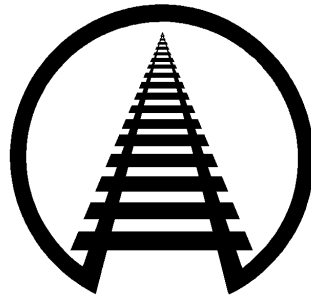


# **CIRCULAR NO. 42-K**

(Supersedes Circular No. 42-J)

## **GENERAL RULES COVERING LOADING OF CARLOAD SHIPMENTS OF COMMODITIES IN CLOSED CARS**



Issued November 1, 2010

The "General Rules" quoted in AAR Circular No. 42-J, dated January 1, 2001 have been revised as shown herein.

These "General Rules" **MUST** be observed for all closed car loading and take precedence over the "Loading Methods" referred to, or included, in the loading publications. Those publications contain detailed methods for loading specific commodities.

Approved by

**DAMAGE PREVENTION AND FREIGHT CLAIM COMMITTEE  
ASSOCIATION OF AMERICAN RAILROADS**

Published by

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## **GENERAL RULES-CLOSED CARS**

Copies of this Circular can be obtained from

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Pueblo, CO 81001

# **CIRCULAR NO. 42-K**

## **GENERAL RULES COVERING LOADING OF CARLOAD SHIPMENTS OF COMMODITIES IN CLOSED CARS**

The following Rules have been formulated for the purpose of providing SAFE methods of loading closed cars and MUST be observed. Primary purpose of these rules is safe transit of the rail car from origin to destination.

### **RULE 1. INSPECTION AND SELECTION OF CARS**

- (A) Cars must be inspected by carrier before placing for loading. Cars must also be inspected by shipper at loading point to see that they are in suitable condition to carry load safely to destination. Cars must have sound roofs, sides, floors and end walls, and operable, snug fitting doors.
- (B) (1) Box cars for the loading of metals of heavy concentrated weight - for example; tin plate, copper anodes, lead ingots, cathodes, zinc slabs and spelters and all other high density commodities - must be inspected by the originating carrier (either before they are placed for loading or at loading point), to see that they are in suitable condition to safely carry loads to destination.
- (2) When ordering box cars for loading concentrated weights of heavy commodities, shippers have the responsibility of notifying serving carriers of this purpose and of not loading any cars not inspected per Rule 1(B)(1).
- (3) Railroads must inspect box cars furnished for loading of metals of heavy concentrated weight - for example; tin plate, copper anodes, lead ingots, cathodes, zinc slabs and spelters and all other high density commodities, to insure they meet one of the following requirements:
- a. Car stenciled adjacent to door opening 25K or 50K which indicates floor loading capacity.
  - b. Have wood floor of 2-1/4 inch thickness in sound condition supported by at least three metal floor stringers on each side of center sill full length of car.
  - c. If equipped with sliding sill under frame, have wood floor of 2-1/4 inch thickness in sound condition supported by at least two metal floor stringers on each side of center sill full length of car.
  - d. If equipped with steel floors or special type wooden flooring full length of car provided, the overall strength of the floor is not less than that of a floor with three stringers as specified as in the foregoing.

If in doubt, obtain verification of the floor strength from the Mechanical Department of Car Owner.

