HLDI
Highway Loss Data Institute

Insurance Report



Collision Losses controlling for mileage

2015–17 Passenger Cars, Pickups, SUVs, and Vans

RM-17 April 2018



Highlights

Since 2015 CARFAX® has been providing mileage data to HLDI. That data has been used in special topic analysis but HLDI's intent is to integrate mileage information into all future analysis. This is the first time it has been utilized in a regularly published report.

The loss data included in this report were the same as in the December 2017 collision losses report (2017a).

Including mileage in the analysis impacted the size and class level results. The largest increase in relative collision claim frequency was for mini sports cars (6.1 percent). In contrast, the largest decrease was observed for very large SUVs (-4.0 percent).

While at the vehicle series level, relative collision claim frequency changed less than 2 percent when mileage was included for almost half the vehicles (48 percent). The relative claim frequencies for 28 percent of vehicles changed 4 percent or more.

Some substantial claim frequency changes were observed at the vehicle series level with the addition of mileage. The Tesla Model S four-door electric (2WD and 4WD) and the Tesla Model X four-door electric 4WD, large luxury vehicles, had the largest percentage increases in relative claim frequency (12-13 percent). The Ram 3500 crew cab LWB, a very large pickup had the largest percentage decrease in relative claim frequency (6 percent).

2018 Board of Directors

Chair
Mike Petrarca, Amica Mutual Insurance Company

Vice Chair
Anthony E. Ptasznik, Auto Club Group

Prior Chair
Harry Todd Pearce, GEICO Corporation

Justin B. Cruz, American Family Insurance

David Cummings, USAA

Michael D. Doerfler, Progressive Insurance

Josh Grunin, The Hartford

John Hardiman, New Jersey Manufacturers Insurance Group

Robert Harrington, Erie Insurance Group

Craig Kehrberg, PEMCO Mutual Insurance Company

Andy Lau, Kemper Corporation

Richard Lonardo, MetLife Auto and Home

Justin Milam, American National

Hamid Mirza, Liberty Mutual Insurance Company

Thomas G. Myers, Plymouth Rock Assurance

James Nutting, Farmers Insurance Group of Companies

Kathleen Ores Walsh, COUNTRY Financial

Robert C. Passmore, Property Casualty Insurers Association of America

Thomas O. Rau, Nationwide Insurance

Bill Reddington, Kentucky Farm Bureau Mutual Insurance Company

Michael Stienstra, CHUBB

Laurette Stiles, State Farm Insurance Companies

James Whittle, American Insurance Association

Geoff Williams, Allstate Insurance Group

Andrew Woods, The Travelers Companies

John Xu, CSAA Insurance Group

David L. Harkey, Highway Loss Data Institute

The membership of the Highway Loss Data Institute Board of Directors represents insurance companies that supply data to HLDI. Financial support for HLDI is provided through the Insurance Institute for Highway Safety, which in turn is supported by automobile insurers.

Contents

Introduction 1

Collision losses by vehicle type 2

Table 1: Collision losses for 2015–17 model years by vehicle type after all-variable standardization and controlling for mileage 2

Collision losses — historical trends 2

Figure 1: Collision claim frequencies by calendar year and vehicle type based on four most recent model years 2

Figure 2: Collision claim severities by calendar year and vehicle type based on four most recent model years 3

Figure 3: Collision overall losses by calendar year and vehicle type based on four most recent model years 3

Collision losses by vehicle class and size 4

Figure 4: Relative collision claim frequencies by vehicle class and size, controlling for mileage, 2015–17 model years 4

Figure 5: Relative collision claim severities by vehicle class and size, 2015–17 model years 4

Figure 6: Relative collision overall losses by vehicle class and size, controlling for mileage, 2015–17 model years 5

Best and worst collision losses 6

Table 2: Highest collision losses, 2015–17 model years 6

Table 3: Highest collision losses for vehicles priced less than $30,000, 2015–17 model years 7

Table 4: Lowest collision losses, 2015–17 model years 8

Table 5: Lowest collision losses for vehicles priced less than $30,000, 2015–17 model years 9

Comparison of with and without mileage results 10

Table 6: Comparison of collision losses for 2015–17 model years by vehicle type after all-variable standardization with and without controlling for mileage 10

Figure 7: Percentage change in relative collision claim frequency with and without mileage by vehicle class and size, 2015–17 model years 10

Figure 8: Distribution of percentage change in relative collision claim frequency from adding average miles per day to the model 11

Table 7: Vehicle series with the largest percentage change in relative collision claim frequency from adding average miles per day to the model, 2015–17 model years 12

Discussion 12

Vehicle series collision losses 13

Table 8: Collision losses by series, 2015–17 model years 13

Appendix 29

Appendix: Individual series comprising combined series 29

COPYRIGHTED DOCUMENT, DISTRIBUTION RESTRICTED

©2018 by the Highway Loss Data Institute. All rights reserved. Distribution of this report is restricted. No part of this publication may be reproduced, or stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the copyright owner. Possession of this publication does not confer the right to print, reprint, publish, copy, sell, file, or use this report in any manner without the written permission of the copyright owner.

Companies Supplying Data

This report is based on loss data supplied by the following insurers:

21st Century Insurance

Alfa Alliance Insurance Corporation

Allstate Insurance Group

American Family Insurance

American National

Amica Mutual Insurance Company

Auto Club Group

Automobile Insurers Bureau of Massachusetts

CHUBB

COUNTRY Financial

CSAA Insurance Group

Erie Insurance Group

Esurance

Farm Bureau Financial Services

Farmers Insurance Group of Companies

Florida Farm Bureau Insurance Companies

GEICO Corporation

Hanover Insurance Group

The Hartford

Kemper Corporation

Kentucky Farm Bureau Mutual Insurance Companies

Liberty Mutual Insurance Company

MetLife Auto and Home

National General

Nationwide

New Jersey Manufacturers Insurance Group

PEMCO Mutual Insurance Company

Plymouth Rock Assurance

Progressive Insurance

Rockingham Insurance

Safeco Insurance

SECURA Insurance

Sentry Insurance

State Farm Insurance Companies

Tennessee Farmers Mutual Insurance Company

Texas Farm Bureau

The Travelers Companies

USAA

Introduction

This Highway Loss Data Institute (HLDI) report presents collision insurance losses for passenger vehicles produced in model years 2015–17 while accounting for mileage. The loss data included in this report were the same as in the December 2017 collision losses report (2017a). The linking of mileage data and HLDI insurance data was made possible through a cooperative agreement with CARFAX starting in 2015. Vehicle identification numbers (VINs) from the HLDI database were matched to odometer readings from CARFAX. Odometer readings came from multiple sources including title transfers, yearly inspections, and routine maintenance service. The frequency of odometer readings varied widely. Some vehicles had just one or two odometer readings, while others had numerous records (e.g., every oil change and state inspection). The mileage data from CARFAX has been explored and used in HLDI special topic research. In the long term, HLDI will incorporate mileage into all analysis. This report is the first use of mileage in a routinely published report.

Average miles per day (MPD) was used to estimate all loss results except for claim severity. Vehicles had to have at least two odometer readings to be included in the average miles per day calculations. Prior HLDI research (2016) found much higher average claim severity for vehicles with low average MPD than those with moderate-to-high average MPD. The analysis determined that the costlier claims were responsible for lower average MPD, not low MPD causing higher dollar claims. Due to this phenomenon, all HLDI studies will only use average MPD to estimate claim frequency and not claim severity.

The vehicles included in this analysis were up to 4 years old during the period studied. Collision coverage insures against physical damage sustained in crashes to insured people's own vehicles.

Results for all 2015–17 vehicles are included in the overall totals and in the separate totals for class and size subgroups in the principal table (**Table 8**). A detailed description of these class and size subgroups appears in the HLDI *Technical Appendix*. Reporting requirements were 1,000 insured vehicle years of exposure or 100 claims. A total of 613 passenger car, pickup, SUV, and van series met this reporting criterion.

Results in this report were standardized to control for the effect of demographic and geographic variables, to accurately assess the contribution of the vehicle to insurance losses. Losses were standardized by calendar year, model year, garaging state, number of registered vehicles per square mile (vehicle density), driver age, gender, marital status, deductible, and risk. Average MPD were included in the analysis for claim frequencies, and thus overall losses. Standardization was accomplished using a two-step process. First, regression models were constructed to produce estimates for each variable for claim frequency, claim severity, and overall losses. Then the estimates were reweighted so that every vehicle has the same exposure distribution across all the variables in the model.

This standardization procedure was first described in HLDI special report A-77, *Make and Series Results and Modeling* (2008). Further modifications were described in special report A-82, *Collision Losses after All-Variable Standardization* (2009). For details about this procedure, see the HLDI *Technical Appendix* (2010).

To provide information on as many vehicle series as possible, collision data for model years 2015–17 were combined for those vehicles with basic designs that remained unchanged. Also, some individual series were grouped into combined series (vehicles that are similar but have different engines). These combinations are listed in the **Appendix**.

Van sizing and classification change

HLDI is using a new size and classification scheme for vans. The HLDI vehicle class name of *cargo/passenger van* was changed to *van*, and cargo variants of vans or minivans are now classed with their non-cargo variants. For more information, see the HLDI Vehicle Bulletin *HLDI Van sizing and classification change* (2017b).

Collision losses by vehicle type

Table 1 lists collision losses for 2015–17 passenger vehicles by vehicle type after all-variable standardization while controlling for mileage. Mileage was not used in the claim severity model. For 2015–17 model year passenger vehicles, the combined collision claim frequency was 7.4 claims per 100 insured vehicle years, the collision claim severity was $5,575, and collision overall losses were $415. Passenger cars (including minivans) had the highest claim frequency (8.5) and overall losses ($472). Pickups had the highest claim severity ($5,626).

Table 1: Collision losses for 2015–17 model years by vehicle type after all-variable standardization and controlling for mileage

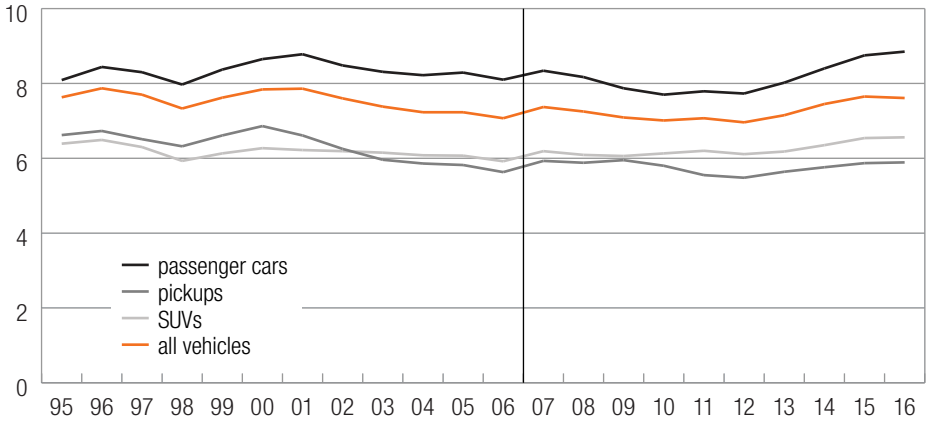
Vehicle type	Claim frequency	Claim severity	Overall losses
Passenger cars (including minivans)	8.5	$5,571	$472
Pickups	6.3	$5,626	$356
SUVs	6.6	$5,561	$367
All passenger vehicles*	**7.4**	**$5,575**	**$415**

*All-passenger-vehicle total includes 84,846 years of exposure and 4,305 claims from vans.

Collision losses — historical trends

Historical trends in collision claim frequencies, claim severities, and overall losses are shown in Figures 1–3, but the data have not been standardized. As shown in Figure 1, collision claim frequencies exhibited a downward trend from 2001 to 2012 for all vehicle types combined. While passenger cars and pickups followed the same general trend, SUVs remained relatively flat. Collision claim frequencies for all vehicles combined exhibited an upward trend from 2012 to 2015, followed by a slight decline in 2016. Claim frequencies were higher for passenger cars than for pickups and SUVs.

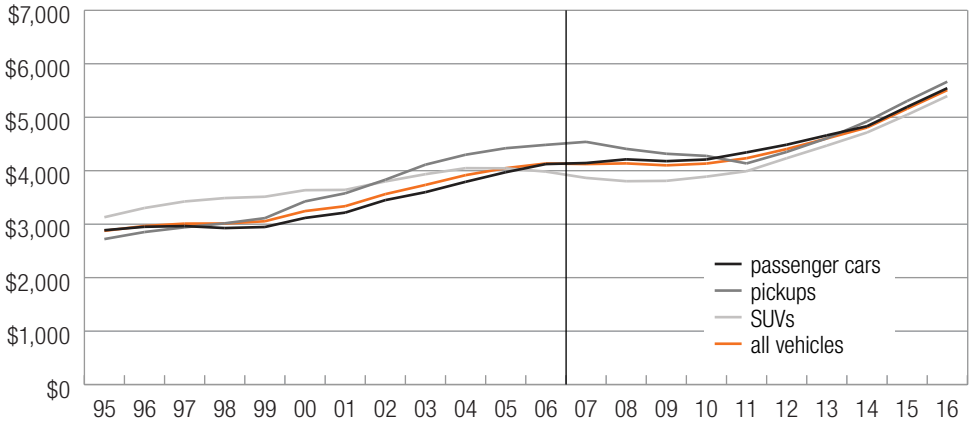
Figure 1: Collision claim frequencies by calendar year and vehicle type based on four most recent model years



Vertical line indicates change in reporting procedures for one company; data for this company were excluded through 2006 and included beginning in 2007.

