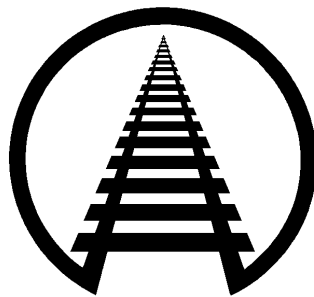


General Information Series No. 869

70 in. Diameter Rolls Loaded in 60 ft. Cushioned Boxcars with 16 ft. Double Plug Doors Secured with Anchored D-Strap

(CCLG Part 2 (12/19): Table 7.1 (Revised); Section 7.8 (Revised); Pattern 8-60-70-13-2 (New))

Approved by
DAMAGE PREVENTION & FREIGHT CLAIM COMMITTEE
Association of American Railroads



Issued
November 2021

Published by
Association of American Railroads/TTCI
Damage Prevention and Loading Services
55500 DOT Road
Pueblo, CO 81001

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General Rules

The General Rules relating to personal safety and the safe operation of trains, contained in AAR Circular Nos. 42-O and 43-G or supplements thereto, issued by the Association of American Railroads, **must be observed**.

These loading rules and/or practices apply to shipments transported in the USA, Canada and Mexico.

The loading methods in individual closed car loading publications issued by the Damage Prevention and Loading Services Section of the Association of American Railroads are minimum standards that have been evaluated and approved. These minimum standards offer practical guidelines on the subjects covered. Since these are minimum standards, it may be necessary to supplement these methods in some instances.

Securement standards in AAR closed car loading publications are intended for safe transit of the rail car from origin to destination and prevention of lading and equipment damage. These standards do not address unloading practices.

This approval may be withdrawn if the loads using these methods exhibit consistent load failure during actual shipments.

*Loading and bracing methods not presently approved may receive consideration for approval and publication under Section II - Evaluation of New Loading and Bracing Methods and Materials for Closed Cars, Trailers or Containers of **General Information Bulletin No. 2, "Rules and Procedures for Testing of New Loading and Bracing Methods or Materials"**. Submit requests to Closed Car Loading Rules Manager, dpls@aar.com.*

CAUTION: Car rocking motion caused by the lift equipment entering and/or exiting the rail car may cause unsupported packages or articles with a higher center of gravity to fall to the floor. Minimize access to the car. Exercise caution when inside a partially loaded car. Lift operators should stay on lift equipment, whenever possible, while inside a partially loaded car.

General

Rail cars must be inspected by shipper at loading point to verify that rail cars are in suitable condition. Rail car interiors must have, but are not limited to, sound roofs, sides, floors, and endwalls; and operable, snug-fitting doors. Any exception is cause for the rail car to be rejected.

It is important that rail cars are clean and free from protruding nails, brads, staples, temporary anchor plates, fragments of steel strap, old blocking etc. Some projections of lining or anchor devices may require covering with sheets of corrugated fiberboard taped in place.

Referenced paragraphs may be found in the Closed Car Loading Guide (CCLG) Part 2, *Best Practices for Loading Roll Paper in Railcars*, December 2019.

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This method is only applicable to 70 in. diameter rolls loaded in 60 ft. long cushioned boxcars with 16 ft. double plug doors. Most paper shipped via rail is wrapped or the outer plies are considered the protective wrap.

7.8 Anchored U-Straps & Anchored D-Straps:

7.8.1 (revised):

Anchored U-straps or anchored D-straps may be used as a method of doorway protection for the following:

- 70 in. paperboard rolls in a 60 ft. cushioned boxcar having a maximum 12 ft. doorway; secured with steel straps – anchored U-straps
- 72 in. roll diameters in a 50 ft. or 60 ft. boxcar having a maximum 12 ft. doorway; secured with steel straps – anchored U-straps
- 84 in. roll diameters in a 60 ft. boxcar having a maximum 12 ft. doorway; secured with steel straps – anchored U-straps
- 69 in. roll diameters in a 50 ft. boxcar having a maximum 12 ft. doorway; secured with nonmetallic straps – anchored U-straps
- 70 in. roll diameters in a 60 ft. cushioned boxcar having a maximum 16 ft. doorway; secured with nonmetallic straps – anchored D-straps

7.8.5 70 in. Diameter Rolls in a 60 ft. Cushioned Boxcar with 16 ft. Double Plug Doors Secured with Anchored D-Straps (CCLG Part 2 -New)

7.8.5.1 Load rolls in a 1-1 offset loading method throughout the boxcar. Load rolls tight with three points of contact with either the endwalls, sidewalls, or other roll stacks.