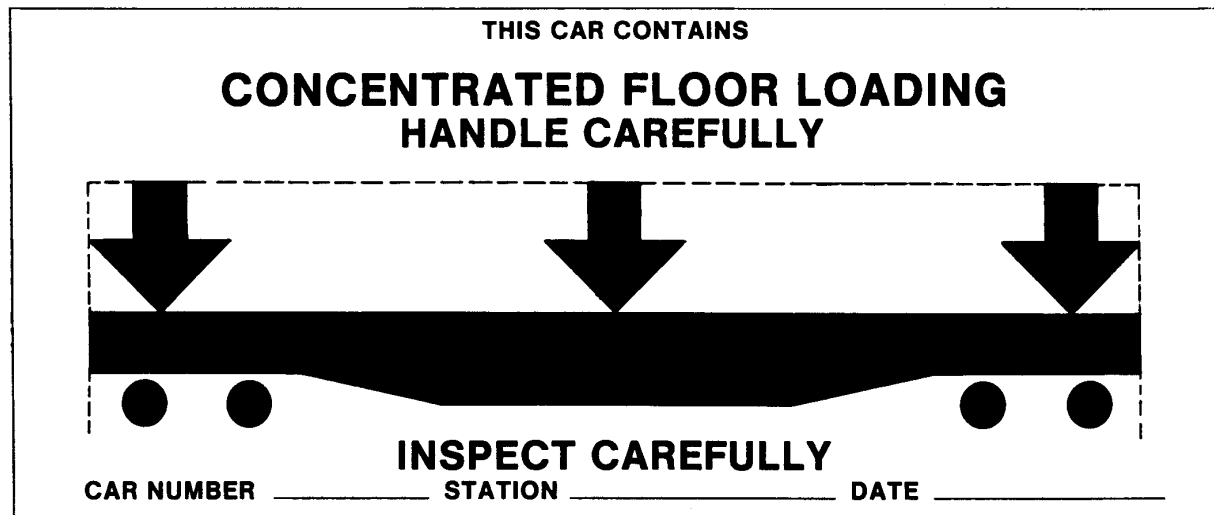
Also, such floors and supporting structure must be in good condition when cars are loaded.

The shipper should check the box car to see that the floors and supporting structure are in good condition. If the shipper has any doubts concerning the condition of the car, the serving railroad should be contacted.

## GENERAL RULES - CLOSED CARS

- (4) Shippers have the responsibility of attaching a Concentrated Floor Loading card, Figure 1, to the routing or placard board on each side of box cars in which metals with densities exceeding 400 lbs. per cubic foot and/or exceeding 800 lbs. per square foot floor bearing area are loaded.

Figure 1



- (5) Load, occupying less than total floor space, must be secured so as not to permit movement that would have an accumulative effect of overloading one end or one side of car when loaded in accordance with Rule 4(G).

### RULE 2. CLEARANCE AT SIDE BEARING - LOADED CARS

For cars not equipped with constant-contact type side bearings (zero clearance normal) there must be clearance at side bearings to permit free curvature of trucks.

### RULE 3. MAXIMUM LOAD WEIGHT

- (A) The weight of load in the car must not exceed the load limit stenciled on the car.  
 (B) The weight of load on one truck must not exceed one-half of the load limit stenciled on the car.

