



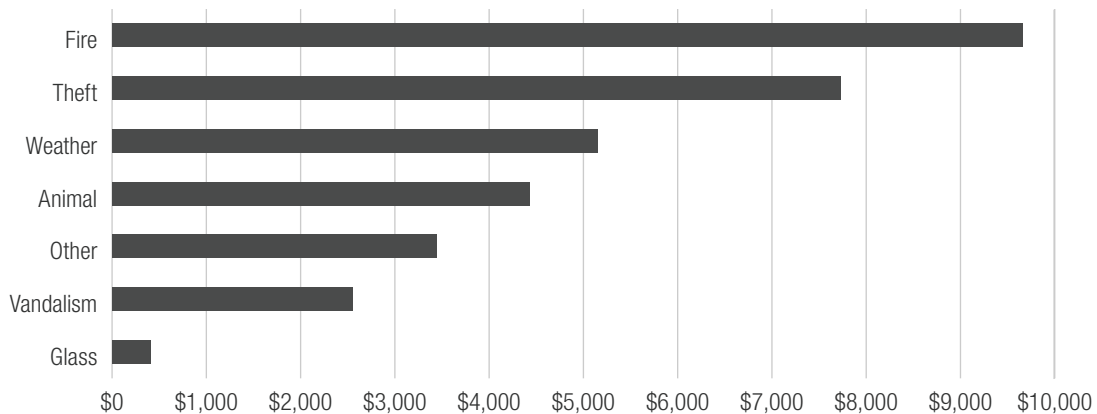
Noncrash fire insurance losses overview

► Summary

This Highway Loss Data Institute (HLDI) report provides descriptive information on noncrash fire insurance losses for calendar year 2020. Noncrash fire losses represent fire damage to a vehicle not caused by a collision or vandalism and are covered under comprehensive insurance. This coverage insures against theft or physical damage to insured people's own vehicles that occurs for reasons other than crashes.

Noncrash fires are very rare events, accounting for only 0.6 percent of the total comprehensive claims in calendar year 2020; their claims are typically very expensive, with an average claim severity of \$9,655 in calendar year 2020. As seen in the figure below, noncrash fires had the highest claim severity among all comprehensive loss types in calendar year 2020. This claim severity for noncrash fires is higher than all other coverage types except for bodily injury liability. These fire events can sometimes cause damage to other vehicles and to homes, and in some tragic instances, the loss of life. Additionally, unlike claims caused by crashes, noncrash fire claim frequencies increase as vehicles age. For the newest vehicles, noncrash fire claim frequency is about 1 per 10,000 insured vehicle years. However, by the time vehicles are 15 years old, their noncrash fire claim frequency increases to 5 claims per 10,000 insured vehicle years. While this increase is large on a percentage basis, even at the peak vehicle age for noncrash fire claims, these claims are still very rare.

Comprehensive claim severity by loss type, calendar year 2020



► Introduction

This Highway Loss Data Institute (HLDI) report provides descriptive information on noncrash fire insurance losses for calendar year 2020. Noncrash fire losses represent fire damage to a vehicle not caused by a collision or vandalism and are covered under comprehensive insurance. This coverage insures against theft or physical damage to insured people's own vehicles that occurs for reasons other than crashes.

Results in this report are not standardized to control for the effect of demographic or geographic variables.

► Method

Insurance measures

Several insurance measures are used in this report. Exposure is expressed in insured vehicle years. One insured vehicle year may consist of one vehicle insured for 365 days, or 365 vehicles insured for 1 day, or any combination of vehicles and days that adds up to 365 days. Exposure is used as the denominator for calculating claim frequency.

Claim frequency is a measure of claim risk and is calculated by dividing the number of claims by the amount of exposure. For noncrash fires, claim frequency is expressed in claims per 10,000 insured vehicle years. Claim severity is measured in dollars and is calculated by dividing the dollars spent to settle claims by the number of claims. Overall losses are the product of the frequency and severity measures, and represent the dollars paid per insured vehicle year.

