

Status Report

Insurance Institute for Highway Safety | Highway Loss Data Institute

Loss leaders

Luxury cars dominate list of models
with highest collision losses



ALSO IN
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December 28, 2017

- ▶ New estimates of safety features in vehicle fleet
- ▶ Honda's sporty wheels tempt car thieves



The BMW i8 plug-in hybrid (left) has above-average losses for collision coverage, while the Smart ForTwo electric (right) has much lower than average losses.

Two eco-friendly vehicles are at opposite ends of the spectrum when it comes to collision losses for 2014–16 model passenger vehicles, the latest claims information from HLDI shows. The Smart ForTwo electric has the lowest overall collision losses, while the BMW i8 plug-in hybrid has some of the highest, second only to a trio of Bentley Continentals.

Collision claims data give consumers an idea of how expensive it is to repair a particular vehicle, while injury data help fill out the safety picture.

Sorting loss results by vehicle size and type, luxury cars, a group that includes the i8, have higher than average collision claim costs, while pickups and SUVs have lower than average costs. When it comes to injury claims, minicars or small cars have the most frequent claims for injuries to their occupants, while very large pickups have the lowest.

Collision coverage insures against damage to a driver's vehicle if he or she is at fault in a crash. Collision claims data give consumers an idea of how expensive it is to repair a vehicle, while injury data help fill out the safety picture.

HLDI also analyzes claims under comprehensive coverage, which covers theft and damage not caused by a crash, and property damage liability, which pays for damage that an at-fault driver causes to another vehicle. Analysts use this data to gauge the real-world loss experience of vehicles, and it is a valuable comparison tool for car buyers.

“Whenever consumers are on the hunt for a new vehicle they should consult two key resources: safety ratings from IIHS and insurance loss results from HLDI,” says Matt Moore, HLDI’s senior vice president.

Best and worst collision claims for 2014–16 passenger vehicles, ranked by overall losses

Lowest overall losses

vehicle	vehicle size and type	claim frequency	claim severity	overall losses
Smart ForTwo electric	2-door microcar	3.3	\$4,921	\$162
Ram 1500 LWB 4WD	large pickup	4.5	\$4,065	\$185
Ford F-250 4WD	very large pickup	3.8	\$4,940	\$187
Kia Soul electric	small station wagon	5.0	\$3,786	\$189
Chevrolet Corvette Z06 convertible	midsize sports car	2.8	\$7,145	\$204
Jeep Wrangler 2dr SWB 4WD	small SUV	3.1	\$6,555	\$205
Ram 2500 crew cab SWB 2WD	very large pickup	6.2	\$3,451	\$215
F-350 SuperCab 4WD	very large pickup	4.6	\$4,789	\$221
Subaru Outback 4WD with EyeSight	midsize station wagon	5.9	\$3,750	\$222
Subaru Outback 4WD	midsize station wagon	6.0	\$3,692	\$222

LWB: long wheelbase SWB: short wheelbase

Highest overall losses

vehicle	vehicle size and type	claim frequency	claim severity	overall losses
Bentley Continental GT 2dr 4WD	very large luxury car	7.1	\$35,744	\$2,536
Bentley Continental Flying Spur 4dr 4WD	very large luxury car	8.1	\$28,816	\$2,338
Bentley Continental GTC convertible 4WD	very large luxury car	6.5	\$29,478	\$1,923
BMW i8 plug-in hybrid 2dr 4WD	midsize luxury car	7.7	\$21,588	\$1,657
Maserati Granturismo 2dr	large sports car	8.5	\$18,785	\$1,597
BMW M6 2dr	large luxury car	8.6	\$17,436	\$1,498
Audi RS7 4dr 4WD	large luxury car	8.7	\$16,013	\$1,401
BMW M3 4dr	midsize luxury car	8.0	\$16,866	\$1,359
BMW M4 2dr	midsize luxury car	10.0	\$13,499	\$1,349
Maserati Ghibli 4dr 4WD	large luxury car	10.1	\$13,272	\$1,339
average all passenger vehicles		7.4	\$5,256	\$390

Note: Claim frequencies are per 100 insured vehicle years. Claim severity is average loss payment per claim. Overall losses are average payments per insured vehicle year. Vehicles are 2014–16 models unless otherwise noted. Cargo vans are excluded from the above lists.

“Combined, they give a good picture of a vehicle’s overall safety and insurance costs.”

