

Each year, International Roadcheck places special emphasis on a category of violations. The special emphasis for 2017 is cargo securement. While checking for compliance with safe load regulations is always a part of roadside inspections, the Commercial Vehicle Safety Alliance (CVSA) is highlighting cargo securement this year as a reminder of its importance.

CARGO SECUREMENT TIPS

Know the regulations.

Cargo securement standards represent the minimum safety requirements for general cargo and some specific commodities.

- The Federal Motor Carrier Safety Administration (FMCSA) outlines U.S. cargo securement rules on its website at www.fmcsa.dot.gov/regulations/cargo-securement/cargo-securement-rules.
- If you are transporting hazardous materials, they have additional load securement requirements. The Pipeline and Hazardous Materials Safety Administration (PHMSA) outlines hazardous load securement rules in 49 CFR Part 177, Subpart B. These regulations can be accessed online at www.ecfr.gov. In the Browse area, select "Title 49 – Transportation" from the drop-down menu. Under the "Subtitle B – Other Regulations Relating to Transportation" heading, select "100-177" for the Pipeline and Hazardous Materials Safety Administration, Department of Transportation. Scroll down to the "Subchapter C – Hazardous Materials Regulations" and select "177." Click on "Subpart B – Loading and Unloading."
- The Canadian Council of Motor Transport Administrators' (CCMTA) National Safety Code (NSC) cargo securement standards are available online at www.ccmta.ca/en/national-safety-code/nsc-cargo-securement-standards.
- You may want to invest in CVSA's illustrated cargo securement handbook, which includes both U.S. and Canadian regulations for reference. Visit www.cvsa.org and click on the "Store" tab to order a copy of "Practical Cargo Securement: Guidelines for Drivers, Carriers and Shippers."

- CVSA's full 2017 "North American Standard Out-of-Service Criteria Handbook and Pictorial" is also available (in electronic or print form) for purchase online in the "Store" section of our website.

Properly secure your load, as well as all equipment.

Cargo must be firmly immobilized and secured on or within a vehicle. And while safe cargo securement principles and regulations apply to every item carried for delivery, they also apply to anything else on or in the truck, including dunnage, tools and equipment. Shovels, blocks, webbing, chains, spare tires, brooms, forklifts, pallet jacks, winches, ratchets, etc., all must be secured. Also, remember that an enclosed van trailer may not be sufficient securement for the load you are transporting. Many large or heavy loads may need additional securement in an enclosed van to safely secure the load. Bungee cords and tarp straps must not be used as primary securement for loads or equipment.

Inspect tie-downs for wear and damage.

Regulations require tie-downs to be attached and secured in a manner that prevents it from becoming loose, unfastening, opening or releasing while the vehicle is in transit. But over time, tie-downs can become worn, torn or damaged. Make sure you inspect tie-downs for damage. CVSA's North American Standard Out-of-Service Criteria includes a helpful tie-down defect table for chain, wire rope, cordage, synthetic webbing, steel strapping, fittings or attachments, and anchor points. If worn or damaged, tie-downs should be removed and replaced.

Use best practices and due diligence.

There may be best practices, established by consensus by those who haul what you're hauling, that are worth following. If your shipment is more unique, do your research. Find out what works best. But always make sure your load is properly contained, immobilized and secured so that it cannot leak, spill, blow off, fall from, fall through or otherwise be dislodged from the vehicle, or shift upon or within the vehicle to such an extent that the vehicle's stability or maneuverability is affected. Loads that shift can not only cause crashes but can also damage your equipment. And improper cargo and equipment securement violations will affect your company's safety rating.

Top Load Securement Violations:

1. Failure to prevent shifting/loss of load
2. Failure to secure truck equipment (tarps, dunnage, doors, tailgates, spare tires, etc.)
3. Damaged tie-downs (unacceptable wear on chain or cuts and tears on web straps)
4. Insufficient tie-downs
5. Loose tie-downs

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Training Blueprint

Cargo securement: Preventing a dangerous situation

A professional driver's job is to safely and efficiently transport cargo to the customer, making sure it arrives on time and damage free. Proper cargo securement is an important step when it comes to making this happen, as it helps in preventing accidents, injuries, damage to products being hauled, and unnecessary downtime.

Trainer's Note: *Use of a video is one way to introduce this topic. When selecting a video, take into account your drivers' level of experience, the type(s) of vehicle(s) they operate, and the types of situations they deal with on a daily basis.*

General requirements

Sections 391.13 and 392.9 of the Federal Motor Carrier Safety Regulations (FMCSRs) address general securement requirements.



A driver must know how to properly locate, distribute, and secure cargo. This regulation also requires that the driver be familiar with the methods and procedures for securing cargo in or on his/her vehicle.

A vehicle may not be driven unless the vehicle's cargo is properly distributed and adequately secured.

The vehicle's tailgate, tailboard, doors, tarpaulins, spare tire, and other equipment used in its operation, and the means of fastening the cargo, must be secured.

In addition, the vehicle's cargo must not:

- Block the driver's view ahead or to the right or left sides;
- Interfere with the free movement of the driver's arms or legs;
- Prevent the driver from reaching accessories required for emergencies; or
- Prevent the driver or any other person from exiting the vehicle's cab or driver's compartment.

