2340	81	1.438	
1998	Dodge	Neon	495	VIMF	4S	1	0	F	0.963	0.504	1995	558	2307	69	1.445	
1983	Dodge	Omni	N/A	4	5H	1	0	F	0.975	0.511	1490	398	1649	N/A	1.391	
1983	Dodge	Omni	N/A	4	5H	1	0	F	0.932	0.519	1454	395	1599	N/A	1.371	
1983	Dodge	Omni	N/A	4	5H	2	0	F	0.986	0.517	1504	418	1690	N/A	1.375	
1983	Dodge	Omni	N/A	4	5H	4	0	F	1.107	0.526	1712	471	1813	N/A	1.353	
1987	Dodge	Raider	V144	1	MP	0	0	4	1.168	0.694	2405	650	2318	N/A	0.993	
1989	Dodge	Raider	V332C	5	MP	4	2335	4	1.441	0.691	3071	705	3065	0.859	1.025	
1989	Dodge	Raider	V332B	5	MP	4	0	4	1.293	0.683	2633	684	2643	0.883	1.036	
1989	Dodge	Raider	V332D	5	MP	4	2335	4	1.441	0.721	3098	750	3074	0.823	0.982	
1989	Dodge	Raider	V332A	5	MP	1	0	4	1.211	0.661	2419	583	2527	0.931	1.071	
1981	Dodge	Ram	V206	2	PU	0	0	R	1.341	0.658	4222	703	4211	N/A	1.243	
1987	Dodge	Ram B-150	V333A	5	VN	1	0	R	1.231	0.777	4414	1216	4589	0.974	1.089	
1987	Dodge	Ram B-150	V333C	5	VN	8	1557	R	1.507	0.847	5646	N/A	5708	0.814	0.999	
1987	Dodge	Ram B-150	V333B	5	VN	8	0	R	1.392	0.858	4826	N/A	5136	0.846	0.986	
1987	Dodge	Ram B-150	V333D	5	VN	8	1557	R	1.507	0.903	4934	N/A	5744	0.780	0.937	
1991	Dodge	Ram D-150	V338D	5	PU	3	4226	R	1.757	0.708	7110	N/A	7098	0.993	1.180	
1991	Dodge	Ram D-150	V338B	5	PU	3	0	R	1.349	0.669	5017	860	5081	1.048	1.248	
1991	Dodge	Ram D-150	V338A	5	PU	3	0	R	1.401	0.651	4971	797	5038	1.083	1.283	
1991	Dodge	Ram D-150	V338C	5	PU	3	4226	R	1.757	0.677	7088	N/A	7064	1.032	1.234	
1991	Dodge	Ramcharger	V334D	5	MP	5	1112	4	1.482	0.803	5777	N/A	5671	0.935	1.046	
1991	Dodge	Ramcharger	V334A	5	MP	1	0	4	1.300	0.743	4903	1094	4911	0.960	1.073	
1991	Dodge	Ramcharger	V334C	5	MP	5	1112	4	1.482	0.783	5713	N/A	5710	0.983	1.073	
1991	Dodge	Ramcharger	V334B	5	MP	5	0	4	1.401	0.782	5215	N/A	5221	0.983	1.073	
1988	Ford	Aerostar	V169	2	VN	0	0	R	1.278	0.694	3026	732	3068	N/A	1.112	
1989	Ford	Aerostar	N/A	TT	VN	7	890	R	1.566	N/A	N/A	N/A	N/A	0.811	N/A	
1991	Ford	Aerostar	T507	5	VN	0	0	R	1.382	0.694	3836	789	3760	N/A	1.110	
1992	Ford	Aerostar	T519	5	VN	0	0	4	1.263	0.671	3359	751	3410	N/A	1.149	
1986	Ford	Aerostar XL	V380	5	VN	1	0	R	1.274	0.695	3118	720	3190	0.945	1.110	
1989	Ford	Aerostar XL	N/A	TT	VN	1	0	R	1.283	N/A	N/A	N/A	N/A	1.012	N/A	
1992	Ford	Aerostar, long	T518	5	VN	0	0	4	1.359	0.684	3915	819	3932	N/A	1.126	
1978	Ford	Bronco	V192	2	MP	0	0	4	1.318	0.775	4853	1104	4853	N/A	1.059	
1988	Ford	Bronco Custom	N/A	TT	MP	1	0	4	1.396	N/A	2421	616	2539	1.040	1.044	
1984	Ford	Bronco II	395	VIMF	MP	1	0	4	1.191	0.690	2421	616	2539	0.907	1.044	
1984	Ford	Bronco II	396	VIMF	MP	1	0	4	1.189	0.681	2652	735	2881	0.923	1.058	
1983	Ford	Bronco II	N/A	TT	MP	1	0	4	1.093	N/A	N/A	N/A	N/A	0.978	N/A	

Model Year	Vehicle Make	Vehicle Model	Veh. No.	IPMD Ver.	Veh. Type	Occu- pants	Ballast (N)	Drive Axle	CG Location (m)		Moments of Inertia (kg-m <sup>2</sup> )			Roll/Yaw Product (kg-m <sup>2</sup> )	Tilt Table Ratio	Static Stability Factor
									From Front Axle	Above Ground	Pitch	Roll	Yaw			
1983	Ford	Bronco II	N/A	TT	MP	1	0	4	1.093	N/A	N/A	N/A	N/A	0.983	N/A	
1985	Ford	Bronco II	N/A	TT	MP	4	1446	4	1.274	N/A	N/A	N/A	N/A	0.802	N/A	
1985	Ford	Bronco II	N/A	TT	MP	1	0	4	1.139	N/A	N/A	N/A	N/A	0.900	N/A	
1985	Ford	Bronco II	N/A	TT	MP	4	111	4	1.208	N/A	N/A	N/A	N/A	0.825	N/A	
1987	Ford	Bronco II	V117	1	MP	0	0	R	1.194	0.698	2453	597	2357	N/A	1.035	
1988	Ford	Bronco II	T219A	2	MP	1	0	4	1.246	0.729	2678	569	2628	N/A	0.993	
1989	Ford	Bronco II	T232A	3	MP	1	0	R	1.242	0.726	2653	573	2603	N/A	0.992	
1983	Ford	Bronco XL	V176	2	MP	0	0	R	1.314	0.734	2776	559	2653	N/A	0.987	
1998	Ford	Club Wagon	468	VIMF	VN	1	0	R	1.337	0.818	4404	1035	4377	N/A	1.038	
