

# INFORMATION SHEET

## Securement of Wheeled and Tracked Vehicles



Vehicles that are not well secured can cause not only material damage, but also severe injuries to the driver or road users. This information sheet summarizes the main securement requirements for wheeled and track vehicle transportation, excluding securement of flattened or crushed vehicles. These requirements are determined by the type of vehicle to be transported and by the weight of the vehicle or the trailer that transports it.

For any type of vehicle to be transported, the carrier must meet the general requirements of section 471 on the [Highway Safety Code](#) (HSC), which states, among other things, that:

- The transported vehicle must be **firmly secured** so it **cannot move**
- The transported vehicle must not be placed or secured in a manner that **interferes with the stability** or handling of the vehicle transporting the load.

It should be noted that section 471 of the HSC does not mention specific requirements on the tie-downs to be used such as their certification mark, load capacity, number, type, and positioning.

Depending on the weight of the vehicle carrying the load, the [Cargo Securement Standards Regulation](#) (CSSR) can apply in addition to section 471 of the HSC:

- If the gross vehicle weight rating (GVWR) of the vehicle carrying the load or towing the trailer exceeds 4 500 kg (see box below for explanations on the GVWR); or
- If the sum of the transporting vehicle and the trailer GVWRs exceeds 4 500 kg.



For information, the CSSR contains most provisions of [Standard 10](#), which is a Canadian standard adopted by the majority of provinces and is specifically about cargo securement. This standard is part of the National Safety Code for Motor Carriers, published by the Canadian Council of Motor Transport Administrators.

The GVWR, or gross vehicle weight rating, is the net weight of a vehicle plus the maximum load the vehicle can carry according to the manufacturer's instructions. For further information on the GVWR or on calculation methods to estimate the GVWR of full trailers or semi-trailers, consult the [ministère des Transports, de la Mobilité durable et de l'Électrification des transports](#) website [information on the GVWR in French only] or the [Société de l'assurance automobile du Québec](#) website.

### SITUATION 1: Transportation of vehicles not considered as light or heavy vehicles according to Standard 10

*Small machinery that operates on wheels or tracks, lift trucks, off-road vehicles (ATV, snowmobile), motorcycles, golf carts, or lawn tractors that weigh less than 4 500 kg (including load if applicable).*



**CASE 1A** The GVWR of the transporting vehicle or the sum of its GVWR and the GVWR of its trailer is **less than 4 500 kg**

Only the requirements of section 471 are applicable.

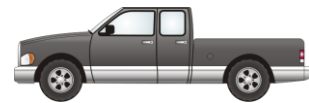
CASE 1B The transporting vehicle is a heavy vehicle or the sum of its GVWR and the GVWR of its trailer **exceeds** 4 500 kg

In addition to the requirements of section 471, the CSSR is applicable and it is required to comply with the general provisions set out in [Standard 10](#):

- Two (2) tie-downs are required for the first 3.04 m in length, and 1 extra tie-down for each additional 3.04 m or fraction of 3.04 m. These tie-downs must have the WLL (Working Load Limit) certification mark.
- It is necessary to comply with the common requirements of the CSSR and Standard 10 described at the end of this sheet.

## SITUATION 2: Transportation of vehicles considered as “light vehicles”

*Automobiles, sport utility vehicles (SUV), trucks or minivans that weigh less than 4 500 kg (including load if applicable), excluding all vehicles mentioned in Situation 1.*



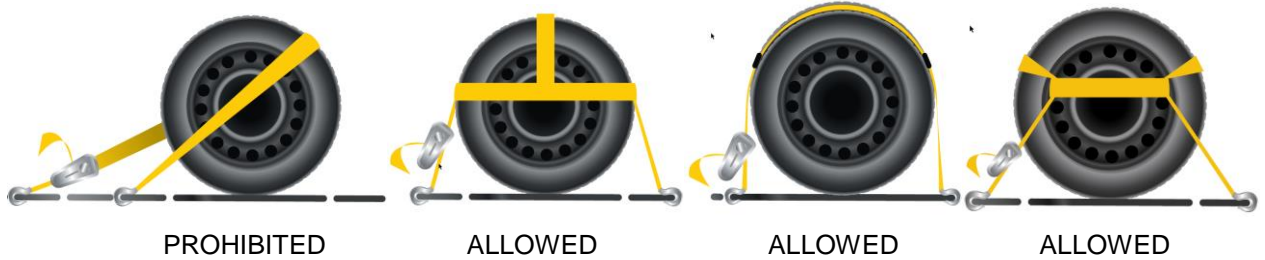
CASE 2A The GVWR of the transporting vehicle or the sum of its GVWR and the GVWR of its trailer is **less** than 4 500 kg

