CARGO TANK ROLLOVER

Rollover Facts:

1. 78% of cargo tank rollovers (CTRs) involve driver error
2. 56% of CTRs occur on straight roads
3. Two thirds occur in daylight
4. 93% occur on dry roads
5. The majority of CTRs involve drivers with 10+ years of experience
6. 94% of rollovers occur from partial loads
7. 54% of rollovers involve some brake type of brake defect
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C&F RISK ENGINEERS UNDERSTAND YOUR BUSINESS

Since 1822, Crum & Forster has successfully anticipated what’s next. Our insurance policy is our promise to help you – the policyholder – in the event of a loss. It gives you a future benefit that you can count on. But C&F offers something more. Our Risk Engineers can help your operation right now.

Before you ever encounter a claim, our Risk Engineers can meet you and identify actual and potential loss sources. We’ll conduct a thorough study of your company that includes exposures, hazards and accident trends. Together we’ll review your current loss prevention efforts, physical location, loss information and other business records to pinpoint fundamental loss causes. Then we’ll create an action plan with practical recommendations to strengthen existing safety programs. We can maintain an ongoing review of it to evaluate progress and effectiveness. We can even conduct a legal exposure review of your company’s agreements. Everything we do is aimed at putting into place an effective loss control strategy that works consistently over time to lower your operation’s risk of loss.

Our highly specialized Risk Engineers are strategically located throughout the country and have the experience, training and professionalism to provide risk management solutions to meet your business needs and contribute to your success. They have on average more than 20 years industry experience, many with roles dedicated to safety and training. And we invest not only in our insureds, but in the industry. We are members of and participate in many state associations and regularly present at industry conventions and events. These connections and experience are invaluable, and are key in assisting you in developing and deploying a modern, up-to-date safety and training program.

Our solutions are both innovative and established. Whether it’s Accident Event Recorders (AERs) to help identify vehicle accident causes and tailor safety training, digital tracking systems, or online video training to assure OSHA compliance, we bring you the latest technology. Matched with the experience of our Risk Engineers, your operation benefits from the engineering awareness built over a lifetime and cutting edge safety science.

A driver’s internal conditions and chosen distractions contribute to rollovers

America’s roads grow more congested every day, and we all know that distractions decrease our attention when we drive our own cars. The same distractions contribute to the cargo tank rollovers of commercial vehicles, but with even greater potential for damage. And it’s not just driver responses to external distractions that factor into a rollover. Exclusively internal conditions – like inattentiveness, fatigue and even complacency – also play a big role.

Some distractions have existed since the beginning. For example, we often feel compelled to pick up things that have fallen onto the floorboard, thinking it will not interfere with the safe operation of the vehicle. But is it really necessary to reach over and try to grab that Thermos of coffee while driving, instead of waiting for a place to stop and pick it up safely?

The object that has fallen onto the floorboard is at least a sudden event that we might feel demands our immediate attention. But the majority of distractions that we now contend with are things that we choose to let distract us.

Vehicle radios haven’t always existed, and when manufacturers first began to install them, many believed that their presence inside vehicles would contribute to driver distraction with states like New York, New Jersey, Massachusetts, Illinois and Ohio all proposing laws that would subject the installation and use of a car radio to fines. Changing CDs and cassettes is less of a distraction now that fewer people use them, but manually removing one of these media, placing it in its case, selecting another and taking it out of its case for use in a player might have consumed more “eyes off the road” time than any other distraction.

The newest distractions are interactive. Everywhere, the paper map is replaced with the smartphone’s talking, GPS-enabled map. In any traffic jam, and even in moving traffic, drivers can be observed texting.
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The reality is that more distractions are constantly offered to the driver. Only the driver can choose to ignore them and do what brings him to the road – drive.

Situations that may cause sudden reactions include running off the side of the road, moving over into another lane, or driving too close to another vehicle. They may cause a driver to immediately turn away from danger to avoid an accident or go into a ditch. A sudden lateral movement of a cargo tank causes the liquid inside the tank to slosh and the vehicle to roll.

Overcorrecting is a common mistake that can lead to rollovers. If you run off the side of the road, try to slow down by taking your foot off of the accelerator and keep the vehicle straight and under control. Even if you do this, soft roadside conditions may still cause the liquid to slosh and roll the vehicle. The best course of action is always to keep the vehicle on the roadway by focusing on driving.

Ramps • Intersections • Curves • Corners
A safe speed sometimes is not what’s indicated by the posted speed limit, and that’s why maintaining a speed that’s proper for the road and traffic conditions is essential. For example, entrance and exit ramps are mainly designed for passenger vehicles in dry conditions. Larger trucks and especially trucks with liquid cargo tanks should negotiate these ramps at a speed much lower than the posted speed limit. Take the same caution when approaching intersections, corners, and curves. FMCSA – the Federal Motor Carrier Safety Administration - identifies speed as a major contributor to cargo tank rollovers. Always maintain the proper speed to avoid situations that could call for a sudden move or cause your vehicle to turn over.

Baffles and Compartments
Cargo tanks such as those that may haul gasoline, diesel, kerosene, or other types of fuel may have separate compartments. Anhydrous ammonia and propane cargo tanks usually have baffles to inhibit product movement or sloshing. Sanitary considerations prevent use of baffles for cargo tanks used to transport food products. The characteristics of these different cargo tanks play a part in how the vehicle handles and should be handled. Cargo tanks without baffles or compartments are much easier to roll and this fact should be considered when turning and stopping. Even those with baffles and separate compartments do not offer insurance against a rollover. A substantial shift in any load’s center of gravity can cause the vehicle to tip. In any year, roughly 60% of rollover crashes occur with cargo tanks carrying partial loads that, when the vehicle is abruptly turned, develop a “slosh and surge” effect that causes the vehicle to tip and rollover.

Driver Experience
Does driver experience matter? Sure it does. Experience and training are necessary for any new driver or for any experienced driver working for a new company. Drivers who have not driven cargo tanks with liquid products are at a higher risk of rollovers. Even though a driver may have previous experience, driving for a new company with a different type of vehicle can increase the risk of rollovers as well. Newly hired drivers should not drive a cargo tank vehicle until properly trained and comfortable
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with the operation of the vehicle. Even experienced drivers should not get too comfortable. FMCSA reports that the majority of cargo tank rollovers involve drivers with ten or more years of experience. So don’t let the, “I’ve done this a long time and I know what I am doing syndrome,” cause your guard to come down. You’re only as good as the last drive you finished safely.

**Online Training Resources**
Cargo tank rollover videos have been developed that help with driver orientation and refresher training programs. One, developed by the Propane Education and Research Council (PERC), relates to propane bobtails and the other, developed by the FMSCA, addresses the operation of refined fuel tanker transport units. A fact sheet accompanies it. Please utilize these training resources by accessing the links below:

- **Propane Bobtail Rollover Video**
  www.propanesafety.com/additional-training/bobtail-rollover-prevention/

- **FMCSA’s Guide to Cargo Tank Truck Rollover Prevention**

* **FMCSA’s Rollover Prevention Video at**
  www.fmcsa.dot.gov/regulations/hazardous-materials/cargo-tank-truck-rollover-prevention

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