1998	Ford	Club Wagon	467	VIMF	VN	1	0	R	1.576	0.794	6749	1179	6722	112	0.991	
1985	Ford	E150	V251E	TT	VN	8	2113	R	1.589	0.795	7215	1239	7364	124	0.999	
1985	Ford	E150	V251D	4	VN	0	0	R	1.871	N/A	N/A	N/A	N/A	0.816	N/A	
1985	Ford	E150	V251A	4	VN	1	0	R	1.678	0.788	6879	N/A	N/A	N/A	1.092	
1985	Ford	E150	V251B	4	VN	1	1557	R	1.662	0.791	6801	1374	6536	N/A	1.090	
1987	Ford	E150	V181	2	VN	0	LtLd	R	1.735	0.844	7499	N/A	6926	N/A	1.021	
1992	Ford	E150	T319	5	VN	0	0	R	1.475	0.774	5565	922	6270	N/A	1.115	
1978	Ford	E150	V223	2	VN	0	0	R	1.543	0.765	6477	1289	6248	N/A	1.135	
1988	Ford	E150 Club Wag XLT	V393	5	VN	1	0	R	1.404	0.752	4809	1294	4590	N/A	1.149	
1977	Ford	E250	V227	2	VN	0	0	R	1.701	0.770	7058	N/A	7028	N/A	1.126	
1987	Ford	E250	V121	1	VN	0	LtLd	R	1.446	0.792	5945	1508	6075	N/A	1.095	
1985	Ford	Escort L	V124	1	2S	0	0	F	1.572	0.731	N/A	N/A	N/A	N/A	1.176	
1986	Ford	Escort XR3i	N/A	TT	3H	1	0	F	0.830	0.511	1535	328	1545	N/A	1.377	
1986	Ford	Expedition	V112	1	2S	0	0	F	0.894	N/A	N/A	N/A	N/A	1.097	N/A	
1998	Ford	Expedition	451	VIMF	MP	1	0	F	0.965	0.503	1491	337	1519	N/A	1.422	
1998	Ford	Explorer	538	VIMF	MP	7	1753	4	1.459	0.777	5398	1210	5639	152	1.071	
1998	Ford	Explorer	485	VIMF	MP	1	0	4	1.708	0.838	6735	1410	6859	496	0.993	
1998	Ford	Explorer	486	VIMF	MP	5	1005	4	1.295	0.697	3561	740	3682	31	1.063	
1998	Ford	Explorer	484	VIMF	MP	1	0	4	1.441	0.735	4092	856	4154	156	1.010	
1992	Ford	Explorer Sport	T521	5	MP	0	N/A	R	1.291	0.693	3761	840	3996	31	1.070	
1992	Ford	Explorer XL	V398	5	MP	1	0	4	1.442	0.688	4038	754	4042	N/A	1.069	
1991	Ford	Explorer XL	V397	5	MP	1	0	4	1.224	0.680	3204	690	3256	N/A	0.886	
1991	Ford	Explorer XL	V329B	5	MP	5	0	4	1.325	0.683	3748	750	3754	N/A	0.882	
1991	Ford	Explorer XL	V329D	5	MP	5	1268	4	1.420	0.718	3959	839	3887	N/A	1.034	
1991	Ford	Explorer XL	V329C	5	MP	5	0	4	1.516	0.721	4349	849	4258	N/A	0.765	
1991	Ford	Explorer XL	V329A	5	MP	1	0	4	1.516	0.721	4349	849	4258	N/A	1.030	
1982	Ford	F100	V171	2	PU	0	0	R	1.329	0.686	3718	742	3665	N/A	1.083	
1998	Ford	F150	V171	2	PU	0	0	R	1.265	0.678	3311	754	3246	N/A	1.237	
1984	Ford	F150	V386	5	PU	1	0	R	1.465	0.701	5091	796	5375	-69	N/A	
1985	Ford	F150	V147B	1	PU	1	0	4	1.333	0.739	4383	721	4527	N/A	1.180	
1985	Ford	F150	V147C	1	PU	N/A	LtLd	4	1.527	0.729	N/A	N/A	N/A	1.061	1.147	
1985	Ford	F150	V147A	1	PU	N/A	GWWR	4	1.867	0.759	N/A	N/A	N/A	N/A	1.168	
1987	Ford	F150	V108M	4	PU	0	0	R	1.529	0.711	N/A	N/A	N/A	N/A	1.120	
1987	Ford	F150	V108C	1	PU	0	0	R	1.145	0.669	3531	N/A	N/A	N/A	1.196	
1987	Ford	F150	V108A	1	PU	0	0	R	1.559	0.724	5834	1334	5502	N/A	1.140	
1987	Ford	F150	V108B	1	PU	0	0	R	1.146	0.711	3376	818	3425	N/A	1.160	
1987	Ford	F150	V108D	1	PU	0	0	R	1.185	0.707	4055	1154	3572	N/A	1.168	
1987	Ford	F150	V160	2	PU	0	0	R	1.139	0.679	3470	841	3428	N/A	1.216	
1987	Ford	F150	V108K	4	PU	3	0	R	1.359	0.680	4480	935	4207	N/A	1.200	
1987	Ford	F150	V108E	4	PU	1	0	R	1.165	0.716	3500	857	355	N/A	1.149	
1987	Ford	F150	V108F	4	PU	1	0	R	1.137	0.688	3428	779	3456	N/A	1.196	
1987	Ford	F150	V108I	4	PU	1	0	R	1.138	0.690	3399	781	3483	N/A	1.191	
1987	Ford	F150	V108H	4	PU	1	0	R	1.135	0.690	3455	787	3481	N/A	1.191	
1987	Ford	F150	V108G	4	PU	1	0	R	1.136	0.690	3432	799	3475	N/A	1.192	
1987	Ford	F150	V108J	4	PU	1	0	R	1.137	0.689	3436	745	3471	N/A	1.194	
1987	Ford	F150	V108J	4	PU	1	0	R	1.134	0.690	3451	792	3512	N/A	1.191	

Model Year	Vehicle Make	Vehicle Model	Veh. No.	IPMD Ver.	Veh. Type	Occu-pants	Ballast (N)	Drive Axle	CG Location (m)		Moments of Inertia (kg-m <sup>2</sup> )			Roll/Yaw Product (kg-m <sup>2</sup> )	Tilt Table Ratio	Static Stability Factor
									From Front Axle	Above Ground	Pitch	Roll	Yaw			