Insurance data are unique in that they include many crashes that don’t result in injury. In particular, data for collision claims include many crashes that don’t get reported to police. More than half of collision claims for passenger vehicles cost less than \$3,000, with the largest number falling in the \$1,000–\$1,999 range.

Loss information reflects both a vehicle’s attributes and how it is driven. HLDI controls for factors such as driver age, gender and marital status; calendar year; model

year; the number of registered vehicles per square mile at the garaging location and state. Collision losses also are adjusted for deductibles. A deductible is the amount of money a policyholder must pay for a claim before an insurer will expend money to settle the claim. The most common deductible is between \$251 and \$500. For this report, cargo vans were excluded.

Collision losses

Overall losses are a combination of claim frequency, or how often claims are made, and claim severity, or how much is paid per claim.

The two-door Bentley Continental GT four-wheel drive has the highest overall collision loss experience among 2014–16 passenger vehicles. The Continental GT’s overall collision losses are 6½ times the average (\$390) for all passenger vehicles. Overall collision losses top \$2,500 for the GT.

All but one of the cars with the 10 highest collision losses are luxury models. The exception is the Maserati Granturismo. It is classified as a two-door large sports car, though its price tag is bigger than that of most luxury vehicles. The Granturismo’s overall collision losses are 4 times the »

(« from p. 3) average for all passenger vehicles.

The average loss payment per insured vehicle year of the i8, a midsize luxury car, is just slightly higher than that of the GranTurismo. Within its own vehicle class, the i8's collision losses far outstrip those of other midsize luxury cars, most of which have high overall losses.

“The above-average losses for luxury cars are driven by their high claim severities,” Moore says. “They are expensive to buy and to repair.”

Among the 10 vehicles with the lowest overall collision losses, there are four pickups, three station wagons, a sports car, a small SUV and a microcar, the ForTwo.

The ForTwo electric's overall collision losses are 58 percent lower than other passenger vehicles. The next best vehicle is the Ram 1500 long-wheelbase four-wheel drive, a large pickup whose overall collision losses are 53 percent lower than the average; followed closely by a very large pickup, the Ford F-250 four-wheel drive; and the Kia Soul electric, a small station wagon.

Not everyone can afford a Bentley, so HLDI also tabulated results for 2014–16 models that sell for less than \$30,000. Small and midsize cars accounted for more than half of the vehicles with the highest collision overall losses in this price group, and

nearly all of the vehicles on this high-loss list are marketed for their performance.

The Hyundai Genesis midsize coupe had the highest relative overall losses, followed by the Scion FR-S, Ford Mustang, Chevrolet Camaro and Subaru BRZ — all sporty two-doors.

In the under-\$30,000 group, the ForTwo remains atop the best list, followed by the Jeep Wrangler small SUV (the two-door, short-wheelbase, four-wheel drive version), the midsize Subaru Outback, both with and without EyeSight, Subaru's front crash prevention technology; and the Ram 1500 long-wheelbase four-wheel drive.

Injury losses

When it comes to injuries in crashes, medical payment insurance pays for injuries to an at-fault driver or passengers in that driver's vehicle, while bodily injury liability insurance pays for injuries that an at-fault driver causes to occupants of other vehicles or others on the road. Personal injury protection (PIP) coverage is sold in states with no-fault insurance systems. This coverage pays for injuries to occupants of the insured vehicle, no matter who is at fault.

Losses for both medical payment and PIP reflect in part how well a vehicle protects its occupants. Consumers can compare injury losses based on the coverage they need.

Looking at PIP, the Mitsubishi Lancer, a small four-door car, has the highest frequency among 2014–16 models — at 36 claims per 1,000 insured vehicle years, or about twice the average. The Scion iA, a mini four-door car, comes next with 32 claims per 1,000 insured vehicle years. Most of the vehicles with the highest PIP frequencies are minicars or small cars, with the exception of the midsize Chrysler 200 and the large Dodge Charger.

The Porsche 911 Carrera, a two-door midsize sports car, had the lowest frequency among the models studied, at one-quarter of the all-passenger vehicle average. The Chevrolet Corvette Z06 coupe was next best, at one-third of the all-passenger vehicle average.

Injury claim frequencies are affected by a number of factors, including how often a vehicle is driven and on what kind of roads. A vehicle with a low injury claim rate isn't necessarily among the safest. In general, larger, heavier models and those with good safety ratings offer the best protection for their occupants.