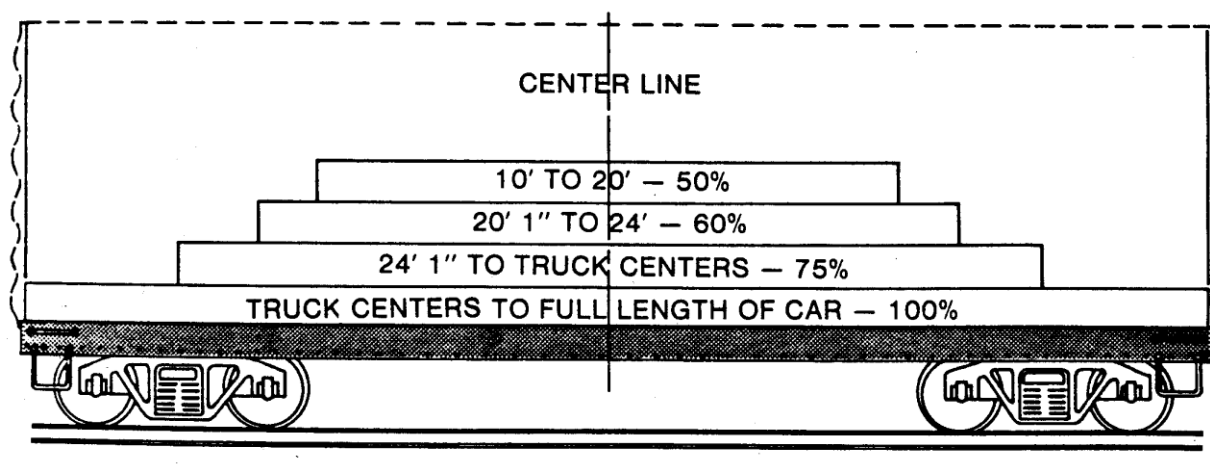
### RULE 4. DISTRIBUTION OF WEIGHT LENGTHWISE IN CARS

- (A) For all box cars except staggered double-door cars built prior to 1966, the percentages of stenciled load limits, as shown below, must not be exceeded for loads located between truck centers, measured lengthwise of car, unless car owner has otherwise designated by note in the Official Railway Equipment Register.

## GENERAL RULES - CLOSED CARS

### Length of Load

10 ft. to 20 ft. ....	50%
20 ft. 1 inch to 24 ft. ....	60%
24 ft. 1 inch to truck centers ....	75%
Truck centers to full length of car .....	100%



(B) For staggered double-door box cars built prior to 1966, the percentages listed in Rule 4(A) will be as shown below:

<u>Length of Load</u>	<u>Inside Length of Car</u>	
	40 ft.	50 ft.
10 ft. to 20 ft. ....	40%	35%
20 ft. 1 inch to 24 ft. ....	45%	40%
24 ft. 1 inch to truck centers ....	75%	75%
Truck centers to full length of car .....	100%	100%

Further, if the maximum load is 40% of stenciled load limit, the provisions of Rule 3(A) and (B) would not apply.

- (C) Weight of material loaded in either end between truck centers and end of car must not exceed 15% of stenciled load limit for box cars built prior to January 1, 1966, and 25% for cars built subsequent January 1, 1966.
- (D) When crosswise bearing pieces are used, the distance between the outside bearing pieces (center to center) must exceed the minimum distances specified in above Rules 4(A) and 4(B) for that percentage of the stenciled load limit being loaded and be in sufficient number to assure uniform distribution of lading on car floor.
- (E) Bearing pieces lengthwise of car, extending beyond the lading may be used in order to spread weight distribution over a greater area. In such cases, "length of bearing pieces" is substituted for "length of load" in above Rules 4(A) and 4(B). Bearing pieces must be of suitable strength in relation to percentages stated and continuous and in sufficient number to assure uniform distribution of lading on car floor.

## GENERAL RULES - CLOSED CARS

- (F) When length of load is less than the distance between truck centers, and load is not located in center of car, the center of load weight must not be nearer to either truck center than shown below:

**Load Weight as % of Load Limit**

50% of load limit or less    Any place between truck centers.

60%	One-sixth distance between truck centers.
66.6%	One-fourth distance between truck centers.
75%	One-third distance between truck centers.
87%	Three-sevenths distance between truck centers.
90%	Nine-twentieths distance between truck centers.

- (G) No lengthwise shift of lading is permissible unless load is secured as a floating unit under the following conditions:

- (1) All recommended securement and doorway protection methods are observed.
- (2) Retardation aids are used on all floating loads in closed cars where specified in individual loading pamphlets to prevent excessive shifting on car floor.

- (H) When loading covered hopper cars all compartments are to be uniformly loaded to an equal height unless the car is listed in The Official Railway Equipment Register as being designed for unequal compartment loading. When loaded with high density material to gross rail load and less than 60 percent of available volume, car owner must be contacted for approval.

- (I) Covered hopper cars, if subjected to stopover unloading, may have the compartments listed below partially or completely unloaded:

- (1) 2 compartment car - not permitted.
- (2) 3 compartment car - both end compartments or the center compartment.
- (3) 4 compartment car - both center or both end compartments.

Consignee must inspect car before releasing to ensure that remaining load is equally distributed and meets the provisions of Rule 5.