1987	Ford	F150	V108L	4	PU	1	0	R	1.110	0.695	3351	781	3447	N/A	1.184	
1990	Ford	F150	N/A	TT	PU	1	0	4	1.417	N/A	N/A	N/A	N/A	1.070	N/A	
1990	Ford	F150	V244	4	PU	0	0	R	1.407	0.692	5067	839	5070	N/A	1.194	
1992	Ford	F150 Sport	T503	5	PU	0	0	R	1.241	0.648	3933	727	4023	N/A	1.289	
1992	Ford	F150 Sport	T502	5	PU	0	0	R	1.254	0.668	3967	764	4055	N/A	1.250	
1992	Ford	F150 XLT	T514	5	PU	0	0	R	1.469	0.700	5257	787	5324	N/A	1.194	
1991	Ford	F150 XLT Lariat	T321	5	PU	0	0	R	1.480	0.676	5520	840	5369	N/A	1.231	
1973	Ford	F250	V224	2	PU	0	0	R	1.540	0.720	5836	827	5652	N/A	1.153	
1984	Ford	F250	N/A	TT	PU	1	0	R	1.365	N/A	N/A	N/A	N/A	1.097	N/A	
1984	Ford	F250	V385	5	PU	1	0	R	1.407	0.744	4823	761	4890	1.024	1.111	
1985	Ford	F250	V157	1	PU	4	0	4	1.451	0.757	7454	N/A	7910	N/A	1.106	
1991	Ford	Festiva	V340C	5	3H	4	556	F	1.091	0.512	1364	349	1438	0.997	1.370	
1991	Ford	Festiva	V340B	5	3H	4	0	F	1.022	0.520	1233	340	1320	1.013	1.348	
1991	Ford	Festiva	V340D	5	3H	4	556	F	1.091	0.536	1381	347	1453	0.981	1.309	
1991	Ford	Festiva	V340A	5	3H	1	0	F	0.856	0.325	1051	298	1128	1.028	1.338	
1980	Ford	LTD	V204	2	4S	0	0	R	1.236	0.556	3934	686	3989	N/A	1.434	
1988	Ford	Mustang GL	V167	2	2S	0	0	R	1.115	0.529	2150	408	2225	N/A	1.370	
1988	Ford	Mustang GT	V168	2	2S	0	0	R	1.090	0.532	2568	453	2620	N/A	1.375	
1981	Ford	Ranchero	V226	2	PU	0	0	R	1.277	0.687	4666	688	4579	N/A	1.478	
1997	Ford	Ranger	461	VIMF	PU	1	0	4	1.100	0.687	2640	579	2763	0.924	1.067	
1997	Ford	Ranger	479	VIMF	PU	1	0	R	1.223	0.666	2815	514	3002	N/A	1.105	
1997	Ford	Ranger	460	VIMF	PU	1	0	R	1.130	0.679	2889	683	3124	0.925	1.079	
1985	Ford	Ranger	V148B	1	PU	N/A	LtLd	R	1.202	0.649	2588	560	2306	N/A	1.066	
1985	Ford	Ranger	N/A	TT	PU	1	0	R	1.180	N/A	N/A	N/A	N/A	1.010	N/A	
1985	Ford	Ranger	V148C	1	PU	N/A	GVWR	R	1.455	0.645	3298	649	2906	N/A	1.072	
1985	Ford	Ranger	V148A	1	PU	0	0	R	1.186	0.633	2261	441	2119	N/A	1.093	
1985	Ford	Ranger	V148D	TT	PU	3	3114	R	1.471	N/A	N/A	N/A	N/A	0.874	N/A	
1985	Ford	Ranger	N/A	TT	PU	3	2224	R	1.426	N/A	N/A	N/A	N/A	0.852	N/A	
1985	Ford	Ranger	N/A	TT	PU	1	0	R	1.146	N/A	N/A	N/A	N/A	1.007	N/A	
1991	Ford	Ranger	V378	5	PU	1	0	R	1.141	0.598	2272	424	2299	0.995	1.167	
1991	Ford	Ranger	V376	5	PU	1	0	R	1.167	0.623	2797	441	2865	0.991	1.110	
1991	Ford	Ranger	V373	5	PU	1	0	R	1.204	0.629	2589	410	2705	1.012	1.129	
1991	Ford	Ranger	V372	5	PU	1	0	R	1.189	0.635	2650	422	2761	0.990	1.117	
1991	Ford	Ranger	V370	5	PU	1	0	R	1.188	0.631	2679	423	2754	0.977	1.124	
1991	Ford	Ranger	V371	5	PU	1	0	R	1.187	0.624	2701	434	2731	0.989	1.140	
1991	Ford	Ranger	V375	5	PU	1	0	R	1.218	0.636	2642	412	2739	0.985	1.117	
1991	Ford	Ranger	V377	5	PU	1	0	R	1.278	0.622	3410	508	3440	0.999	1.142	
1992	Ford	Ranger	V388	5	PU	1	0	R	1.115	0.622	2392	434	2490	0.969	1.119	
1992	Ford	Ranger	V389	5	PU	1	0	R	1.281	0.629	3173	476	3227	0.961	1.127	
1985	Ford	Ranger XL	N/A	TT	PU	1	0	4	1.160	N/A	N/A	N/A	N/A	0.922	N/A	
1992	Ford	Ranger XLT	T511	5	PU	0	0	R	1.150	0.615	2615	404	2643	N/A	1.126	
1988	Ford	Taurus	V162	2	4S	0	0	F	0.952	0.563	2553	573	2687	N/A	1.373	
1988	Ford	Taurus	V336	5	4S	1	0	F	0.955	0.532	2556	554	2725	1.192	1.453	
1992	Ford	Taurus	T509	5	4S	0	0	F	0.959	0.550	2590	541	2765	N/A	1.402	
1987	Ford	Tempo	V166	2	4S	0	0	F	0.946	0.546	2078	474	2090	N/A	1.310	
1987	Ford	Thunderbird LX	V119A	2	2C	1	LtLd	R	1.150	0.560	3142	635	3335	N/A	1.332	
1987	Ford	Thunderbird LX	V119B	4	2C	1	0	R	1.150	0.578	2941	539	3493	N/A	1.285	
1987	Ford	Thunderbird LX	V119C	4	2C	2	0	R	1.155	0.569	2943	560	3238	N/A	1.307	
1987	Ford	Thunderbird LX	V119D	4	2C	1	0	R	1.147	0.581	2959	526	3194	N/A	1.278	
