Underride and Jackknife Crashes: Causes and Evidence

Underride and jackknife crashes are two tractor-trailer crash types that often 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 blocking several lanes. Each raises its own evidence questions for an 18-wheeler accident lawyer.

What makes underride crashes deadly

According to the Insurance Institute for Highway Safety (IIHS), large trucks are taller and have greater ground clearance than cars, so a lower vehicle can slide beneath a trailer, and strong underride guards can prevent that. When a car goes under a trailer, the trailer can strike the passenger compartment, bypassing 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 covers rear impact guards on trucks in service. IIHS reports that NHTSA finalized a stronger rear guard rule in 2022. In a June 2024 report to Congress under the Bipartisan Infrastructure Law, NHTSA estimated an average of 89 deaths a year among light passenger vehicle occupants in two-vehicle crashes where 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. State commercial driver manuals explain that locked trailer wheels make the trailer tend to swing around, which is more likely with an empty or lightly loaded trailer. Hard braking, excessive speed for conditions, wet or icy pavement, poorly adjusted brakes and shifting cargo can each play a part. Federal Motor Vehicle Safety Standard No. 121 covers air brake systems, including antilock brakes, but antilock brakes reduce wheel lockup rather than preventing every skid.

A photograph of the folded rig shows where the vehicles ended up, tractor trailer accident claim lawyer not which unit lost control first. A tractor skid and a trailer swing can look similar at rest, so reconstruction relies on tire marks, ECM speed and brake data, brake adjustment readings and the load records. A semi-truck crash lawyer typically asks for the brake inspection history and the bill of lading for that reason.

Rollovers and secondary crashes

FMCSA's Large Truck and Bus Crash Facts 2022 reports that overturn, or rollover, was the first harmful event in 4 percent of fatal crashes involving large trucks. A jackknifed or overturned trailer can block multiple lanes, which can lead to secondary collisions with vehicles that cannot stop in time. Poor trailer visibility at night is another factor in underride cases, so investigators check the retroreflective sheeting required on many trailers under 49 CFR 393.11. 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. A big rig accident attorney 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.