For complete loss results for 2014–16 models, plus results for older models, go to iihs.org/hldi_composite. For a copy of “Collision losses: 2014–16 passenger cars, pickups, SUVs and vans,” email publications@iihs.org. ■

Personal injury protection claims for 2014–16 passenger vehicles

Lowest claim frequency

vehicle	vehicle size and type	claim frequency
Porsche 911 Carrera 2dr	midsize sports car	4.4
Chevrolet Corvette Z06 2dr	midsize sports car	5.1
Porsche Boxster convertible	small sports car	5.2
Mercedes-Benz E-Class station wagon 4WD	large luxury car	5.5
Mercedes-Benz SL-Class convertible	midsize sports car	6.3
Porsche Cayman 2dr	small sports car	6.8
Land Rover Range Rover 4dr 4WD	large luxury SUV	6.9
Chevrolet Corvette 2dr	midsize sports car	7.0
Chevrolet Corvette convertible	midsize sports car	7.1
Tesla Model S 4dr electric 2WD	large luxury car	7.1

Highest claim frequency

vehicle	vehicle size and type	claim frequency
Mitsubishi Lancer 2WD	4-door small car	36.0
Scion iA	4-door minicar	31.6
Nissan Versa	4-door small car	31.2
Kia Rio	4-door minicar	30.8
Chevrolet Sonic	4-door small car	29.8
Chrysler 200 2WD	4-door midsize car	29.7
Kia Forte	4-door small car	29.7
Scion iM	small station wagon	29.4
Dodge Charger 2WD	4-door large car	29.1
Kia Rio	mini station wagon	28.6

Note: Claim frequencies are per 1,000 insured vehicle years. Vehicles are 2014–16 models unless noted. Cargo vans are excluded from the above lists.



New estimates of safety features in vehicle fleet

Nissan Rogue with ProPILOT Assist

Parking assist systems are spreading faster in the fleet than front crash prevention and other crash avoidance features, indicates a new report from HLDI examining how many vehicles are equipped with various driver assistance technologies.

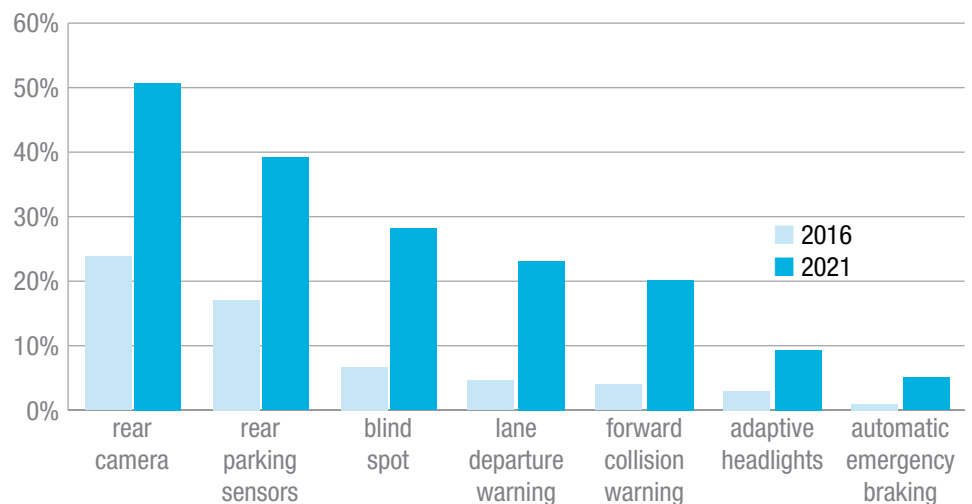
HLDI analyses of claims data and IIHS studies of police-reported crashes indicate that several crash avoidance technologies are reducing crashes reported to insurers and police, with the biggest benefits so far for front crash prevention. The overall impact on highway safety, however, has been limited due to the small number of vehicles on the road equipped with the mostly optional technologies.

It typically takes at least three decades before 95 percent of vehicles on the road have a given feature, HLDI has previously estimated (see *Status Report*, Jan. 24, 2012, at iihs.org). That projection is based on availability, meaning the feature could be standard or optional.