1998	Ford	Windstar	446	VIMF	VN	1	0	F	1.193	0.648	3769	884	4088	N/A	1.245	
1998	Ford	Windstar	529	VIMF	VN	7	525	F	1.465	0.694	4635	1008	4929	N/A	1.163	
1991	Geo	Metro	V342	5	3H	1	0	F	0.955	0.511	944	255	1010	1.128	1.320	
1991	Geo	Tracker LSI	V330B	5	MP	4	0	F	1.161	0.638	1595	469	1597	0.920	1.097	
1991	Geo	Tracker LSI	V330E	5	MP	0	0	4	1.014	0.597	1368	398	1539	1.057	1.173	
1991	Geo	Tracker LSI	V330C	5	MP	4	667	4	1.228	0.639	1709	475	1842	0.896	1.095	

Vehicle Research and Test Center

National Highway Traffic Safety Administration

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									From Front Axle	Above Ground	Pitch	Roll			
1991	Geo	Tracker LSI	V330D	5	MP	4	667	4	1.236	0.659	1752	492	1856	0.864	1.063
1991	Geo	Tracker LSI	V330A	5	MP	1	0	4	1.027	0.613	1399	418	1560	0.978	1.142
1987	GMC	1500 Sierra	V120	1	PU	0	0	4	1.342	0.720	N/A	N/A	N/A	1.118	1.118
1977	GMC	1500 Sierra Grande	N/A	TT	PU	1	0	R	N/A	N/A	N/A	N/A	N/A	1.125	N/A
1985	GMC	C-15 pickup	V151	1	PU	0	0	R	1.427	0.663	4516	954	4407	N/A	1.226
1982	GMC	C-20 Suburban	V228	2	MP	0	0	4	1.642	0.838	7393	1207	6918	N/A	1.019
1984	GMC	C-20 Suburban	V225	2	MP	0	0	R	1.814	0.793	7518	1128	7307	N/A	1.008
1990	GMC	Jimmy ST	V246	4	MP	0	0	4	1.178	0.672	3174	640	3122	N/A	1.057
1987	GMC	Sierra	V140	1	PU	0	0	4	1.416	0.708	N/A	N/A	N/A	N/A	1.213
1991	GMC	Sierra C-10 1500	V326A	4	PU	1	0	R	1.242	0.682	3808	737	3531	1.071	1.178
1991	GMC	Sierra C-10 1500	V326B	4	PU	3	0	R	1.261	0.705	3843	779	3937	1.046	1.139
1991	GMC	Sierra SLE 1500	V327B	4	PU	3	0	R	1.421	0.709	5122	836	4842	1.052	1.129
1991	GMC	Sierra SLE 1500	V327A	4	PU	1	0	R	1.415	0.695	4956	795	4731	1.078	1.151
1990	GMC	Suburban 1500	V335B	TT	MP	8	0	4	1.881	N/A	N/A	N/A	N/A	0.898	N/A
1990	GMC	Suburban 1500	V335A	5	MP	1	0	4	1.717	0.768	7745	1244	7608	0.991	1.099
1990	GMC	Suburban 1500	V335C	TT	MP	8	810	4	1.947	N/A	N/A	N/A	N/A	0.866	N/A
1990	GMC	Suburban 1500	V335D	TT	MP	8	810	4	1.947	N/A	N/A	N/A	N/A	0.866	N/A
1991	Honda	Accord LX	V341D	5	4S	5	200	F	1.258	0.511	2891	541	2922	1.122	1.447
1991	Honda	Accord LX	V341A	5	4S	1	0	F	1.067	0.504	2478	476	2618	1.184	1.467
1991	Honda	Accord LX	V341B	5	4S	5	0	F	1.231	0.510	2802	540	2918	1.122	1.450
1991	Honda	Accord LX	V341C	5	4S	5	200	F	1.258	0.510	2900	541	3031	1.124	1.450
1996	Honda	Acura SLX	323	VIMF	MP	0	0	4	1.334	0.690	3773	828	3902	N/A	1.088
1996	Honda	Acura SLX	324	VIMF	MP	0	0	4	1.339	0.678	3804	915	3979	N/A	1.121
1996	Honda	Acura SLX	297	VIMF	MP	1	0	4	1.325	0.698	3787	862	3888	0.918	1.088
1996	Honda	Acura SLX	295	VIMF	MP	4	2477	4	1.547	0.709	4563	996	4641	0.838	1.071
1998	Honda	Civic	452	VIMF	2S	1	0	F	1.038	0.513	1617	365	1785	N/A	1.431
1981	Honda	Civic	N/A	TT	4S	1	0	F	0.980	N/A	N/A	N/A	N/A	1.159	N/A
1983	Honda	Civic	T526	5	3H	0	0	F	0.827	0.519	1122	250	1216	N/A	1.328
1987	Honda	Civic	N/A	TT	3H	1	0	F	0.948	N/A	N/A	N/A	N/A	1.203	N/A
1985	Honda	Civic CRX	N/A	TT	3H	1	0	F	0.872	N/A	N/A	N/A	N/A	1.209	N/A
1998	Honda	CR-V	487	VIMF	MP	1	0	4	1.180	0.644	2471	579	2682	N/A	1.188
1998	Honda	CR-V	488	VIMF	MP	5	418	4	1.342	0.654	2848	669	3055	N/A	1.171
1986	Hyundai	Excel	V103	1	3H	0	0	F	0.920	0.540	1378	312	1434	N/A	1.268
1987	Hyundai	Excel	V118	2	4S	1	0	F	1.033	0.539	1902	383	2063	N/A	1.263
1987	Hyundai	Excel	V250B	4	4S	4	0	F	0.850	0.558	1886	476	1938	N/A	1.226
1987	Hyundai	Excel	V250A	4	4S	1	0	F	0.941	0.555	1691	404	1778	N/A	1.233
1978	IH	Scout	V188	2	MP	0	0	4	1.156	0.687	3853	784	3788	N/A	1.078
1991	Isuzu	Amigo XL	V347	5	MP	1	0	4	1.123	0.653	2433	543	2495	1.016	1.122
1986	Isuzu	pickup	V207	2	PU	0	0	R	1.179	0.514	1905	334	1980	N/A	1.301
1998	Isuzu	Rodeo	490	VIMF	MP	1	0	4	1.247	0.633	2942	685	3105	N/A	1.198
