



December 7, 2018 (replaces the October 12, 2017 bulletin)

## CLARIFICATIONS ON INTEGRAL SECUREMENT SYSTEMS FOR ROLL-ON/ROLL-OFF AND HOOK LIFT CONTAINERS

The purpose of this information bulletin is to clarify the regulatory cargo securement requirements related to the transport of Roll-On/Roll-Off and Hook Lift containers. This clarification concerns automated integral securement systems that do not necessitate manual installation of tiedowns.

### Roll-On/Roll-Off containers

This type of container is installed on the carrier truck or on the semi-trailer (hereinafter called "the vehicle") with a cable that pulls it on a tilt bed. Trucks designed for transporting Roll-On/Roll-Off containers can transport containers of different lengths made by various manufacturers (see illustration A).



Illustration A

### Hook Lift containers

This type of container is installed with an articulated arm that pulls it and deposits it directly on the fixed side rails of the vehicle. Normally, Hook Lift containers must be transported only with a vehicle specifically designed for this purpose. Usually, the container and the vehicle's cargo securement system come from the same manufacturer (see illustration B).



Illustration B

### Standard No. 10 and integral securement system

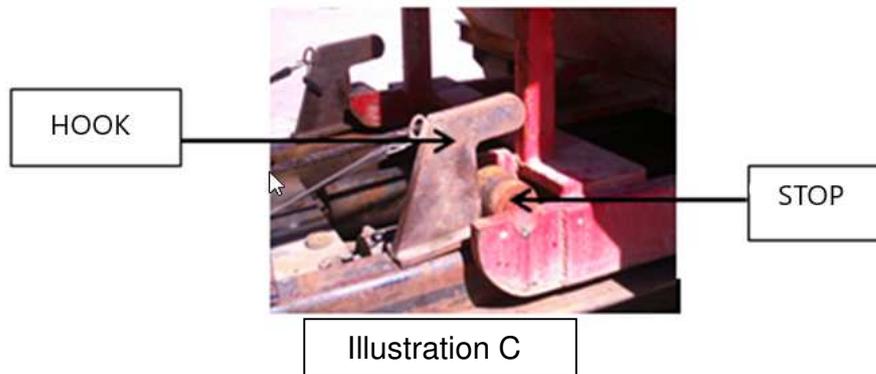
The Ministère des Transports has established, for the transport of Roll-On/Roll-Off or Hook Lift containers, that a cargo securement system, equipped with compatible restraining devices in the front and rear, must be considered as an integral securement system (ISS) if it is compliant with the criteria of the standard ANSI Z245.1-1999, Mobile Wastes and Recyclable Materials Collection,

Transportation, and Compaction Equipment. A reference is made to this standard in Part 4 of Standard No. 10, in section 7.3.4, in particular.

For the cargo securement of both types of containers, these criteria are essentially summarized in the following points:

### ROLL-ON/ROLL-OFF CONTAINERS WITH ISS

- The vehicle's ISS must include the mating of the side rails of the hoist frame and container (see illustration D on the next page), which restricts lateral movement of the container to 7 cm (2.75 in) maximum. The vehicle must be designed only for the transport of Roll-On/Roll-Off containers.
- The vehicle's ISS must be equipped with fixed hooks (located on the front of the truck or the tilt frame) to prevent upward movement. The ISS must also include stops on the front of the container, which must be aligned directly under the vehicle's hooks, as shown in illustration C.



- The lifting cable and its hook must be attached to the container at an anchor point designed for this purpose.
- According to Standard No. 10, the rear hooks must be located no more than 2 m (6.5 ft) from the rear of the container.
- The top end of the rear hooks of the ISS must be placed directly above the side rail of the container to restrict the container's vertical movement to 7 cm (2.75 in) maximum, regardless of the container's lateral position (see illustration D).
- A single hook is enough if it is located at the centre, but at least two hooks are necessary if they are located on the side rails.
- Automatic rear hooks must be part of the vehicle's equipment and be activated by mechanical, pneumatic or hydraulic systems. They must :
  - be designed and made according to the performance criteria mentioned in section 5 of Standard No. 10 and the ISS criteria mentioned in section 7.3.4 of ANSI Z245.1-1999;
  - have a blocking system (for example, springs) that keeps them in contact with the side rails and

prevents them from opening accidentally.

- All ISS components must be in good working order and not be deformed.