For all vehicles combined, the steady increase in claim severities slowed starting in 2006 and began increasing again starting in 2010 (**Figure 2**). Between 2010 and 2016, claim severities increased by 33 percent. SUVs had the highest collision claim severities in 1995 and by 2016, SUVs had the lowest.

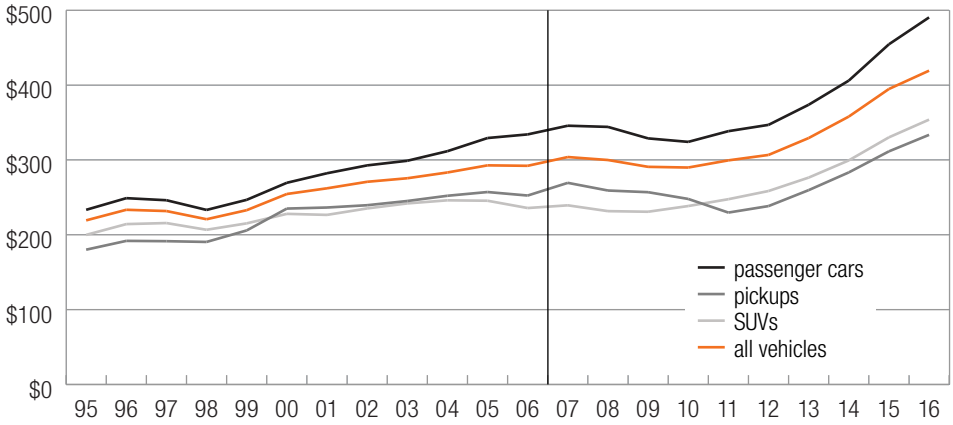
Figure 2: Collision claim severities by calendar year and vehicle type based on four most recent model years



Vertical line indicates change in reporting procedures for one company; data for this company were excluded through 2006 and included beginning in 2007.

Overall losses followed a similar pattern to that of claim severities (**Figure 3**). Between 2010 and 2016, overall losses for all vehicles combined increased by 45 percent. Passenger cars had higher collision overall losses than pickups and SUVs for the entire period.

Figure 3: Collision overall losses by calendar year and vehicle type based on four most recent model years



Vertical line indicates change in reporting procedures for one company; data for this company were excluded through 2006 and included beginning in 2007.

Collision losses by vehicle class and size

Figures 4–6 show relative collision claim frequencies, claim severities, and overall losses by vehicle class and size for 2015–17 model year vehicles. In each figure, the value 100 represents the average result for all passenger vehicles. Relative claim frequencies controlling for mileage were lowest for very large vans (68). Four-door microcars (141) had the highest relative claim frequency, a category consisting of two Mitsubishi vehicles (Figure 4). Relative claim severities ranged from 74 for midsize station wagons to 184 for very large luxury cars (Figure 5). Relative overall losses controlling for mileage ranged from 55 for two-door microcars to 210 for very large luxury cars (Figure 6).

Figure 4: Relative collision claim frequencies by vehicle class and size controlling for mileage, 2015–17 model years

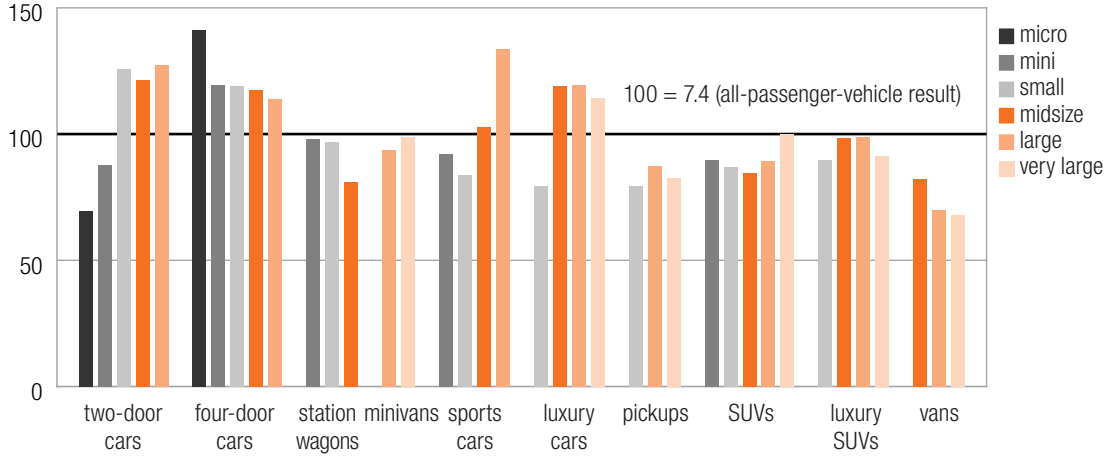


Figure 5: Relative collision claim severities by vehicle class and size, 2015–17 model years

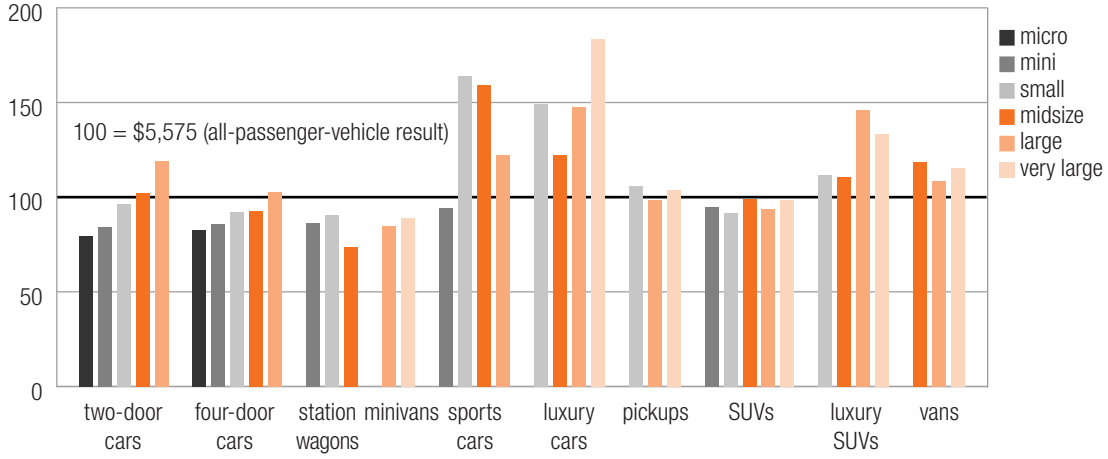
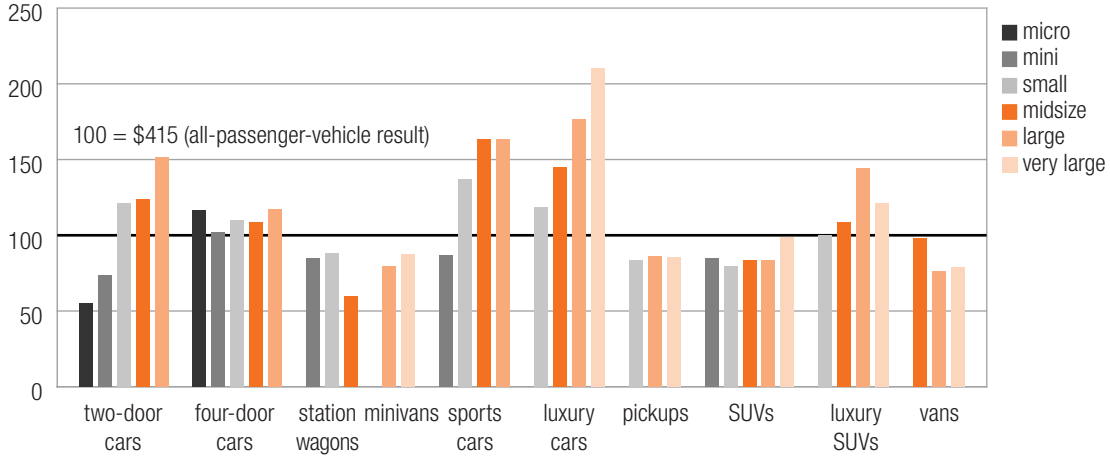


Figure 6: Relative collision overall losses by vehicle class and size controlling for mileage, 2015–17 model years



Best and worst collision losses

Table 2 lists the 10 vehicle series with the highest (worst) relative loss results for collision overall losses, claim frequencies, and claim severities for 2015–17 model year vehicles. The highest relative overall losses ranged from 399 to 749. The vehicles with the highest relative collision overall losses included eight luxury vehicles and two sports cars. The Bentley Continental GT two-door 4WD (749), a very large luxury car, had the highest result followed by the Lamborghini Huracan two-door 4WD (614), a midsize sports car. The highest relative claim frequencies ranged from 151 (Mitsubishi Lancer 4WD and BMW M6 four-door) to 193 (Mitsubishi Mirage G4). The highest relative claim severities ranged from 409 (Jaguar F-Type two-door 4WD) to 1,416 (Lamborghini Huracan two-door 4WD). The vehicle with the next highest relative claim severity was the Bentley Continental GT two-door 4WD (744), which was nearly half the highest result.

Table 2: Highest collision losses, 2015–17 model years

Make and series	Model years	Size and class	Exposure	Result
Relative overall losses				
Bentley Continental GT 2dr 4WD	15–17	Very large luxury car	1,257	749
Lamborghini Huracan 2dr 4WD	15–17	Midsize sports car	1,507	614
Bentley Continental Flying Spur 4dr 4WD	15–17	Very large luxury car	1,399	551
BMW i8 plug-in hybrid 2dr 4WD	15–17	Midsize luxury car	3,918	511
Maserati Granturismo 2dr	15–17	Large sports car	1,488	479
Bentley Continental GTC convertible 4WD	15–17	Very large luxury car	1,895	473
Audi S8 4dr 4WD	15–17	Very large luxury car	1,659	460
Audi RS7 4dr 4WD	15–17	Large luxury car	2,362	434
BMW X6 M 4dr 4WD	15–17	Midsize luxury SUV	1,527	408
BMW M6 4dr	15–17	Large luxury car	1,551	399
Relative claim frequency				
Mitsubishi Mirage G4	17	Mini 4dr car	3,944	193
Tesla Model S 4dr electric	15–17	Large luxury car	14,194	165
Scion/Toyota FR-S/86 series	15–17	Small 2dr car	31,484	164
Tesla Model X 4dr electric 4WD	16–17	Large luxury SUV	13,602	163
Tesla Model S 4dr electric 4WD	15–17	Large luxury car	45,612	162
Mitsubishi Lancer	15–17	Small 4dr car	24,891	156
Maserati Ghibli 4dr	15–17	Large luxury car	8,315	152
Infiniti Q60 2dr 4WD	17	Midsize luxury car	1,258	152
BMW M6 4dr	15–17	Large luxury car	1,551	151
Mitsubishi Lancer 4WD	15–17	Small 4dr car	7,361	151
Relative claim severity				
Lamborghini Huracan 2dr 4WD	15–17	Midsize sports car	1,507	1,416
Bentley Continental GT 2dr 4WD	15–17	Very large luxury car	1,257	744
Ferrari California T convertible	15–17	Midsize sports car	1,884	719
Porsche 911 Turbo 2dr 4WD	15–17	Midsize sports car	3,430	501
Bentley Continental Flying Spur 4dr 4WD	15–17	Very large luxury car	1,399	479
Porsche 911 Turbo convertible 4WD	15–17	Midsize sports car	2,018	463
Bentley Continental GTC convertible 4WD	15–17	Very large luxury car	1,895	460
Porsche 911 Carrera 2dr	15–17	Midsize sports car	12,892	443
BMW i8 plug-in hybrid 2dr 4WD	15–17	Midsize luxury car	3,918	437
Jaguar F-Type 2dr 4WD	16–17	Midsize luxury car	2,286	409

Table 3 lists the 10 vehicle series priced at less than $30,000 with the highest relative loss results for collision overall losses, claim frequencies, and claim severities for 2015–17 model year vehicles. The highest relative overall losses ranged from 145 to 189. Many vehicles with the highest collision overall losses were midsize or smaller cars. The Scion FR-S/Toyota 86 series, a small two-door car, had the highest relative overall losses (189). The highest relative claim frequencies ranged from 138 (Ford Mustang two-door) to 193 (Mitsubishi Mirage G4). The highest relative claim severities ranged from 118 (Nissan NV 2500 cargo and GMC Sierra 1500) to 134 (Chevrolet City Express cargo).

