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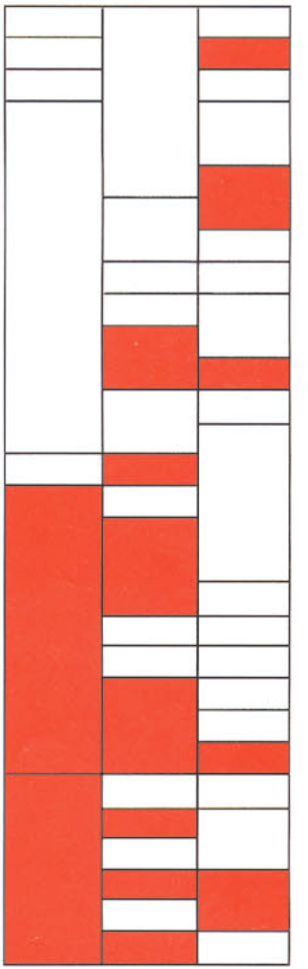
Injury and Collision Loss Experience

by Make and Model



September 1992

HIGHWAY LOSS DATA INSTITUTE

The Highway Loss Data Institute (HLDI) is a nonprofit, public service organization. It is closely associated with and funded through the Insurance Institute for Highway Safety, which is wholly supported by the American Insurance Highway Safety Association, the American Insurers Highway Safety Alliance, the National Association of Independent Insurers Safety Association, and a number of individual insurance companies. HLDI gathers, processes, and publishes data on the ways in which insurance losses vary among different kinds of vehicles.

Guide to this Report

The table on the inside of this publication summarizes the recent insurance injury and collision loss experience of passenger cars. Results are based on the loss experience of 1989-91 cars. Results for cars newly introduced or redesigned during these model years are based on the most recent years for which the designs were unchanged (either 1990-91 or 1991 only, as appropriate).

The results are grouped according to five car body styles—station wagons and passenger vans, four-door models, two-door models, luxury models, and sports models. Within these groups, cars are listed according to size—large, midsize, and small (see definitions). Most popular car models are listed, but some others are not reported because there are relatively few of them on U.S. roads and, hence, insufficient data to compute reliable results.

Injury losses are presented in terms of the frequency of insurance claims filed under Personal Injury Protection (PIP) coverages. Two measures of injury losses are presented. The overall result for a particular car is the frequency of all medical claims filed under PIP coverages, regardless of the magnitude of the losses. The other injury loss result represents the frequency of claims for paid medical losses exceeding $500. For some cars, no injury loss result for claims greater than $500 is shown because of insufficient data to compute this figure.

Collision losses are presented in terms of average loss payments per insured vehicle year (see definitions).

All losses are stated in relative terms, with 100 representing the result for all cars in each loss category. Thus, an injury or collision result of 122 is 22 percent worse than average. A result of 96 is 4 percent better than average. Cars are listed within each body style and size group in ascending sequence of their overall injury claim frequency result.

For convenience, the results are color-coded: light yellow for results more than 30 percent better than average (i.e., results of less than 70); dark yellow for results 21-30 percent better than average; tan for results plus or minus 20 percent of average; orange for results 21-30 percent worse than average; and red for results more than 30 percent worse than average (i.e., results of more than 130).

The results are adjusted, or standardized, to reduce possible distortions due to two non-vehicle factors: operator age (injury and collision results) and deductible amount (collision results only).

Highlights

The table on the inside of this publication shows very wide variations in the injury and collision loss experience of various vehicles on the nation's highways. Many of the cars with the worst injury results have claim frequencies that are double those of many of the vehicles with the best experience. Most of the cars with the best overall results (injury and collision) are large cars. Those with the worst overall results typically are small models.

All cars, beginning with 1990 models, are required to have automatic restraints (air bags or automatic safety belts). By the 1998 model year, all cars will have air bags for both drivers and right front-seat passengers. Results for cars with air bags are identified with a ★ but it should be noted that the addition of air bags doesn't have a large effect on injury claim frequencies (see "Automatic Restraints" on the inside table for further explanation).

Newer car models may sometimes have been redesigned but given the same name as earlier—but different—models. In these cases, the results for the earlier model should not be used to predict the experience of the newer one.

Injury and collision results are drawn from two detailed statistical reports, HLDI I91-1 and HLDI R91-2. Single copies of these are available from HLDI, 1005 North Glebe Road, Arlington, VA 22201.

Definitions

Average Loss Payment per Insured Vehicle Year–dollar total of all collision loss payments made for the claims for a group of vehicles divided by the total exposure for that group; expressed as dollars per insured vehicle year.

Claim Frequency–number of injury claims for a group of vehicles, divided by the exposure for that group; expressed as claims per 1,000 insured vehicle years.

Collision Coverages–coverages under which people insure their own vehicles against loss caused by collision.

Deductible Amount–portion of the loss borne by the policyholder.

Exposure–accumulation of time intervals that individual vehicles are insured; expressed in units of insured vehicle years.

Personal Injury Protection (PIP) Coverages–first-party no-fault coverages under which an insurer pays, within specified limits, the medical/hospital/other expenses of the insured and others in the vehicle.