Only the requirements of section 471 are applicable.

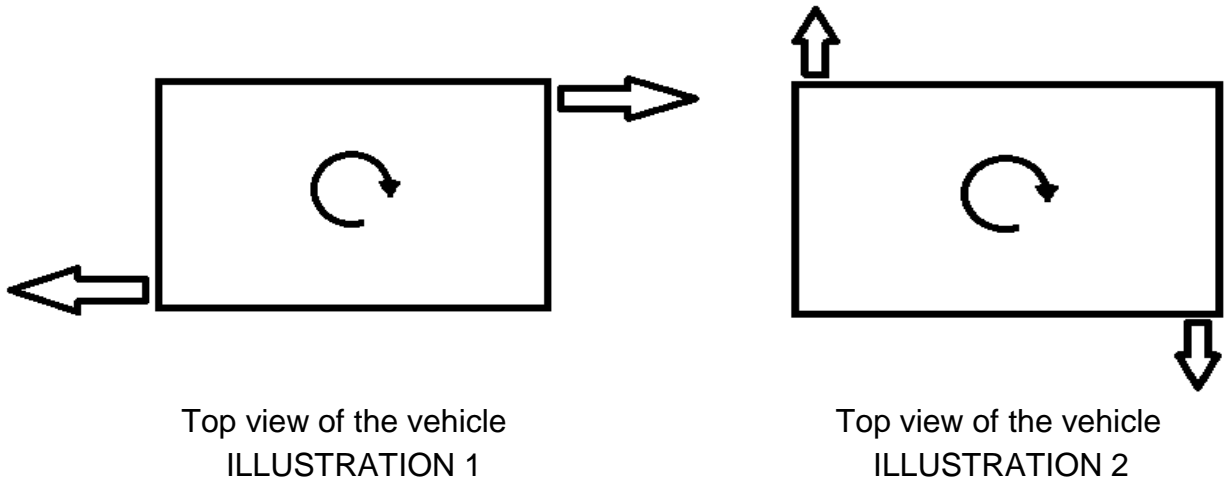
CASE 2B The GVWR of the transporting vehicle or the sum of its GVWR and the GVWR of its trailer **exceeds** 4 500 kg

In addition to the requirements of section 471, the CSSR is applicable and it is required to comply with the general provisions and the specific provisions for light vehicles set out in [Standard 10](#):

- A tie-down must be installed at the front of the vehicle, and another one at the rear. Each of these tie-downs must have a binder and must bear a WLL certification mark.
- Tie-downs that are designed to attach to the structure of a light vehicle must be attached to the anchor points specifically designed for that purpose.
- Synthetic webbing slings that fit over or around the wheels of a light vehicle must be designed for that purpose and recommended by manufacturers. Synthetic webbings wrapped around the wheels but not designed for that purpose are prohibited.



- In cases where tie-downs are installed on wheels in a way that could make the vehicle rotate because they produce tension only toward the front and the rear (without being centered with the longitudinal central axis—Illustration 1), it is mandatory to install a tie down at each of the four corners of the vehicle to prevent any possibility of rotation (which would loosen tie-downs). The same applies to tie-downs that produce lateral tension on a front wheel and a rear wheel (Illustration 2).