1991	Isuzu	Rodeo	V366	5	MP	1	0	4	1.359	0.645	3602	661	3716	0.947	1.123
1991	Isuzu	Rodeo	V369	5	MP	1	0	4	1.311	0.662	3464	658	3514	0.937	1.093
1991	Isuzu	Rodeo	V365	5	MP	1	0	4	1.328	0.659	3546	634	3638	0.944	1.099
1991	Isuzu	Rodeo	V367	5	MP	1	0	4	1.352	0.694	3583	651	3642	0.937	1.044
1991	Isuzu	Rodeo	V361	5	MP	1	0	4	1.339	0.680	3709	678	3672	0.954	1.078
1991	Isuzu	Rodeo	V402	5	MP	1	0	4	1.316	0.688	3538	690	3577	0.944	1.061
1991	Isuzu	Rodeo	V368	5	MP	1	0	4	1.326	0.648	3424	678	3494	0.966	1.117
1991	Isuzu	Rodeo	V400	5	MP	1	0	4	1.360	0.693	3815	712	3846	0.929	1.058
1991	Isuzu	Rodeo	V364	5	MP	1	0	4	1.353	0.697	3769	699	3789	0.955	1.038
1992	Isuzu	Rodeo	V396	5	MP	1	0	4	1.354	0.692	3773	713	3805	0.933	1.060
1992	Isuzu	Rodeo	V401	5	MP	1	0	4	1.354	0.692	3773	713	3805	0.933	1.060
1994	Isuzu	Trooper	310	VIMF	MP	1	0	4	1.351	0.685	3829	835	3953	0.881	1.070
1994	Isuzu	Trooper	311	VIMF	MP	4	2545	4	1.543	0.703	4337	974	4532	0.802	1.044
1988	Isuzu	Trooper	V186B	2	MP	2	0	4	1.277	0.702	3343	718	3289	N/A	0.996
1988	Isuzu	Trooper	V186C	2	MP	4	0	4	1.335	0.724	3532	802	3382	N/A	0.964

Vehicle Research and Test Center

National Highway Traffic Safety Administration

Part 2

Model Year	Vehicle Make	Vehicle Model	Veh. No.	IPMD Ver.	Veh. Type	Occu- pants	Ballast (N)	Drive Axle	CG Location (m) From Front Axle	Above Ground	Pitch	Roll	Yaw	Roll/Yaw Product (kg-m <sup>2</sup> )	Tilt Table Ratio	Static Stability Factor
1988	Isuzu	Trooper	V186A	2	MP	0	0	4	1.284	0.677	3286	701	3282		N/A	1.031
1984	Isuzu	Trooper II	N/A	TT	MP	5	1446	4	1.454	N/A	N/A	N/A	N/A		0.845	N/A
1991	Isuzu	U-15 pickup	V346	5	PU	1	0	4	1.123	0.628	2618	515	2684		1.087	1.162
1997	Jeep	Cherokee	386	VIMF	MP	1	0	4	1.147	0.682	2498	653	2704	85	1.009	1.076
1997	Jeep	Cherokee	N/A	TT	MP	1	0	4	N/A						1.025	
1977	Jeep	Cherokee	V218	2	MP	0	0	4	1.250	0.675	3833	811	3927		N/A	1.173
1984	Jeep	Cherokee	V252D	4	MP	0	0	4	1.171	0.660	2598	586	2770		N/A	1.116
1984	Jeep	Cherokee	V252E	4	MP	1	0	4	1.182	0.660	2608	614	2780		N/A	1.116
1984	Jeep	Cherokee	V252F	4	MP	2	1446	4	1.272	0.671	2758	651	2973		N/A	1.098
1984	Jeep	Cherokee	V252A	4	MP	1	0	4	1.190	0.665	2750	599	2751		N/A	1.108
1984	Jeep	Cherokee	V252B	4	MP	4	0	4	N/A	0.702	3021	612	2923		N/A	1.050
1986	Jeep	Cherokee	V182	2	MP	0	0	4	1.134	0.657	2429	527	2523		N/A	1.111
1987	Jeep	Cherokee	V125C	1	MP	N/A	GVWR	4	1.338	0.684	3205	746	3280		N/A	1.059
1987	Jeep	Cherokee	V125A	1	MP	0	0	4	1.088	0.678	2586	619	2525		N/A	1.067
1987	Jeep	Cherokee	V125B	1	MP	N/A	LiLd	4	1.146	0.648	3024	462	2679		N/A	1.117
1988	Jeep	Cherokee	V185B	2	MP	2	0	4	1.150	0.685	2721	584	2851		N/A	1.078
1988	Jeep	Cherokee	V185C	2	MP	4	0	4	1.231	0.694	2906	608	2966		N/A	1.064
1988	Jeep	Cherokee	V185A	2	MP	0	0	4	1.136	0.669	2705	547	2812		N/A	1.103
1981	Jeep	CJ-5	N/A	4	MP	0	0	4	1.106	0.607	1381	362	1506		N/A	1.072
1981	Jeep	CJ-5	N/A	4	MP	1	0	4	1.134	0.630	1401	387	1527		N/A	1.033
1981	Jeep	CJ-5	N/A	TT	MP	4	2224	4	1.177	N/A	N/A	N/A	N/A		0.814	N/A
1981	Jeep	CJ-5	N/A	TT	MP	4	2224	4	1.304	N/A	N/A	N/A	N/A		0.825	N/A
1983	Jeep	CJ-7	V190	2	MP	0	0	4	1.217	0.664	1872	486	1986		N/A	1.060
1983	Jeep	CJ-7	V172	2	MP	0	0	4	1.178	0.701	1972	592	1978		N/A	1.041
1998	Jeep	Grand Cherokee	443	MP	MP	0	0	4	1.193	0.695	2894	695	3101	102	N/A	1.073
1998	Jeep	Grand Cherokee	530	VIMF	MP	1	0	4	1.495	0.720	3788	882	3986	211	N/A	1.036
1987	Jeep	Wrangler	V113	VIMF	MP	5	2914	4	1.067	0.637	1749	480	1800		N/A	1.157
1988	Jeep	Wrangler	V184C	1	MP	4	0	4	1.311	0.663	2050	541	2092		N/A	1.106
1988	Jeep	Wrangler	V184A	2	MP	0	0	4	1.168	0.597	1735	431	1851		N/A	1.228
1988	Jeep	Wrangler	V184B	2	MP	2	0	4	1.215	0.632	1817	502	1893		N/A	1.160
