INFO camionnage

Information bulletin for the trucking industry

Bulletin n°: 02.11.06
Date : November 13, 2006

CARGO SECUREMENT STANDARDS REGULATION

(Replaces Bulletin N° 02.01.06 published on January 31, 2006)

On June 29, 2005, the Government of Québec authorized publication in the *Gazette officielle du Québec* of the Cargo Securement Standards Regulation.

This regulation, which came into force on July 14, 2005, adopts the provisions of National Safety Code Standard 10 – Cargo Securement. This standard is available on the Web site at http://www.ccmta.ca.

In 2005, the other Canadian administrations also adopted the provisions of National Safety Code Standard 10 – Cargo Securement, to harmonize cargo securement standards in Canada. These new regulations, both in Québec and in the rest of Canada, represent a major step in the process of harmonization of cargo securement standards throughout North America. The Federal Motor Carrier Safety Administration (FMCSA) has already adopted a new regulation, which came into force in the United States on January 1, 2004.

On February 1, 2006, following an adjustment period of several months, the new securement provisions that were specified in the Cargo Securement Standards Regulation (Order-in-Council 583-2005) came into force in Québec. These provisions were intended to improve road safety and to harmonize securement standards with those of other North American administrations.

However, during the adjustment period we have been informed by our colleagues from other administrations and by certain carriers' and shippers' associations that complete integration of the new cargo securement requirements of National Safety Code 10 – Cargo Securement presents some major difficulties.

To take into account this information, it was agreed with Contrôle routier Québec (CRQ) to defer the application of some cargo securement requirements for certain types of vehicles or cargo and to recognize certain industry best practices as equivalent to some cargo securement requirements, until an official position is presented by the Canadian Council of Motor Transport Administrator (CCMTA).

Thus, until the Ministère des Transports du Québec (MTQ) can inform the transportation industry of the final position that will be adopted, the Regulation's new standards will apply, accounting for the special conditions described below.

Version française disponible sur demande

1. CARGO SECUREMENT WITHIN VANS

Section 9 of National Safety Code Standard 10 – Cargo Securement provides that cargo shall be firmly immobilized or secured on or within a vehicle by structures of adequate strength, blocking, bracing, dunnage or dunnage bags, shoring bars, tiedowns or a combination of these. These general cargo securement requirements within sided vehicles will not be the object of roadside control until the rules of applicability currently being developed have been propagated. However, the general requirements that are specified in subsections 1 and 3 of Section 471 of the *Highway Safety Code*, the specific standards that are found in Part 2 of National Safety Code Standard 10 – Cargo Securement (see appendix) and standards presented in the *Transportation of Dangerous Substances Regulation* apply even within sided vehicles (vans)**.**

2. CARGO SECURING DEVICES INBOARD THE RUB RAILS

Section 15 of National Safety Code Standard 10 – Cargo Securement provides that the securing devices used on or within a vehicle shall, wherever practical, be located inboard the rub rails where the vehicle has rub rails. It has been agreed to postpone the application of this requirement to allow the industry to make the necessary modifications to the equipment used. However, it is strongly recommended to include all the securing devices inboard the rub rails when the vehicles and the components of the securing devices allow this. The outer part of a rub rail installed on a road vehicle may prove to be inadequate when it is used as an anchor point. Before using this part of a rub rail for such purposes, it is appropriate to consult the vehicle's manufacturer to ensure this accessory's effectiveness.

3. SECUREMENT OF BELL ENDS OF CONCRETE PIPES

Section 78 of National Safety Code Standard 10 – Cargo Securement provides, in particular, that bell pipes shall be loaded alternating on opposite sides of the vehicle. This principle of alternation may prove to be a problem in some situations due to certain characteristics of the pipes. When a heavy vehicle user is unable to comply with this principle, it must be ensured that all the male ends of the pipes loaded on the same side of the vehicle are raised by a chain section that increases the friction between the cargo items and the bed of the vehicle.