### **RULE 5. DISTRIBUTION OF WEIGHT - CROSSWISE OF CAR**

- (A) The load must be located so that the weight along both sides of car is about equal for the entire length of the load.
- (B) When the load is of such a character that it cannot be placed so as to obtain equal distribution of weight, crosswise of car, suitable ballast, properly secured, must be used to equalize the weight.
- (C) In box cars lading must be secured to prevent tipping or moving towards car's sides where the vacant space across car exceeds the following:
- (1) An aggregate of 18 inches crosswise of car.

## GENERAL RULES - CLOSED CARS

- (2) Vacant crosswise space of less than 18 inches as may be specified in pamphlets covering methods for loading, bracing and blocking carload shipments of individual commodities.
- (D) Partial unloading of covered hopper cars crosswise of car or complete unloading of any compartment along one side, in cars with longitudinal partition sheets, is prohibited.

## RULE 6. LOADING, BLOCKING AND BRACING - BOX CARS

- (A) Lading must be loaded and secured so as to permit unloading from either side of rail car.
- (B) All lumber used for blocking and bracing must be of sound material, free of defects which impair its strength or interfere with proper nailing.
- (C) Machines and other items, having high center of gravity or narrow base, must be secured to prevent them from tipping over in transit.
- (D) When car floor is not satisfactory for use of material handling equipment in loading and/or unloading operation, suitable steel plates or other adequate material must be placed in car to facilitate use of equipment and prevent equipment from breaking through door.
- (E) The threads on rods or bolts used as bracing or blocking, or in connection therewith, must be chisel checked immediately behind single or double nuts to insure nuts remaining in original position. Two or more threads must extend beyond nuts. Not required when nut lock or lock nuts are used and properly seated and torqued to manufacturer's recommended minimum ft.-lb. value.  
**NOTE:** Lock washers are not acceptable substitutes.
- (F) All high-tension bands used for securing the load must meet the specifications published in ASTM Specification D3953 (latest edition).
- (G) High-tension bands or wires securing the load must be machine tensioned and sealed or twist tied, respectively.
- (H) Metal protectors, such as corner guards or plates, sufficient to provide a suitable radius must be used to protect bands and wires at all points on lading having sharp edges. Apply so as to prevent displacement.
- (I) The manner of attaching metal ties to car walls must be in accordance with the methods prescribed for the individual commodities which reduces the possibility of anchor plates pulling loose or metal ties shearing.

## GENERAL RULES - CLOSED CARS

- (J) Where high-tension bands or high-tension wires are specified in the detailed rules, they may be substituted for each other, if of equal load strength, provided all the other items used to secure the load are equal in number and strength.
- (K) Unless otherwise specified in the loading pamphlets, the number of bands or wire for rigid braced loads must have the combined joint strength in each longitudinal impact direction equal the weight of the lading being secured.
- (L) The proper combination of steel bands or wire, seals and sealing tools must be used to provide the minimum joint strength for sizes listed in Tables 1 and 3.
- (M) Non-metallic strap may be used for load securement only when specified in applicable commodity loading publications.

**TABLE 1  
HIGH-TENSION BANDS**

Width & Thickness Inches	Width & Thickness Millimeters	Minimum Breaking Strength - Pounds	Minimum Joint Strength - Pounds	Recommended Minimum No. of Pairs of Notches on Joint - All Surface Finishes	Recommended Minimum No. of Pairs of Crimps on Joint		
					Surface Finish - Bands		
					Uncoated, Dry	Coated, Not Waxed	Waxed
1¼ x .029	31.75 x .750	4,750	3,565	2	3	3	4
1¼ x .031	31.75 x .790	4,750	3,565	2	3	3	4
1¼ x .035	31.75 x .890	4,750	3,565	2	3	3	4
1¼ x .044	31.75 x 1.12	6,750	5,065	4	4	4	4
1¼ x .050	31.75 x 1.27	6,750	5,065	4	4	4	4
2 x .044	50.80 x 1.12	10,600	7,950	4	4	4	4*
2 x .050	50.80 x 1.27	10,600	7,950	4	4	4	4*
2 x .065	50.80 x 1.65	13,800	10,350	4	4	4	4*

\* Grit Seals Only. 6 Pairs Required for Non-grit Seals.