7.8.5.2 Rolls may be multi-stacked in the ends of the boxcar and in the doorway area of the boxcar. The three floor-spots in the doorway area must have an equal number of layers and have approximately equal roll height for strapping application.

7.8.5.3 Doorpost and doorway rolls are loaded on minimum 2 mm rubber mats – 48 in. x 48 in. square mats. If these rolls are multi-stacked, apply a minimum 2 mm rubber mats between each layer. Use of rubber mats on the floor and between layers is essential to the success of the load pattern. Reference *CCLG Part 2 – Section 5.5 – Rubber Mats*.

7.8.5.4 A single riser can be used under doorway rolls to allow for dock plate access. If risers are used, rubber mat is applied under the riser and between the roll and the riser. Reference *CCLG Part 2 – Section 5.7 – Risers*.

7.8.5.5 The three floor-spots in the doorway are loaded in a triangle formation. Ensure the two back rolls are loaded a minimum 2-3 inches from the non-loading door, to allow the strapping to fully tighten. See Figure 1. The correct placement of the doorway rolls is also essential to the success of the loading pattern.

7.8.5.6 Apply AAR approved Type 1A, Grade 5 nonmetallic straps in a D-strap configuration.

- Apply two straps per layer if the rolls in the doorway are stacked three or four high.
- Apply three straps per layer if the rolls in the doorway stacked two high.
- Apply four straps if the rolls in the doorway are a single layer.
- Distribute straps equally over the height of the rolls. For the top roll layer ensure that the top strap is applied to contact the upper 50% of the roll height.

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7.8.5.7 For D-strap application, thread each strap through doorpost anchors of equal height on each side of the non-loading door. Bring each strap end behind the rear doorway roll stacks and then around the face of the centered front roll stack. See Figure 2.

7.8.5.8 Connect straps using a ladder buckle in accordance with the manufacturer's instructions. Fully tension straps using the correct tensioning tools per manufacturer's instructions. It is recommended to use a pneumatic or battery powered tension device.