Total losses typically occur when the cost of repairing damage to a vehicle exceeds a percentage of the vehicle's actual cash value. The percentage may vary depending on state regulations, the salvage value, and the structural integrity of the damaged vehicle. When HLDI first receives data about a claim, there is no indication of whether the vehicle was deemed a total loss. When the vehicle is sold to a salvage yard, HLDI receives notification that the claim resulted in a total loss. Because of this, the most recent loss data may underrepresent the number of total loss claims in the HLDI database.

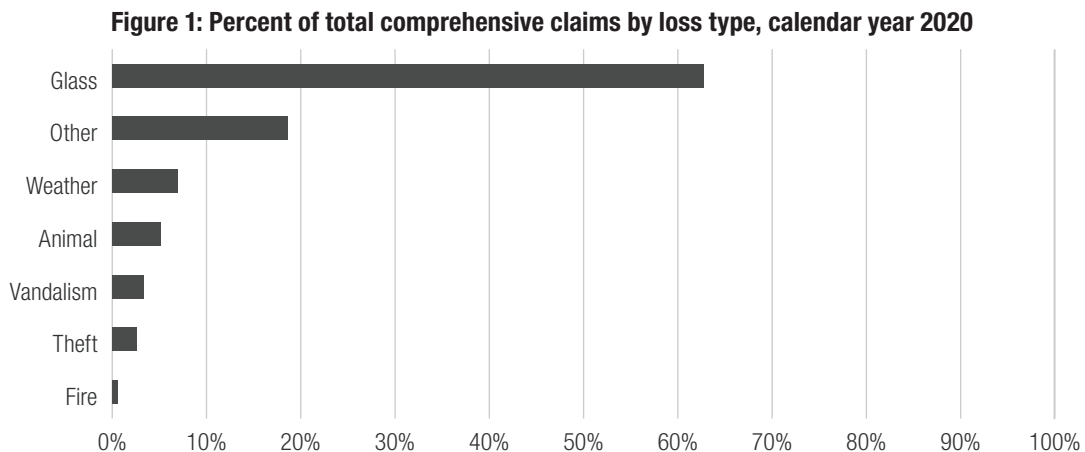
Of the companies that currently report comprehensive coverage to HLDI, 25 provide additional loss information that includes vandalism, fires, weather, and animal strikes. This analysis is limited to those 25 companies. Vehicle exposure from the 25 companies represents more than 90 percent of the HLDI database.

Vehicles

This study examines vehicles from model years 1981–2022 and these vehicles are aged –1 to 39 years old in calendar year 2020. Vehicle age is calculated as the difference between the calendar year and model year. Many manufacturers release new models in the calendar year before the vehicle's model year. For example, a vehicle's 2020 model may be released during the 2019 calendar year. For the purpose of this analysis, such a vehicle is considered to have an age of –1 in calendar year 2019, 0 (zero) in calendar year 2020, 1 in calendar year 2021, etc.

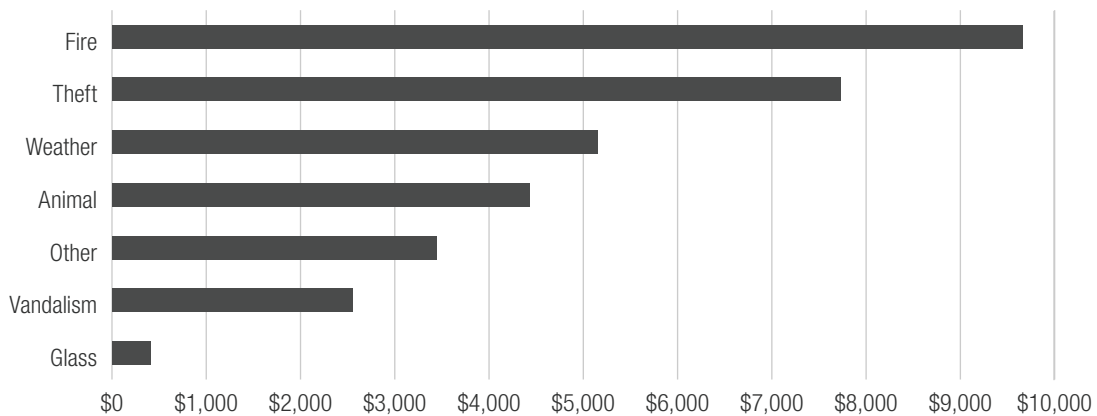
Comprehensive claims and dollars by loss type

Figure 1 shows the percentage of total comprehensive claims and **Figure 2** shows comprehensive claim severity by loss type for the 2020 calendar year. Noncrash fires were the least frequent loss type, accounting for only 0.6 percent of the total comprehensive claims in calendar year 2020. Glass losses were the most common, accounting for 63 percent of all comprehensive claims (**Figure 1**).



