Centerbeam Cable Securement Job Aid + Q&A

At CN, safety is a core value rooted in collaboration with our customers and supply chain partners. We all have a collective interest in maintaining safe operations and remaining vigilant to address unsafe behaviors.

Unsecured or loose cables on centerbeam flat cars are a significant safety issue in the railroad industry, and can cause equipment damage, derailments and employee injury. Loaders and unloaders can easily avoid these problems by following required procedures and making sure their employees are aware of and trained in proper cable securement methods and take adequate time to carry out securement functions. CN has prepared this document to assist customers in fulfilling those responsibilities.

We encourage you to watch CN’s Securing Cables video by clicking on the image below:

![CN's Securing Cables video](image)

**The Association of American Railroads (AAR) Open Top Loading Rules Manual**

The Association of American Railroads (AAR) Open Top Loading Rules Manual (republished May 2017), Section 1, General Rule 22.4.3, contains the rules for cable securement on centerbeam flat cars. These rules have also been adopted by the Railway Association of Canada (RAC), Circular No. M-1, Car Loading Rules (revised February 2018). Links to these rules are below:

https://my.aar.org/OTLR/Documents/Section1/Section1.20170327.pdf


The following passages are noteworthy:

**AAR, Page 4 (Rules 1.2.1, 1.2.2, 1.2.4)**

“Shipper is responsible for properly loading and securing lading for safe transport to destination(s). These rules have been adopted and are mandated by Transport Canada under the Canadian Railway Safety Act for rail traffic entering and/or moving within Canada.”
Shippers must adhere to the drawings and specifications of an applicable figure contained in Sections 2 through 6, where a figure is available, as well as all applicable General Rules published herein. All items described under the applicable figure for securing the load must be applied as specified.

Shippers are responsible for inspecting their shipments to ensure that the shipments are properly and safely loaded and secured and that all applicable details in these General Rules, as well as the applicable figures, when involved, have been complied with in all cases before shipments are tendered to the carrier.”

AAR, Page 205 (Appendix B, incorporating Rule 27, Section 5, Note 2(b) of the Uniform Freight Classification 6000-M, Rules and Regulations, Section 3, effective 2001)

“Consignee is required to return and secure to same car all railroad-owned securement devices removed to complete unloading, store chains, ratchets, tension devices, and other appurtenances in appropriate facility.”

RAC, Page 22
“To ensure the safety of all concerned, the blocking, bracing and tie downs of loads on rail cars originating in Canada must be done in conformity with the “Car Loading Rules” produced by the Railway Association of Canada (RAC) and or “Rules Governing the Loading of Commodities on Open Top Cars” produced by Association of American Railroads (AAR).

Shippers must observe the drawings and specifications of an applicable Loading Figure, where a figure is available, as well as all applicable General Rules regarding the safe loading of freight cars. All items described under the figures for securing loads must be applied as specified. Shippers must also inspect shipments to insure that they are properly and safely secured and that all details of the applicable Figure and General Rules have been complied with, before the shipments are released to carriers.”

AAR, Page 80 (Rule 22.4)
This page provides the specifications for properly secured centerbeam cables in addition to providing photos and states (Rule 22.4.3) that:

“All cables must be properly secured per manufacturer’s recommendation prior to car movement”

AAR Figure 22.5 shows a properly secured cable for empty movement of a railcar.

In some instances, even if there are some missing or defective securement hooks or hangers, the cables can still be secured and the car can safely move. Below are several examples on how to secure cables on cars that have missing or defective securement hooks or hangers.

If the center hook is present and in good condition use the following option (option 1).
Option 1:
If car is equipped, use the deck key slots (shown below) that are located on the far outside of the deck or riser.

If the center or side securement hooks are broken, missing or unusable use the following securement option (option 2).

Option 2:
Use the outer facing bottom key slot (shown at left) located on the upright in the center of car.

Cars that have defective winches should be routed to the nearest rip track for repair once they have been released.

In most cases, defective cables are being replaced on the front end by the shipper.
Option 3:
This is the AAR approved method (shown below).

Potential option 4 – please read carefully:
If approved, the below method will be option number 4. We will only recommend using this option on cars where the other three options will not work.
**Note: We have some BCOL series center beams that will need to use this option.**
Questions & Answers

1. How does an unloader properly secure cables?

**ANSWER:** Follow the AAR Open Top Loading Rules and RAC Car Loading Rules and the guidance provided in this document. AAR Figure 22.5 shows properly secured cables for the empty movement of centerbeam flat cars. Educate your employees on these procedures and assure they take sufficient time to secure cables after unloading. Contact your railroad if you have any questions.

2. How do I secure cables properly when:

   a. the hooks are broken/missing on the cars and no eyelet is available for the chain
   b. the winches are jammed or will not tighten properly
   c. the winch bar holes are broken so you can’t release or tighten the cable
   d. the Pawl is broken and won’t catch the ratchet wheel so will not tighten
   e. the ratchet wheel is broken (missing pegs so unwinds by itself)
   f. the frame is bent which may impact the cables from tightening
   g. the chain broken at the end of the cable (if there is no chain at the end of the cable and the railcar is a KEYHOLE car, it cannot hook onto anything to be tightened.
   h. The cable is kinked and we cannot straighten it out.