4. SECUREMENT OF ACCESSORY EQUIPMENT FOR TRANSPORT OF VEHICLES WITH AN INDIVIDUAL WEIGHT OF MORE THAN 4500 KG

Section 89 of National Safety Code Standard 10 – Cargo Securement provides, in particular, that accessory equipment on a heavy vehicle, including a hydraulic shovel, shall be completely lowered and secured to the vehicle. Heavy vehicle users do not have to conform to this requirement when:

- the accessory equipment can only move vertically;
- accessory equipment that can pivot, tilt or move sideways is blocked or immobilized by the transport vehicle's structure or by a blocking or securement mechanism built into the transported vehicle.

For more information concerning the cargo securement standards, you can visit the Ministère des Transports du Québec Web site at http://www.mtq.gouv.qc.ca/ or call 1 888 355-0511.

Appendix

CARGO SECUREMENT STANDARDS REGULATION

General information

OBJECT AND INTREPRETATION (Section 1)

The standards of the Regulation govern securement of cargo carried by heavy vehicles. They also govern securement of the contents of intermodal containers and containers carried on heavy vehicles. Some exemptions apply to farm motor vehicles and farm trailers.

Heavy vehicle mean:

a) a road vehicle or a combination of road vehicles, within the meaning of the Highway Safety Code, having a net mass in excess of 3,000 kg;

b) a minibus or a tow truck, within the meaning of the same Code, regardless of their net mass;

c) a road vehicle subject to the Transportation of Hazardous Substances Regulation.

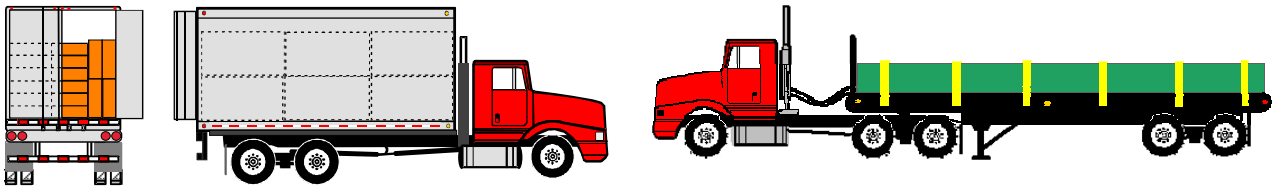
GENERAL CARGO SECUREMENT STANDARDS (Sections 4 and 5)

(National Safety Code Standard 10 – Cargo Securement, Part 1)

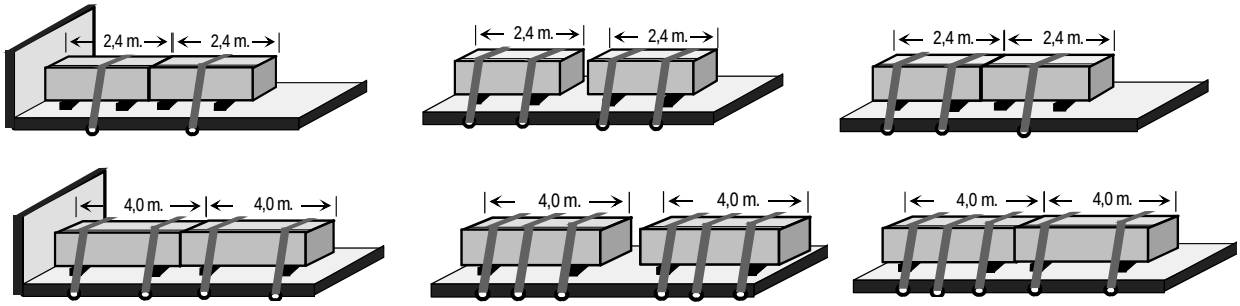
The Cargo Securement Standards Regulation prescribes general standards which apply to all types of cargo, except for bulk cargo transported in sided vehicles. In fact, the term “bulk” covers several classes of products (aggregates, liquids, gases, granular products, etc.) which are piled in for transport. However, the Regulation includes standards for covering bulk cargo (see page 12 of this bulletin).

