Underride and Jackknife Crashes: Causes and Evidence

Underride and jackknife crashes are two kinds of tractor-trailer collisions https://truckaccidentlawyer.wiki/topics/liability-and-claims/ that frequently cause severe injuries. An underride crash happens when a smaller vehicle slides partly or completely beneath a trailer or truck body. A jackknife occurs when the tractor and trailer fold toward each other, often across several lanes. Each one raises distinct evidence questions for a truck accident attorney.

Why underride crashes are so dangerous

According to the Insurance Institute for Highway Safety (IIHS), large trucks are taller and have greater ground clearance than cars, which means a lower vehicle can slide beneath a trailer, and strong underride guards can prevent that. If a car goes under a trailer, the trailer can intrude into the passenger compartment, which bypasses much of the crash protection built into the front of the car.

Rear impact guards on trailers fall under Federal Motor Vehicle Safety Standards No. 223 and No. 224, found at 49 CFR 571.223 and 571.224, and 49 CFR 393.86 addresses rear impact guards on vehicles already in service. IIHS reports that NHTSA finalized a stronger rear guard rule in 2022. In a June 2024 report to Congress under the truck accident lawyer Bipartisan Infrastructure Law, NHTSA estimated an average of 89 deaths a year among light passenger vehicle occupants in two-vehicle crashes in which the passenger vehicle strikes the side of a trailer or semi-trailer and underrides it. A truck accident lawyer will look at whether the trailer had a compliant guard and whether it was damaged before the crash.

The mechanics of a jackknife

A jackknife usually starts with a loss of traction. Commercial driver manuals explain that when trailer wheels lock, the trailer tends to swing around, which is more likely with an empty or lightly loaded trailer. Hard braking, speed too fast for conditions, wet or icy pavement, out-of-adjustment brakes and shifting cargo can all contribute. Federal Motor Vehicle Safety Standard No. 121 covers air brake systems, including antilock brakes, but antilock brakes reduce wheel lockup without eliminating every skid.

Photos of the folded rig show where the vehicles came to rest, not which unit lost control first. A tractor skid and a trailer swing can look alike after the fact, so reconstruction relies on tire marks, ECM speed and brake data, brake adjustment readings and the load records. A semi-truck crash lawyer will usually ask for the brake inspection history and the bill of lading for that reason.

Rollovers and blocked lanes

FMCSA's Large Truck and Bus Crash Facts 2022 states that overturn, or rollover, was the first harmful event in 4 percent of fatal crashes involving large trucks. A jackknifed or overturned rig can block several lanes, leading to secondary collisions with vehicles that cannot stop in time. Poor trailer visibility at night is another factor in underride cases, which is why the retroreflective sheeting required on many trailers under 49 CFR 393.11 gets a close look. A commercial truck accident lawyer often reviews the police crash report and scene photos for lighting and visibility problems.

Liability and evidence in these crashes

Responsibility may reach beyond the driver: the trucking company for maintenance and training, the loader for cargo securement under 49 CFR Part 393, and the manufacturer if a guard or brake component was defective. An 18-wheeler accident lawyer will usually ask that the trailer, the guard and the brake components be preserved before any repairs. Each state has its own statute of limitations and fault rules, and this general information is not legal advice or a prediction about any claim.