Conversely, **Figure 2** shows that noncrash fires had the highest claim severity among all comprehensive loss types (\$9,655), while glass losses had the smallest (\$410). Theft and weather damage accounted for the next highest claim severities at \$7,724 and \$5,151, respectively.

Figure 2: Comprehensive claim severity by loss type, calendar year 2020

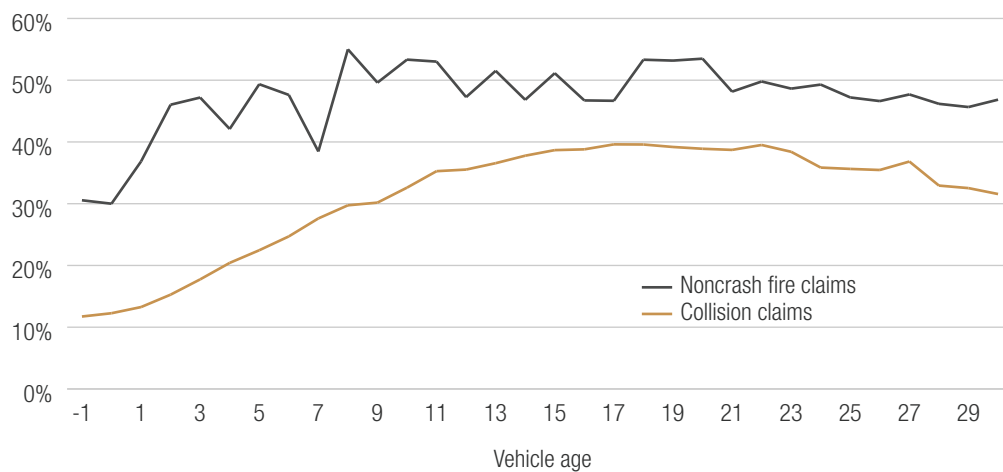


Noncrash fire total losses

Noncrash fire claims are costly, as a large percentage result in total losses. **Figure 3** shows total losses due to noncrash fires by vehicle age for vehicles up to 30 years old as a percentage of all noncrash fire claims in calendar year 2020. Total losses under collision coverage are also presented for comparison. The percentage of noncrash fire claims in 2020 that resulted in a total loss was over 40 percent for all but the youngest vehicles. The percentage of collision total losses generally increased with age until vehicles reached the age of 20, where the percentage began to decline.

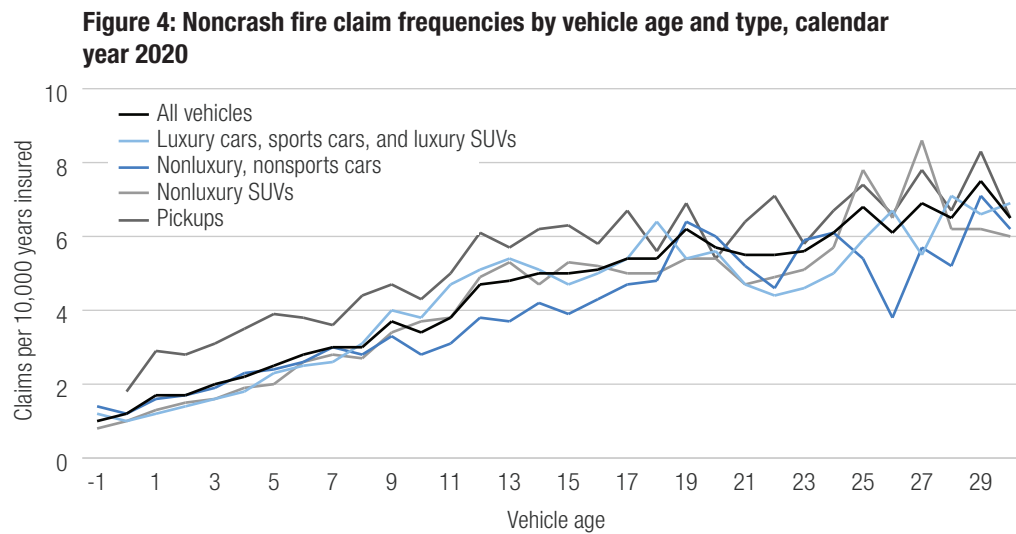
Total losses account for a higher percentage of noncrash fire claims, as compared with the percentage of total losses under collision coverage at every vehicle age in calendar year 2020. The largest difference is at age 2, where the percentage of noncrash fires that resulted in a total loss was 31 percentage points higher than total losses under collision coverage. This difference decreased as the vehicles aged, declining to a 21 percentage point difference for vehicles at age 10 and a difference of 15 percentage points for vehicles at age 20.