Thus, a cargo must be firmly immobilized or secured on or within the vehicle which transports it by structures of adequate strength, blocking, bracing, dunnage or dunnage bags, shoring bars, tiedowns or a combination of these.

Sided vehicle **Flatbed vehicle**



The general standards also govern the use of tiedowns. Use of a minimum number of tiedowns is required, established in relation to the strength of the tiedowns and the weight and length of the cargo to be secured. Thus, each article of cargo must be secured by at least one tiedown for each length of 3.04 metres or fraction of 3.04 metres. Moreover, at least one additional tiedown is required when an article is not immobilized (to prevent forward movement) by a structure of the vehicle, a blocking device or another correctly secured article.



It is also required that the aggregate working load limit (WLL) of the tiedowns used in a securement system must not be less than 50% of the total weight of the cargo restrained by this system.

The standards also describe that the working load limit (WLL) of a tiedown is established based on the manufacturer's certification affixed to this device. In the absence of this certification, the standards prescribe a default working load limit (WLL) value for this tiedown. Example: A 75-mm (3") wide synthetic webbing tiedown might be certified by the manufacturer for a WLL of 2,268 kg (5,000 lbs) based on certification test results, whereas the Regulation specifies a WLL of 1,360 kg (3,000 lbs) for a similar tiedown that is not certified by the manufacturer.

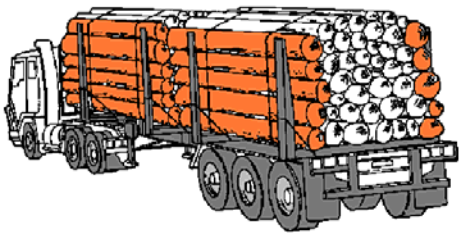
SPECIAL STANDARDS

The Regulation also prescribes special securement standards for different types of cargoes which exhibit specific transportation and securement characteristics related to the special features of the nature of this cargo or its components.

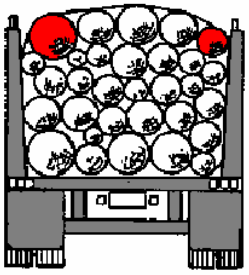
LOGS *(Section 7)*

(National Safety Code Standard 10 – Cargo Securement, Sections 28 to 40)

A log has the characteristics of being both cylindrical and slender when trees loaded lengthwise are involved. These special features mean that a combination of tiedowns and blocking devices is necessary for the correct securement of all types of log cargoes.



The standards prescribe that outside logs of a stack of logs must be restrained by at least two bunks, bolsters or stakes on one side of the stack and at least two other bunks, bolsters or stakes on the other side of the same stack.



It is also prescribed that the centre of the highest outside log on each side of a stack of logs must be lower than the top of the bunks or stakes and the upper logs that form the top of the cargo must be crowned.

A minimum of two tiedowns is also prescribed to secure each outside log of a stack. However, a single tiedown may be used to secure a stack of logs 1.22 m long loaded crosswise on a vehicle. It is also possible to use a single tiedown for stacks of short logs loaded lengthwise when all the logs in a stack are contained in all horizontal directions, or by a structure of the vehicle or by logs of another stack.

The special standards also prescribe that the aggregate working load limit (WLL) of the tiedowns used to restrain a stack of logs loaded lengthwise must be at least equivalent to 1/6 of the weight of this stack.

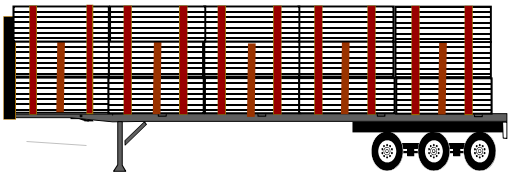
DRESSED LUMBER *(Section 8)*

(National Safety Code Standard 10 – Cargo Securement, Sections 41 to 47)

The transport of bundles of dressed lumber involves special cargo securement standards. During their transport, the bundles are generally stacked on top of each other and secured by tiedowns installed on top of the bundles. Stacking the bundles has the effect of increasing the height of the centre of gravity and reducing the efficiency of the tiedowns in terms of application of uniform tension to all the articles they restrain.