Vehicle Body Style and Size Groups–the five vehicle body style groups are station wagons/passenger vans, regular four-door models, regular two-door models, luxury models, and sports models; each body style group is further divided into subgroups according to wheelbase size (rounded):

Large Cars–wheelbases greater than 109 inches

Midsize Cars–wheelbases greater than 99 inches and less than or equal to 109 inches

Small Cars–wheelbases less than or equal to 99 inches

Youthful Operator–for purposes of this report, all males (married or single) under 25 years and all unmarried females under 25 years.

Two-Door Models		Overall Injury	Injuries Costing $500+	Collision
Large	All	86	88	96
	Buick LeSabre	74		110
	Ford Thunderbird	83	84	96
	Mercury Cougar	90	92	95
Midsize	All	111	109	107
	Chevrolet Lumina	88	93	77
	Buick Regal	91	90	94
	Pontiac Grand Prix	91	88	91
	Oldsmobile Cutlass Supreme	94	91	87
	★ Chrysler LeBaron convertible	97	94	118
	Buick Skylark	99		100
	Honda Accord	100	103	104
	Honda Prelude	102	106	126
	Acura Integra	104	102	137
	Oldsmobile Calais	106	109	109
	★ Chevrolet Beretta	108		131
	★ Chrysler LeBaron	109	104	116
	Pontiac Grand Am	114	117	98
	Ford Tempo	123	129	94
	Pontiac Sunbird	124	113	103
	Chevrolet Cavalier	143	136	110
Small	All	132	134	124
	Eagle Talon 4 wheel drive	63		160
	Dodge Colt	105	109	105
	Plymouth Colt	106	107	104
	Eagle Talon	110		137
	Honda Civic	111	113	93
	Ford Probe	117	121	130
	Mazda 323	118		111
	Nissan 240SX	120	130	166
	Plymouth Laser	122	121	143
	Mazda MX-6	125	119	131
	★ Toyota Celica	125	128	150
	Mitsubishi Mirage	125		112
	Ford Escort	127	126	121
	Mitsubishi Eclipse	138	155	140
	★ Plymouth Sundance	139		109
	★ Dodge Daytona	144	133	148
	Toyota Tercel	144		100
	★ Dodge Shadow	147		118
	★ Geo Storm	147	149	159
	Ford Festiva	153	151	102
	Nissan Sentra	155		125
	Geo Metro	173	168	120
	Hyundai Excel	173	171	130
	Hyundai Scoupe	212		144

Luxury Models		Overall Injury	Injuries Costing $500+	Collision
Large	All	62	63	106
	★ Lexus LS400	44	44	137
	★ BMW 735/750iL	49		237
	★ Mercedes SEL/SDL series	53	54	152
	Jaguar XJ6	54	52	160
	★ Acura Legend 4-door	56		110
	★ Lincoln Town Car	59	59	89
	Cadillac Brougham	60	65	83
	★ Chrysler Imperial	61		70
	★ Cadillac Fleetwood 4-door	61		95
	★ Cadillac DeVille 2-door	61		105
	★ Cadillac DeVille 4-door	64	61	94
	★ Infiniti Q45	67		146
	★ Mercedes 260E/300D/E	69	78	150
Midsize	All	73	75	131
	★ Volvo 740/760 station wagon	47	41	113
	★ Oldsmobile Toronado	58		126
	★ Lincoln Continental	60	58	91
	★ Saab 9000	60		135
	★ BMW 500 series	61	67	170
	★ Buick Riviera	63		91
	★ Audi 100/200 4-door	68		157
	★ Cadillac Seville	74		99
	★ Cadillac Eldorado	79		100
	★ Lincoln Mark VII	82		136
	★ Mercedes 190D/E	84	89	131
	★ Volvo 740/760 4-door	89	92	124
	★ BMW 318i/325i 2-door	102		224

Sports Models		Overall Injury	Injuries Costing $500+	Collision
Midsize	All	118	123	148
	Nissan 300ZX 2+2	81		163
	★ Ford Mustang convertible	97		139
	★ Pontiac Firebird	122	138	145
	★ Ford Mustang	129	132	158
	★ Chevrolet Camaro	133	144	138
Small	All	91	91	142
	★ Chevrolet Corvette	68		167
	Nissan 300ZX	79		220
	★ Mazda MX-5 Miata	85	80	88
	Mazda RX-7	95		146
	★ Mercury Capri	111		104
	Honda Civic CRX	120	120	132
	★ Toyota MR2	128		190

Injury and Collision Loss Experience

Injury and collision results for 1989-91 car models are stated in relative terms, with 100 representing the average for all cars. A blank indicates insufficient data to compute a reliable result.