Figure 3: Total losses as percentage of all claims by coverage, calendar year 2020

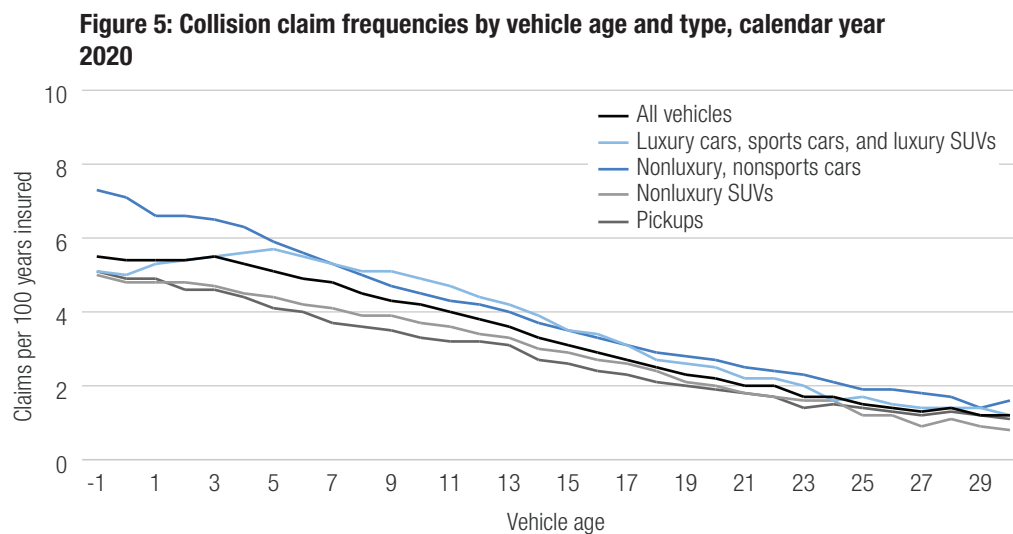


Noncrash fire insurance losses by vehicle type

Figure 4 presents noncrash fire claim frequencies by vehicle age and type in calendar year 2020 for vehicles up to 30 years old. The noncrash fire claim frequency for all vehicle types combined increased steadily with vehicle age. Pickups had higher noncrash fire claim frequencies than all other vehicle types among the newest vehicles.