Bolstered by new data, HLDI for the first time has estimated the percentage of the fleet equipped with optional driver assistance features. The estimates are based on vehicle data

manufacturers shared with HLDI. Analysts combined this with vehicle feature information from HLDI's database and registration data from IHS Automotive. Besides »

Predicted registered vehicles equipped with advanced driver assistance systems by calendar year, 2016 and 2021



(« from p. 5) rear cameras and rear parking sensors, the studied features include front crash prevention with forward collision warning, front crash prevention with automatic emergency braking, adaptive front lighting, lane departure warning and blind spot monitoring.

HLDI predicts that 95 percent of registered vehicles will be equipped with rear cameras in 2039; rear parking sensors in 2041; forward collision warning, blind spot monitoring and lane departure warning in 2043; autobrake in 2045 and adaptive headlights sometime after 2050.

“These are the best estimates of how many vehicles on the road are or will be equipped with these technologies,” says Matt Moore, senior vice president of HLDI.

Federal mandates, safety ratings that reward certain features, and other factors can speed up the rate at which technology ends up in new models and therefore in registered vehicles.

Rear cameras, which were introduced on model year 2002 vehicles, are the only feature HLDI estimates will be on more than half of the registered vehicle population in 2021 — and the only one subject to a federal mandate. Nearly a quarter of the 2016 registered vehicle fleet had rear cameras, and they were available on more than a third of vehicles. Rear cameras will be required on most new vehicles starting May 1, 2018, as a way to reduce backover crashes involving children and pedestrians (see *Status Report*, May 29, 2014).

HLDI studies of insurance losses have shown that rearview cameras and rear parking sensors reduce claim rates for damage to other vehicles (see *Status Report*, Nov. 17, 2016). An IIHS study of police-reported crashes indicates that rearview cameras could prevent nearly 1 in 6 police-reported backing crashes.

Front autobrake, which has shown large reductions in crashes reported to insurers and to police, will have the most growth, increasing from less than 1 percent of the registered fleet in 2016 to about 5 percent in 2021. Automakers have voluntarily committed to make front autobrake standard on nearly all new models sold by 2022.

For a copy of HLDI Bulletin Vol. 34, No. 28, “Predicted availability and fitment of safety features on registered vehicles,” email publications@iihs.org. ■



Honda's sporty wheels still a draw for thieves

When thieves struck a Honda dealership in Monroe, N.C., in June, they swiped wheels from Accords but left behind the new cars. Thefts like these are behind climbing insurance losses for late-model Accords with sporty rims, HLDI analyses show.

Vehicle theft and other noncrash losses, such as hitting a deer or getting dinged in a hailstorm, are paid under comprehensive coverage. At first blush, these claims might not seem to be as worrisome as getting into a crash, but they aren't without cost. There are deductibles to pay, tow trucks to hire and time lost waiting for repairs.

Wheels are enticing theft targets because like many vehicle parts, they lack identification markings, making them harder to trace and easier for criminals to unload.

HLDI has been tracking the problem for several years, reporting on high theft losses for Accords, as well as the Honda Fit Sport. HLDI recently updated theft loss results for Honda's popular midsize sedan, finding the frequency of claims per 1,000 insured vehicle years for Sport and Touring models is sharply higher than baseline Accords.

Higher theft losses for the Accord began appearing in HLDI data when Honda introduced the four-door Sport, which has 18-inch alloy wheels, in the 2013 model year. Honda added 19-inch alloy wheels on the 2016 Accord four-door Sport and Touring models and introduced a Sport Special Edition model with 19-inch wheels for 2017. Other Accords have 16- or 17-inch wheels.

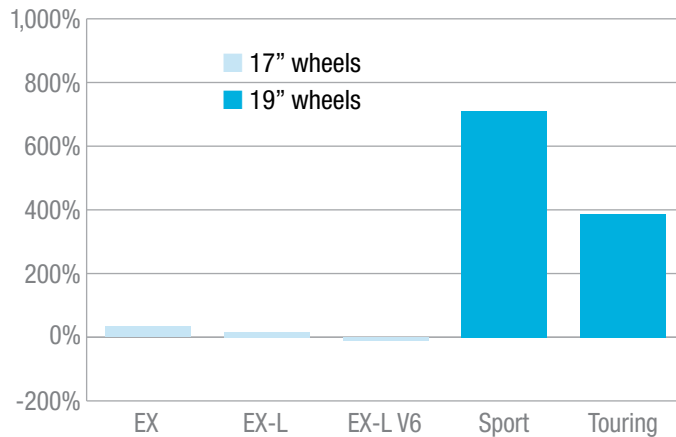
In its second report on Accord theft losses, HLDI compared losses under



