



Large Truck & Tanker Rollover Prevention



STATISTICS

There are over 1,300 tanker rollover accidents and 500 large truck rollover accidents that occur each year throughout the U.S. according to National Highway Traffic Safety Administration. Over 60% of these rollover accidents result in fatalities. Most of these accidents occur on dry straight roads and highways, not on ramps and turns as one might expect. Over 63% of tanker rollover accidents occur with partial loads. Veteran drivers, with over 10 years of experience, are involved in over 2/3 of all rollover accidents.

In an effort to increase awareness and significantly reduce the number of truck rollover accidents, consider the following:

THE SCIENCE behind the rollover

- Center of gravity – Large trucks and tankers have a higher center of gravity and are naturally more susceptible to rollovers. Liquid loads and shifting-solid loads create additional forces on the truck's center stability and center of gravity.
- Speed – Maintaining safe speeds at all times is critical. Most speed limit signs are designed for passenger vehicles for clear dry conditions. Large trucks should observe a much lower speed limit and adjust further considering driving conditions.
- Sudden stops, starts and turns – Loads prone to shifting are greatly affected by sudden movement in stops, starts and sharp turns. Anticipating stops, slower deliberate starts and slowing during turns all minimize load shifting.
- Partial loads – These loads are often more hazardous than full loads. More shifting of loads occurs with partial loads, especially liquid loads (sloshing and surging).

THE DRIVER

- Distracted driving –All unsafe behaviors should be avoided while driving including cell phone use, texting, eating and other electronic device usage.
- Speeding – Obey all posted **truck** speed limit signs while maintaining **10 mph under** automobile speed limit signs. Keeping the truck at safe speeds will allow the driver to adjust more readily to situations that occur.



- Alertness – Drivers being alert is a major success factor for avoiding accidents. The use of illegal drugs, alcohol, certain prescription drugs and some over-the-counter drugs will limit the ability for the driver to remain alert and significantly delay reaction times.
- Hours of service – Adhere to the DOT FMSCA guidelines for maximum allowable driving times and required rest break intervals.

THE TRUCK - Vehicle Maintenance & Pre-Trip Inspections

- Brakes – Conducting brake inspections and checks for proper operation are critical. Checking the air compressor, slack adjusters, brake lines, linings, warning lights and gauges should be inspected before each trip at a minimum.
- Suspension – The suspension system supports the loads and provides vehicle stability. Components of the suspension system to check in a pro-trip inspection should include U-bolts, spring hangers, axel, spring assembly, torsion bar, air components and torque/radius/tracking components.
- Tires – Maintaining proper tire pressures and treads will provide for a safer ride and better driver control. It is important to check all tires for excessive/abnormal wear, proper inflation/pressures, load limits and clearances at a minimum.

THE CONDITIONS

- Roadways - City, rural and highway driving each present unique challenges to a driver. Traffic conditions, road surfacing, pedestrian traffic, ramps and roadway narrowing must all be taken into account in pre-trip planning. Dispatch and fellow drivers may be able to provide information alerting others of unusual conditions.
- Environmental factors – Driving in the rain, snow, below freezing weather, fog, low light and high wind situations increase the potential for rollover accidents to occur. These conditions can cause reduced traction, reduced visibility and can affect load stability. Decreasing speeds and increasing following distances will minimize accident potential during low light and inclement weather conditions. Consider getting off the road during severe conditions.
- Steep grades – Steep uphill grades limit visibility and can cause load shifts. Steep downhill grades can shift loads and increase the truck speeds. Test brakes and appropriately shift gears prior to negotiating steep grades.
- Road conditions – Under construction and poorly maintained roads can pose road hazards that could affect load stability. Soft shoulders, gravel, berms, narrow culverts and curbs (tripping) all could have a catastrophic effects leading to rollovers.

ROLLOVERS CAN BE PREVENTED...\$AVE A “B.U.C.K.”

Be alert
Understand the hazards
Check your truck
Know your load



RESOURCES:

Tanker Rollover Prevention Video - <https://www.fmcsa.dot.gov/rolloverprevention>

Truck Rollover Prevention Training Video (Vicroads)- <https://www.youtube.com/watch?v=mV9NebHbtus>

Cargo Tank Rollover prevention paycheck stuffer -

https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/docs/Cargo%20Tank%20Payroll%20Stuffer%20-%20Handout_090613_C.pdf

LexTrainer – A free online training resource for AIG policyholders -

<https://lextrainer.puresafety.com/Ondemand/Home>

REFERENCES:

Department of Transportation Federal Motor Carrier Safety Administration

National Highway Traffic Safety Administration, Fatality Analysis Reporting System (FARS) Web-Based Encyclopedia, <http://www-fars.nhtsa.dot.gov/>

National Waste & Recycling Association, <https://wasterecycling.org/> National Highway Traffic Safety Administration, Traffic Safety Facts 2013

For more information, contact your local AIG representative.

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