



COST AND RISK IN AT-FAULT CMV CRASHES

DRIVE AWARE. AVOID CRASHES. SAVE A LIFE.

What Did We Look At?

Texas A&M Transportation Institute (TTI) looked at nearly 2,800 CMV crashes in 20 counties across the state of Texas. We used statistical tools to identify the top factors associated with increased crash severity when the CMV driver was at fault. The Federal Motor Carrier Safety Administration and TTI's Center for Transportation Safety funded the project.

What's Happening Out There?

Commercial motor vehicle (CMV) crashes happen every day. Most involve **human error**, sometimes on the part of the CMV driver. Many are **preventable**. As in all driving situations, **awareness** is a first step toward preventing these crashes from ever happening. **Technology** can also help reduce crash risk. Both are something CMV carriers can do something about.



DRIVER FATIGUE Impacts on At-Fault CMV Crashes

In single vehicle, non-intersection crashes, driver fatigue...

was a contributing factor in **15%** of crashes



resulted in **30%+** higher estimated cost* per crash



resulted in **70%** higher injury/fatality risk* per crash



In multi-vehicle, non-intersection crashes, driver fatigue...

was a contributing factor in **4%** of crashes



resulted in **130%+** higher estimated cost* per crash



resulted in **270%** higher injury/fatality risk* per crash



*compared with crashes where driver fatigue not a contributing factor.

Driver Behaviors

Driver fatigue is a top contributing behavior factor in at-fault CMV crashes. Knowing how driver behaviors contribute to at-fault CMV crashes can help carriers develop policies and **training strategies** to reduce those crashes. In addition to driver fatigue, driving behaviors that had the most impact on CMV at-fault crashes include:

- Stopping problems (e.g., failure to stop)
- Failure to yield right-of-way
- Using the wrong lane
- Speeding

In training, CMV carriers should emphasize **driver awareness** of these behaviors, as well as how to **avoid them**.

IMPROPER LANE USE Impacts on At-Fault CMV Crashes

In single vehicle, non-intersection crashes, improper lane use...

was a contributing factor in **31%** of crashes

resulted in **30%+** higher injury/fatality risk per crash



Technology Solutions

Advanced vehicle technologies—such as **collision-avoidance** and **stability control** technologies—can help reduce situations such as run-off-the-road crashes, roadway collisions with other vehicles or objects, and overturns/rollovers. All these situations are **important factors** in at-fault CMV crashes.

What About Oilfield Crashes?

Are CMV crashes more severe near oilfields? When TTI compared crashes inside and outside oilfield areas, we found **no significant difference** in at-fault CMV crash severity. Crashes might be more frequent in oilfield areas, but when they happen, they are just as severe outside the oilfield as they are inside the oilfield.

Why Speeding Matters

Speeding was a factor in more than **20 percent** of at-fault CMV intersection crashes. When speeding was a **contributing factor**, estimated crash costs were **20 percent higher** than crashes where speeding was not a contributing factor. Crashes with **speeding citations** had a **170 percent** greater injury/fatality risk per crash.

Crashes Are Preventable

CMV carriers have **tools to help prevent** at-fault CMV driver crashes. **Training and setting policies** to encourage CMV operators to drive awake, aware, and avoiding improper driving behaviors is the first step to preventing injury, **saving lives**, and **reducing liability costs**. And by **outfitting trucks** with stability-control and collision-avoidance technologies, carriers can reduce situations where drivers lose control of their rigs.

IMPROPER STOPPING Impacts on At-Fault CMV Crashes

In intersection crashes, stopping problems...



were a contributing factor in **18%** of crashes



resulted in **60%+** higher estimated cost* per crash



resulted in **170%** higher injury/fatality risk* per crash

*compared with crashes where stopping problems were not a contributing factor.

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Collision Avoidance and Stability Control Technologies Can Help Reduce Crash Costs



At-Fault CMV Crashes Involving Multiple Vehicles...

resulted in nearly **50%** higher estimated costs compared to single-vehicle crashes



OVERTURNS/ROLLOVERS in At-Fault, CMV, Single-Vehicle Crashes...

were a contributing factor in **40%** of crashes



resulted in **80%** higher estimated cost* per crash



resulted in **110%** higher injury/fatality risk* per crash



*compared with crashes where overturns/rollovers did not occur.

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