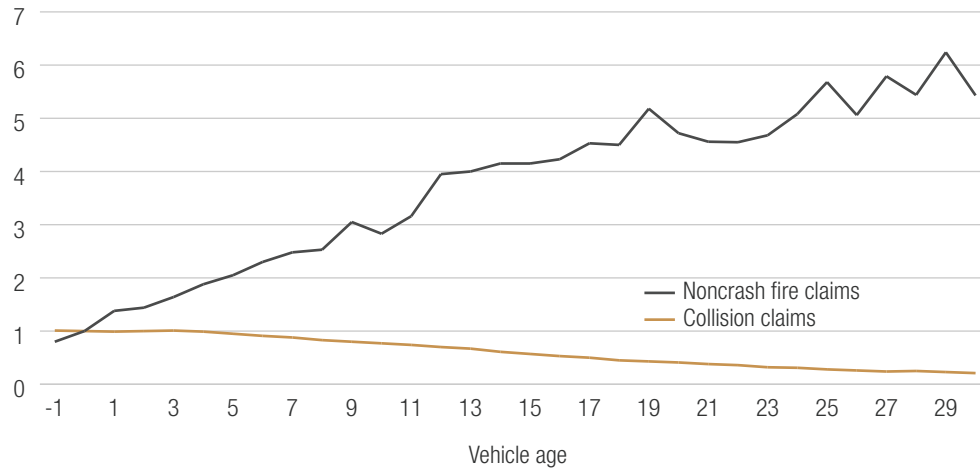


To provide context for the information presented in this report on noncrash fire claims, data on collision claims has also been included. **Figure 5** shows collision claim frequencies by vehicle age and type in calendar year 2020 for vehicles up to 30 years old. In contrast to noncrash fire claim frequencies, which increase with vehicle age, collision claim frequencies for all vehicle types decreased steadily with vehicle age. Pickup trucks had lower collision claim frequencies than all types of passenger cars.



Noncrash fire and collision claim frequencies are indexed to vehicles with an age of 0 (model year 2020 vehicles in calendar year 2020) and are shown in **Figure 6**. As vehicles age their noncrash fire claim frequency grows every year, while collision claim frequency declines with age.

Figure 6: Noncrash fire and collision claim frequency indexed to vehicle age 0, by vehicle age



Noncrash fire claim severities by vehicle age and type in calendar year 2020 are presented in **Figure 7**. For all vehicle types, noncrash fire claim severities tended to decrease with age. For vehicles over 10 years old, noncrash fire claim severities for all vehicle types, except for the oldest luxury cars, sports cars, and luxury SUVs, remained below \$7,000. The oldest vehicles with higher claim severities are likely collectible and valuable vehicles.

Figure 7: Noncrash fire claim severities by vehicle age and type, calendar year 2020