Top view of the vehicle  
ILLUSTRATION 1

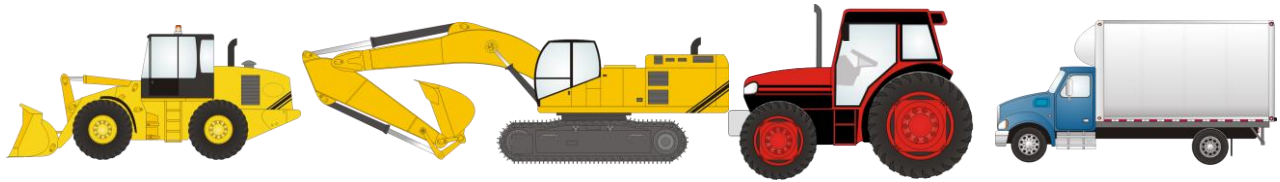
Top view of the vehicle  
ILLUSTRATION 2

- According to Standard 10, when a tie-down is in contact only with tires, it is not mandatory to use an edge protector. However, if the portion of the tie-down passing on the inner side of the wheel is in contact with a sharp-edged metal part, it is mandatory to use an edge protector, protective sleeve or any other protection equipment to prevent any form of tie-down wear.
- Edge protectors are not required at points where the synthetic webbing comes into contact with the tires of a light vehicle.
- It is prohibited to transport stacks of light vehicles.
- It is necessary to comply with the common requirements of the CSSR and Standard 10 described at the end of this sheet.

The winch used to pull vehicles on tow trucks is not considered as a tie-down.

### SITUATION 3: Transportation of vehicles considered as “heavy vehicles”

Vehicles or any piece of equipment or machinery on wheels or tracks that weigh more than 4 500 kg (including load if applicable).



In addition to the requirements of section 471, the CSSR is applicable and it is required to comply with the general provisions and the specific provisions for heavy vehicles set out in [Standard 10](#):

- The vehicle must be secured with at least four (4) tie-downs:
  - Each tie-down must have a WLL of at least 2 268 kg or 5 000 lb (e.g. 5/8 in. grade 70 chain or 3 in. synthetic webbing)
  - Tie-downs must be attached as close as possible at the front and rear of the vehicle or to anchor points on the vehicle that are specifically designed for that purpose. Each of these tie-downs must have a binder.

Accessory equipment (e.g. an articulated arm) must be completely lowered and secured with a fifth tie-down unless the accessory equipment can only move vertically, or is blocked or immobilized by the transporting vehicle’s structure or by a blocking or securement mechanism built into the transported heavy vehicle.

- It is necessary to comply with the common requirements of the CSSR and Standard 10 described at the end of this sheet.

#### COMMON REQUIREMENTS OF THE CSSR AND STANDARD 10:

- It is prohibited to use a tie-down (webbing, chain or cable) that does not have any tag or mark indicating its WLL.
- The total WLL of tie-downs must exceed 50% of the transported vehicle’s weight (including loads if applicable).

With heavy vehicles, if a fifth tie-down has to be used to secure accessory equipment, this tie-down must not be taken into account in the total WLL calculation.

- Anchor points on the transporting vehicle must be designed for that purpose. An anchor point that has a lower capacity than the tie-down to which it is secured lowers the capacity of the tie-down when calculating the sum of capacities.

- Tie-downs must be installed in a manner that prevents them from slipping, loosening, unfastening, opening or releasing.
- Load binders must have a blocking system that prevents the binder from opening (customized fasteners, bungee cords, wires or wrapped leftover chains can be used).
- Whenever possible, tie-downs must be located within the rub rails if the vehicle is fitted with them.

The driver must check securement (e.g. tension of tie-downs) before driving the vehicle, after a change of duty status, after 80 km and then after each 240 km or 3 hours of driving.

#### GENERAL NOTES AND GOOD PRACTICES:

- It is neither mandatory nor prohibited to install tie-downs in an X shape.
- Synthetic webbing, chains and steel wires can be used as tie-downs.
- For transportation of all types of vehicles, it is strongly recommended to install at least four (4) tie-downs with a WLL certification mark at the four (4) corners of the vehicle to be transported.
- To secure the transported vehicle in all directions, it is strongly recommended installing tie-downs at an angle of 30 to 45° in all directions (when viewed from the side, the front or the rear, and above).