7.8.5.9 Apply strap hangers to the doorway rolls to maintain strap alignment on the rolls.

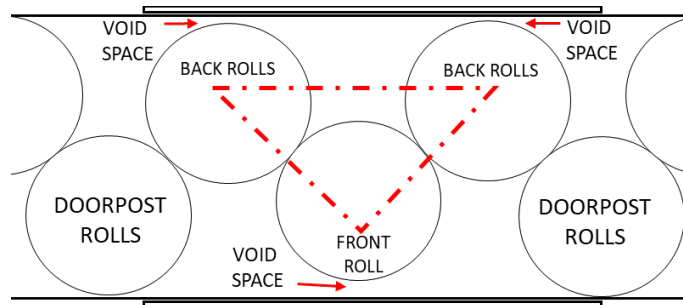


Figure 1
Doorway loading pattern

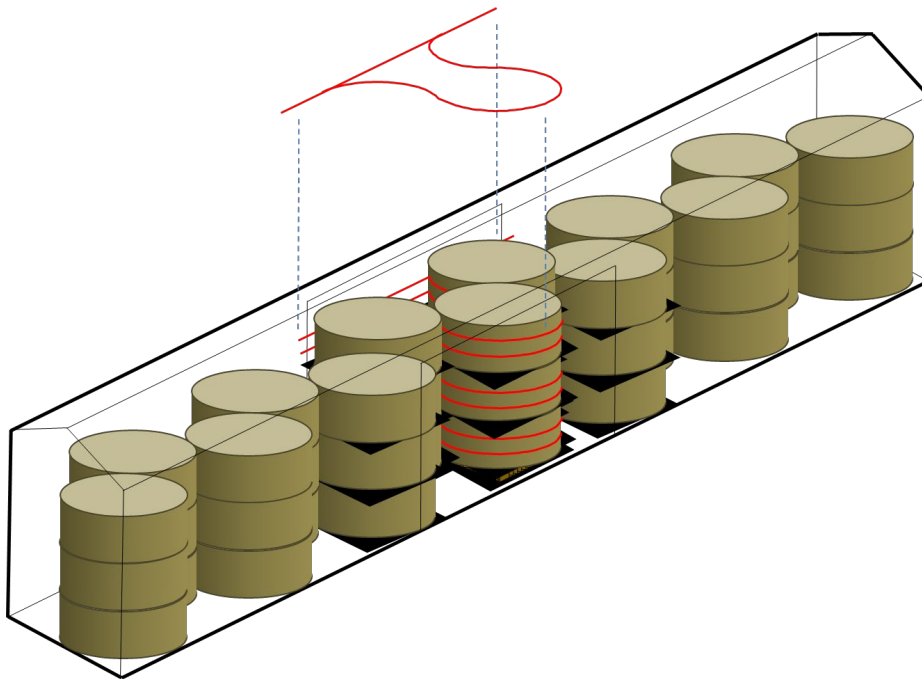


Figure 2
Anchored D-strap

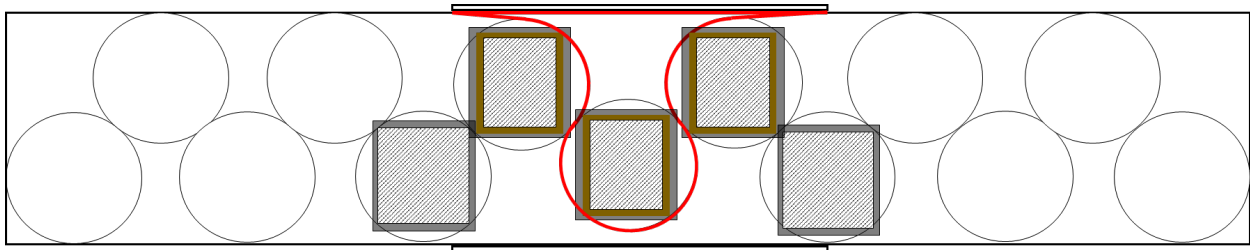
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**70 in. Diameter Rolls Loaded in 60 ft. Cushioned Boxcars with
16 ft. Double Plug Doors Secured with Anchored D-Strap**

8-60-70 60 ft Car—70 in. Diameter Rolls

Load Plan Number	Car Size	Floor Spots	Securement	Paragraph Reference Number
8-60-70-13-2	60'9" x 9'6"	13	Anchored D-strap	5.5 – Rubber Mats 5.7 - Risers 7.8.5 – Anchored D-Strap

8-60-70-13-2 70 in. Diameter 60-9 x 9-6 Railcar Anchored D-Straps 13 Floor Spots



Suitable Door Types	Doorway Protection	Maximum Door Width (ft)	Suitable Draft Gear Type
Double Plug	7.8.5 – Anchored D-Strap	16	Cushion Underframe

Reference paragraph 5.5 - Rubber Mats; 5.7 - Risers, 7.8.5 - Anchored D-Strap

Table 7.1 (Revised):

Roll Diameter	Doorway Area	Paper Type	Boxcar	Underframe	Max Door Size	Rubber Mat Application	Loading Notes
70	Multi-layer	Roll Paper	60 ft	Cushioned	16 ft plug door	Floor application and between layers	Anchored straps required

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General Information Series Publications