1990	Jeep	Wrangler	N/A	TT	MP	1	0	4	1.231	N/A	N/A	N/A	N/A		1.034	N/A
1992	Lincoln	Continental	T520	5	4S	0	0	4	1.033	0.548	3214	617	3402		N/A	1.431
1986	Mazda	323	V109	1	3H	0	0	F	0.922	0.527	1390	323	1400		N/A	1.337
1984	Mazda	B2000	V221	2	PU	0	0	R	1.257	0.547	2212	354	2242		N/A	1.211
1979	Mazda	GLC	V213	2	3H	0	0	R	1.050	0.512	1271	267	1390		N/A	1.279
1998	Mazda	MPV	502	VIMF	VN	1	0	F	1.250	0.651	2973	718	3200	119	N/A	1.173
1998	Mazda	MPV	503	VIMF	VN	7	556	F	1.498	0.665	3755	984	3871	213	N/A	1.100
1991	Mazda	MPV	V345	5	MP	1	0	4	1.249	0.665	3389	759	3429		N/A	1.162
1998	Mazda	Protégé	481	VIMF	4S	1	0	F	1.005	0.522	1558	426	1737	54	N/A	1.395
1998	Mazda	Protégé	482	VIMF	4S	5	703	F	1.261	0.529	1797	465	2182	67	N/A	1.376
1987	Mercedes	190	V158	2	4S	0	0	R	1.216	0.559	2083	444	2095		N/A	1.276
1987	Mercedes	190	V159	2	4S	0	0	R	1.211	0.554	2099	449	2113		N/A	1.287
1987	Mercedes	190 E	V164	2	4S	0	0	R	1.211	0.558	2123	443	2137		N/A	1.264
1987	Mercedes	190 E	V165	2	4S	0	0	R	1.221	0.550	2087	436	2142		N/A	1.286
1984	Mercury	Grand Marquis	V173	2	4S	0	0	R	1.222	0.565	3848	717	3907		N/A	1.402
1998	Mercury	Tracer	454	VIMF	4S	1	0	F	0.927	0.521	1705	375	1886	72	N/A	1.374
1998	Nissan	Frontier	489	VIMF	PU	1	0	F	1.291	0.601	2918	541	3099	-20	N/A	1.169
1986	Nissan	Maxima	V110	1	4S	0	0	F	0.884	0.541	2465	514	2445		N/A	1.350
1988	Nissan	Maxima	V161	2	4S	0	0	F	0.909	0.547	2523	522	2462		N/A	1.335
1998	Nissan	Pathfinder	445	VIMF	MP	1	0	4	1.222	0.684	3072	726	3281	112	N/A	1.096
1987	Nissan	Pathfinder	V133	1	MP	0	0	4	1.222	0.663	2895	657	2834		N/A	1.069
1991	Nissan	Pathfinder	V343	5	MP	1	0	4	1.273	0.684	3708	706	3753		N/A	1.068
1985	Nissan	pickup	V152	1	PU	0	0	R	1.130	0.544	2107	409	2064		N/A	1.223
1985	Nissan	pickup	N/A	TT	PU	1	0	R	1.146	N/A	N/A	N/A	N/A		N/A	N/A
1986	Nissan	pickup	N/A	TT	PU	1	0	R	1.236	N/A	N/A	N/A	N/A		1.118	N/A
															1.208	N/A



Model Year	Vehicle Make	Vehicle Model	Veh. No.	IPMD Ver.	Veh. Type	Occu- pants	Ballast (N)	Drive Axle	CG Location (m) From Front Axle	Above Ground	Pitch	Roll (kg-m <sup>2</sup> )	Yaw	Roll/Yaw Product (kg-m <sup>2</sup> )	Tilt Table Ratio	Static Stability Factor
1988	Nissan	pickup	T183A	2	PU	1	0	R	1.283	0.600	2303	454	2446		N/A	1.159
1989	Nissan	pickup	N/A	TT	PU	1	0	R	1.125	N/A	N/A	N/A	N/A		1.046	N/A
1989	Nissan	pickup	T236A	3	PU	1	0	R	1.311	0.601	N/A	514	2584		N/A	1.159
1989	Nissan	pickup	T242A	3	PU	1	0	R	1.318	0.605	2548	491	2539		N/A	1.150
1989	Nissan	pickup	T231A	3	PU	1	0	R	1.320	0.585	2651	454	2681		N/A	1.189
1998	Nissan	Sentra	453	VIMF	4S	1	0	F	0.959	0.520	N/A	401	1848	72	N/A	1.402
1983	Nissan	Sentra	N/A	TT	4S	1	0	F	0.972	N/A	N/A	N/A	N/A		1.173	N/A
1987	Nissan	Sentra	V134	1	2S	0	0	F	0.931	0.523	1461	349	1461		N/A	1.367
1987	Nissan	Sentra	V111	1	2S	0	0	F	0.922	0.531	1460	343	1461		N/A	1.366
1985	Nissan	Stanza	N/A	TT	4S	1	0	F	0.968	N/A	N/A	N/A	N/A		1.166	N/A
1987	Nissan	Van	V116	1	VN	0	0	R	0.965	0.692	2615	801	2418		N/A	1.022
1987	Nissan	XE King Cab	V123C	1	PU	N/A	GVWR	R	1.614	0.631	3808	760	3659		N/A	1.101
1987	Nissan	XE King Cab	V123B	1	PU	N/A	Lt.Ld	R	1.363	0.612	3094	603	3066		N/A	1.135
1987	Nissan	XE King Cab	V123A	1	PU	0	0	R	1.340	0.593	2779	522	2808		N/A	1.171
1980	Oldsmobile	98	V154	1	4S	0	0	R	1.312	0.586	4834	991	4984		N/A	1.313
1976	Oldsmobile	98 Regency	V163	1	4S	0	0	R	1.554	0.379	6720	N/A	6399		N/A	1.402
1990	Oldsmobile	Cutlass Calais	V359	5	2S	1	0	F	0.903	0.517	1945	451	2082		N/A	1.142
1990	Oldsmobile	Cutlass Calais	V350	5	4S	1	0	F	0.945	0.528	2125	454	2285		1.198	1.368
1990	Oldsmobile	Cutlass Calais	V358	5	4S	1	0	F	0.907	0.526	2002	434	2142		1.139	1.345
