

TRANSPORTATION / WAREHOUSING

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Overview on Correctly Securing Cargo

Introduction

The Federal Motor Carrier Safety Administration (FMCSA) mandates that any hauler of goods operating in interstate commerce must comply with their standards of cargo securement. These regulations are based on the North American Cargo Securement Standard Model Regulations, and FMCSA published the standards to reduce the amount of accidents caused by shifting or falling cargo. The cargo securement rules are applicable to carriers of all types of commodities, except those in bulk that lack structure or fixed shape, such as liquids, gases, grain, sand and gravel.

Applicability

These cargo securement regulations do not require motor carriers to spend excessive funds in replacing their current cargo securement devices. Rather, they set guidelines for how these devices should be used and the number of restraints required to adequately secure cargo. It is your responsibility as the driver to make sure you are following all the guidelines of the rule. It is important for your safety and the safety of everyone on the road. Always keep in mind that you are responsible for the load you are transporting, so don't be reckless with it.

Performance Criteria

The regulations laid out by FMCSA require that carriers' cargo securement systems be capable of withstanding the forces associated with these three decelerations and accelerations when applied separately:

- 0.8 g deceleration in the forward direction
- 0.5 g acceleration in the rear direction
- 0.5 g acceleration in a lateral direction

Though these guidelines are specifically laid out in the rule, the company is not required to conduct testing to ensure cargo securement equipment can withstand these forces. If you carefully adhere to the guidelines of the rule, it is generally accepted that the system will be able to withstand these forces and that you are following the performance criteria adequately.

What the FMCSA rule comes down to is that cargo should be firmly secured by structures of adequate strength, including dunnage or dunnage bags, shoring bars, tiedowns or a combination of these elements. The cargo should be immobilized and, most importantly, it should not shift during transit. By not following these FMCSA rules, you risk exposing yourself and others on the road to serious injury, plus opening yourself and the company to costly liability.

Tiedowns

Make sure before you get on the road that each tiedown is attached and secured so that it will not loosen, unfasten, open or release while in transit. The regulations also require tiedowns and other cargo security components to be located inboard of the rub rails whenever applicable and practical. It is important to check whether any tiedowns could be subject to abrasion or cutting by the cargo itself, and if this is the case, you must ensure there is edge protection.



When cargo is not blocked or positioned to prevent forward movement, the number of tiedowns you need depends on the length and weight of the articles. According to the rule, you need to ensure there is:

- One tiedown for articles 5 feet or less in length and 1,100 pounds or less
- Two tiedowns for articles 5 feet or less in length and more than 1,100 pounds
- Two tiedowns for articles greater than 5 feet but less than 10 feet in length, regardless of weight
- Two tiedowns for articles greater than 10 feet and one additional tiedown for every 10 feet of length, or fraction thereof, beyond the first 10 feet

Cargo Placement and Restraint

Articles of cargo that are likely to roll must be restrained by chocks, wedges, a cradle or other equivalent means to prevent rolling. The device used to prevent rolling must not shift, become unfastened or loosen during transit. It is important that articles of cargo either be placed in direct contact with one another or be prevented from shifting toward each other while in transit.

Special Purpose Vehicles

Because of their size and shape, the basic tiedown rules do not apply to vehicles transporting articles of cargo such as steel or concrete beams, crane booms, girders, trusses or any other fabricated structural items. However, the FMCSA still requires that these types of cargo be securely fastened to the truck by special methods and devices that meet the standard performance requirements.

Commodity-Specific Securement Requirements

For some types of cargo, FMCSA has adopted specific, detailed securement requirements. Historically, there has been much disagreement between industry and enforcement agencies about how these items should be properly secured. Thus, there are far more thorough specifications for these items. Your supervisor will inform you about the specific requirements for securing these loads if you are required to carry them. FMCSA has special requirements for the following commodities: logs, dressed lumber, metal coils, paper rolls, concrete pipe, intermodal containers, automobiles, light trucks and vans, heavy vehicles/equipment/machinery, flattened/crushed vehicles, roll-on/roll-off containers and large boulders.

Final Thoughts

These cargo securement policies are put in place for your safety. Carelessness in following them can not only affect your cargo, but can also put you and others on the road in danger. Shifting cargo loads could cause you to lose control of your vehicle, and this is a common cause of many trucking accidents. Take it upon yourself as the driver to ensure your load is secure when you get on the road, and if you sense or see something is wrong, pull off the road as soon as possible to fix it.

Also, remember that these rules are only effective if all your cargo security equipment is in proper working order. Cuts, cracks or other signs of weak components will hinder the equipment's performance and will reduce amount of cargo it can safely secure. Safety when it comes to securing cargo is a responsibility the company does not take lightly, and it is ultimately up to you to make sure you and your load reach your destination safely. If you have any questions about cargo securement requirements, contact your supervisor.