- 754 Wood Bins Braced by Disposable Inflatable Dunnage Bags and Lengthwise Fillers (CCLG Part 7) (10/16)
- 755 55-Gallon Steel Drums on Pallets Secured with Cordstrap® Barriers in 40-ft ISO Containers (Nonhazardous Materials only) (ILG Method I-6) (11/16)
- 759 Revision to Paragraph 2.5, Distribution of Weight Crosswise in Cars (CCLG Part 10) (2/17)
- 760 Incomplete Layers of Plywood Secured in Boxcars with Nonmetallic Straps (CCLG Part 3) (2/17)
- 765 Wood Bins Braced by Disposable Inflatable Dunnage Bags and Shock-Gard® Lengthwise Void Fillers (CCLG Part 7) (7/17)
- 768 Gearboxes Mounted on Sleds in 20 ft. Long ISO Containers (ILG Method E-23) (9/17)
- 778 Split Loads of 58 in. Diameter Roll Pulpboard on End Using Rubber Mats when Stowed in Trailers Having Large Metal Plates Approximately 9 ft. in Length at the Nose (ILG Method E-23) (3/18)
- 781 Wood Bins Braced by Disposable Inflatable Dunnage Bags and BIN-PAK or M-PAK Lengthwise Void Fillers (CCLG Part 7) (4/18)
- 782 Plastic Intermediate Bulk Containers with Disposable Inflatable Dunnage Bags and Lengthwise Void Fillers – Schoeller Allibert (CCLG Part 7) (4/18)
- 783 Cased Goods Secured by Tuff Wrap™ D.I.D. Bags (ILG Method F-4) (4/18)
- 784 Cased Goods Secured by S.A.M. D.I.D. Bags (ILG Method F-4) (5/18)
- 786 Aluminum Coils on Platforms/Skids Loaded on Rubber Mats & Secured by Two Floor Anchored Web Straps & Supplemental Securement Straps (CCLG Part 9) (6/18)
- 787 Universal Storage Containers Loaded in 53 ft. Intermodal Containers (ILG Method H-15) (6/18)
- 791 DRUM-PAK® Dunnage for Open Head Drums in Cushioned Boxcars (CCLG Part 7) (6/18)
- 794 Peat Moss, Bagged or Baled, in Cushioned Boxcars (CCLG Part 8) (8/18)
- 795 Coiled Metal on Platforms/Skids in Boxcars (CCLG Part 9) (8/18)
- 797 Split Loads of 58 in. Diameter Roll Pulpboard on End Using Rubber Mats when Stowed in Trailers Having Large Metal Plates Approximately 9 ft in Length at the Nose (ILG Method E-19) (11/18)
- 798 Intermodal Loads Secured with TyGard DS™ (ILG Method B-9) (11/18)
- 799 46 in. to 57 in. Diameter Roll Paper on End Using Rubber Mats (ILG Method E-21) (12/18)
- 800 54 in. Diameter Paperboard on End Using Rubber Mats (ILG Method E-22) (12/18)
- 803 Stretch Film Roping of Steel Coils and Coil Loading Methods for Railroad Shipments (CCLG Part 9) (12/18)
- 810 Reinforced Longitudinal Void Fillers for Plastic, Metal or Wood Intermediate Bulk Containers with Tomato Products (CCLG Part 7) (4/19)
- 811 Plastic Intermediate Bulk Containers with Disposable Inflatable Dunnage Bags - Horen (CCLG Part 7) (6/19)
- 817 Case Goods Secured by Stopack Max Blocker D.I.D Bags (ILG Method F-5) (9/19)
- 822 Palletized or Crated Auto Parts Secured by Web Strap Assemblies in 53 ft. Containers (ILG Method H-16) (9/19)
- 823 Plywood and Similar Panels Products – Loading Doorway Areas (CCLG Part 3) (10/19)
- 824 Case Goods Secured by Stopack Blocker D.I.D Bags (ILG Method F-6) (10/19)
- 825 Loading Bundled Ingots with Open Doorways (CCLG Part 10) (10/19)
- 826 Building Brick in Closed Cars – Incomplete Layer Securement – Woodpack Walls (Litco) (CCLG Part 5) (11/19)
- 827 Drum Layer Separators for Intermodal Shipments (Hazardous or Nonhazardous) (ILG Methods: B-3; B-8; B-9 (GIS 798); G-2; G-3; I-1; I-2; I-3; & I-4 (GIS 792)) (11/19)
- 828 44 in. Diameter Paper Roll in 50 ft. Cushioned Boxcars Using Horizontal Airbags (CCLG Part 2) (12/19)
- 829 39 in. Diameter Paper Rolls in 50 ft. Cushioned Boxcars Using Vertical Airbags (CCLG Part 2) (12/19)
- 831 Metal Intermediate Bulk Containers with Disposable Inflatable Dunnage Bags and Lengthwise Void Fillers – Goodpack USA (CCLG Part 7) (3/20)
- 832 47 in. Diameter Roll Paper Loaded in 60 ft. Cushioned Boxcar with Plug Doors. (CCLG Part 2) (4/20)
- 833 Double Layer Loads of Hazardous or Nonhazardous Materials Secured with Cordstrap® Barriers in a 20-ft Container (ILG Method I-4) (4/20)
- 834 Hazardous or Nonhazardous Loads Secured with Cordstrap® Barriers in 40-ft Containers (ILG Method I-5) (4/20)
- 835 Double Layer Loads of Nonhazardous Materials Secured with HFLASH RHS Securement System in a 20-ft Container (ILG Method I-7) (4/20)
- 836 Wood Bin Containers for Shipping Liquid or Paste Products in Boxcars (CCLG Part 7) (5/20)
- 837 54 in. Diameter Roll Paper Loaded in 50 ft. Boxcars (CCLG Part 2) (5/20)
- 838 Unitizing with Stretch Wrap or Film, Stretch Wrap Roping, Shrink Netting or Shrink Film (CCLG Part 6) (6/20)
- 839 Contour Pad Application with Roll Paper (CCLG Part 2) (6/20)
- 841 60 in. Diameter Roll Paper Loaded in 60 ft. Cushioned Boxcars with 12 ft. Plug Doors (CCLG Part 2) (6/20)
- 842 52 in. Diameter Roll Paper Loaded in 50 ft. Cushioned Boxcars with Plug Doors. (CCLG Part 2) (6/20)
- 844 46 in. Diameter Roll Paper Loaded in 50 ft. Cushioned Boxcars with Plug Doors. (CCLG Part 2) (7/20)
- 845 Roll Paper in Boxcars with Doorway Rolls on Risers and Rubber Mats (CCLG Part 2) (7/20)
- 846 Securing Incomplete Layers of Paper Rolls (CCLG Part 2) (7/20)
- 847 50 in. Diameter Roll Paper in 50 ft. Boxcars – 21 & 22 Floor Spots (CCLG Part 2) (7/20)
- 848 Securing Incomplete Layers of Paper Rolls (CCLG Part 2) (7/20)