	<70	Substantially Better than Average
	70-79	Better than Average
	80-120	Average
	121-130	Worse than Average
	>130	Substantially Worse than Average

Highway Loss Data Institute
1005 North Glebe Road
Arlington, VA 22201
703-247-1600

Station Wagons & Passenger Vans		Overall Injury	Injuries Costing $500+	Collision
Large	All	69	67	66
	Ford Aerostar 4 wheel drive	49		80
	★ Plymouth Voyager	56		60
	★ Dodge Caravan	59		53
	GMC Safari	66	73	61
	Pontiac Trans Sport	71		72
	Toyota Previa	71	79	67
	Oldsmobile Silhouette	71		66
	Mazda MPV 4 wheel drive	72		113
	Mazda MPV	75	79	103
	Chevrolet Astro	76	74	57
	Chevrolet Lumina APV	77	73	71
	Ford Aerostar	80	82	70
Midsize	All	74	68	81
	★ Ford Taurus	61	49	80
	★ Mercury Sable	69		84
	Toyota Camry	70	63	72
	★ Volvo 240	74		88
	Nissan Axxess	78		85
	Subaru Legacy 4 wheel drive	78	68	93
	Subaru Legacy	87		86
	Chevrolet Cavalier	100		84
Small	All	98	93	82
	Subaru Loyale 4 wheel drive	82		79
	Honda Civic	85		69
	Toyota Corolla	88		81
	Ford Escort	109		79

Automatic Restraints

All cars, beginning with 1990 models, are required to have automatic restraints (air bags or automatic safety belts). By the 1998 model year, all cars will have air bags for both drivers and right front-seat passengers. Results for cars with air bags are identified with a ★ but it should be noted that the addition of air bags doesn't have a large effect on injury claim frequencies. Why? Because air bags reduce injuries in serious crashes, but crashes involving less serious injuries are both more common and unaffected by the presence of air bags.

Another way to think about this is to remember that air bags are designed to work in moderate and severe frontal crashes. Together with safety belts, air bags successfully mitigate serious injuries in such crashes, but lesser injuries can still occur. Injuries can also occur in crashes in which air bags aren't designed to deploy. The result is that claims can still be filed, and claim frequencies don't change much.

The success of air bags in reducing deaths and serious injuries is proven. An Insurance Institute for Highway Safety study shows 28 percent fewer driver deaths in frontal crashes in cars equipped with air bags, compared with cars with manual belts only. A HLDI study shows that moderate and severe injuries are 25 to 29 percent lower among drivers of cars with air bags, compared with comparable cars with automatic belts. A federal study also shows death and injury reductions in cars with air bags, compared with cars with safety belts only.

Four-Door Models		Overall Injury	Injuries Costing $500+	Collision
Large	All	63	63	76
	★ Buick Park Avenue	45		67
	★ Oldsmobile Ninety-Eight	51		102
	★ Chevrolet Caprice	62	57	72
	★ Ford Crown Victoria	63	63	69
	★ Mercury Grand Marquis	63	66	77
	★ Chrysler New Yorker 5th Avenue	64	70	81
	Oldsmobile Eighty-Eight	66	64	80
	Buick LeSabre	66	62	74
	Pontiac Bonneville	68	68	84
Midsize	All	95	96	88
	Buick Century	67	65	69
	Mazda 929	69		112
	★ Chrysler New Yorker Salon	73		81
	Buick Regal	75	71	71
	★ Mercury Sable	75	73	93
	Pontiac Grand Prix	79	74	72
	Oldsmobile Cutlass Supreme	80	76	74
	★ Ford Taurus	80	77	87
	Oldsmobile Cutlass Ciera	80	77	77
	Chevrolet Lumina	80	74	69
	★ Lexus ES250	82		119
	★ Chrysler LeBaron	84		66
	Toyota Cressida	85	93	116
	Subaru Legacy 4 wheel drive	87		102
	Pontiac 6000	87		82
	★ Dodge Dynasty	87	85	67
	Nissan Maxima	89	95	105
	Eagle Premier	90	84	81
	Honda Accord	91	94	93
	Volkswagen Passat	91		145
	★ Volvo 240	93	86	105
	Ford Tempo 4 wheel drive	93		83
	★ Dodge Spirit	95	87	74
	Toyota Camry	96	102	81
	Buick Skylark	99	96	88
	★ Chevrolet Corsica	100		95
	★ Plymouth Acclaim	100	94	75
	Mazda 626	102	106	102
	Mitsubishi Galant	105	108	101
	Acura Integra	108	99	112
	Oldsmobile Calais	110	111	95
	Pontiac Sunbird	110		88
	Subaru Legacy	110	112	100
	Mercury Topaz	112	109	83
	Saturn SL	112		69
	Pontiac Grand Am	113	116	83
	Ford Tempo	113	112	81
	Chevrolet Cavalier	120	117	87
	Nissan Stanza	131	142	111
	Hyundai Sonata	135	156	121
Small	All	132	134	103
	Volkswagen Golf	95		114
	Volkswagen Jetta	115	119	127
	Mercury Tracer	121		104
	★ Plymouth Sundance	125	107	96
	Mazda 323 Protegé	126	134	117
	Honda Civic	127	128	98
	Ford Escort	127	129	92
	Toyota Corolla	129	137	96
	Eagle Summit	131	130	117
	★ Dodge Shadow	136	127	100
	Nissan Sentra	137		99
	Geo Prizm	141	136	111
	Mitsubishi Mirage	148	156	115
	Geo Metro	151		114
	Toyota Tercel	153		103
	Hyundai Excel	179	190	123