Once on the road, the driver must inspect the vehicle's cargo and the devices used to secure the cargo within the first 50 miles of the trip.

After that initial inspection, the driver must reexamine the security of his/her vehicle's load after driving for 3 hours, 150 miles, or when the driver makes a change of duty status (whichever comes first).

A driver may be exempt from this requirement if his/her vehicle is sealed and he/she has been ordered not to open it to inspect, or it is loaded in a way that makes it impractical to inspect the cargo.

Trainer's Note: *Distribute copies of the FMCSRs to your drivers. Review and discuss Secs. 391.13 and 392.9.*

Also distribute and discuss any policies your company may have on this subject.

Securement terms

Blocking, bracing, dunnage, load locking bars, and tiedowns are just some of the terms commonly used when discussing cargo securement.

Blocking is a structure or device placed on the front, back, or sides of a piece of cargo to keep it from sliding.

Blocking fits snugly against cargo and is secured to the cargo deck or sides to prevent movement.

Bracing is a structure or device placed against an article of cargo to prevent it from tipping or shifting. It is generally used between the cargo and the trailer ends or sides to keep an object stationary.

Dunnage is filler material used in empty spaces between cargo to keep it from shifting. Wood, cardboard, airbags, extra pallets, bubble wrap, and plastic are some of the materials used as dunnage.

Load locking bars can be used vertically or horizontally to prevent





cargo from tipping or shifting. The bars have rubber feet that are placed against the vehicle's walls or ceiling and floor. The bars are placed snugly against the cargo and then tightened with a jacking device until they are tightly wedged in place against the cargo.

Tiedowns are a combination of securing devices, attached to anchor points, which form an assembly that attaches articles of cargo to, or restrains articles of cargo on, a vehicle or trailer. Tiedown equipment includes straps, chains, and tensioning devices, including winches and ratchets.

Specific requirements

Part 393, Subpart I of the FMCSRs covers load-securement specifics. The regulations, which begin with Sec. 393.100, apply to trucks, truck tractors, semi-trailers, full trailers, and pole trailers.

A vehicle must be loaded and equipped, and the cargo secured, in a way that prevents the cargo from leaking, spilling, blowing, or falling from the vehicle.

All cargo must be contained, immobilized, or secured to prevent shifting that adversely affects your vehicle's stability or maneuverability.

All cargo must be firmly immobilized or secured on or within a vehicle by structures

of adequate strength, dunnage or dunnage bags, shoring bars, tiedowns, or a combination of these.

Cargo that is likely to roll must be restrained by chocks, wedges, a cradle, or other equivalent means to prevent rolling. The means of preventing rolling must not be capable of becoming unintentionally unfastened or loose while the vehicle is in transit.

Use of tiedowns

Cargo placed beside each other and secured by tiedowns must either be placed in direct contact with each other or prevented from shifting towards each other while in transit.

The aggregate working load limit of any securement system used to secure cargo against movement must be at least one-half times the weight of the cargo.

Usually, the working load limit of a tiedown is marked on the device by the manufacturer. If it is not listed on the device, the table in Sec. 393.108 must be used.

Section 393.110 specifies the minimum number of tiedowns that must be used.

- One tiedown is required for cargo that is 5 feet or less in length, and weighs 1,100 pounds or less.
- Two tiedowns are required if the cargo is 5 feet or less in length,

and weighs more than 1,100 pounds.

- Two tiedowns are required if the cargo is longer than 5 feet but less than or equal to 10 feet in length, regardless of the weight.
- Two tiedowns are required if the cargo is longer than 10 feet and one additional tiedown is required for every additional 10 feet in cargo length or fraction thereof, beyond the first 10 feet of length.

If an individual article is blocked, braced, or immobilized to prevent movement in the forward direction by a headerboard, bulkhead, other articles which are adequately secured, or by an appropriate blocking or immobilization method, it must be secured by at least one tiedown for every 10 feet of article length, or fraction thereof.

Trainer's Note: *Distribute copies of the FMCSRs to your drivers. Review and discuss the applicable sections of Part 393, Subpart I.*

Also distribute and discuss any policies your company may have on this subject.

Special loads

Certain types of cargo have specific securement requirements. These requirements are found in Sections 393.116 to 393.136 of the FMCSRs.

Trainer's Note: *You will need to review these regulations with your drivers if they haul logs, boulders, metal coils, or any other cargo covered in these specific requirements.*

Conclude your training with a question and answer session.

CARGO SECUREMENT

Driver Issues



All cargo must be loaded so it doesn't:

- Spill or shift
- Block your view of the road
- Block cab doors or emergency equipment

***Cargo should be checked within the first 50 miles of your trip and:**

- When you make a change of duty status - or -
- When you have driven for 3 hours - or -
- When you have driven 150 miles (whichever comes first)

*You are not required to check sealed cargo if you have been ordered not to or if the vehicle is loaded in a way that makes inspection impractical.