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70 in. Diameter Rolls Loaded in 60 ft. Cushioned Boxcars with 16 ft. Double Plug Doors Secured with Anchored D-Strap

General Information Series Publications

- 849** 72 in. Diameter Paper Rolls Loaded in 60 ft. Cushioned Boxcars with 16 ft. Double Plug Doors Secured with Double-S Straps (CCLG Part 2) (7/20)
- 851** 50 in. Diameter Roll Paper in 50 ft. Cushioned Boxcars with Plug Doors – 23 Floor Spots (CCLG Part 2) (8/20)
- 852** Cased Goods Secured by Cargo Tuff Dually™ D.I.D. Bags (ILG Method F-7) (9/20)
- 853** 59 in. Diameter Cellulose Loaded in 60 ft. Cushioned Boxcars with 16 ft. Plug Doors (CCLG Part 2) (10/20)
- 855** 79 in. Diameter Paper Rolls Loaded in 60 ft. Cushioned Boxcars with 16 ft. Double Plug Doors Secured with Double-S Straps (CCLG Part 2) (10/20)
- 856** 76 in. Diameter Rolls Loaded in 60 ft. Cushioned Boxcars with 16 ft. Double Plug Doors Secured with Anchored H-Strap (CCLG Part 2) (10/20)
- 857** Incomplete Layer Securement for 50 in. Roll Paper in 50 ft. or 60 ft. Cushioned Boxcars (CCLG Part 2) (11/20)
- 859** 69 in. Diameter Rolls Loaded in 50 ft. Boxcars Secured with Anchored U-Straps (CCLG Part 2) (3/21)
- 860** 50 in. Diameter Paper Rolls T-Loaded in 50 ft. Boxcars (CCLG Part 2) (3/21)
- 861** Case Goods Secured with Floor Blocking and the Super Wedge® XL, Intermodal Wedge XL®, or Intermodal Wedge (Logistick Inc.) (ILG Method H-14) (3/21)
- 863** 59 in. Diameter Cellulose Loaded in 50 ft. Cushioned Boxcars with Maximum 16 ft. Plug Doors (CCLG Part 2) (9/21)
- 864** 58 in. Diameter Roll Paper Loaded in 60 ft. Cushioned Boxcars with Double Doors – Roll Omission (CCLG Part 2) (9/21)
- 866** Doorway Protection for Baled Paper and Other Baled Products in Boxcars (CCLG Part 8) (9/21)
- 867** Bales of Wood Pulp in Boxcars (CCLG Part 8) (11/21)
- 868** Lengthwise Filler Material used in Prepared Food and Similarly Packaged Product Shipments (CCLG Part 6) (11/21)
- 869** 70 in. Diameter Rolls Loaded in 60 ft. Cushioned Boxcars with 16 ft. Double Plug Doors Secured with Anchored D-Strap (CCLG Part 2) (11/21)