**ANSWER:** With large bolt cutters, remove the cable that can’t be safely secured and inform the railroad when car is released of such action so it can be fixed at next available yard. For winch defect, loaders/unloader should apply an orange ribbon and advise us upon release.

3. Should I be rejecting a car if the car is damaged where I cannot properly secure cables?

**ANSWER:** No. With large bolt cutters, remove the cable that can’t be safely secured and inform the railroad when car is released of such action so it can be fixed at next available yard. For winch defect, loaders/unloader should apply an orange ribbon and advise us upon release.

4. What if a car was properly released but was vandalized after release?

**ANSWER:** CN is not aware of recent incidents of vandalism to securement cables on empty centerbeam flat cars in transit. If you have had a concern with trespassers tampering with properly secured empty centerbeam cars, you may take pictures of each car released to show it has been released according to AAR rules.

5. If I receive a car at loading that is missing cables or hooks/winches are broken, should I bad order the car, even though under AAR loading rules the car does not need to have all cables secured (i.e., AAR rules allow a car to move with so many cables per feet/length of product so that all cables may not have to be used)?

**ANSWER:** Car can be used as long as it meets the minimum AAR securement requirements listed in the applicable figure in the AAR Rules and the receiver can safely secure all cables after unloading.
6. Why do railroads pull cars that are not properly secured?

**ANSWER:** Loaders/unloaders are required by AAR standards to release cars that are safe to move. Loaders and unloaders are in a position to physically inspect and validate cable securement on centerbeam cars at their facilities. Railroads are not in a similar position to inspect cable securement at customer facilities or at interchange with another railroad. The AAR rules (Rule 1.2.1) specifically provide that “Carrier’s acceptance of the load or lack of origin inspection does not negate shipper’s responsibility.”

7. The tariff states that the shipper “MAY” be held responsible. In what cases would the shippers be held responsible and does this mean the fee will be applied to the shipper?

**ANSWER:** Tariff item 14000 has been revised to provide that in the case of a railcar that has been unloaded and cables, banding, strapping or other materials have not been properly secured, the unloading party will be responsible for the applicable fee. In the event the unloading party cannot be held accountable, the payer of freight named on the Bill of Lading from the previous loaded shipment may be held accountable for this fee. CN’s intention is that, where CN cannot satisfactorily resolve the matter with an unloader, CN will engage the shipper to work with its unloader to facilitate this important safety initiative and ensure the reliability of the supply chain. CN expects that shippers will cooperate fully to assure that their unloaders meet all applicable securement requirements.

8. What will CN do if there are repeat offenders (unloaders who do not properly secure cables)?

**ANSWER:** An embargo/waybill restriction (depending on whether the destination is on CN’s line or a foreign railroad) may be put in place at locations where systemic non-compliance is observed. Non-compliance is considered systemic when any unloading location has not properly secured cables multiple times (3 times). A location that is embargoed/restricted will need to provide CN with a remedial action plan so that further occurrences are not repeated and prior to having the restriction/embargo removed.

9. How will CN prove the cables on a particular car were not properly secured? We understand that pictures will be taken, will they be time stamped with car number visible?

**ANSWER:** We are working with our Mechanical team who secure the cables at various locations throughout our network for pictures to be provided that will include the car number. At the time the picture is taken, it will be automatically emailed to a central depository and we will have time stamps on those emails if the pictures don’t include it.

10. Is it CN’s responsibility to supply a car that is safe and has all working parts?

**ANSWER:** CN has been working in partnership with its loaders/unloaders to supply shared equipment in good working order. CN does not load or unload cars and therefore is not in a position to physically inspect/validate all of the loading securement devices on every car prior to placement. The shippers and receivers of these cars need to advise CN of any equipment defects so that CN’s Mechanical team can make the repair at the first available opportunity. CN does its utmost to provide a safe and good working order car. It is the responsibility of the shipper/receiver to ensure they release a car that is safe to move according to AAR standards.
11. Pressure on centerbeams cable?

**ANSWER:** AAR Rule = 22.5.3 A power tensioning device may be used when tensioning a permanently mounted winch equipped with a 3/8 in. diameter cable, provided it is capable of applying smooth and continuous tension. When using a power tensioning device to tension such cabling and assemblies, a torque value of 200 ft·lb at the mandrel is recommended. Impact or hammer wrenches and the like must not be used. 

**DO NOT USE IMPACT WRENCH = USE TORQUE WRENCH**

12. How many chain links need to go into the key slot (Min/Max)? Some cables have 3-4 chains others have 8+.

**ANSWER:** The link minimum is two and the maximum is the last link that fits properly in the key slot.

We will remain engaged with our customers and partners on this initiative in order to ensure we continue to improve the safety for all involved with centerbeam railcars. CN is willing to work with its shippers as well as unloaders as partners in this important safety initiative to ensure compliance with proper cable securement. The important thing is for unloaders to properly secure cables. Please continue to send your ideas and suggestions so we can focus on continuous improvement.

Should you require any further information please contact your Account Manager or Customer Service Representative.

Thank you for your assistance with this critical safety initiative.