Introduction

In the trucking industry, there is a very specific way of getting into and out of a large truck. Federal Motor Carrier Safety Regulation Subpart L has requirements in sections 399.201 through 211 that specifically apply to High Profile Cab Over Engine (COE) trucks that have been in effect since 1982. That standard states:

Any person entering or exiting the cab or accessing the rear portion of a high profile COE truck or truck-tractor shall be afforded sufficient steps and handholds, and/or deck plates to allow the user to have at least 3 limbs in contact with the truck or truck-tractor at any time.

This is normally referred to as the “three point rule” and is referenced in instructions for climbing ladders, poles, trees, and even in rock climbing. By having 3 limbs in contact with the equipment, if one were to slip, a fall is less likely to occur.

When this standard for Cab over Engine trucks came into effect, many manufacturers used the guidelines for all of their vehicles, including conventional cabs and all rear of cab access. Truck drivers are taught the three point rule in driver training and by responsible trucking companies.

Three Point Rule

Example of 3 Points of Contact:
1. Front Grab Handle
2. Rear Grab Handle
3. Steps

- Only climb on or get off when the equipment or vehicle is stationary
- Always mount or climb down while facing the truck or the equipment
- Make sure that the points of contact you are using are clear of debris, mud, grease, etc…
- Only use points of contact that were intended to be used to climb on or dismount

Forensic Investigations

The “three point rule” can be considered a standard of care for all large trucks. Despite efforts to improve safety, falls from trucks, resulting in injuries, still occur.

The forensic analysis of these falls often brings up many questions:

- Was the step and handhold system safely designed to ensure three point control at all times?
- Were there design issues such as protruding fasteners that may affect the stability of the person that fell?
- Was the three point rule used by the person that fell?
- Was the person that fell a professional driver?
- Was the person that fell properly trained?
- Does the vehicle carry untrained passengers?
- Were instructions provided in clear view of the driver and passenger?
- Is a Commercial Driver’s License required to operate the vehicle?

These issues and more may be relevant to your investigation. Contact vehicle engineer, Erin Shipp, P.E., to discuss your case and how she may assist with your investigation.

Featured Expert

Erin M. Shipp, P.E., NCEES
Vehicle Engineer
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Erin has more than 30 years of engineering experience involving product design and development of heavy trucks, motor homes, buses, and passenger cars.

Erin worked at Chrysler for ten years in a variety of engineering roles including Structures Engineer, Lead Engineer, and Customer Satisfaction Team Engineer. Prior to joining Chrysler, she spent nearly a decade in engineering positions in the bus industry.

Erin also spent 14 years in truck design and development, 12 years at Freightliner and 2 years at Marmon. In these positions she was involved in nearly every system of the vehicle including body, cab access, vehicle durability, sleeper design, clutch and shift controls, cooling, chassis, drive train application, battery mounting, restraints, vehicle application, aerodynamics, and steering systems.

Erin is a Mechanical Engineer, a registered Professional Engineer, and holds a patent for Energy Absorbing Front Frame Structures.