Note - A sufficient number of seals must be applied to accommodate the recommended number of pairs of notches or crimps.

The above recommended minimum number of notches or crimps is based on current general recommendations of high-tension banding manufacturers on the basis of tensioning and sealing tools being in proper operating condition. A lesser number of notches or crimps may be used provided the shipper can demonstrate that the joint has the minimum strength shown in the table under column "Minimum Joint Strength - Pounds".



## GENERAL RULES - CLOSED CARS

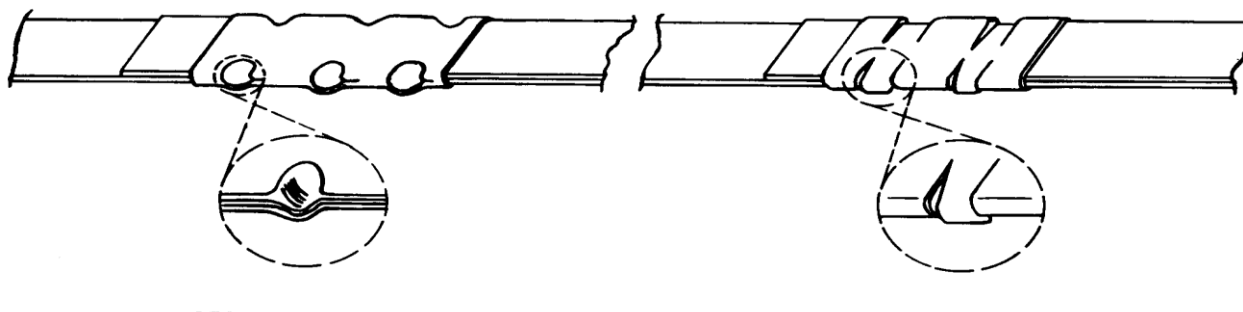
In all cases, a sufficient number of notches or crimps must be used to achieve the minimum joint strength - pounds, as shown in the column headed "Minimum Joint Strength - Pounds".

Users of tensioning and sealing equipment should be properly instructed in the correct use of these tools and tools should be checked periodically to ensure their efficiency.

Following are illustrations of crimp and notch types of seal joints:

**CRIMP-TYPE JOINT  
THREE PAIR SHOWN**

**NOTCH-TYPE JOINT  
TWO PAIR SHOWN**



High-tension band sizes 1 1/4" and 2" used for load securements are to be marked to indicate manufacturer's or supplier's name and the letters "AAR".

Markings shall consist of the letters "AAR", the manufacturer's or distributor's name, or abbreviated name, or registered trademark, or symbol, or AAR code consisting of two digits. Markings shall be in characters not less than 1/8" high for steel die imprint and not less than 1/4" high for paint, ink surface printing or embossing, spaced at not more than 5 foot intervals.

Markings applied to high tension bands manufactured to metric dimensions must be followed by the letter "M" of the same size as the original marking.

## GENERAL RULES - CLOSED CARS

The following methods of marking for purpose of identification have been assigned to manufacturers and suppliers whose products have been tested by the AAR and found to meet the requirements of this Rule.

Name	Method of Marking	Markings
ITW/Acme Packaging	Steel Embossed	AAR 11
ITW/Signode	Steel Embossed	AAR 11
Samuel Strapping Systems	Steel Die Imprint, Ink Print	AAR 22,33,47
Gerrard-Ovalstrapping	Ink Print	AAR 52
Garibaldi (Chile)	Steel Die Imprint, Ink Print, Paint Embossed	AAR 20
Hankum Co, LTD.	Ink Print	AAR 26
Maillis Strapping Systems-USA	Ink Print	AAR 57
Dubose Strapping Inc.	Ink Print	AAR 58

**IMPORTANT** - High-tension bands must be applied to packages and/or loads with markings facing outward.

**TABLE 3  
HIGH TENSION WIRE**

Gage	Diameter Inches	Minimum Joint Strength - Pounds
8	.1620	1700
10	.1350	1700
11 1/2	.1130	1150
12	.1055	1080