Honda Accord Sport

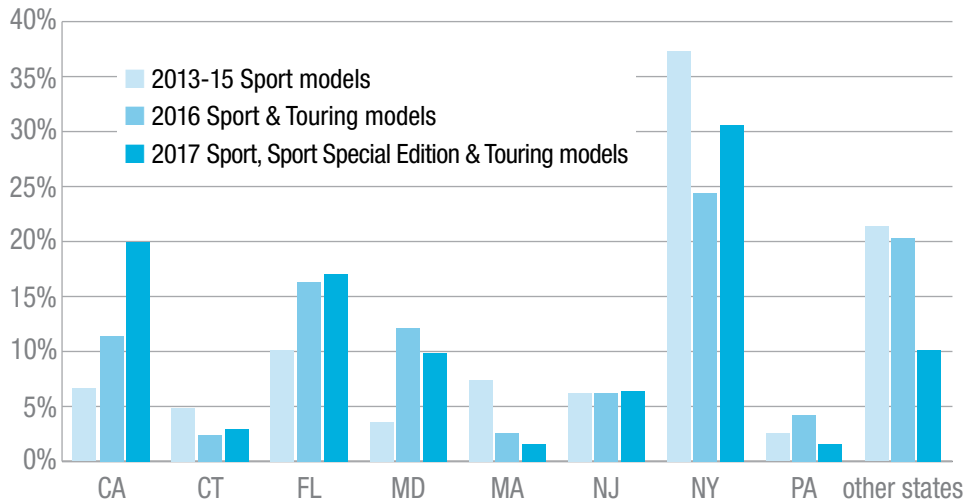
Estimated difference in theft claim frequency compared to LX model with 16-inch wheels

2016 Honda Accord 4-door



Honda added 19-inch alloy wheels to the Accord Sport and Touring models beginning with the 2016 model year.

State distribution of Honda Accord theft claims by model year



comprehensive coverage for the 2016 and 2017 four-door Sport model and Touring model to other four-door Accords, as well as other passenger vehicles. The results are based on exposure and claims through April 2017.

Two main factors determine comprehensive losses. One is how often claims are filed (claim frequency). The other is how big the claim payments are (claim severity), which in this case reflects the cost of replacing stolen components. These factors combine to indicate overall insurance losses, or average loss payment per insured vehicle year. The overall loss is the average cost of insuring a vehicle for one year, excluding administrative costs.

The frequency of theft claims for the 2016 Accord Sport was more than 7 times

as high as the Accord LX, and the frequency of theft claims for the 2016 Touring model was nearly 4 times as high as the LX. Overall losses followed a similar pattern as claim frequency. The frequency of claims for Sport and Touring models with 19-inch wheels was more than 12 times and 6 times, respectively, than the average for all-other passenger vehicles.

Claim size amounts, including the deductible, were concentrated in the \$3,001–\$4,000 range for 2013–15 Sport models with 18-inch wheels in both the current and 2016 HLDI studies—about the cost of replacing four tires and rims. For 2016 and 2017 Sport and Touring models with 19-inch wheels, claim size peaked slightly higher in the \$4,001–\$5,000 range. The higher claim amounts for the newest

model Accords may be because 19-inch tires are generally more expensive than 18-inch tires.

HLDI analysts also looked at how the Accord theft claims were distributed across the U.S. New York had the highest percentage, with 37 percent of 2013–15 Sport model claims, 24 percent of 2016 Sport and Touring model claims and 31 percent of 2017 Sport, Sport Special Edition and Touring model claims. Florida had the second-highest percentage of claims for the 2013–15 models (10 percent) and 2016 models (16 percent). California had the second-highest percentage for 2017 models at 20 percent.

For a copy of the HLDI Bulletin Vol. 34 No. 20 “Honda Accord theft losses — an update,” email publications@ihs.org. ■

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Vol. 52, No. 10
December 28, 2017

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IIHS is an independent, nonprofit scientific and educational organization dedicated to reducing the losses — deaths, injuries and property damage — from motor vehicle crashes.

HLDI shares and supports this mission through scientific studies of insurance data representing the human and economic losses resulting from the ownership and operation of different types of vehicles and by publishing insurance loss results by vehicle make and model.

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