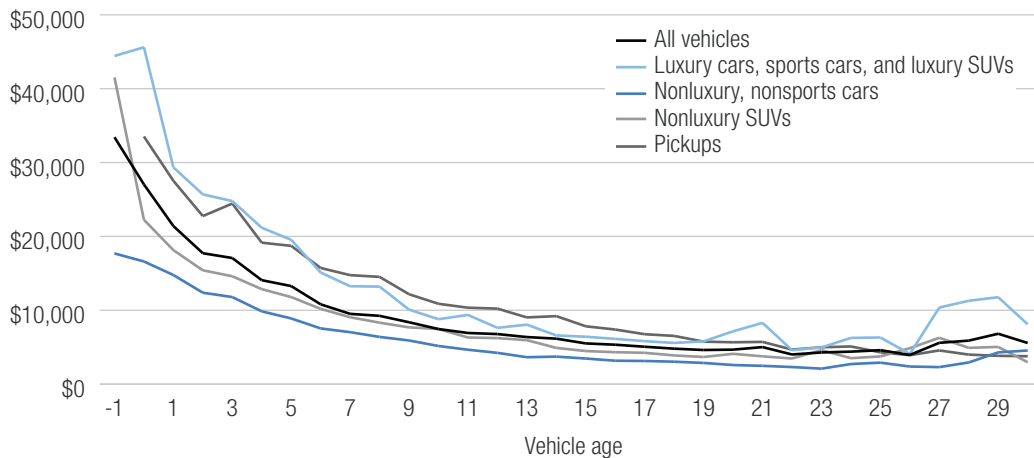
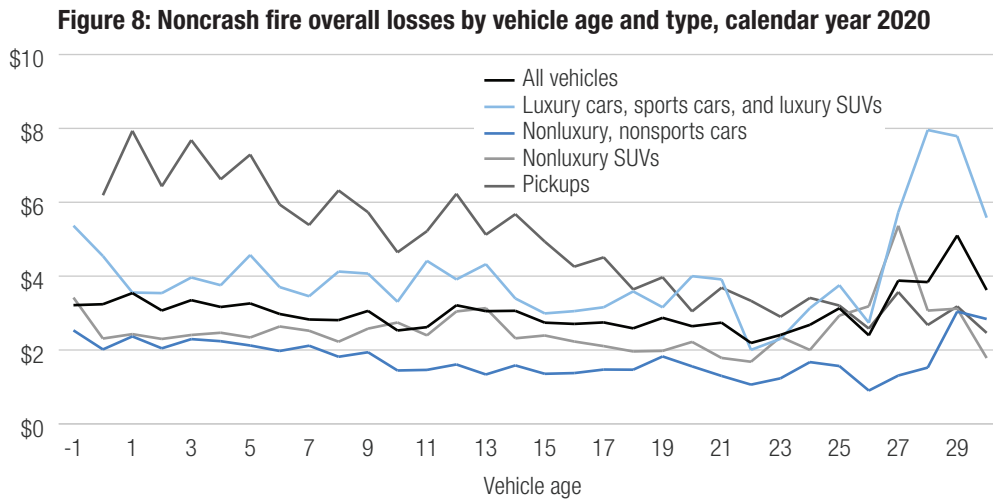
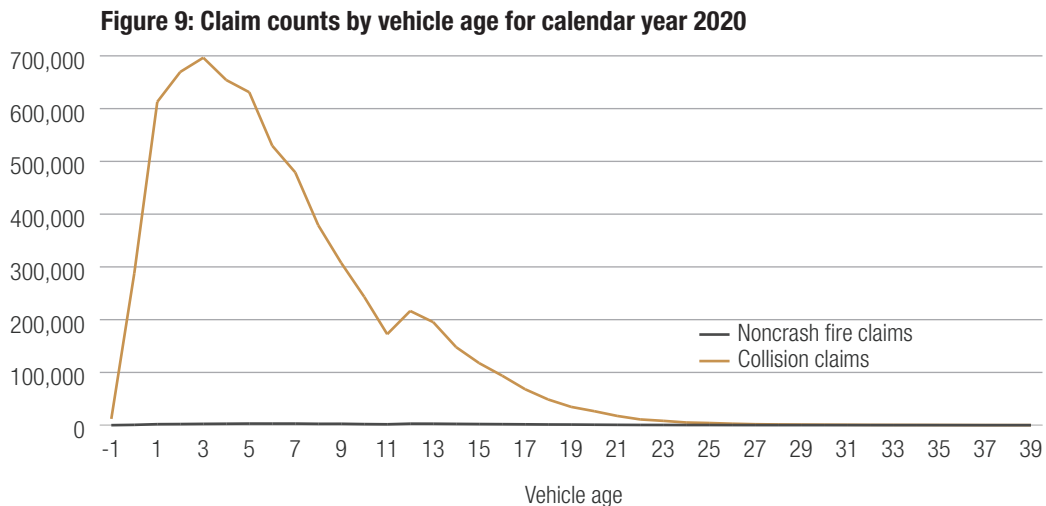


Figure 8 presents noncrash fire overall losses by vehicle age and type in calendar year 2020. Noncrash fire overall losses for all vehicle types combined remained fairly level and under \$4.00 per insured vehicle year, except for the oldest vehicles. Until vehicle age 20, pickup trucks had the highest noncrash fire overall losses.



► Discussion

Noncrash fires are rare events as shown in **Figure 9**. In calendar year 2020, for model year 2020 (vehicle age = 0), there were 288,059 collision claims while there were just 636 noncrash fire claims. Although noncrash fire losses accounted for less than 1 percent of all comprehensive claims in calendar year 2020, they had the highest claim severity among all comprehensive loss types. This is likely because the fires destroyed many of the vehicles. On average, 46 percent of noncrash fire claims resulted in total losses in calendar year 2020. Comparatively, 24 percent of all collision claims resulted in total losses.



Noncrash fire claim frequencies also increase with vehicle age, whereas collision claim frequencies decline with age. It is possible that as components age, they are more likely to fail, resulting in a noncrash fire. Noncrash fire claim severities decrease with age along with vehicle value, increasing the likelihood of a total loss.

Current HLDI research has shown that vehicles with known fire defects have a significantly increased risk of noncrash fire-related loss, and this risk decreases after the defects have been identified and a recall is issued. Yet, even after being recalled, the risk of noncrash fire losses remains significantly higher compared with vehicles with no known fire defects (HLDI, 2017).

References

Highway Loss Data Institute. (2017). Noncrash fire safety recall losses — for automobiles and motorcycles: 2007–17. *Loss Bulletin*, 34(38).



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