Table 3: Highest collision losses for vehicles priced less than $30,000, 2015–17 model years

Make and series	Model years	Size and class	Exposure	Result
Relative overall losses				
Scion/Toyota FR-S/86 series	15–17	Small 2dr car	31,484	189
Mitsubishi Mirage G4	17	Mini 4dr car	3,944	188
Chevrolet Camaro 2dr	16–17	Large sports car	44,009	183
Subaru BRZ	15–17	Small 2dr car	17,794	174
Ford Mustang 2dr	15–17	Midsize sports car	128,601	167
Dodge Challenger	15–17	Large 2dr car	138,028	160
Mitsubishi Lancer 4WD	15–17	Small 4dr car	7,361	150
Kia Optima hybrid	15–17	Midsize 4dr car	16,571	149
Hyundai Sonata hybrid	16–17	Midsize 4dr car	14,843	147
Mitsubishi Lancer	15–17	Small 4dr car	24,891	145
Relative claim frequency				
Mitsubishi Mirage G4	17	Mini 4dr car	3,944	193
Scion/Toyota FR-S/86 series	15–17	Small 2dr car	31,484	164
Mitsubishi Lancer	15–17	Small 4dr car	24,891	156
Mitsubishi Lancer 4WD	15–17	Small 4dr car	7,361	151
Subaru BRZ	15–17	Small 2dr car	17,794	150
Chevrolet Camaro 2dr	16–17	Large sports car	44,009	147
Kia Optima hybrid	15–17	Midsize 4dr car	16,571	144
Mitsubishi Mirage	15–17	Micro 4dr car	47,124	141
Hyundai Accent	15–17	Mini 4dr car	56,704	139
Ford Mustang 2dr	15–17	Midsize sports car	128,601	138
Relative claim severity				
Chevrolet City Express cargo	15–17	Midsize van	4,564	134
Ford Transit Connect SWB	15–17	Midsize van	1,524	132
Ram ProMaster City	15–17	Midsize van	6,927	126
Chevrolet Camaro 2dr	16–17	Large sports car	44,009	124
Fiat 124 convertible	17	Mini sports car	2,031	124
Jeep Wrangler 2dr SWB 4WD	15–17	Small SUV	140,070	124
Ford Mustang 2dr	15–17	Midsize sports car	128,601	121
Nissan NV 200 cargo	15–17	Midsize van	11,203	120
GMC Sierra 1500	15–17	Large pickup	5,869	118
Nissan NV 2500 cargo	15–17	Very large van	1,920	118

Table 4 lists the 10 vehicle series with the lowest (best) relative loss results for collision overall losses, claim frequencies, and claim severities for 2015–17 model year vehicles. The lowest relative overall losses ranged from 42 to 56. The GMC Savana 2500 cargo series, a very large van, had the lowest relative overall losses (42). The lowest relative claim frequencies ranged from 42 (Ferrari California T convertible) to 52 (Ram ProMaster 3500 and Chevrolet Express 3500 series). The lowest relative claim severities ranged from 65 (Mazda CX-5 four-door 4WD) to 76 (Subaru Legacy 4WD and Toyota Yaris two-door).

Table 4: Lowest collision losses, 2015–17 model years

Make and series	Model years	Size and class	Exposure	Result
Relative overall losses				
GMC Savana 2500 cargo series	15–17	Very large van	3,650	42
Jeep Compass 4dr 4WD	17	Small SUV	1,241	48
Mazda CX-5 4dr 4WD	17	Small SUV	2,371	48
Mercedes-Benz Sprinter 2500 4WD	15–17	Very large van	1,189	49
Ram 1500 LWB 4WD	15–17	Large pickup	2,732	52
Jeep Wrangler 2dr SWB 4WD	15–17	Small SUV	140,070	53
Chevrolet Express 3500 series	15–17	Very large van	1,595	54
Chevrolet Express 2500 cargo series	15–17	Very large van	7,472	55
Ram 3500 4WD	15–17	Very large pickup	1,595	56
Subaru Outback 4WD	15–17	Midsize station wagon	266,798	56
Relative claim frequency				
Ferrari California T convertible	15–17	Midsize sports car	1,884	42
Jeep Wrangler 2dr SWB 4WD	15–17	Small SUV	140,070	43
Ford Mustang Shelby GT350 2dr	15–17	Midsize sports car	5,668	43
Lamborghini Huracan 2dr 4WD	15–17	Midsize sports car	1,507	43
GMC Savana 2500 cargo series	15–17	Very large van	3,650	48
Chevrolet Corvette Z06 convertible	15–17	Midsize sports car	4,470	48
Jeep Wrangler 4dr 4WD	15–17	Midsize SUV	466,359	49
Ford F-150 4WD	15–17	Large pickup	5,666	51
Chevrolet Express 3500 series	15–17	Very large van	1,595	52
Ram ProMaster 3500	15–17	Very large van	1,103	52
Relative claim severity				
Mazda CX-5 4dr 4WD	17	Small SUV	2,371	65
Ram 2500 crew cab LWB	15–17	Very large pickup	1,539	70
Subaru Outback 4WD	15–17	Midsize station wagon	266,798	70
Jeep Compass 4dr 4WD	17	Small SUV	1,241	73
Subaru Outback 4WD with EyeSight	15–17	Midsize station wagon	288,192	73
Subaru Impreza 4WD with EyeSight	17	Small station wagon	3,024	73
Subaru Legacy 4WD with EyeSight	15–17	Midsize 4dr car	79,579	74
Acura RDX 4dr	15–17	Midsize luxury SUV	73,871	75
Toyota Yaris 2dr	15–17	Mini 2dr car	4,307	76
Subaru Legacy 4WD	15–17	Midsize 4dr car	142,481	76

Table 5 lists the 10 vehicle series priced at less than $30,000 with the lowest relative loss results for collision overall losses, claim frequencies, and claim severities for 2015–17 model year vehicles. The lowest relative overall losses ranged from 48 to 66. The Jeep Compass four-door 4WD and Mazda CX-5 four-door 4WD, both small SUVs, had the lowest relative overall losses (48). The lowest relative claim frequencies ranged from 43 (Jeep Wrangler two-door SWB 4WD) to 72 (Ford Transit Connect cargo SWB and Ford Transit Connect SWB). The lowest relative claim severities ranged from 65 (Mazda CX-5 four-door 4WD) to 79 (Honda CR-V four-door 4WD).

Table 5: Lowest collision losses for vehicles priced less than $30,000, 2015–17 model years

Make and series	Model years	Size and class	Exposure	Result
Relative overall losses				
Jeep Compass 4dr 4WD	17	Small SUV	1,241	48
Mazda CX-5 4dr 4WD	17	Small SUV	2,371	48
Jeep Wrangler 2dr SWB 4WD	15–17	Small SUV	140,070	53
Subaru Outback 4WD	15–17	Midsize station wagon	266,798	56
Ford F-150	15–17	Large pickup	10,647	60
Honda CR-V 4dr	17	Small SUV	14,296	60
Honda CR-V 4dr 4WD	17	Small SUV	27,322	61
Mercedes-Benz Metris cargo	16–17	Large van	1,231	64
Subaru Impreza 4WD with EyeSight	17	Small station wagon	3,024	64
Volkswagen Golf Alltrack 4WD	17	Small station wagon	4,002	66
Relative claim frequency				
Jeep Wrangler 2dr SWB 4WD	15–17	Small SUV	140,070	43
Ford F-150	15–17	Large pickup	10,647	60
Mercedes-Benz Metris cargo	16–17	Large van	1,231	66
Jeep Compass 4dr 4WD	17	Small SUV	1,241	66
Ram ProMaster City	15–17	Midsize van	6,927	70
GMC Canyon ext. cab 4WD	15–17	Small pickup	6,106	70
GMC Canyon ext. cab	15–17	Small pickup	5,876	70
Volkswagen Golf Alltrack 4WD	17	Small station wagon	4,002	71
Ford Transit Connect SWB	15–17	Midsize van	1,524	72
Ford Transit Connect cargo SWB	15–17	Midsize van	2,733	72
Relative claim severity				
Mazda CX-5 4dr 4WD	17	Small SUV	2,371	65
Subaru Outback 4WD	15–17	Midsize station wagon	266,798	70
Jeep Compass 4dr 4WD	17	Small SUV	1,241	73
Subaru Impreza 4WD with EyeSight	17	Small station wagon	3,024	73
Subaru Legacy 4WD with EyeSight	15–17	Midsize 4dr car	79,579	74
Toyota Yaris	15–17	Mini 2dr car	4,307	76
Subaru Legacy 4WD	15–17	Midsize 4dr car	142,481	76
Mazda 3 hatchback	15–17	Small 4dr car	107,384	77
Hyundai Accent	15–17	Mini station wagon	23,045	78
Honda CR-V 4dr 4WD	17	Small SUV	27,322	79

Comparison of with and without mileage results

Table 6 compares the collision claim frequency and overall losses for 2015-17 passenger vehicles by vehicle type after controlling for mileage with prior results that did not control for mileage (HLDI 2017a). Accounting for average MPD had minimal effects on loss results.

Table 6: Comparison of collision losses for 2015–17 model years by vehicle type after all-variable standardization with and without controlling for mileage

Vehicle type	Claim frequency with mileage	Claim frequency without mileage	Overall losses with mileage	Overall losses without mileage
Passenger cars (including minivans)	8.5	8.5	$472	$472
Pickups	6.3	6.4	$356	$356
SUVs	6.6	6.6	$367	$367
All passenger vehicles	**7.4**	**7.4**	**$415**	**$415**

Figure 7 presents the percentage change in relative collision claim frequency with and without mileage by vehicle class and size. The largest increase in relative claim frequency with and without mileage is observed in mini sports cars with an increase of 6.1 percent. Conversely, the largest decrease is observed in very large SUVs with a decrease of 4 percent. Two-door cars, sports cars, and luxury cars have higher relative claim frequencies after controlling for mileage for each size. Vans and pickups have lower relative claim frequencies for each size after controlling for mileage.

Figure 7: Percentage change in relative collision claim frequency with and without mileage by vehicle class and size, 2015–17 model years

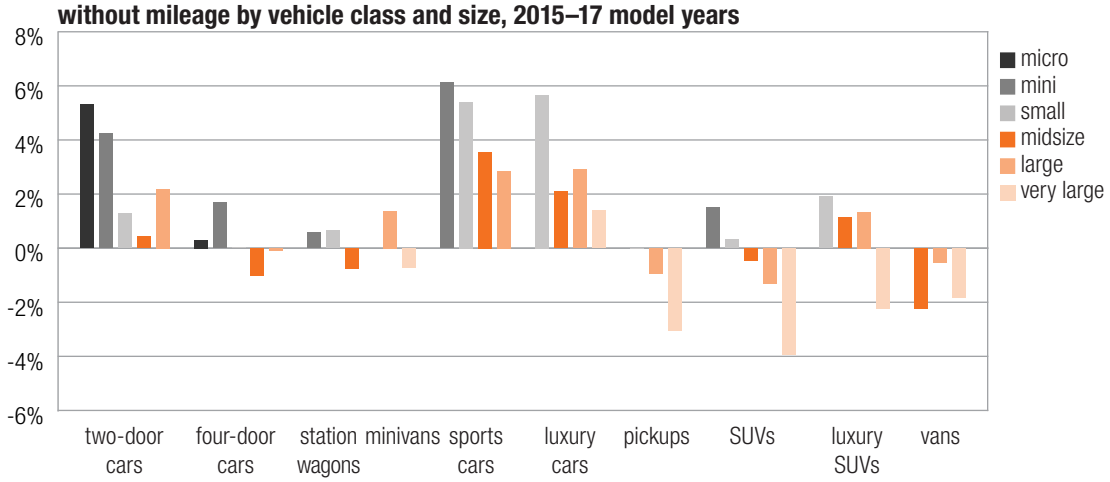


Figure 8 shows the distribution of percentage change in relative collision claim frequency from adding mileage to the model. At the vehicle series level, relative collision claim frequency changed less than 2 percent when mileage was included for nearly half the vehicles (48 percent). The relative claim frequencies for 28 percent of vehicles changed 4 percent or more.

Figure 8: Distribution of percentage change in relative collision claim frequency from adding average miles per day to the model

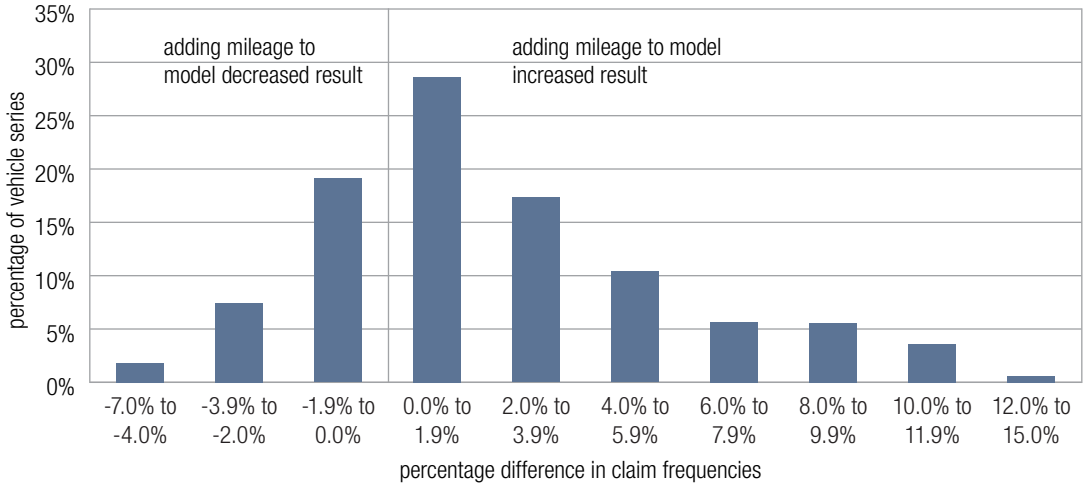


Table 7 lists the vehicle series that had the largest percentage changes in relative collision claim frequency from adding average MPD to the model. The list is limited to vehicle series that meet reporting thresholds. The Tesla Model S four-door electric (2WD and 4WD) and Tesla Model X four-door electric 4WD had the largest percent increases of between 12 and 13 percent. A fourth electric vehicle on the list was the Chevrolet Bolt with a 10 percent increase in relative claim frequency after controlling for mileage. Four other vehicles series with the largest increases were sports vehicles with low average MPD of less than 20.