### IMPORTANT NOTES ON REAR HOOKS THAT ARE PART OF AN ISS

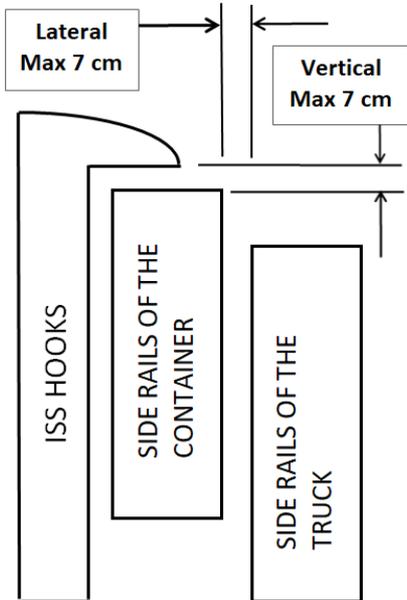


Illustration D – Rear view

Since the side rails of containers and container carrier trucks are coupled to prevent lateral movement (maximum of 7 cm), the sole purpose of the rear hooks is to prevent the container from moving vertically, so that the side rails of the container do not go over the side rails of the truck.

Consequently, the hooks must move laterally, since the container can move to the side up to a maximum of 7 cm (see illustration D).

The hooks are part of an ISS; they must not be considered tiedowns that must remain tensioned as required in sections 19(2) and 19(4) of Standard No. 10.

### **ADDITIONAL INFORMATION**

Even though the purpose of the hooks is not to prevent the lateral movement of the container, they must remain in contact with it when it moves. Thus, to ensure continuous contact, retraction force (which comes from the springs placed at the pivot points) at the upper part of the hooks is required to offset the centrifugal force, which could cause the hook to open during turns. Therefore, it is normal that the hooks can be opened manually, since they must move and follow the lateral movements of the container during turns. However, in order to comply, the hooks must return to their initial position after they are opened manually. To ensure functional and normal retraction, as well as continuous contact by the hook when the container moves from side to side during turns, it is essential that the retracting springs not be worn out (significantly reduced tension) or broken, that the hook pivots not be jammed by rust or dirt, and that the hooks not be bent or deformed.



Illustration E

#### **Note on hooks placed in pairs:**

It is permitted for one of two hooks placed side by side to be engaged above the container side rail, but for the other not to be engaged because it is blocked by a cross member of the container (see illustration E).

### **HOOK-LIFT CONTAINERS WITH ISS**

- The vehicle must be designed only for the transport of Hook Lift containers, and its ISS must meet the criteria of ANSI Z245.1999.
- The vehicle's ISS must include a coupling of the container and the vehicle that makes it possible to restrict the lateral movement of the container to 7 cm (2.75 in) maximum.
- The lifting hook, located in the front, must be securely attached to the container. This hook and the anchor point on the container must be in good working order.
- The ISS must include rear hooks (or a downward restraining system) whose opening can be oriented to the centre of the vehicle (see Illustration F) or to the rear of the vehicle (see Illustration G).



Illustration F



Illustration G

- According to Standard No. 10, the rear hooks must be located no more than 2 m (6.5 ft) from the rear of the container. A single hook is enough if it is located at the centre, but at least two hooks are necessary if they are located on the side rails.
- The coupling between the securement devices on the container and on the vehicle must not allow a container movement of more than 7 cm (2.75 in) relative to the lifting frame in any direction.

### **Application of sections 95 and 96 of Standard No. 10 for both types of containers**

If one of the criteria enumerated above is not respected, it must be considered that the cargo securement mechanism is no longer an ISS or that the ISS is missing, damaged or incompatible. In these cases, it is required to install replacement tiedowns in compliance with the provisions of sections 95 and 96 of Part 2 of Standard No. 10 and the general provisions of Part 1 of Standard No. 10 (except sections 10(2), 10(3) and 22).

If the rear components of an ISS are missing, broken, incompatible or in poor working order, a tiedown must be attached to the rear of the vehicle's chassis and to both sides of the container, or two tiedowns must be attached to each side at the rear of the vehicle and to both sides of the container. In either case, the tiedowns used must :

- be located within 2 m of the rear of the container, without slackening and under enough tension to ensure the stability of the load;
- have a working load limit of at least 2 268 kg and have a certification mark indicating their capacity.

For more information concerning this information bulletin or any other information on the cargo securement standards, you can go to the Ministère's [website](#) or contact us.

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