

March 15, 2001

Docket No. FMCSA-97-2289  
U.S. DOT Dockets, Room PL-401  
U.S. Department of Transportation  
400 Seventh Street, SW  
Washington, DC 20590

**Development of a North American Standard for Protection Against Shifting and Falling Cargo, Notice of Proposed Rulemaking, 65 FR 79050 *et seq.*, December 18, 2000**

**I. Introduction.**

Advocates for Highway and Auto Safety (Advocates) is pleased to submit the following comments on the captioned rulemaking notice. The Federal Motor Carrier Safety Administration (FMCSA) is proposing to revise existing regulations specifying the requirements for preventing cargo from shifting on or falling from commercial motor vehicles. 49 CFR Pts. 392, 393. The FMCSA has proposed regulatory amendments which have commodity-specific securement requirements consisting of both performance and design features to ensure that the most common types of cargo, such as logs, shortwood, boulders, intermodal containers, and other freight or commodities, will not shift on or fall from the freight or cargo area of a commercial motor vehicle under normal operating conditions. Advocates believes that many of the commodity-specific requirements can enhance overall freight transportation safety. However, some of the basic features of the proposed rule are insufficient to prevent the dislodgement of freight under demanding operating conditions, including severe maneuvers and crashes. Also, there are elements of the proposed rule addressing driver responsibilities which essentially are unenforceable. In addition, there are parts of the proposed rule whose meaning and application are unclear, especially with regard to the distinction the agency attempts to draw between “direct” and “indirect” tiedowns. The FMCSA also rejects a number of fundamental cargo securement recommendations contained in the North American Securement Standard Model Regulations by means of brief conclusory statements, without assessing their individual merit for advancing cargo securement safety.

**II. Performance Criteria.**

The FMCSA proposes adoption of new performance requirements controlling cargo securement integrity on the basis of longitudinal, lateral, and vertical acceleration limits. Using

the basic law of gravitational acceleration (32.3 feet/second/second), the agency proposes that cargo securement systems be capable of withstanding 0.8g forward deceleration, 0.5g rearward deceleration, and 0.5g lateral acceleration. The forward deceleration limit is premised upon “an empty or lightly loaded vehicle with an antilock brake system, all brakes properly adjusted, and warmed to provide optional braking performance . . .” 65 FR 79050, 79054. The limit for lateral acceleration is based on “lightly loaded vehicles, or heavily loaded vehicles with a lower center of gravity . . . withstand[ing] lateral acceleration forces greater than 0.50g” without yawing or rolling over. *Id.*

These proposed limits accord with recognized commercial vehicle operating tolerances for deceleration and acceleration generally without a driver losing control of a truck and subsequently rolling over, yawing, or jackknifing. However, they do not entail a severe demand on cargo securement in severe maneuvers or in minor crashes involving forces exceeding these ceilings. The FMCSA states in this proposed rule that it will not adopt performance standards ensuring that cargo is retained on or in the commercial vehicle in collisions, rollovers, or trailer detachments. *Id.* It is noteworthy that, although the agency asserts that “shifting or falling cargo is a contributing factor in less than one percent of the accidents self-reported by motor carriers,” it only states without any corroborating figures that “there is no evidence that a significant number of secondary injuries or fatalities are caused by the impact of cargo thrown from a CMV as the result of an accident, as opposed to the impact of the CMV itself with the roadway, nearby objects or other vehicles.” *Id.* at 79053, 79054. The FMCSA cannot fulfill its obligation to provide a documented administrative record in this rulemaking by making this kind of summary dismissal of the crash consequences of dislodged cargo. Many anecdotal reports, including newspaper accounts, of crashes involving deaths and injuries as a result of cargo detachment have been made over the years which verify that some of these losses occurred from the separation of freight from commercial motor vehicles as the result of severe maneuvers resulting in a collision with other vehicles, impacts with fixed object hazards, or rollovers. Advocates continues to believe that the agency has an obligation to establish standards which ensure the crashworthiness of cargo securement methods in most collisions or rollovers.