The list of vehicles with the largest decreases in relative collision claim frequencies is dominated by very large vehicles, with high average MPD. Very large pickups and SUVs comprised 8 of the 10 vehicle series with the largest decreases. The remaining two vehicle series were both very large cargo vans. All these vehicles had an average MPD of over 47.

Table 7: Vehicle series with the largest percentage change in relative collision claim frequency from adding average miles per day to the model, 2015–17 model years

Make and series	Size and class	Model years	Exposure	Original relative claim frequency	Mileage adjusted relative claim frequency	Percent change	Average miles per day
Largest increase in relative claim frequency							
Tesla Model X 4dr electric 4WD	Large luxury SUV	16–17	13,602	144	163	13%	31.8
Tesla Model S 4dr electric	Large luxury car	15–17	14,194	146	165	13%	34.5
Tesla Model S 4dr electric 4WD	Large luxury car	15–17	45,612	145	162	12%	34.3
Alfa Romeo 4C 2dr	Mini sports car	15–17	1,248	59	65	10%	11.9
Ferrari California T convertible	Midsize sports car	15–17	1,884	38	42	10%	7.4
BMW 5 series 4dr	Large luxury car	17	1,160	75	82	10%	34.2
Jeep Compass 4dr 4WD	Small SUV	17	1,241	60	66	10%	31.2
Ford Mustang Shelby GT350 2dr	Midsize sports car	15–17	5,668	39	43	10%	12.8
Chevrolet Corvette Grand Sport 2dr	Midsize sports car	17	2,289	52	57	10%	17.8
Chevrolet Bolt electric	Small 4dr car	17	1,934	65	71	10%	35.6
Largest decrease in relative claim frequency							
Ram 3500 crew cab LWB	Very large pickup	15–17	2,782	113	106	-6%	69.7
Ram 2500 crew cab LWB	Very large pickup	15–17	1,539	94	90	-5%	56.4
Ram 3500 crew cab LWB 4WD	Very large pickup	15–17	43,225	115	109	-5%	60.8
Ford T-350 Transit cargo	Very large van	15–17	2,807	84	80	-5%	58.8
Ram 2500 mega cab 4WD	Very large pickup	15–17	24,790	92	87	-5%	52.7
Ram 3500 mega cab 4WD	Very large pickup	15–17	12,067	112	107	-5%	55.4
GMC Yukon XL 1500 4dr 4WD	Very large SUV	15–17	70,235	112	107	-4%	47.4
Chevrolet Suburban 1500 4dr 4WD	Very large SUV	15–17	93,706	107	103	-4%	47.9
Ram 2500 crew cab LWB 4WD	Very large pickup	15–17	22,751	92	89	-4%	52.0
Ram ProMaster 3500	Very large van	15–17	1,103	54	52	-4%	66.0

Discussion

Adding average MPD to the collision model resulted in minimal changes. Collision claim frequency for the majority of vehicles changed less than 4 percent. Generally, higher relative claim frequencies were observed for vehicles with low MPD (sports cars and luxury vehicles) and lower claim frequencies for vehicles with higher MPD (trucks, larger SUVs, and vans).

Vehicle series collision losses

Detailed collision coverage results for all 2015–17 passenger vehicles with at least 1,000 insured vehicle years of exposure or 100 claims are listed in **Table 8**. The values reported are total exposure (insured vehicle years), number of claims, and relative results for three loss categories: claim frequency, claim severity, and overall losses. The value 100 corresponds to the average result for all passenger vehicles in each loss category. Individual series are listed in ascending order of relative overall losses within each size and class group.

The total exposure accumulated for the three model years was more than 20.1 million insured vehicle years for passenger cars and more than 22.6 million insured vehicle years for pickups, SUVs, and vans. Collision claims numbered more than 1.7 million for passenger cars and more than 1.4 million for pickups, SUVs, and vans.

Relative claim frequencies for individual vehicle series ranged from 42 for the Ferrari California T convertible to 193 for the Mitsubishi Mirage G4. Relative claim severities ranged from 65 for the Mazda CX-5 four-door 4WD to 1,416 for the Lamborghini Huracan two-door 4WD. Relative overall losses ranged from 42 for the GMC Savana 2500 cargo series to 749 for the Bentley Continental GT two-door 4WD.

Table 8: Collision losses by series, 2015–17 model years

Make	Series	Model years	Exposure (insured vehicle years)	Claims	Relative claim frequency	Relative claim severity	Relative overall losses
All passenger vehicles		**15–17**	**42,788,770**	**3,185,309**	**100=7.4**	**100=$5,575**	**100=$415**
All passenger cars		**15–17**	**20,169,452**	**1,709,812**	**114**	**100**	**114**
MICRO CARS							
2-door		**15–17**	**16,951**	**879**	**70**	**79**	**55**
Smart	ForTwo	16–17	4,682	292	84	86	73
4-door		**15–17**	**47,238**	**4,961**	**141**	**83**	**117**
Mitsubishi	Mirage	15–17	47,124	4,951	141	83	117
MINI CARS							
2-door		**15–17**	**138,639**	**9,040**	**88**	**84**	**74**
Fiat	500 electric	15–17	17,589	863	66	96	63
Fiat	500 convertible	15–17	5,643	335	80	90	72
Mini	Cooper convertible	15–17	10,877	625	77	94	73
Fiat	500	15–17	40,087	2,733	92	81	74
Mini	Cooper	15–17	56,732	3,931	93	91	84
Toyota	Yaris	15–17	4,307	359	112	76	85
4-door		**15–17**	**290,537**	**25,790**	**119**	**86**	**102**
Chevrolet	Spark	16–17	25,160	2,181	116	81	94
Mini	Cooper	15–17	35,159	2,698	103	95	98
Toyota	Yaris hatchback	15–17	13,648	1,221	120	83	99
Ford	Fiesta	15–17	75,493	6,101	109	97	106
Kia	Rio	15–17	41,083	4,079	133	80	106
Hyundai	Accent	15–17	56,704	5,872	139	80	111
Mitsubishi	Mirage G4	17	3,944	565	193	98	188
Station wagons		**15–17**	**318,891**	**23,229**	**98**	**86**	**85**
Honda	Fit	15–17	233,509	16,510	95	85	80
Hyundai	Accent	15–17	23,045	2,036	119	78	93
Kia	Rio	15–17	10,038	820	110	85	94
Ford	Fiesta	15–17	52,299	3,863	99	102	101

Table 8: Collision losses by series, 2015–17 model years							
Make	Series	Model years	Exposure (insured vehicle years)	Claims	Relative claim frequency	Relative claim severity	Relative overall losses
Sports		**15–17**	**29,003**	**1,990**	**92**	**94**	**87**
Mazda	MX-5 Miata convertible	16–17	17,647	1,238	94	92	87
Fiat	124 convertible	17	2,031	142	94	124	116
Alfa Romeo	4C 2dr	15–17	1,248	61	65	321	209
SMALL CARS							
2-door		**15–17**	**331,364**	**31,009**	**126**	**96**	**121**
Volkswagen	New Beetle convertible	15–17	20,061	1,503	101	90	90
Volkswagen	Golf	15–17	7,233	567	105	88	93
Volkswagen	New Beetle	15–17	25,985	2,155	111	84	94
Hyundai	Veloster	15–17	30,005	2,747	123	84	103
Volkswagen	GTI	15–17	13,801	1,101	107	109	117
Hyundai	Veloster turbo	15–17	31,578	2,994	127	96	122
Honda	Civic	16–17	22,884	2,234	131	97	127
Subaru	BRZ	15–17	17,794	1,985	150	116	174
Scion/Toyota	FR-S/86 series	15–17	31,484	3,854	164	115	189
4-door		**15–17**	**5,155,390**	**456,500**	**119**	**92**	**110**
Chevrolet	Bolt electric	17	1,934	103	71	89	64
Subaru	Impreza 4WD	17	2,571	171	90	84	75
Nissan	Leaf electric	15–17	75,261	5,336	95	85	81
Volkswagen	Golf	15–17	56,374	3,846	92	91	84
Mazda	3 hatchback	15–17	107,384	8,979	112	77	86
Chevrolet	Cruze hatchback	17	5,272	386	98	98	97
Mazda	3	15–17	173,019	15,534	121	81	97
Chevrolet	Volt electric	16–17	26,277	1,907	97	103	100
Hyundai	Elantra GT	15–17	33,692	2,803	112	90	101
Toyota	Prius hybrid	15–17	286,191	24,111	113	89	101
Volkswagen	GTI	15–17	75,591	5,699	101	101	103
Subaru	WRX 4WD with EyeSight	16–17	2,343	192	110	93	103
Acura	ILX	15–17	62,937	4,852	104	99	103
Nissan	Juke	15–17	25,520	1,725	91	115	105
Nissan	Juke 4WD	15–17	25,696	1,773	93	114	105
Toyota	Prius c hybrid	15–17	58,569	4,994	115	92	106
Subaru	Impreza 4WD with EyeSight	17	1,298	97	101	106	107
Toyota	Prius Prime plug-in hybrid	17	3,398	254	101	106	107
Chevrolet	Sonic	15–17	79,451	7,304	123	88	109
Honda	Civic	16–17	319,959	30,569	128	87	111
Kia	Forte	15–17	213,020	20,017	126	88	112
Nissan	Versa	15–17	185,230	17,581	127	90	115
Toyota	Corolla	15–17	925,558	83,131	121	98	118
Ford	Focus	15–17	174,829	15,825	122	97	118
Volkswagen	Golf R 4WD	15–17	11,622	856	99	120	119
Chevrolet	Cruze	16–17	82,947	7,444	121	100	121
Honda	Civic hatchback	17	15,651	1,486	128	95	121
Nissan	Sentra	15–17	332,704	30,207	122	100	122

Table 8: Collision losses by series, 2015–17 model years							
Make	Series	Model years	Exposure (insured vehicle years)	Claims	Relative claim frequency	Relative claim severity	Relative overall losses
Scion/Toyota	iA/Yaris iA series	16–17	36,311	3,548	131	93	122
Subaru	WRX 4WD	15–17	134,662	11,613	116	107	124
Hyundai	Elantra	17	106,010	10,754	136	100	136
Mitsubishi	Lancer	15–17	24,891	2,884	156	93	145
Mitsubishi	Lancer 4WD	15–17	7,361	828	151	99	150
Station wagons		**15–17**	**1,264,169**	**91,240**	**97**	**91**	**88**
Subaru	Impreza 4WD with EyeSight	17	3,024	198	88	73	64
Volkswagen	Golf Alltrack 4WD	17	4,002	212	71	92	66
Kia	Soul electric	15–17	3,683	204	75	89	66
Subaru	Crosstrek 4WD	15–17	174,068	10,766	83	87	72
Subaru	Crosstrek 4WD with EyeSight	15–17	50,687	3,055	81	89	72
Subaru	Impreza 4WD	17	5,370	370	93	82	75
Volkswagen	Golf	15–17	29,441	1,821	83	95	79
Ford	Focus electric	15–17	3,072	168	73	108	80
Kia	Soul	15–17	390,206	27,408	94	88	83
Chevrolet	Sonic	15–17	41,760	3,422	110	86	95
Ford	C-Max plug-in hybrid	15–17	17,670	1,299	99	98	96
Mini	Clubman 4WD	17	2,261	176	105	95	99
Toyota	Prius v hybrid	15–17	48,581	3,847	106	94	100
Mini	Clubman	16–17	6,343	443	94	109	102
Nissan	Versa Note	15–17	106,810	8,312	105	99	103
Kia	Forte	15–17	23,569	2,044	116	89	104
Ford	C-Max hybrid	15–17	19,499	1,560	107	97	104
Fiat	500L	15–17	6,250	462	99	110	109
Scion/Toyota	iM/Corolla iM series	16–17	22,856	2,147	126	90	114
Ford	Focus	15–17	108,066	8,750	109	105	114
Ford	Focus RS 4WD	16–17	3,044	255	113	164	185
Sports		**15–17**	**44,792**	**2,789**	**84**	**164**	**137**
Audi	TT 2dr 4WD	16–17	2,211	135	82	146	120
Audi	TTS 2dr 4WD	16–17	1,190	92	104	126	130
Porsche	Boxster convertible	17	1,069	51	64	242	156
Luxury		**15–17**	**19,085**	**1,128**	**79**	**149**	**118**
Mercedes-Benz	B class electric station wagon	15–17	2,223	142	86	115	99
BMW	i3 electric station wagon	15–17	16,862	985	79	164	129
MIDSIZE CARS							
2-door		**15–17**	**95,827**	**8,648**	**121**	**102**	**124**
Buick	Cascada convertible	16–17	6,780	492	98	92	89
Honda	Accord	15–17	66,915	5,876	118	95	113
4-door		**15–17**	**6,268,647**	**548,188**	**117**	**92**	**109**
Subaru	Legacy 4WD with EyeSight	15–17	79,579	5,731	97	74	72
Subaru	Legacy 4WD	15–17	142,481	10,241	97	76	74
Buick	Verano	15–17	66,146	5,331	108	84	91
Volkswagen	Passat	15–17	199,463	15,367	103	90	93
Mazda	6	15–17	216,138	19,178	119	80	95

