The Truth about Speed Limiters and Safety

The OOIDA Foundation (OOFI), which is the research and educational arm of OOIDA, conducted an analysis of publically available information on FMCSA's Compliance, Safety, and Accountability (CSA) Safety Measurement System (SMS) website[1] in November 2015 in order to present data that represented the real-world safety outcomes of electronic logging devices (ELDs) and speed limiters (SLs).

As part of the analysis, the OOFI examined the CSA SMS scores of large carriers that had both ELDs and SLs installed, as well as those carriers that did not have these devices installed, which OOFI separated into two cohorts (asset carriers and non-asset carriers). OOFI reviewed the following data in order to identify the correlation between ELD and SL equipped fleets with improved safety in HOS compliance, in speeding violations, and in crashes when compared to non-ELD equipped and non-speed limited fleets. The examined data included:

- Percentages of Crashes per 100 power units (PU)
- Percentage of Crashes per 100 drivers
- Percentage of Crashes per million vehicle miles travelled (MVMT)

In order to select carriers to examine the safety outcomes of ELDs and SLs, OOFI first selected large motor carriers that had been active in pursuing a mandate for the installation of ELDs and SLs. These large carriers are classified as asset carriers. Secondly, OOFI focused on carriers that did not have ELDs and SLs installed, which were classified as non-asset carriers. These carriers predominately utilized owner-operators. Only the largest non-asset carriers were selected in order for the two cohorts to be comparable.[2]

Speeding Violations

The premise of SLs is that by reducing the highest possible speed a CMV may travel, speeding violations, along with crashes and the severity of crashes, would be reduced. Therefore, by utilizing this premise held by safety groups, large carriers, and FMCSA, it would be reasonable to assume that carriers equipped with speed limiting devices would have fewer speeding violations. OOFI discovered however that regardless of the CSA SMS score, speed limited carriers had an equal, and often higher, number of speeding violations than those carriers that were not equipped with SLs.

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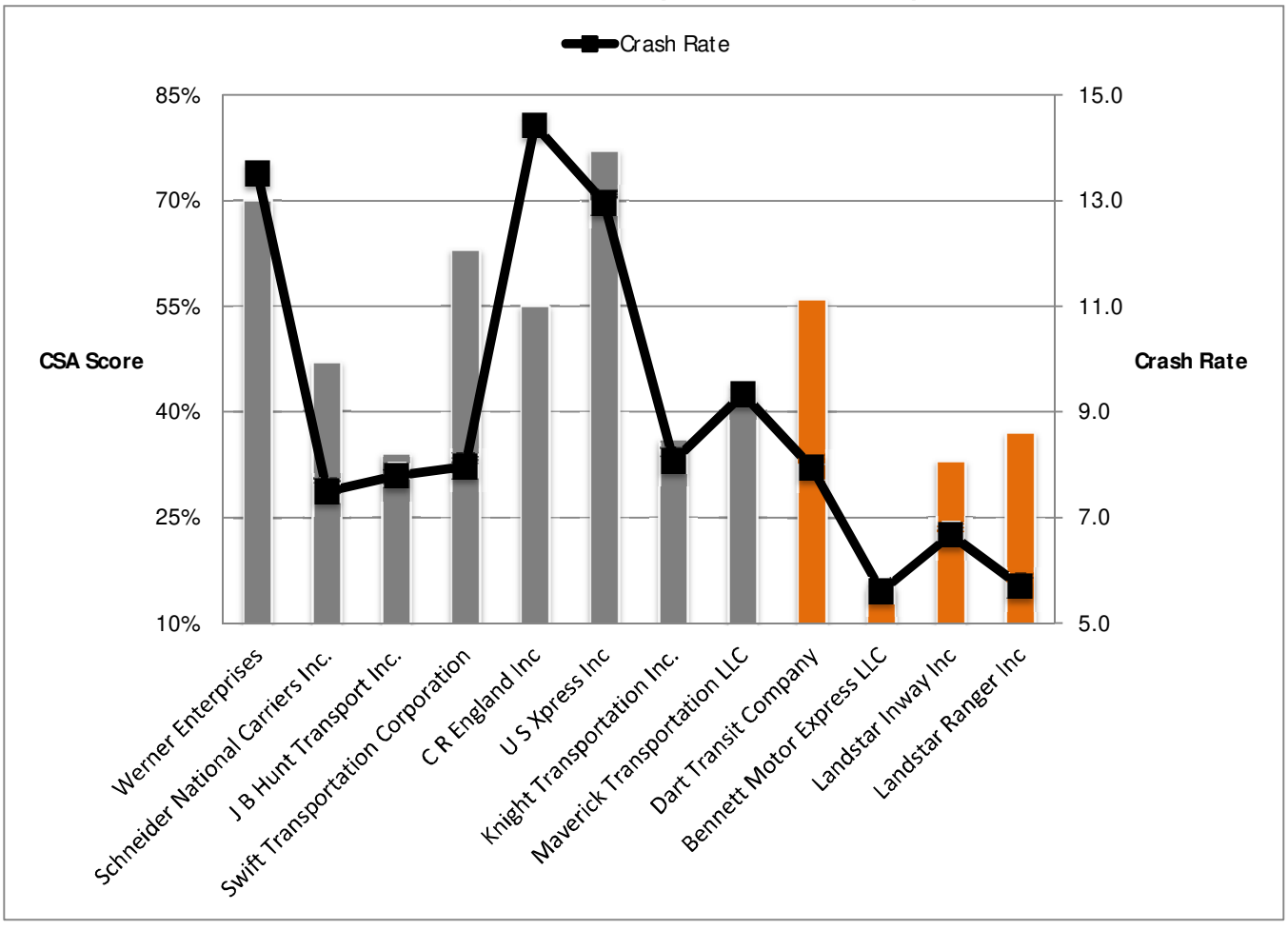
[1] https://csa.fmcsa.dot.gov/

[2] Dart uses or is beginning to use EOBRs for a majority of their owner-operated trucks. Dart has stated that they do not demand these from their owner-operators unless they show a pattern of non-compliance on their logs which would be reflected in their CSA scores.

In order to assess the data, OOFI focused on the rate of speeding violations and crashes per 100 PUs and MVMT for each of the motor carriers. For the asset and non-asset carriers, the average violation rate per 100 PU was 7.6 and 8.1, respectively, while the average speeding violation rate in construction zones was 0.52 and 0.39 per MVMT. The average crash rate per 100 PUs and MVMT was 10.2 and 1.1 for asset carriers, and 6.5 and 0.8 for non-asset carriers. Despite the installation of SLs, the asset carriers ranked worse in the Unsafe Driving Behavioral Analysis Safety Improvement Category (BASIC), in speeding violations in construction zones, and in overall crash rates.

The following chart demonstrates the CSA SMS percentile score for each carrier in the Unsafe Driving BASIC compared to the actual crash rate per 100 PUs. In 2014, FMCSA updated the CSA SMS webpage so that the BASICs appear from left to right based upon their correlation to crash risk, of which the Unsafe Driving BASIC appears first.

Chart 1: Unsafe Driving BASIC compared to crash rate per 100 PUs



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