To account for these special conditions, the Regulation prescribes special securement standards for dressed lumber cargoes composed of bundles loaded on more than one layer of bundles.

The use of stakes or blocking devices is prescribed to restrain the layers of bundles from lateral movement in addition to the tiedowns required by the general cargo securement standards. When such stakes or blocking devices are not used, the use of a greater number of tiedowns than those required by the general cargo securement standards is prescribed.



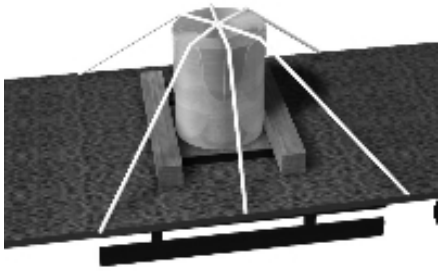
For example, this is the case of stacks of more than two layers of bundles. In these circumstances, the use of tiedowns to restrain the bundles of a middle layer is then required (above the second layer for three-layer stacks). The aggregate working load limit (WLL) of the tiedowns used must not be less than 50% of the total weight of the articles they restrain.

METAL COILS *(Section 9)*

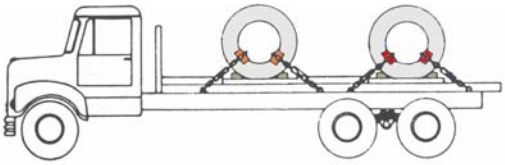
(National Safety Code Standard 10 – Cargo Securement, Sections 48 to 58)

A metal coil is a heavy cylindrical object. These features make it necessary to use effective immobilization devices, especially when the coil is loaded with eyes horizontal.

To consider these special features, the Regulation prescribes special securement standards for cargoes of metal coils with eyes vertical or horizontal.



For the transport of metal coils with eyes vertical, the use of a combination of tiedowns is prescribed, which must be installed on top of each coil. The use of blocking or immobilizing devices is also prescribed to prevent the coils from shifting longitudinally.



For the transport of metal coils with eyes horizontal, the use of blocking devices is prescribed which make it possible to immobilize each coil and raise it off the platform of the vehicle. In addition to blocking devices, the use of tiedowns to restrain each coil is prescribed.

The aggregate working load limit of (WLL) of the tiedowns used must not be less than 50% of the weight of the coil they restrain.

PAPER ROLLS *(Section 10)*

(National Safety Code Standard 10 – Cargo Securement, Sections 59 to 72)

A paper roll is a heavy cylindrical object which has a certain fragility related to the nature of the product (paper). These features mean that cargoes of paper rolls are generally transported inside sided vehicles or intermodal containers.

To account for these features, the use of blocking devices, bracing devices, friction mats, tiedowns or a combination thereof is prescribed to immobilize the paper rolls and prevent the paper rolls from moving horizontally within sided vehicles or intermodal containers, taking into account the fact that the sides hold the cargo in place.

Special securement standards are also prescribed for transport of paper rolls on flatbed vehicles because there are no sides to hold the cargo in place. The paper rolls must be loaded and secured as if this were a sided vehicle and the entire cargo must be secured by tiedowns as prescribed in the general cargo securement standards. The aggregate working load limit (WLL) of the tiedowns used must not be less than 50% of the total weight of the articles they restrain.

CONCRETE PIPE *(Section 11)*

(National Safety Code Standard 10 – Cargo Securement, Sections 73 to 82)

A concrete pipe has a cylindrical shape and its outer texture has a high friction coefficient. A pipe can be transported alone on a vehicle (large diameter), but a cargo of pipes (small diameter) may be composed of several pipes loaded against each other and stacked.

To account for these features, the Regulation presents special securement standards for cargoes of small and large diameter concrete pipe.