Table 8: Collision losses by series, 2015–17 model years							
Make	Series	Model years	Exposure (insured vehicle years)	Claims	Relative claim frequency	Relative claim severity	Relative overall losses
Honda	Accord	15–17	926,314	77,618	113	85	96
Honda	Accord hybrid	15–17	35,828	2,920	109	92	101
Toyota	Camry	15–17	881,699	74,888	114	91	104
Ford	Fusion	15–17	509,390	41,610	110	97	107
Ford	Fusion 4WD	15–17	41,740	3,343	108	103	111
Chrysler	200 4WD	15–17	32,382	2,798	116	99	115
Nissan	Altima	15–17	824,966	78,568	128	90	115
Volkswagen	Jetta	15–17	307,533	27,249	119	97	115
Chevrolet	Malibu hybrid	16–17	3,031	228	101	115	116
Ford	Fusion hybrid	15–17	48,061	4,104	115	101	116
Chevrolet	Malibu	16–17	124,704	11,172	120	98	117
Chrysler	200	15–17	305,949	29,828	131	90	118
Toyota	Camry hybrid	15–17	62,685	5,751	123	97	119
Kia	Optima	16–17	80,637	7,253	121	99	120
Ford	Fusion plug-in hybrid	15–17	29,373	2,308	106	114	120
Hyundai	Sonata	15–17	527,294	46,085	117	103	121
Volkswagen	CC	15–17	10,862	963	119	114	135
Hyundai	Sonata hybrid	16–17	14,843	1,503	136	108	147
Kia	Optima hybrid	15–17	16,571	1,775	144	104	149
Nissan	Maxima	16–17	89,418	8,978	135	111	150
Hyundai	Sonata plug-in hybrid	16–17	1,400	128	123	122	150
Station wagons		**15–17**	**587,544**	**35,390**	**81**	**74**	**60**
Subaru	Outback 4WD	15–17	266,798	15,962	80	70	56
Subaru	Outback 4WD with EyeSight	15–17	288,192	17,158	80	73	58
Volvo	V60	15–17	11,452	800	94	92	86
Volvo	V60 Cross Country 4WD	15–17	4,884	274	75	121	91
Volvo	V60 4WD	15–17	6,290	454	97	107	104
Sports		**15–17**	**438,649**	**33,552**	**103**	**159**	**164**
Chevrolet	Corvette Grand Sport 2dr	17	2,289	97	57	144	83
Ford	Mustang GT convertible	15–17	13,979	794	76	131	100
Ford	Mustang convertible	15–17	23,113	1,828	106	101	108
Chevrolet	Corvette Z06 convertible	15–17	4,470	161	48	225	109
Ford	Mustang Shelby GT350 2dr	15–17	5,668	183	43	264	114
Chevrolet	Corvette 2dr	15–17	54,833	2,614	64	179	115
Chevrolet	Corvette convertible	15–17	11,179	468	56	217	122
Nissan	370Z convertible	15–17	1,441	109	102	141	144
Mercedes-Benz	SL class convertible	15–17	12,141	773	85	191	163
Ford	Mustang 2dr	15–17	128,601	13,234	138	121	167
Chevrolet	Corvette Z06 2dr	15–17	20,836	818	53	322	170
Porsche	911 Carrera convertible	15–17	6,241	354	76	230	175
Ford	Mustang GT 2dr	15–17	104,107	9,199	119	152	181
Porsche	911 Targa 2dr 4WD	15–17	3,087	133	58	340	198
Nissan	370Z 2dr	15–17	15,148	1,359	120	165	199
Porsche	911 Carrera 2dr	15–17	12,892	611	64	443	282

Table 8: Collision losses by series, 2015–17 model years							
Make	Series	Model years	Exposure (insured vehicle years)	Claims	Relative claim frequency	Relative claim severity	Relative overall losses
Porsche	911 Turbo convertible 4WD	15–17	2,018	96	64	463	297
Ferrari	California T convertible	15–17	1,884	60	42	719	305
Porsche	911 Turbo 2dr 4WD	15–17	3,430	159	62	501	313
Lamborghini	Huracan 2dr 4WD	15–17	1,507	49	43	1,416	614
Luxury		**15–17**	**1,856,855**	**164,308**	**119**	**122**	**145**
Volvo	S60 4dr	15–17	34,731	2,532	98	97	95
Acura	TLX 4dr	15–17	133,267	10,482	106	90	96
Acura	TLX 4dr 4WD	15–17	22,424	1,766	106	95	100
Volvo	S60 Inscription 4dr	16–17	4,110	278	91	116	105
Volvo	S60 Inscription 4dr 4WD	16–17	2,590	188	97	109	106
Volvo	S60 4dr 4WD	15–17	18,439	1,364	99	108	107
BMW	3 series station wagon 4WD	15–17	8,804	678	103	105	109
BMW	2 series convertible 4WD	15–17	4,321	346	108	101	109
Audi	A3 convertible	15–17	3,455	293	114	98	111
BMW	2 series 2dr	15–17	8,445	764	122	93	113
BMW	M2 2dr	16–17	1,314	76	78	147	114
Cadillac	ATS 2dr	15–17	6,068	461	102	113	115
Audi	A3 convertible 4WD	15–17	8,201	630	103	112	116
BMW	2 series convertible	15–17	4,634	420	122	99	121
Lincoln	MKZ 4dr	15–17	32,701	2,736	112	110	124
BMW	2 series 2dr 4WD	15–17	6,068	529	117	108	126
Cadillac	ATS 4dr 4WD	15–17	15,945	1,418	119	106	127
Lexus	ES 350 4dr	15–17	151,862	12,666	112	116	130
Cadillac	ATS 4dr	15–17	25,625	2,377	125	105	130
Cadillac	ATS 2dr 4WD	15–17	4,941	423	115	115	132
Lexus	CT 200h hybrid 4dr	15–17	37,221	3,451	125	106	132
BMW	3 series 4dr 4WD	15–17	93,962	8,146	116	114	133
Lincoln	MKZ 4dr 4WD	15–17	25,755	2,213	115	116	134
Audi	A3 4dr 4WD	15–17	61,884	5,362	116	116	135
Audi	A3 4dr	15–17	46,326	4,350	126	108	137
BMW	3 series 4dr	15–17	107,687	9,823	123	117	143
Lincoln	MKZ hybrid 4dr	15–17	23,570	2,220	127	113	144
BMW	4 series convertible	15–17	21,516	1,960	122	119	146
Mercedes-Benz	C class 4dr 4WD	15–17	138,532	11,666	113	130	147
BMW	4 series convertible 4WD	15–17	14,691	1,281	117	127	149
Mercedes-Benz	C class 4dr	15–17	75,834	6,508	115	130	150
Audi	A5 convertible 4WD	15–17	11,649	980	113	133	150
Audi	A4 4dr 4WD	17	15,978	1,293	109	139	151
Audi	S5 convertible 4WD	15–17	3,304	285	116	132	152
BMW	4 series 4dr 4WD	15–17	18,858	1,771	126	123	155
Mercedes-Benz	CLA class 4dr	15–17	42,127	4,198	134	117	156
Lexus	ES 300h hybrid 4dr	15–17	27,452	2,611	128	123	157
Audi	A3 plug-in hybrid station wagon	16–17	3,867	319	111	142	158
Audi	A4 4dr	17	5,108	426	112	145	162

Table 8: Collision losses by series, 2015–17 model years							
Make	Series	Model years	Exposure (insured vehicle years)	Claims	Relative claim frequency	Relative claim severity	Relative overall losses
Infiniti	Q50 4dr 4WD	15–17	56,967	5,660	133	123	164
Jaguar	XE 4dr 4WD	17	1,298	118	122	135	165
Infiniti	Q50 4dr	15–17	49,248	4,748	129	128	165
BMW	4 series 4dr	15–17	26,983	2,663	133	126	167
BMW	4 series 2dr 4WD	15–17	15,043	1,487	133	126	168
Lexus	IS 300 4dr 4WD	16–17	12,533	1,228	132	129	170
Infiniti	Q60 2dr	17	1,649	133	108	158	171
Lexus	IS 350 4dr	15–17	11,924	1,128	127	134	171
Mercedes-Benz	CLA class 4dr 4WD	15–17	18,969	2,013	143	120	171
Lexus	IS 350 4dr 4WD	15–17	8,162	812	134	128	171
Mercedes-Benz	C class 2dr	17	3,145	272	116	153	178
Lexus	IS 200T 4dr	16–17	26,528	2,649	134	136	183
Infiniti	Q50 hybrid 4dr 4WD	15–17	1,351	137	137	134	183
BMW	4 series 2dr	15–17	22,261	2,283	138	134	184
Infiniti	Q50 hybrid 4dr	15–17	1,616	163	136	136	184
Mercedes-Benz	CLA class AMG 4dr 4WD	15–17	1,829	182	134	141	188
Audi	S3 4dr 4WD	15–17	7,898	681	116	165	191
Jaguar	XE 4dr	17	3,012	266	119	163	193
Audi	A5 2dr 4WD	15–17	13,344	1,248	126	156	196
Cadillac	ATS-V 4dr	16–17	1,126	108	129	162	209
Audi	S5 2dr 4WD	15–17	6,889	584	114	185	211
Mercedes-Benz	C class AMG 4dr 4WD	16–17	6,325	574	122	183	223
Jaguar	F-Type convertible 4WD	16–17	1,144	68	80	284	226
Mercedes-Benz	C class 2dr 4WD	17	2,246	220	131	178	234
Jaguar	F-Type convertible	15–17	3,314	201	81	292	238
Jaguar	F-Type 2dr	15–17	7,956	486	82	292	240
Infiniti	Q60 2dr 4WD	17	1,258	142	152	168	255
BMW	M4 convertible	15–17	6,224	547	118	236	279
BMW	M3 4dr	15–17	11,613	1,002	116	281	326
BMW	M4 2dr	15–17	16,603	1,664	135	247	332
Jaguar	F-Type 2dr 4WD	16–17	2,286	148	87	409	356
Mercedes-Benz	C class AMG 4dr	15–17	2,457	227	124	294	365
BMW	i8 plug-in hybrid 2dr 4WD	15–17	3,918	341	117	437	511
LARGE CARS							
2-door		**15–17**	**161,941**	**15,354**	**127**	**119**	**152**
Dodge	Challenger SRT Hellcat	15–17	15,287	603	53	228	121
Dodge	Challenger SRT-8	15–17	8,049	550	92	161	148
Dodge	Challenger	15–17	138,028	14,137	138	116	160
4-door		**15–17**	**765,804**	**65,000**	**114**	**103**	**117**
Ford	Taurus 4WD	16–17	1,182	87	99	78	78
Buick	Regal 4WD	15–17	5,782	449	104	85	89
Buick	LaCrosse	17	3,587	273	102	90	92
Buick	Regal	15–17	39,407	3,068	105	93	98
Toyota	Avalon	15–17	101,264	8,077	107	97	104

Table 8: Collision losses by series, 2015–17 model years							
Make	Series	Model years	Exposure (insured vehicle years)	Claims	Relative claim frequency	Relative claim severity	Relative overall losses
Chevrolet	SS	15–17	7,074	442	84	125	105
Toyota	Avalon hybrid	15–17	25,019	2,077	112	97	108
Ford	Taurus	16–17	8,280	661	107	103	110
Chevrolet	Impala	15–17	155,998	13,513	116	97	113
Chrysler	300 4WD	15–17	27,807	2,100	101	111	113
Hyundai	Azera	15–17	9,103	834	123	96	118
Chrysler	300	15–17	48,281	4,389	122	100	122
Chrysler	300 HEMI	15–17	6,422	543	114	110	125
Dodge	Charger 4WD	15–17	22,092	1,775	108	118	127
Dodge	Charger	15–17	75,893	7,562	134	107	144
Ford	Taurus SHO 4WD	16–17	1,871	147	105	140	147
Dodge	Charger HEMI	15–17	41,356	3,791	123	139	171
Dodge	Charger SRT Hellcat	15–17	3,591	215	80	290	233
Minivans		**15–17**	**38,364**	**2,674**	**94**	**85**	**79**
Chrysler	Pacifica	17	37,883	2,649	94	86	81
Sports		**15–17**	**205,204**	**20,426**	**134**	**122**	**164**
Chevrolet	Camaro convertible	16–17	5,183	340	88	105	92
Chevrolet	Camaro 2dr	16–17	44,009	4,826	147	124	183
Mercedes-Benz	AMG GT 2dr	16–17	2,734	169	83	338	280
Maserati	Granturismo convertible	15–17	1,387	103	100	292	292
Maserati	Granturismo 2dr	15–17	1,488	143	129	372	479
Luxury		**15–17**	**748,614**	**66,548**	**119**	**148**	**177**
Acura	RLX 4dr	15–17	5,605	420	101	104	105
Infiniti	Q70L 4dr	15–17	5,012	344	92	122	113
Cadillac	CTS 4dr	15–17	15,311	1,345	118	110	130
Infiniti	Q70 4dr	15–17	5,544	412	100	131	131
Infiniti	Q70 4dr 4WD	15–17	5,416	415	103	132	135
Infiniti	Q70L 4dr 4WD	15–17	4,558	322	95	143	136
Cadillac	CT6 4dr 4WD	16–17	5,471	388	95	143	137
Genesis	G80 4dr 2WD/4WD	17	4,309	381	119	115	137
Cadillac	CTS 4dr 4WD	15–17	13,325	1,183	119	116	138
Mercedes-Benz	E class 2dr	15–17	5,407	459	114	132	151
BMW	5 series 4dr	17	1,160	71	82	184	151
Mercedes-Benz	E class 4dr 4WD	17	7,734	650	113	140	158
Audi	A6 4dr 4WD	15–17	58,737	4,828	110	146	161
Lexus	GS 350 4dr 4WD	15–17	18,737	1,758	126	129	162
Lexus	GS 350 4dr	15–17	34,647	2,966	115	142	164
Mercedes-Benz	E class convertible	15–17	9,985	769	103	163	168
BMW	6 series convertible	15–17	2,504	222	119	142	169
Lexus	RC 350 2dr 4WD	15–17	9,470	788	112	153	171
Audi	A6 4dr	15–17	5,792	535	124	140	173
BMW	5 series 4dr 4WD	17	1,235	90	98	181	178
Mercedes-Benz	E class 4dr	17	8,859	742	113	162	183
BMW	6 series convertible 4WD	15–17	1,912	158	111	167	186