Securement terms

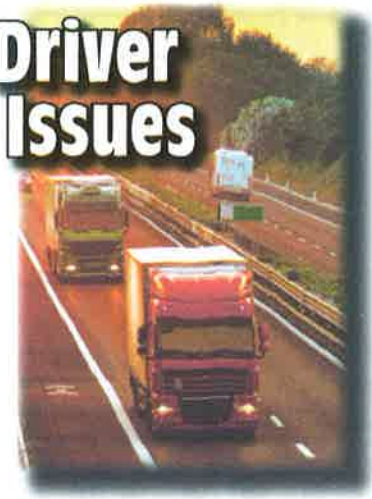
- **Blocking:** Placed to the front, back, or sides of cargo to keep from sliding
- **Bracing:** Placed against cargo to keep from tipping or shifting
- **Dunnage:** Material used in empty spaces between cargo to keep from shifting
- **Load locking bars:** Used vertically or horizontally to keep cargo from tipping or shifting
- **Tiedowns:** Straps, chains, used to restrain cargo



CARGO SECUREMENT

Driver Issues

Directions: Read each statement carefully and mark the response that best answers the question.



1. **Cargo must be loaded so it doesn't:**
 - A. Block your view of the road
 - B. Spill or shift
 - C. Block cab doors and emergency equipment
 - D. All of the above

2. **Cargo should be checked within the first 75 miles of your trip.**
 - A. True
 - B. False

3. **You are not required to check sealed cargo if you have been ordered not to or if the vehicle is loaded in a way that makes inspection impractical.**
 - A. True
 - B. False

4. _____ is a strap or chain used to restrain cargo.
 - A. A tiedown
 - B. Blocking
 - C. Bracing
 - D. All of the above

5. _____ is material used in empty spaces between cargo to keep it from shifting.
 - A. A load locking bar
 - B. A tiedown
 - C. Dunnage
 - D. All of the above



Name: _____ Date: _____

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ROADCHECK /RENTAL TRAILERS MARCH 17, 2017 REMINDER NOTES

RENTAL TRAILERS! DRIVERS IT IS EXTREMELY IMPORTANT FOR YOU TO INSPECT THE TRAILERS (INSIDE AND OUT) AND NOTE ANY DAMAGE ON THE TRAILER ON THE RENTAL INSPECTION SHEET. (UNLESS IT IS ALREADY NOTED BY THE RENTAL AGENT) DO POINT OUT TO THE AGENT ABOUT THE DAMAGE. ALSO, PLEASE TAKE A PHOTO OF ANY DAMAGE WHEN YOU PICKUP. NOTATE ANYTHING THAT IS NEEDED TO BE SHOWN WHEN THE TRAILER IS TURNED BACK TO THE RENTAL AGENT. WE HAVE RECEIVED INVOICES FOR REPAIRS THAT ARE ASTRONOMICAL!! PLEASE BE DILIGENT AND INSPECT THE RENTAL TRAILERS. (CALL DISPATCH IF THERE IS ANY PROBLEM WITH THE TRAILER) ** REMEMBER TO TURN YOUR ENVELOPES IN- IN A TIMELY MANNER!! WE WILL BE SHORT PAID IF WE DO NOT SEND TO THE CUSTOMER IN TIME.**

EARLY REMINDER!!!

ALSO, THE COMMERCIAL VEHICLE SAFETY ALLIANCE CONFIRMED THAT THE INTERNATIONAL ROADCHECK INSPECTION BLITZ WILL BE HELD JUNE 6-8, 2017. THE EMPHASIS WILL BE ON CARGO SECUREMENT. SEE ATTACHED FOR TIPS. VIOLATIONS RELATED TO CARGO SECUREMENT INCLUDE FAILURE TO PREVENT SHIFTING/LOSS OF CARGO, FAILURE TO SECURE TRUCK EQUIPMENT,DAMAGED TIE-DOWNS,INSUFFICIENT TIE-DOWNS AND LOOSE TIE-DOWNS.

DURING THE 72-HOUR INSPECTION SPREE, THE NORTH AMERICAN STANDARD LEVEL I WILL BE CONDUCTED. THIS IS THE MOST THOROUGH INSPECTION.

***BOTH THE DRIVER AND TRUCK WILL BE INSPECTED SO MAKE SURE YOU HAVE YOUR CDL, PHYSICAL CARD, PERMIT BOOKS IN ORDER AND UP TO DATE, 2016 ERG IN YOUR DOOR POCKET!!!!!!KEEP YOUR SEAT BELT ON!!! KEEP LOG BOOKS UP TO DATE, CHECK THAT YOUR TRUCK AND TRAILER HAVE ANNUAL (CURRENT) INSPECTIONS. *THE ABOVE INFO IS SOMETHING THAT YOU SHOULD BE CHECKING ON A DAILY BASIS. THANK YOU. KEEP UP THE GOOD WORK. BE SAFE/ BE COURTEOUS/ BE PROFESSIONAL HAPPY TRAILS TO YOU. PLEASE READ PRINT SIGN AND DATE AND RETURN. PLEASE, ALSO READ THE INFORMATION AND TAKE TEST ON CARGO SECUREMENT ENCLOSED.**

PRINT _____ SIGN _____ DATE _____