

# Potentially how many fatalities, injuries and property damage could be avoid annually if commercial semi-trucks and trailers were required to have high mount directional turn signals deployed when they are changing lanes or making wide turns?

While there is no direct statistical data available on the specific safety impact of **high mount directional turn signals** for semi-trucks and trailers, closely related safety interventions—such as **lane departure warning systems** (LDWS) and enhanced truck signaling/awareness technologies—offer a strong basis for estimating their potential benefits.

## Annual Impact: Related Safety Technologies

Studies analyzing the impact of lane departure warning systems, which address a similar problem of improving visibility and driver awareness when trucks change lanes or make wide turns, have found that:

- **Up to 6,372 crashes, 1,342 injuries, and 115 deaths** could be prevented annually in the U.S. if all large trucks were equipped with lane departure warning systems<sup>[1] [2]</sup>.
- Other studies suggest LDWS could prevent **9,000 to 10,000 crashes** and **227 to 247 fatalities** each year, largely by preventing unintentional lane departures and sideswipes<sup>[3]</sup>.

These figures are drawn from comprehensive safety reports that estimate the benefit of giving both truck drivers and other road users better visual and/or audible cues about truck movements, which is precisely the function high mount directional turn signals would enhance.

## Reasoning for High Mount Directional Turn Signals

- Many truck crashes, especially lane change and turning incidents, are the result of other motorists not being clearly warned of a truck's intentions, due to limited visibility of standard lower-mounted signals—particularly near the trailer's upper corners or during nighttime/bad weather<sup>[1]</sup>.
- Survey data show that **blind spots and truck unpredictability** are major factors making car drivers feel unsafe near large trucks, with 18% of surveyed drivers specifically citing poor visibility of truck intentions<sup>[1]</sup>.

Given the parallels, it is reasonable to infer that **requiring high mount directional turn signals could avoid a comparable order of magnitude of crashes, injuries, and deaths** each year—potentially **hundreds of fatalities, over a thousand injuries, and thousands of crashes** annually—especially if mandated fleet-wide.

## Limitations and Context

- Actual numbers would depend on deployment effectiveness, fleet-wide compliance, driver training, and public awareness, as well as how often a lack of visible signaling is the sole cause of a crash.
- While high mount turn signals specifically target visibility for adjacent and trailing drivers, lane departure warning systems (cited above) also alert truck drivers themselves, so numbers might slightly overstate the effect, but the **direction of benefit is strongly supported** by the available evidence.

**In summary:** If commercial semi-trucks and trailers were broadly required to use high mount directional turn signals when changing lanes or making wide turns, it is reasonable to expect a reduction of **hundreds of fatalities, thousands of injuries, and thousands of crashes** each year—comparable to the impact of other advanced safety signaling and warning systems already studied and recommended for the trucking industry<sup>[3] [1] [2]</sup>.



1. <https://natlawreview.com/article/truck-safety-technology-can-prevent-thousands-crashes-every-year>
2. <https://aaafoundation.org/lane-departure-warning-systems-leveraging-large-truck-technology-engineering-realize-safety-gains/>
3. [https://aaafoundation.org/wp-content/uploads/2017/11/Truck-Safety\\_Lane-Departure.pdf](https://aaafoundation.org/wp-content/uploads/2017/11/Truck-Safety_Lane-Departure.pdf)