Table 8: Collision losses by series, 2015–17 model years							
Make	Series	Model years	Exposure (insured vehicle years)	Claims	Relative claim frequency	Relative claim severity	Relative overall losses
Jaguar	XF 4dr 4WD	16–17	2,161	190	118	161	190
Lexus	RC 350 2dr	15–17	17,408	1,510	117	163	190
Jaguar	XJ 4dr LWB 4WD	15–17	2,363	196	111	173	193
Mercedes-Benz	CLS class 4dr	15–17	7,084	682	129	152	197
Lexus	RC 200T 2dr	16–17	3,305	302	123	163	200
Mercedes-Benz	E class 2dr 4WD	15–17	4,331	357	111	181	200
Lexus	RC 300 2dr 4WD	16–17	1,959	177	121	168	204
Lexus	GS 200T 4dr	16–17	1,158	109	126	163	206
Jaguar	XF 4dr	16–17	3,239	339	141	150	211
Audi	A7 4dr 4WD	15–17	16,023	1,458	122	174	213
Audi	S6 4dr 4WD	15–17	3,759	324	116	186	215
Mercedes-Benz	CLS class 4dr 4WD	15–17	6,736	607	121	178	216
BMW	6 series 4dr 4WD	15–17	5,938	597	135	161	218
Jaguar	XJ 4dr LWB	15–17	2,948	262	119	192	230
Jaguar	XJ 4dr 4WD	15–17	1,134	95	112	210	236
BMW	6 series 4dr	15–17	6,562	679	139	174	241
Audi	S7 4dr 4WD	15–17	3,156	278	118	208	247
Jaguar	XJ 4dr	15–17	2,013	199	133	197	262
Cadillac	CTS-V 4dr	16–17	1,476	118	107	250	267
Lexus	RC-F 2dr	15–17	5,112	490	129	225	290
Tesla	Model S 4dr electric	15–17	14,194	1,742	165	186	308
Tesla	Model S 4dr electric 4WD	15–17	45,612	5,509	162	215	349
Maserati	Ghibli 4dr	15–17	8,315	944	152	232	353
Lexus	GS F 4dr	16–17	964	100	139	260	362
Maserati	Ghibli 4dr 4WD	15–17	11,126	1,215	147	248	364
BMW	M6 4dr	15–17	1,551	175	151	264	399
Audi	RS7 4dr 4WD	15–17	2,362	235	134	324	434
VERY LARGE CARS							
Minivans		**15–17**	**1,153,345**	**84,761**	**99**	**89**	**88**
Honda	Odyssey	15–17	392,042	27,665	95	81	77
Dodge	Grand Caravan	15–17	162,156	11,576	96	83	79
Kia	Sedona	15–17	74,467	5,690	103	87	90
Toyota	Sienna 4WD	15–17	59,280	4,748	108	94	101
Toyota	Sienna	15–17	263,111	20,892	107	100	107
Luxury		**15–17**	**192,599**	**16,410**	**114**	**184**	**210**
Volvo	S90 4dr 4WD	17	1,055	88	112	97	108
Cadillac	XTS 4dr	15–17	22,337	1,859	112	103	115
Cadillac	XTS 4dr 4WD	15–17	9,288	716	104	131	136
Lincoln	Continental 4dr 4WD	17	1,342	93	93	148	138
BMW	535 i GT 4dr 4WD	15–17	1,170	104	120	122	146
BMW	535 i GT 4dr	15–17	1,157	91	106	143	151
Kia	K900 4dr	15–17	7,078	657	125	131	163
Lincoln	Continental 4dr	17	1,424	116	110	152	167
Lexus	LS 460 4dr	15–17	8,027	668	112	158	176

Table 8: Collision losses by series, 2015–17 model years							
Make	Series	Model years	Exposure (insured vehicle years)	Claims	Relative claim frequency	Relative claim severity	Relative overall losses
Lexus	LS 460 4dr 4WD	15–17	4,576	398	117	174	203
Mercedes-Benz	S class 4dr LWB	15–17	30,186	2,523	112	190	213
Lexus	LS 460 L 4dr	15–17	1,509	140	125	175	218
BMW	7 series 4dr	16–17	4,589	476	139	159	221
Mercedes-Benz	S class 4dr LWB 4WD	15–17	30,613	2,579	113	203	229
BMW	7 series 4dr 4WD	16–17	5,464	492	121	217	263
Mercedes-Benz	S Class 2dr 4WD	15–17	7,294	540	100	292	291
Audi	A8L 4dr 4WD	15–17	11,077	1,134	138	212	292
Maserati	Quattroporte 4dr 4WD	15–17	2,616	251	129	250	323
Audi	S8 4dr 4WD	15–17	1,659	172	139	330	460
Bentley	Continental GTC convertible 4WD	15–17	1,895	145	103	460	473
Bentley	Continental Flying Spur 4dr 4WD	15–17	1,399	120	115	479	551
Bentley	Continental GT 2dr 4WD	15–17	1,257	94	101	744	749
All pickups, SUVs, and vans		**15–17**	**22,619,318**	**1,475,497**	**88**	**100**	**88**
PICKUPS							
All pickups		**15–17**	**4,989,965**	**315,292**	**85**	**101**	**86**
All small pickups		**15–17**	**971,250**	**57,289**	**79**	**106**	**84**
2-door plus		**15–17**	**203,769**	**11,387**	**75**	**103**	**78**
GMC	Canyon ext. cab	15–17	5,876	307	70	95	67
Nissan	Frontier ext. cab 4WD	15–17	11,552	623	72	96	69
GMC	Canyon ext. cab 4WD	15–17	6,106	317	70	100	69
Chevrolet	Colorado ext cab 4WD	15–17	19,296	1,061	74	102	75
Chevrolet	Colorado ext cab	15–17	24,086	1,410	79	98	77
Nissan	Frontier ext. cab	15–17	25,025	1,444	78	100	78
Toyota	Tacoma xtra cab	16–17	15,887	986	83	106	88
Toyota	Tacoma xtra cab 4WD	16–17	26,651	1,584	80	115	92
4-door		**15–17**	**767,480**	**45,901**	**80**	**106**	**86**
Nissan	Frontier crew cab LWB 4WD	15–17	7,518	452	81	85	69
GMC	Canyon crew cab 4WD	15–17	42,547	2,294	72	97	70
GMC	Canyon crew cab	15–17	27,540	1,546	75	98	74
Nissan	Frontier crew cab SWB 4WD	15–17	49,833	2,918	79	98	77
Nissan	Frontier crew cab SWB	15–17	55,153	3,359	82	96	78
Chevrolet	Colorado crew cab 4WD	15–17	99,759	6,418	86	97	84
Chevrolet	Colorado crew cab	15–17	61,592	3,943	86	101	87
Toyota	Tacoma double cab LWB	16–17	6,184	430	93	97	91
Toyota	Tacoma double cab LWB 4WD	16–17	21,827	1,456	90	109	98
Toyota	Tacoma double cab 4WD	16–17	96,992	6,208	86	116	100
Toyota	Tacoma double cab	16–17	58,454	3,864	89	118	105
Nissan	Frontier crew cab LWB	15–17	2,760	219	107	107	114
All large pickups		**15–17**	**2,987,273**	**194,596**	**88**	**99**	**86**
2-door		**15–17**	**86,262**	**4,985**	**78**	**102**	**79**
Ram	1500 LWB 4WD	15–17	2,732	137	67	77	52
Ford	F-150 4WD	15–17	5,666	215	51	117	60
Ford	F-150	15–17	10,647	475	60	100	60

Table 8: Collision losses by series, 2015–17 model years							
Make	Series	Model years	Exposure (insured vehicle years)	Claims	Relative claim frequency	Relative claim severity	Relative overall losses
Ram	1500 LWB	15–17	3,247	189	78	99	78
Chevrolet	Silverado 1500 4WD	15–17	13,462	757	76	104	79
GMC	Sierra 1500 4WD	15–17	4,549	218	64	128	83
Ram	1500 SWB	15–17	16,502	1,071	87	96	83
GMC	Sierra 1500	15–17	5,869	349	80	118	94
Chevrolet	Silverado 1500	15–17	15,828	1,062	90	106	96
Ram	1500 SWB 4WD	15–17	7,079	471	89	109	97
2-door plus		**15–17**	**156,079**	**8,431**	**73**	**97**	**70**
Ford	F-150 SuperCab 4WD	15–17	110,143	5,713	70	96	67
Ford	F-150 SuperCab	15–17	43,940	2,581	79	99	78
4-door		**15–17**	**2,744,932**	**181,180**	**89**	**99**	**87**
Ford	F-150 SuperCrew 4WD	15–17	491,764	26,091	71	102	73
Ford	F-150 SuperCrew	15–17	164,789	9,299	76	99	75
Honda	Ridgeline crew cab 4WD	17	15,793	1,139	97	83	80
Chevrolet	Silverado 1500 ext. cab 4WD	15–17	258,276	18,291	95	90	86
Toyota	Tundra double cab 4WD	15–17	69,764	4,599	89	98	87
GMC	Sierra 1500 ext. cab 4WD	15–17	72,776	4,631	85	102	87
GMC	Sierra 1500 crew cab	15–17	53,578	3,316	83	105	87
Ram	1500 crew cab LWB	15–17	4,628	365	106	83	88
Toyota	Tundra CrewMax	15–17	47,061	3,036	87	102	88
GMC	Sierra 1500 crew cab 4WD	15–17	193,261	12,321	86	104	89
Ram	1500 crew cab LWB 4WD	15–17	38,464	2,775	97	92	89
Ram	1500 ext. cab 4WD	15–17	97,879	7,109	98	92	90
Toyota	Tundra CrewMax 4WD	15–17	143,027	9,426	89	102	90
Toyota	Tundra double cab	15–17	39,230	2,683	92	99	91
Chevrolet	Silverado 1500 crew cab	15–17	138,187	9,834	96	95	91
Ram	1500 crew cab SWB 4WD	15–17	281,484	19,560	93	97	91
Ram	1500 crew cab SWB	15–17	96,636	6,997	97	96	93
Chevrolet	Silverado 1500 ext. cab	15–17	69,796	5,395	104	90	94
Chevrolet	Silverado 1500 crew cab 4WD	15–17	363,043	26,216	97	97	94
Toyota	Tundra double cab LWB 4WD	15–17	2,384	182	103	92	94
GMC	Sierra 1500 ext. cab	15–17	18,336	1,238	91	106	96
Ram	1500 ext. cab	15–17	49,779	4,024	109	88	96
Nissan	Titan crew cab short bed 4WD	17	2,862	218	102	95	97
Nissan	Titan crew cab short bed	17	2,324	172	99	100	99
Honda	Ridgeline pickup	17	4,600	342	100	101	101
Nissan	Titan crew cab	16–17	2,745	225	110	107	117
Nissan	Titan crew cab 4WD	16–17	7,958	694	117	117	137
All very large pickups		**15–17**	**1,031,442**	**63,407**	**83**	**104**	**86**
2-door		**15–17**	**30,406**	**1,320**	**58**	**103**	**60**
Ram	3500 4WD	15–17	1,595	76	64	87	56
Ram	2500 4WD	15–17	4,051	202	67	89	60
Chevrolet	Silverado 2500 4WD	16–17	2,048	129	84	119	100