Similarly, the FMCSA demurs on setting any crashworthiness standards which exceed the limits it has proposed for operation of trucks not resulting in loss of control on the basis that “it would be extraordinarily expensive, and probably impracticable, to require that all cargo securement systems be capable of keeping loads in place during moderate to severe collisions, rollover accidents, and trailer detachments.” *Id.* at 79054. However, the agency again makes these assertions of insupportable costs and impracticality without any quantification of the costs and the benefits which might accrue to cargo securement safety if limits more demanding than those proposed were adopted. In fact, the agency nowhere in this rulemaking provides any estimation of costs and benefits of changing the current cargo securement standards, including adoption of the amendments it has proposed in this rulemaking.

### III. Direct and Indirect Tiedowns.

The FMCSA recognizes in this proposed rule that surface friction of cargo against the floor of the freight-carriage area of a commercial motor vehicle plays a major role in preventing cargo from shifting and in ensuring its retention. There is not, however, an overall performance-based standard espoused by the agency to ensure that high friction surfaces are used as cargo floors or supports to improve the chances of cargo not shifting while being transported.

The agency also proposes different levels of working loads of the devices used to secure cargo depending on whether they are direct or indirect tiedowns. The FMCSA defines a “direct tiedown” to be

one that is intended to provide direct resistance to potential shifting of an article being transported. A direct tiedown may be attached to an article and to an anchor point on the CMV, or it may be attached to an anchor point, go around or through an article, then be attached to another anchor point.

*Id.* at 79053.

In contrast, “[a]n indirect tiedown is attached to the vehicle, runs directly over or through an article, then is attached to another anchor point on the other side of the article, and is tightened.” *Id.*

The FMCSA also further distinguishes different aggregate working load limits of direct tiedowns when each direct tiedown is connected between the motor vehicle and the article or cargo, and when the direct tiedown is attached to the vehicle, passes through or around the cargo, or is attached to it, and is again attached to the vehicle. *Id.* at 79055. The agency claims that it will now be necessary for carriers and drivers to determine whether a tiedown is direct or indirect and make the appropriate calculations “instead of determining the aggregate working load limit of all the tiedowns being used . . .” *Id.* It obviously will also be necessary for carriers and drivers to distinguish the different parts of a direct tiedown to determine which will be governed by one-half the working load limit and which by the full working load limit.

On the basis of the verbal descriptions offered by the FMCSA, Advocates cannot conclusively distinguish between direct and indirect tiedowns, nor between exactly which parts of a direct tiedown are governed by one-half its working load or by its full working load. Although we can envision an indirect tiedown whose character appears to apply essentially constraining vertical forces on a piece of cargo against the floor of the vehicle, it is far less clear when a tiedown can or cannot be regarded as a “direct” tiedown or which parts are governed by full working load limits and which by one-half working load limits. Advocates is convinced that many carriers and drivers will fail to understand the distinctions drawn by the agency concerning tiedowns and will inappropriately judge a tiedown as “direct” when in fact it is an indirect

tiedown, or will misjudge the working load limits applying to the different parts of a direct tiedown, resulting in securement which does not meet the standard and poses an unacceptable safety risk of dislodgement. As a result, the calculations which the agency wants carriers to apply in judging whether the requirements of the proposed regulation have been met, will be uncertain and often mistaken. The FMCSA needs to evaluate its descriptions of the different species of tiedowns and perhaps provide clearer text accompanied by illustrative examples of the most common ways in which tiedowns are direct and indirect, and provide guidance on how carriers and drivers can distinguish between the different parts of direct tiedowns with respect to working load limits.

#### **IV. Front End Structures On Commercial Motor Vehicles.**

The FMCSA proposes to retain its current front-end structures (headerboards or “headache racks”) rules for commercial motor vehicle cargo transport. 49 CFR § 393.106. However, the agency proposes a revision which it asserts will emphasize cargo securement rather than occupant protection. 65 FR 79055. The clear implication of the short discussion provided by the FMCSA is that many types of cargo which now may be transported only if a vehicle has a front end structure would be able to be transported without a front end structure. Proposed 49 CFR § 393.120(a) would apply to “commercial motor vehicles transporting cargo that is *in contact with* the front end structure of the vehicle,” and front end structures or headboards would accordingly have to meet certain static strength requirements and penetration resistance.<sup>1</sup> *Id.* at 79062 (emphasis supplied).