1991	Oldsmobile	Cutlass Calais	V356	5	2S	1	0	F	0.949	0.525	2036	433	2200		1.137	1.349
1991	Oldsmobile	Cutlass Calais	V357	5	4S	1	0	F	0.909	0.533	2036	433	2200		1.147	1.329
1991	Oldsmobile	Cutlass Calais	V354	5	4S	1	0	F	0.931	0.536	1978	424	2138		1.127	1.322
1991	Oldsmobile	Cutlass Calais	V352	5	4S	1	0	F	0.923	0.541	1967	423	2133		1.123	1.310
1991	Oldsmobile	Cutlass Calais	V353	5	4S	1	0	F	0.924	0.531	1979	424	2117		1.133	1.334
1991	Oldsmobile	Cutlass Calais	V355	5	4S	1	0	F	0.923	0.534	1975	421	2125		1.129	1.325
1991	Oldsmobile	Cutlass Calais	V351	5	4S	1	0	F	0.926	0.533	1984	419	2136		1.125	1.328
1985	Oldsmobile	Cutlass Ciera	V122A	1	4S	0	0	F	0.973	0.535	2361	480	2407		N/A	1.373
1985	Oldsmobile	Cutlass Ciera	V122E	4	4S	1	0	F	0.969	0.544	2365	497	2531		N/A	1.348
1985	Oldsmobile	Cutlass Ciera	V122C	4	4S	4	0	F	1.118	0.535	2643	568	2794		N/A	1.370
1985	Oldsmobile	Cutlass Ciera	V122D	4	4S	1	0	F	0.969	0.539	2359	498	2547		N/A	1.360
1985	Oldsmobile	Cutlass Ciera	V122B	4	4S	1	0	F	1.007	0.533	2424	503	2629		N/A	1.377
1980	Plymouth	Arrow	V215	2	PU	0	0	R	1.244	0.522	2415	367	2504	184	N/A	1.297
1998	Plymouth	Grand Voyager	459	VIMF	VN	1	0	R	1.288	0.659	4110	918	4356		N/A	1.219
1985	Plymouth	Reliant	V130	1	SW	0	0	F	0.975	0.543	2268	511	2161		N/A	1.339
1987	Plymouth	Sundance	V132	1	4S	0	0	F	0.945	0.534	1839	470	1866		N/A	1.364
1991	Plymouth	Voyager	V363	5	VN	1	0	F	1.165	0.634	3367	768	3460		1.057	1.222
1991	Plymouth	Voyager	V362	5	VN	1	0	F	1.256	0.648	4167	855	4177		1.030	1.195
1992	Plymouth	Voyager	V379	5	VN	1	0	F	1.150	0.637	3259	740	3424		1.053	1.221
1990	Plymouth	Voyager SE	N/A	TT	VN	1	0	F	1.240	N/A	N/A	N/A	N/A		1.080	N/A
1984	Pontiac	Fiero	N/A	TT	2C	1	0	R	1.312	N/A	N/A	N/A	N/A		1.321	N/A
1985	Pontiac	Fiero	N/A	TT	2C	1	0	R	1.347	N/A	N/A	N/A	N/A		1.320	N/A
1985	Pontiac	Fiero	V104	1	2C	0	0	R	1.389	0.507	1528	375	1619		N/A	1.465
1985	Pontiac	Fiero	N/A	TT	2C	1	0	R	1.346	N/A	N/A	N/A	N/A		1.326	N/A
1985	Pontiac	Grand Am	N/A	TT	2C	0	0	F	0.881	0.533	1866	402	1999		N/A	1.325
1989	Pontiac	Grand Am	V174	2	2C	0	0	F	1.060	0.548	2222	435	2247		N/A	1.287
1978	Pontiac	LeMans	T243A	3	2C	1	0	R	1.247	0.549	2984	536	3152		N/A	1.339
1988	Pontiac	LeMans	V203	2	2C	0	0	R	1.247	0.549	2984	536	3152		N/A	1.339
1982	Renault	LeCar	V131	1	3H	0	0	F	0.998	0.521	1400	335	1412		N/A	1.346
1998	Saturn	LeCar	N/A	TT	4S	1	0	F	1.014	N/A	N/A	N/A	N/A		1.002	N/A
1998	Saturn	SL	455	VIMF	4S	1	0	F	1.044	0.534	1620	399	1786		N/A	1.349
1984	Subaru	Brat	V214	2	MP	0	0	F	0.988	0.545	1569	299	1688		N/A	1.252
1991	Subaru	Justy GL	V348	5	3H	1	0	F	0.877	0.538	1169	284	1246		0.982	1.231
1987	Subaru	XT Coupe	V137	1	2C	0	0	F	0.943	0.541	1661	338	1677		N/A	1.315
1988	Suzuki	Samurai	V179C	2	MP	4	0	F	1.162	0.679	1255	358	1341		N/A	0.964
1988	Suzuki	Samurai	V179A	2	MP	0	0	F	1.007	0.593	1034	262	1138		N/A	1.103
1988	Suzuki	Samurai	V180N	TT	MP	4	1112	F	1.157	N/A	N/A	N/A	N/A		0.905	N/A

Model Year	Vehicle Make	Vehicle Model	Veh. No.	IPMD Ver.	Veh. Type	Occu-pants	Ballast (N)	Drive Axle	CG Location (m)		Moments of Inertia (kg-m <sup>2</sup> )			Roll/Yaw Product (kg-m <sup>2</sup> )	Tilt Table Ratio	Static Stability Factor
									From Front Axle	Above Ground	Pitch	Roll	Yaw			
1988	Suzuki	Samurai	V180	2	MP	0	0	4	1.138	0.596	1038	296	1144	N/A	1.098	
1988	Suzuki	Samurai	V180A	2	MP	2	0	4	1.028	0.640	1060	326	1197	N/A	1.023	
1988	Suzuki	Samurai	V180F	4	MP	1	0	4	1.016	0.600	1120	347	1210	N/A	1.090	
1988	Suzuki	Samurai	V179B	2	MP	2	0	4	1.039	0.628	1072	351	1138	N/A	1.041	
1988	Suzuki	Samurai	V146	1	MP	0	0	4	1.005	0.595	1057	309	1160	N/A	1.087	
1988	Suzuki	Samurai	V180K	4	MP	1	0	4	1.018	0.600	1103	331	1208	N/A	1.087	