Table 8: Collision losses by series, 2015–17 model years							
Make	Series	Model years	Exposure (insured vehicle years)	Claims	Relative claim frequency	Relative claim severity	Relative overall losses
2-door plus		**15–17**	**89,451**	**4,852**	**73**	**98**	**72**
GMC	Sierra 2500 ext. cab 4WD	16–17	2,291	127	75	102	76
Chevrolet	Silverado 2500 ext. cab 4WD	16–17	8,277	483	78	106	83
4-door		**15–17**	**911,584**	**57,236**	**84**	**104**	**88**
Ram	2500 crew cab LWB	15–17	1,539	103	90	70	63
Ram	2500 crew cab SWB	15–17	3,106	183	79	83	66
Ford	F-250 SuperCrew 4WD	17	13,380	696	70	96	67
Ram	3500 crew cab SWB 4WD	15–17	10,956	694	85	85	73
Ram	2500 crew cab SWB 4WD	15–17	128,721	7,645	80	93	74
Ram	2500 mega cab 4WD	15–17	24,790	1,615	87	93	81
Ram	2500 crew cab LWB 4WD	15–17	22,751	1,503	89	92	82
Chevrolet	Silverado 2500 crew cab	16–17	1,498	94	84	98	83
Ford	F-350 SuperCrew 4WD	17	7,380	440	80	107	86
Ram	3500 mega cab 4WD	15–17	12,067	961	107	81	87
Ram	3500 crew cab LWB	15–17	2,782	219	106	89	94
GMC	Sierra 2500 crew cab 4WD	16–17	27,027	1,682	84	113	94
GMC	Sierra 3500 crew cab 4WD	16–17	7,802	601	103	92	95
Chevrolet	Silverado 2500 crew cab 4WD	16–17	46,824	3,231	93	103	96
Chevrolet	Silverado 3500 crew cab 4WD	16–17	13,258	1,010	102	98	100
Ram	3500 crew cab LWB 4WD	15–17	43,225	3,507	109	99	107
SUVs							
All SUVs		**15–17**	**17,489,918**	**1,152,623**	**89**	**100**	**88**
Mini SUVs		**15–17**	**177,727**	**11,862**	**90**	**95**	**85**
Mazda	CX-3 4dr 4WD	16–17	8,300	514	83	91	76
Kia	Niro hybrid 4dr	17	3,188	201	85	102	86
Honda	HR-V 4dr 4WD	16–17	82,835	5,638	91	94	86
Honda	HR-V 4dr	16–17	64,412	4,273	89	99	89
Mazda	CX-3 4dr	16–17	3,106	209	90	104	94
Small SUVs		**15–17**	**6,176,933**	**400,469**	**87**	**92**	**80**
Jeep	Compass 4dr 4WD	17	1,241	61	66	73	48
Mazda	CX-5 4dr 4WD	17	2,371	131	74	65	48
Jeep	Wrangler 2dr SWB 4WD	15–17	140,070	4,455	43	124	53
Honda	CR-V 4dr	17	14,296	799	75	80	60
Honda	CR-V 4dr 4WD	17	27,322	1,585	78	79	61
Subaru	Forester 4dr 4WD with EyeSight	15–17	179,313	10,528	79	86	68
Subaru	Forester 4dr 4WD	15–17	563,158	33,113	79	86	68
Mazda	CX-5 4dr	17	1,276	70	74	97	72
Kia	Sportage 4dr 4WD	17	21,326	1,275	80	95	76
Fiat	500X 4dr 4WD	16–17	8,449	540	86	89	76
Kia	Sportage 4dr	17	22,956	1,403	82	93	76
Jeep	Patriot 4dr 4WD	15–17	120,726	8,016	89	86	76
Ford	Escape 4dr 4WD	15–17	325,971	18,596	77	101	78
Ford	Escape 4dr	15–17	425,324	25,574	81	96	78
Jeep	Compass 4dr 4WD	15–17	87,766	6,062	93	86	80

Table 8: Collision losses by series, 2015–17 model years							
Make	Series	Model years	Exposure (insured vehicle years)	Claims	Relative claim frequency	Relative claim severity	Relative overall losses
Hyundai	Tucson 4dr	16–17	65,697	3,991	82	100	81
Jeep	Renegade 4dr	15–17	57,605	3,564	83	101	84
Jeep	Renegade 4dr 4WD	15–17	112,025	6,412	77	109	84
Chevrolet	Trax 4dr 4WD	15–17	64,356	3,936	82	105	86
Jeep	Patriot 4dr	15–17	130,137	9,960	103	84	86
Fiat	500X 4dr	16–17	10,386	716	93	94	87
Volkswagen	Tiguan 4dr	15–17	52,492	3,442	88	100	88
Toyota	RAV4 4dr	15–17	351,935	25,248	96	92	89
Hyundai	Tucson 4dr 4WD	16–17	55,607	3,673	89	101	89
Jeep	Compass 4dr	15–17	44,345	3,443	104	88	91
Toyota	RAV4 4dr 4WD	15–17	528,637	39,264	100	92	91
Nissan	Rogue 4dr	15–17	283,951	21,698	103	91	93
Chevrolet	Trax 4dr	15–17	85,069	5,631	89	105	93
Volkswagen	Tiguan 4dr 4WD	15–17	52,109	3,502	90	105	95
Nissan	Rogue 4dr 4WD	15–17	414,213	32,152	104	92	96
Mitsubishi	Outlander Sport 4dr 4WD	15–17	50,406	3,647	97	103	100
Toyota	RAV4 hybrid 4dr 4WD	16–17	42,759	3,343	105	97	102
Mitsubishi	Outlander Sport 4dr	15–17	55,249	4,434	108	97	105
Mitsubishi	Outlander 4dr 4WD	15–17	28,487	2,147	101	109	110
Mitsubishi	Outlander 4dr	15–17	29,324	2,371	109	107	116
Midsize SUVs		**15–17**	**6,120,032**	**384,817**	**84**	**99**	**84**
Jeep	Wrangler 4dr 4WD	15–17	466,359	17,080	49	132	65
Toyota	4Runner 4dr 4WD	15–17	215,982	13,054	81	90	73
Toyota	4Runner 4dr	15–17	74,121	4,564	83	91	75
Honda	Pilot 4dr	16–17	69,443	4,620	89	84	75
Jeep	Cherokee 4dr 4WD	15–17	403,042	24,301	81	94	76
Honda	Pilot 4dr 4WD	16–17	152,519	10,327	91	87	79
Jeep	Cherokee 4dr	15–17	177,029	11,233	85	94	80
Chevrolet	Equinox 4dr 4WD	15–17	224,168	13,976	84	96	81
Ford	Flex 4dr	15–17	18,766	1,121	80	102	82
Dodge	Journey 4dr 4WD	15–17	52,138	3,520	91	92	83
Chevrolet	Equinox 4dr	15–17	427,826	27,942	88	95	83
Ford	Edge 4dr	15–17	85,421	5,027	79	106	83
Jeep	Grand Cherokee 4dr	15–17	104,604	6,676	86	98	84
Hyundai	Santa Fe 4dr	15–17	35,702	2,404	90	94	85
Nissan	Murano 4dr	15–17	71,081	4,556	86	99	86
Toyota	Highlander 4dr	15–17	187,935	12,132	87	99	86
GMC	Terrain 4dr 4WD	15–17	107,570	6,629	83	105	87
GMC	Terrain 4dr	15–17	167,091	10,307	83	106	88
Dodge	Journey 4dr	15–17	168,377	12,535	100	88	88
Ford	Flex 4dr 4WD	15–17	10,718	648	81	109	89
Toyota	Highlander 4dr 4WD	15–17	340,331	22,907	90	98	89
Hyundai	Santa Fe Sport 4dr	15–17	114,427	7,242	85	105	89
Jeep	Grand Cherokee 4dr 4WD	15–17	458,946	29,814	87	102	89

Table 8: Collision losses by series, 2015–17 model years							
Make	Series	Model years	Exposure (insured vehicle years)	Claims	Relative claim frequency	Relative claim severity	Relative overall losses
GMC	Acadia 4dr	17	11,355	782	92	97	89
Ford	Edge 4dr 4WD	15–17	134,163	8,218	82	108	89
GMC	Acadia 4dr 4WD	17	12,707	875	93	97	90
Kia	Sorento 4dr	16–17	136,677	9,460	93	98	91
Hyundai	Santa Fe Sport 4dr 4WD	15–17	83,785	5,476	88	106	93
Nissan	Murano 4dr 4WD	15–17	97,494	6,543	90	103	93
Ford	Explorer 4dr	16–17	99,676	6,179	83	112	93
Kia	Sorento 4dr 4WD	16–17	98,325	6,832	93	101	94
Hyundai	Santa Fe 4dr 4WD	15–17	35,167	2,587	99	96	95
Toyota	Highlander hybrid 4dr 4WD	15–17	15,391	1,100	96	102	98
Nissan	Pathfinder 4dr	15–17	84,039	6,919	111	90	99
Ford	Explorer 4dr 4WD	16–17	177,733	11,745	89	115	102
Mazda	CX-9 4dr	16–17	4,446	400	121	88	106
Nissan	Pathfinder 4dr 4WD	15–17	103,026	8,894	116	94	109
Mazda	CX-9 4dr 4WD	16–17	8,751	799	123	91	112
Large SUVs		**15–17**	**1,368,910**	**91,108**	**89**	**94**	**84**
Chevrolet	Tahoe 4dr	15–17	131,651	8,424	86	86	74
Chevrolet	Traverse 4dr 4WD	15–17	117,196	7,518	86	87	75
Chevrolet	Traverse 4dr	15–17	167,227	10,996	88	86	76
GMC	Acadia Limited 4dr	17	2,739	187	92	87	79
GMC	Acadia Limited 4dr 4WD	17	4,578	292	86	94	81
Chevrolet	Tahoe 4dr 4WD	15–17	156,954	10,501	90	91	81
GMC	Yukon 4dr	15–17	55,731	3,599	87	94	82
Ford	Expedition 4dr	15–17	21,618	1,119	70	118	82
Toyota	Sequoia 4dr	15–17	8,242	549	89	93	83
Buick	Enclave 4dr	15–17	90,209	6,530	97	88	86
Ford	Expedition 4dr 4WD	15–17	23,058	1,223	71	122	87
Nissan	Armada 4dr 4WD	17	2,688	183	91	96	88
GMC	Yukon 4dr 4WD	15–17	93,156	6,152	89	100	89
Toyota	Sequoia 4dr 4WD	15–17	20,005	1,415	95	95	90
Buick	Enclave 4dr 4WD	15–17	61,220	4,558	100	91	91
Dodge	Durango 4dr	15–17	48,823	3,589	99	95	94
Dodge	Durango 4dr 4WD	15–17	86,953	6,340	98	100	98
Nissan	Armada 4dr	17	2,602	183	95	133	126
Volkswagen	Touareg 4dr 4WD	15–17	11,917	835	94	140	131
Very large SUVs		**15–17**	**275,363**	**20,531**	**100**	**98**	**98**
Chevrolet	Suburban 1500 4dr	15–17	52,163	3,864	99	88	88
GMC	Yukon XL 1500 4dr	15–17	28,999	2,176	101	90	91
Ford	Expedition EL 4dr	15–17	11,029	603	73	126	93
Chevrolet	Suburban 1500 4dr 4WD	15–17	93,706	7,160	103	91	93
Ford	Expedition EL 4dr 4WD	15–17	19,231	1,118	78	127	99
GMC	Yukon XL 1500 4dr 4WD	15–17	70,235	5,609	107	95	102

Table 8: Collision losses by series, 2015–17 model years							
Make	Series	Model years	Exposure (insured vehicle years)	Claims	Relative claim frequency	Relative claim severity	Relative overall losses
LUXURY SUVs							
Small luxury SUVs		**15–17**	**490,715**	**32,848**	**90**	**112**	**100**
Buick	Encore 4dr 4WD	15–17	58,875	3,835	87	102	89
Buick	Encore 4dr	15–17	110,070	7,010	86	105	90
Lincoln	MKC 4dr	15–17	41,165	2,609	85	109	93
BMW	X1 4dr	17	1,456	110	102	94	96
Lincoln	MKC 4dr 4WD	15–17	44,654	2,724	82	119	98
Mercedes-Benz	GLA class 4dr 4WD	15–17	49,746	3,490	94	110	104
Mercedes-Benz	GLA class 4dr	15–17	21,937	1,524	93	113	105
BMW	X1 4dr 4WD	16–17	26,321	1,768	90	122	110
Audi	Q3 4dr	15–17	8,059	534	89	126	112
Infiniti	QX30 4dr 4WD	17	1,637	108	88	134	118
Audi	Q3 4dr 4WD	15–17	37,320	2,573	93	130	120
Infiniti	QX30 4dr	17	1,476	135	123	114	139
Land Rover	Range Rover Evoque 4dr 4WD	15–17	37,339	2,950	106	136	145
Mercedes-Benz	GLA class AMG 4dr 4WD	15–17	2,723	210	104	161	167
Midsize luxury SUVs		**15–17**	**2,315,352**	**169,844**	**99**	**111**	**109**
Acura	RDX 4dr	15–17	73,871	4,655	85	75	64
Acura	RDX 4dr 4WD	15–17	128,230	8,179	86	78	66
Acura	MDX 4dr	15–17	57,429	3,559	83	85	71
Buick	Envision 4dr	17	2,932	171	78	94	73
Acura	MDX 4dr 4WD	15–17	161,390	10,966	91	85	78
Volvo	XC60 4dr	15–17	30,356	1,943	86	95	82
Cadillac	XT5 4dr	17	17,259	1,030	80	104	83
Volvo	XC60 4dr 4WD	15–17	51,495	3,200	83	101	84
Cadillac	XT5 4dr 4WD	17	10,327	647	84	101	85
Buick	Envision 4dr 4WD	16–17	8,198	460	75	117	88
Mercedes-Benz	GLC class 4dr	16–17	21,174	1,276	81	117	94
Volvo	XC90 plug-in hybrid 4dr 4WD	16–17	2,289	146	86	112	96
Lincoln	MKX 4dr	16–17	17,301	1,084	84	116	98
BMW	X3 4dr	15–17	12,238	829	91	108	98
Mercedes-Benz	GLC class 4dr 4WD	16–17	25,069	1,602	86	119	102
Volvo	XC90 4dr 4WD	16–17	41,879	3,118	100	103	103
Mercedes-Benz	GLC class coupe 4dr 4WD	17	1,213	78	86	122	105
Lexus	NX 200T 4dr 4WD	15–17	61,236	4,502	99	110	109
Lexus	NX 200T 4dr	15–17	56,657	3,918	93	117	109
Infiniti	QX60 4dr	15–17	39,128	2,962	102	107	109
Lincoln	MKX 4dr 4WD	16–17	20,224	1,284	85	128	110
Infiniti	QX50 4dr 4WD	16–17	12,473	803	87	127	110
BMW	X3 4dr 4WD	15–17	103,040	7,071	92	121	112
Infiniti	QX70 4dr	15–17	6,122	410	90	125	112
Infiniti	QX50 4dr	16–17	8,114	550	91	127	116
Infiniti	QX60 4dr 4WD	15–17	60,342	4,950	110	105	116
Lexus	NX 300h hybrid 4dr 4WD	15–17	5,625	405	97	121	117