This means that if cargo is not in contact with a front end structure, there is no need for the structure, if present, to meet the proposed performance requirements nor, in fact, is there an implied requirement that any front end structure be present: “[T]he best way to ensure driver safety is to have tougher standards to prevent the cargo from shifting forward. For example, if the vehicle is transporting metal coils, once the cargo begins to move forward, it is unlikely that a front-end structure would save the driver.” *Id.* at 79055. This is true enough for very heavy metal coils. But, for many other kinds of cargo, the difference between having a headboard capable of withstanding a substantial dynamic loading and point-source intrusion may be the difference between life and death for some drivers when other types of cargo are dislodged and move towards the cab under severe braking, for example. Advocates regards it as very unwise for the agency to impliedly require headboards meeting certain minimum strength standards only

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<sup>1</sup>The FMCSA nowhere delineates how a commercial motor vehicle owner or operator could measure the static strength and penetration resistance of a front end structure, or how an enforcement official could determine prospectively whether a front end structure met the performance specifications of proposed 49 CFR § 393.120.

if the cargo is actually in contact with the front end structure. In the real world, cargo can and will become loose, even if carriers and drivers attempt to adhere to the agency's proposed revisions to the cargo securement regulations. The absence of an appropriately strong headboard in some cases can easily result in deaths and injuries not only to the truck cab occupants, but to other vehicle occupants in the vicinity of a truck which goes out of control because unsecured freight penetrated the truck cab and injured or killed the driver.

#### **V. Driver Responsibilities for Cargo Securement.**

The FMCSA proposes revision of 49 CFR § 392.9 so that drivers would be required to inspect their cargo and cargo securement devices within the first 50 miles of travel rather than the first 25 miles of travel. Advocates supports driver inspection and adjustment of tiedowns and other securement devices (blocking, braces, cradles, *etc.*) early in the life of a trip, but the agency's argument that inspection after about 50 miles of travel would better determine whether cargo securement is acceptable, is thoroughly speculative. In addition, there is no meaningful way to achieve enforcement verification that such a driver check was in fact accomplished. The FMCSA is not requiring any form of certification or other data entry on any submitted or retained form as an driver affidavit of a cargo securement check early in the life of a trip. This essentially makes revised § 392.9 an honor system and the regulation only an exhortation to the driver.

#### **VI. Freight Inspection.**

Advocates strongly opposes the provisions of proposed § 392.9(b) which would exempt drivers from inspecting the cargo securement of any freight carried in sealed containers, of any freight which the driver is forbidden from inspecting, or of any freight "loaded in a manner that makes inspection of the cargo impracticable." 65 FR 79055. These exemptions will easily become major loopholes for consignors, brokers, freight forwarders, and motor carriers which will undoubtedly be exploited especially for legal defense of suits resulting from crashes with deaths, injuries, and property damage losses as the direct result of dislodged cargo. The provision provides ample opportunities for the different parties in the supply chain to attempt to shift burdens of responsibility for cargo securement and any subsequent failures. Moreover, the agency has provided an unobjective, generalized standard of "impracticability" to govern millions of freight movements without inspection for cargo securement. Without an operational definition of when freight inspection is deemed "impracticable," the FMCSA is underwriting the wholesale exemption of freight which, in some cases, will shift or become otherwise dislodged, resulting in certain instances in vehicle loss of control and subsequent crashes. Advocates urges the agency to reconsider providing such wide, unspecific exemptions to all the members of the

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supply chain from practicing reasonable and responsible cargo securement inspection.

## **VII. Maintenance.**

Advocates is unable to find a provision among the FMCSA's proposed revisions to Pts. 392 and 393 which would confer a duty on carriers and other members of the supply chain to engage in regularized, periodic maintenance and replacement of cargo securement devices, especially of chains, cables, strapping, and other materials used to prevent freight from shifting or falling. Although there are allusions to maintenance needs in the proposed revised text for these sections (*e.g.*, § 393.102(c)) and to the need to avoid the use of damaged securement devices (*e.g.*, § 393.104(b)), the agency does not independently require any routine, periodic maintenance check of securement devices which would be memorialized in a document retained by a carrier and subject to retrieval and evaluation by federal and state safety inspectors. Advocates believes that this kind of frequent, documented securement inspection would materially improve cargo retention safety and provide the agency with valuable information on cargo securement practices, including assisting the agency in determining the costs and benefits of the use of different kinds of tiedowns and other securement devices.

Respectfully submitted,

Gerald A. Donaldson, Ph.D.  
Senior Research Director