1988	Suzuki	Samurai	V180B	2	MP	4	0	4	1.167	0.697	1228	342	1360	N/A	0.939	
1988	Suzuki	Samurai	V180G	4	MP	1	0	4	1.020	0.599	1123	348	1230	N/A	1.090	
1988	Suzuki	Samurai	V180J	4	MP	1	0	4	1.020	0.601	1095	331	1203	N/A	1.086	
1988	Suzuki	Samurai	V180M	4	MP	1	0	4	0.984	0.606	1041	324	1143	N/A	1.077	
1988	Suzuki	Samurai	V180L	4	MP	4	0	4	1.172	0.661	1314	396	1380	N/A	0.988	
1988	Suzuki	Samurai	V180I	4	MP	1	0	4	1.027	0.601	1094	326	1182	N/A	1.086	
1988	Suzuki	Samurai	V180H	4	MP	1	0	4	1.024	0.602	1097	324	1192	N/A	1.084	
1990	Toyota	4Runner	385	VIMF	MP	1	0	4	1.126	0.739	3572	748	3749	105	0.919	
1990	Toyota	4Runner	N/A	TT	MP	1	0	4	N/A					0.909		
1998	Toyota	4Runner	507	VIMF	MP	1	0	4	1.226	0.707	3093	737	3246	123	1.063	
1998	Toyota	4Runner	508	VIMF	MP	5	1703	4	1.422	0.755	3799	961	3842	223	0.995	
1987	Toyota	4Runner	V129C	1	MP	N/A	GVWR+	4	1.479	0.779	3936	841	3578	N/A	0.912	
1987	Toyota	4Runner	V129A	1	MP	0	0	4	1.226	0.719	2555	361	3331	N/A	0.987	
1987	Toyota	4Runner	V129B	1	MP	N/A	LtLd	4	1.236	0.750	3223	774	2972	N/A	0.947	
1989	Toyota	4Runner	V382	5	MP	1	0	4	1.277	0.699	2983	571	3042	N/A	1.079	
1989	Toyota	4Runner	N/A	TT	MP	1	0	4	N/A					1.028	N/A	
1983	Toyota	Camry	V145A	1	5H	0	0	F	1.034	0.549	1916	429	2036	N/A	1.313	
1983	Toyota	Camry	V145C	4	5H	4	0	F	1.183	0.535	2174	511	2227	N/A	1.354	
1983	Toyota	Camry	V145B	4	5H	1	0	F	1.068	0.526	1970	449	1874	N/A	1.376	
1987	Toyota	Camry	V102	1	4S	0	0	F	1.016	0.549	2494	462	2404	N/A	1.334	
1976	Toyota	Corolla	V201	2	2C	0	0	R	1.054	0.514	1619	300	1706	N/A	1.322	
1987	Toyota	Corolla FX	V143A	1	3H	0	0	F	0.944	0.543	1485	324	1594	N/A	1.303	
1985	Toyota	Coventry	N/A	TT	VN	1	0	R	0.916	N/A	N/A	N/A	N/A	N/A	1.024	
1982	Toyota	Cressida	V115	1	4S	0	0	R	1.194	0.541	2352	365	2361	N/A	1.282	
1979	Toyota	Land Cruiser	V189	2	MP	0	0	4	1.364	0.727	3944	782	3930	N/A	0.970	
1991	Toyota	Land Cruiser	V349	5	MP	1	0	4	1.377	0.757	4513	937	4505	0.953	1.049	
1987	Toyota	LE Van	V127A	1	VN	0	0	R	0.931	0.671	2393	704	2193	N/A	1.048	
1987	Toyota	LE Van	V127B	1	VN	N/A	LtLd	R	0.817	0.691	2654	838	2374	N/A	1.017	
1987	Toyota	LE Van	V127C	1	VN	N/A	GVWR	R	1.115	0.694	3544	954	3218	N/A	1.013	
1986	Toyota	MR2	V153A	1	2C	0	0	R	1.314	0.508	1280	342	1457	N/A	1.418	
1986	Toyota	MR2	V153B	2	2C	0	0	R	1.284	0.485	1276	329	1421	N/A	1.488	
1989	Toyota	pickup	T513	5	PU	0	0	R	1.216	0.540	2492	359	2560	N/A	1.262	
1991	Toyota	Prevvia LE	V360	5	VN	1	0	R	1.329	0.638	3051	774	3135	0.266	1.229	
1986	Toyota	RN50 pickup	V234B	4	PU	2	0	R	1.145	0.562	1948	410	2118	N/A	1.208	
1986	Toyota	RN50 pickup	V234A	4	PU	1	0	R	1.151	0.551	1949	396	1962	N/A	1.232	
1988	Toyota	RN50 pickup	V205	2	PU	0	0	R	1.158	0.549	2061	358	2138	N/A	1.238	
1986	Toyota	RN60 pickup	V217	2	PU	0	0	4	1.095	0.656	2348	461	2383	N/A	1.081	
1983	Toyota	Starlet	N/A	TT	3H	1	0	R	1.030	N/A	N/A	N/A	N/A	N/A	N/A	
1998	Toyota	Tacoma	523	VIMF	PU	1	0	R	1.356	0.568	2856	495	3024	N/A	1.092	
1998	Toyota	Tacoma	524	VIMF	PU	5	2972	R	1.652	0.597	3865	638	4035	32	1.259	
1998	Toyota	Tercel	527	VIMF	2S	1	0	F	0.953	0.502	1326	343	1473	56	1.198	
1998	Toyota	Tercel	528	VIMF	2S	5	58	F	1.138	0.508	1537	423	1689	75	1.389	
1971	Volkswagen	Beetle	V199	2	2S	0	0	R	1.412	0.499	1196	235	1289	N/A	1.373	
1987	Volkswagen	Vanagon	N/A	TT	VN	7	2780	R	1.280	N/A	N/A	N/A	N/A	0.831	N/A	
1987	Volkswagen	Vanagon GL	N/A	TT	VN	1	0	R	1.146	N/A	N/A	N/A	N/A	0.968	N/A	
1991	Volvo	240	T323	5	4S	1	0	R	1.303	0.567	2560	476	2663	N/A	1.231	
1991	Volvo	740	T324	5	4S	1	0	R	1.315	0.531	2738	485	2845	N/A	1.378	
1987	Yugo	GV	V135	1	3H	0	0	F	0.743	0.530	919	251	940	N/A	1.222	
1988	Yugo	GV	V344	5	3H	1	0	F	0.787	0.531	1018	265	1073	0.992	1.220	