Table 8: Collision losses by series, 2015–17 model years							
Make	Series	Model years	Exposure (insured vehicle years)	Claims	Relative claim frequency	Relative claim severity	Relative overall losses
Lincoln	MKT 4dr 4WD	15–17	2,577	188	98	120	117
Land Rover	Discovery Sport 4dr 4WD	15–17	20,478	1,364	89	133	119
Lexus	RX 350 4dr	16–17	39,907	3,036	102	119	122
Mercedes-Benz	GLE class 4dr	16–17	21,706	1,522	94	130	122
BMW	X5 4dr	15–17	20,893	1,465	94	132	124
Lexus	RX 350 4dr 4WD	16–17	60,587	4,866	108	117	126
Infiniti	QX70 4dr 4WD	15–17	8,183	521	86	149	128
BMW	X5 4dr 4WD	15–17	128,227	9,224	97	135	130
Audi	Q5 4dr 4WD	15–17	152,176	12,284	108	130	141
Porsche	Macan 4dr 4WD	15–17	53,952	3,782	94	151	142
Mercedes-Benz	GLE class 4dr 4WD	16–17	38,096	2,960	104	143	149
BMW	X4 4dr 4WD	15–17	19,461	1,569	108	142	154
BMW	X5 plug-in hybrid 4dr 4WD	16–17	5,479	461	113	136	154
Lexus	RX 450h hybrid 4dr 4WD	16–17	8,331	712	115	135	155
Audi	SQ5 4dr 4WD	15–17	11,443	870	102	161	164
Jaguar	F-Pace 4dr 4WD	17	8,780	708	108	153	165
BMW	X6 4dr 4WD	15–17	14,839	1,381	125	161	202
BMW	X6 4dr	15–17	2,273	228	135	154	208
Mercedes-Benz	GLE class coupe 4dr 4WD	16–17	9,884	838	114	199	227
BMW	X5 M 4dr 4WD	15–17	2,982	244	110	220	242
Maserati	Levante 4dr 4WD	17	1,088	99	123	250	307
BMW	X6 M 4dr 4WD	15–17	1,527	155	137	298	408
Large luxury SUVs		**15–17**	**502,521**	**36,911**	**99**	**146**	**144**
Toyota	Land Cruiser 4dr 4WD	15–17	6,013	376	84	105	88
Lexus	GX 460 4dr 4WD	15–17	76,037	5,786	102	102	104
Infiniti	QX80 4dr	15–17	14,821	991	90	120	108
Cadillac	Escalade 4dr 4WD	15–17	49,146	3,223	88	133	117
Infiniti	QX80 4dr 4WD	15–17	20,679	1,384	90	131	118
Cadillac	Escalade 4dr	15–17	19,139	1,345	94	135	128
Lexus	LX 570 4dr 4WD	15–17	10,129	771	102	130	133
Audi	Q7 4dr 4WD	17	25,899	1,834	95	154	146
Mercedes-Benz	GLS class 4dr 4WD	17	13,315	936	94	173	163
Land Rover	Range Rover Sport 4dr 4WD	15–17	52,054	3,856	100	166	166
Land Rover	Range Rover 4dr 4WD	15–17	27,801	1,933	93	182	170
Porsche	Cayenne 4dr 4WD	15–17	31,129	2,365	102	173	177
Land Rover	Range Rover 4dr LWB 4WD	15–17	5,312	351	89	227	201
Porsche	Cayenne hybrid 4dr 4WD	15–17	3,275	283	116	199	231
Mercedes-Benz	G class 4dr 4WD	15–17	8,953	668	100	275	276
Tesla	Model X 4dr electric 4WD	16–17	13,602	1,654	163	222	363
Very large luxury SUVs		**15–17**	**62,365**	**4,232**	**91**	**133**	**121**
Lincoln	Navigator 4dr	15–17	7,589	434	77	140	107
Cadillac	Escalade ESV 4dr 4WD	15–17	29,311	2,155	99	119	118
Lincoln	Navigator L 4dr	15–17	2,520	132	70	169	119
Cadillac	Escalade ESV 4dr	15–17	8,348	588	95	126	119

Table 8: Collision losses by series, 2015–17 model years							
Make	Series	Model years	Exposure (insured vehicle years)	Claims	Relative claim frequency	Relative claim severity	Relative overall losses
Lincoln	Navigator 4dr 4WD	15–17	9,179	564	83	152	125
Lincoln	Navigator L 4dr 4WD	15–17	5,418	359	89	142	127
VANS							
All vans		**15–17**	**139,436**	**7,582**	**73**	**116**	**85**
Midsize vans		**15–17**	**46,997**	**2,882**	**82**	**119**	**98**
Ford	Transit Connect cargo SWB	15–17	2,733	146	72	106	76
Ford	Transit Connect cargo LWB	15–17	10,598	594	75	111	83
Ram	ProMaster City	15–17	6,927	358	70	126	88
Ford	Transit Connect LWB	15–17	9,448	644	92	103	94
Ford	Transit Connect SWB	15–17	1,524	82	72	132	95
Chevrolet	City Express cargo	15–17	4,564	280	83	134	111
Nissan	NV 200 cargo	15–17	11,203	777	93	120	112
Large vans		**15–17**	**7,592**	**396**	**70**	**109**	**76**
Mercedes-Benz	Metris cargo	16–17	1,231	60	66	97	64
Ram	ProMaster 1500	15–17	4,676	185	53	131	70
Mercedes-Benz	Metris	16–17	1,686	150	120	84	100
Very large vans		**15–17**	**84,846**	**4,305**	**68**	**116**	**79**
GMC	Savana 2500 cargo series	15–17	3,650	131	48	87	42
Mercedes-Benz	Sprinter 2500 4WD	15–17	1,189	48	55	90	49
Chevrolet	Express 3500 series	15–17	1,595	61	52	106	54
Chevrolet	Express 2500 cargo series	15–17	7,472	292	53	105	55
Mercedes-Benz	Sprinter 2500	15–17	4,893	204	56	113	63
Ford	T-250 Transit cargo	15–17	15,899	820	69	112	78
Nissan	NV 3500	15–17	7,300	486	90	87	78
Nissan	NV 1500 cargo	15–17	1,371	80	78	104	81
Nissan	NV 2500/3500 van cargo	15–17	1,447	85	79	103	82
Ram	ProMaster 2500	15–17	3,686	154	56	146	82
Ford	T-150 Transit cargo	15–17	7,259	378	70	126	88
Ram	ProMaster 3500	15–17	1,103	43	52	168	88
Mercedes-Benz	Sprinter 2500 cargo	15–17	4,956	250	68	132	89
Ford	T-350 Transit	15–17	10,330	624	81	110	90
Ford	T-150 Transit	15–17	3,240	181	75	133	100
Nissan	NV 2500 cargo	15–17	1,920	124	87	118	103
Ford	T-350 Transit cargo	15–17	2,807	168	80	139	112

LWB = long wheelbase
SWB = short wheelbase

Relative results are computed for individual model years and then combined through a weighted average to produce the 3-year relative result. The all-passenger-vehicle "100 =" value is given for reference only and can only be used as a rough estimate to convert from relative to absolute results.

Minimum requirement for reporting: 1,000 vehicle years of exposure or 100 claims.

Appendix

Appendix: Individual series comprising combined series*		
Make name	**Combined series name**	**Series in combination**
BMW	2 series 2dr	228 i 2dr, 230i 2dr
BMW	2 series 2dr 4WD	228 xi 2dr 4WD, 230xi 2dr 4WD
BMW	2 series convertible	228 i convertible, 230i convertible
BMW	2 series convertible 4WD	228 xi convertible 4WD, 230xi convertible 4WD
BMW	3 series 4dr	320 i 4dr, 328 d 4dr, 328 i 4dr, 330i 4dr, 335 i 4dr, 340 i 4dr
BMW	3 series 4dr 4WD	320 xi 4dr 4WD, 328 dx 4dr 4WD, 328 xi 4dr 4WD, 330xi 4dr 4WD, 335 xi 4dr 4WD, 340 xi 4dr 4WD
BMW	3 series station wagon 4WD	328 d station wagon 4WD, 328 xi station wagon 4WD, 330xi station wagon 4WD
BMW	4 series 2dr	428 i 2dr, 430i 2dr, 435 i 2dr, 440i 2dr
BMW	4 series 2dr 4WD	428 xi 2dr 4WD, 430xi 2dr 4WD, 435 xi 2dr 4WD, 440xi 2dr 4WD
BMW	4 series convertible	428 i convertible, 430i convertible, 435 i convertible, 440i convertible
BMW	4 series convertible 4WD	428 i convertible 4WD, 430xi convertible 4WD, 435 xi convertible 4WD, 440xi convertible 4WD
BMW	4 series 4dr	428i 4dr, 430i 4dr, 435i 4dr, 440i 4dr
BMW	4 series 4dr 4WD	428 xi 4dr 4WD, 430xi 4dr 4WD, 435 xi 4dr 4WD, 440xi 4dr 4WD
BMW	5 series 4dr	528 i 4dr, 530i 4dr, 535 d 4dr, 535 i 4dr, 540i 4dr, 550 i 4dr
BMW	5 series 4dr 4WD	528 xi 4dr 4WD, 530xi 4dr 4WD, 535 dx 4dr 4WD, 535 xi 4dr 4WD, 540xi 4dr 4WD, 550 i 4dr 4WD
BMW	6 series convertible	640 i convertible, 650 i convertible
BMW	6 series convertible 4WD	640 xi convertible 4WD, 650 xi convertible 4WD
BMW	6 series 4dr	640 i 4dr, 650 i 4dr
BMW	6 series 4dr 4WD	640 xi 4dr 4WD, 650 xi 4dr 4WD
BMW	7 series 4dr	740 i 4dr, 750 i 4dr
BMW	7 series 4dr 4WD	740 xi 4dr 4WD, 750 xi 4dr 4WD
Chevrolet	Express 2500 cargo series	Express 2500 cargo, Express 2500 ext. cargo
Chevrolet	Express 3500 series	Express 3500, Express 3500 ext.
GMC	Savana 2500 cargo series	Savana 2500 cargo, Savana 2500 ext. cargo
Scion/Toyota	FR-S/86 series	86, FR-S
Scion/Toyota	iA/Yaris iA series	iA, Yaris iA
Scion/Toyota	iM/Corolla iM series	Corolla iM, iM

*Some of the series listed in the report are a combination of several series. The combinations include vehicles that are similar except for different engines.

References

Highway Loss Data Institute. (2008). Make and series results and modeling (Insurance Special Report A-77). Arlington, VA.

Highway Loss Data Institute. (2009). Collision losses after all-variable standardization, 2007–09 models (Insurance Special Report A-82). Arlington, VA.

Highway Loss Data Institute. (2010). Technical Appendix. Arlington, VA.

Highway Loss Data Institute. (2016). The collision coverage mileage paradox. *Loss bulletin*. 33(12). Arlington, VA.

Highway Loss Data Institute. (2017a). Collision losses. 2015-17 passenger cars, pickups, SUVs, and vans. Insurance Report, R-17. Arlington, VA.

Highway Loss Data Institute. (2017b). HLDI van sizing and classification change. Vehicle Information Bulletin, 34(5). Arlington, VA.

HLDI
Highway Loss Data Institute

1005 N. Glebe Road, Suite 700
Arlington, VA 22201
+1 703 247 1600
iihs-hldi.org

COPYRIGHTED DOCUMENT, DISTRIBUTION RESTRICTED

The Highway Loss Data Institute is a nonprofit public service organization that gathers, processes, and publishes insurance data on the human and economic losses associated with owning and operating motor vehicles.