For pipe cargoes with eyes horizontal, blocking devices must be used to prevent the pipes from rolling and tiedowns must complete the securing system to prevent the pipes from shifting in all directions. The aggregate working load limit (WLL) of the tiedowns used must not be less than 50% of the total weight of the pipes they restrain.

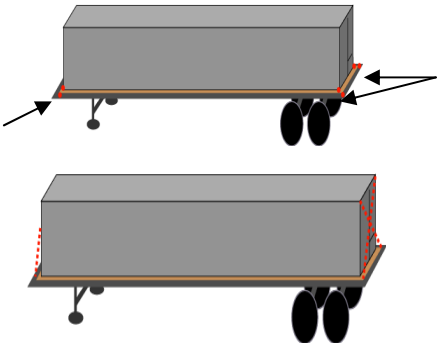
INTERMODAL CONTAINERS *(Section 12)*

(National Safety Code Standard 10 – Cargo Securement, Sections 83 to 86)

An intermodal container is a metal box of standard dimensions which is used to transport cargo. An intermodal container is equipped with integral locking devices so that it can be secured to a container chassis vehicle. These devices also allow the securement of intermodal containers to flatbed vehicles.

Standard metal platforms that are used for intermodal transport can be secured to vehicles according to the same standards if they have the same built-in locks.

For a loaded intermodal container, the use of integral locking devices is prescribed to secure all the lower corners of the container.



In the absence of such devices on the vehicle, the use of chains or wire ropes is prescribed to secure all the lower corners of the container or the use of crossed chains that are fixed to all the upper corners. When the container is empty, it is prescribed to use these same securement systems or conform to the minimum requirements of the general standards concerning the use of tiedowns.

The aggregate working load limit (WLL) of all the tiedowns and locking devices used must not be less than 50% of the total weight of the container.

ROLL-ON / ROLL-OFF CONTAINERS *(Section 13)*

(National Safety Code Standard 10 – Cargo Securement, Sections 94 to 96)

A roll-on / roll-off container is a specialized container which is loaded or unloaded onto from a tilt frame body, by a lifting device in conjunction with rollers which are fixed to the container. This type of container is transported by vehicles specially adapted to secure the container from the front and rear.

It is prescribed that the front of a roll-on / roll-off container be immobilized with blocking devices and secured by means of the lifting device (generally a wire rope). For the rear, it is prescribed to use at least one tiedown attached both to the vehicle chassis and the container chassis, in order to secure the two rails on the container to the two rails on the vehicle body or by at least two tiedowns which secure each side of the container to the vehicle's side rails. The working load limit (WLL) of each tiedown used to secure the rear of the container must be at least 2,268 kg (5000 lb). It is also possible (for the rear) to use two hooks or any other equivalent mechanism allowing the two sides of the container to be secured to the vehicle chassis, at least as effectively as the tiedowns mentioned above.

VEHICLES AS CARGO

a) Vehicle with an individual weight of 4,500 kg or less *(Section 14)*

(National Safety Code Standard 10 – Cargo Securement, Section 88)

A vehicle with an individual weight of 4,500 kg or less generally consists of moving mechanical parts which allow the vehicle to move. Some of these mechanical parts (tires, suspension, etc.) allow free vertical movements. These characteristics mean that transport of such vehicles requires the use of special securement systems.

It is prescribed to use a minimum of two tiedowns, with at least one at the front and at least one at the rear of the vehicle to prevent it from moving sideways, lengthwise and vertically. It is possible to use a minimum of two tiedowns installed at least one at the front and at least one at the rear of the vehicle which are designed to fit over or around the vehicle's wheels. Moreover, the aggregate working load limit (WLL) of the tiedowns used must not be less than 50% of the weight of the vehicle they secure.

b) Flattened or crushed vehicle with an individual weight of 4,500 kg or less *(Section 14)*

(National Safety Code Standard 10 – Cargo Securement, Sections 91 to 93)

A flattened or crushed vehicle is a road vehicle which has been compressed mechanically to reduce its volume to facilitate storage and transport. When they are crushed or flattened, the vehicles can be stacked for transport. This process also has the effect of breaching a vehicle's integrity, which has the consequence of crushing or dislocated parts which are an integral part of this vehicle. Thus, such parts can become detached during transport when subjected to external forces generated by heavy vehicle traffic.

For transport of such cargo, use of a transport vehicle with walls high enough to contain all the cargo is prescribed. When the cargo is not completely contained within the walls, use of a minimum number of tiedowns (other than straps made of synthetic fibre) is then prescribed, combined with structures that extend to the full height of the cargo not contained within the walls. The Working Load Limit (WLL) for each tiedown must be at least 2,268 kg. Moreover, the aggregate working load limit (WLL) of the tiedowns used must not be less than 50% of the total weight of the articles they restrain.

c) Vehicle with an individual weight greater than 4,500 kg *(Section 14)*

(National Safety Code Standard 10 – Cargo Securement, Section 89)

A vehicle with an individual weight greater than 4,500 kg, just like a vehicle of lesser weight, is generally composed of moving parts which allow the vehicle to move. Such vehicles also include tracked machinery or equipment. Some of these mechanical parts (tires, suspension, etc.) allow free vertical movements. These characteristics mean that transport of such vehicles necessitates the use of special securement systems.

The use of at least four tiedowns is prescribed, with at least two attached as close as possible to the front and at least two more attached as close as possible to the rear of the vehicle or to the mounting points which were designed for this purpose, so as to prevent the vehicle from moving sideways, lengthwise and vertically. The working load limit (WLL) of each tiedown must be at least 2,268 kg. Moreover, the aggregate working load limit (WLL) of the tiedowns used must not be less than 50% of the weight of the transported vehicle. The accessories, including a hydraulic shovel, must be completely lowered and secured to the vehicle.

BOULDERS *(Section 15)*

(National Safety Code Standard 10 – Cargo Securement, Sections 97 to 100)

A boulder is a large, irregularly shaped rock, either natural or extracted from a quarry, with a weight of 5,000 kg or more, or a volume exceeding 2 m^3.

Although sometimes coming in shapes that may be similar to another boulder, each boulder has unique characteristics (shape, weight, etc.).

To consider these special features, the Regulation presents special securement standards for this type of cargo. These standards combine requirements regarding the use of hardwood blocking to support each boulder and certain tiedown arrangements depending on the shape of the boulders (cubic and non-cubic). The aggregate working load limit (WLL) of the tiedowns used must not be less than 50% of the weight of the boulder they restrain.

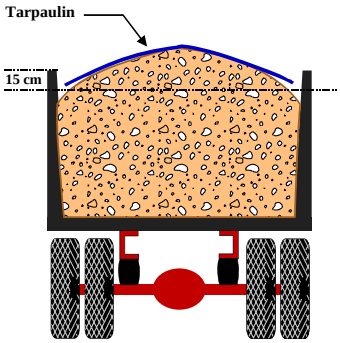
BULK CARGO *(Section 16)*

The term “bulk” covers several classes of products (aggregates, liquids, gases, granular products, etc.) which are piled in for transport.

Certain bulk cargoes are transported in a dump truck, a container or other type of container with an upper part that is totally or partially open.

For transport of cargo in a dump truck, container or any other type of container whose upper part is totally or partially open, use of a covering system is prescribed, composed of a tarpaulin, a canvas or other type of equivalent cover to restrain the cargo within the vehicle structure. However, some exemptions may apply.

Tarpaulin



The covering system must cover at least any portion of the load that extends beyond reference point 15 cm below the top of the lowest wall. It must remain in direct contact with any portion of the load that extends beyond the nearest wall, unless the covering system is maintained above the load by bows secured to the vehicle.

The covering system must also be exempt from tears or other damage in the section used for cargo securement.

SECUREMENT INSPECTION (Section 17)

The Regulation prescribes that the driver must inspect the vehicle’s cargo securement in accordance with Section 3 of *National Safety Code Standard 10 – Cargo Securement.*

Additional information: ***http://www.mtq.gouv.qc.ca***

Service de la normalisation technique