(N) The following are the dimensions and breaking strengths of common annealed wire, rods and bolts:

**TABLE 4  
COMMON ANNEALED WIRE**

Gage	Diameter Inches	Minimum Breaking Strength - Pounds
3	.2500	2200
7	.1875	1100
8	.1719	950
9	.1562	800
11	.1250	500

## GENERAL RULES-CLOSED CARS

**TABLE 5  
RODS AND BOLTS**

<b>Diameter Inches</b>	<b>Minimum Breaking Strength - Pounds*</b>
1/2	5,200
5/8	8,100
3/4	11,700
7/8	16,200
1	21,100
1 1/8	25,800
1 1/4	32,800
1 3/8	38,600
1 1/2	46,900

\* At Root of Thread

### **RULE 7. DOORWAY PROTECTION**

When there is a possibility of lading falling or rolling out of doorway or coming in contact with sliding or plug type side doors, openings must be protected with wood doorway protection, steel straps or other material of sufficient strength and number and adequately secured. Cars equipped with plug type doors loaded with cylindrical items such as rolls of paper or drums require doorway protection unless specifically exempted by applicable commodity pamphlets.

### **RULE 8. CENTER OF GRAVITY**

- (A) Combined center of gravity of rail car and contents must not exceed 98 inches above top of rail. In closed cars there is no practical possibility of exceeding this center of gravity limitation except in cars which exceed Plate C dimensions.
- (B) Cars exceeding Plate C dimensions may extend to 17 feet above top of rail. Certain loadings, such as rolled paper, when loaded two layers high may result in excessive combined center of gravity dimension. Shippers are to calculate the combined center of gravity of the rail car and contents whenever any part of the load will exceed 11 feet 8 inches (140") in height above the car floor. Shipper's tender of billing information for such cars to the origin carrier will signify compliance with this rule. Any questions on loading limitations in cars exceeding Plate C dimensions should be handled with the Mechanical Department of the origin carrier.

## GENERAL RULES-CLOSED CARS

Use the following formula to calculate the combined center of gravity.

- A = Height of car floor above top of rail in inches.
- B = Empty center of gravity of rail car above top of rail in inches, obtainable from car owner.  
(Empty center of gravity may be stenciled on the rail car.)
- C = Center of gravity of load above the car floor in inches.
- D = Height of center of gravity of load above top of rail, equal to A+C.
- E = Lightweight of rail car in pounds.
- F = Weight of load in pounds.

$$\text{Combined Center of Gravity (CG)} = \frac{(B \times E) + (D \times F)}{(E + F)}$$

**NOTE:** The following table may be used as a guideline when determining A in the above formula:

<u>Weight of Load (Pounds)</u>	<u>Spring Deflection</u>
122,000 – 137,000	1.00 inches
138,000 – 164,000	1.25 inches
165,000 – 191,000	1.50 inches
192,000 – 207,000	1.75 inches

**EXAMPLE:** Roll Paper

- Load: (a) 9 rolls or stacks of rolls @ 13,000 lbs each, 151" wide (tall)
- (b) 9 rolls or stacks of rolls @ 7,600 lbs each, 76" wide (tall)

**NOTE:** When the load consists of multiple sections or units having different unit heights and weights such as (a) and (b) above, each section or unit must be taken separately when calculating the CG of the load.

- A = 44"
- B = 58"
- C = (a)  $151" \div 2 = 75.5"$   
(b)  $76" \div 2 = 38"$
- D = (a)  $75.5" + 44" = 119.5"$   
(b)  $38" + 44" = 82"$
- E = 72,800 lbs
- F = (a)  $9 \times 13,000 \text{ lbs} = 117,000 \text{ lbs}$   
(b)  $9 \times 7,600 \text{ lbs} = 68,400 \text{ lbs}$

$$\begin{aligned} \text{Combined CG} &= \frac{(B \times E) + [D(a) \times F(a)] + [D(b) \times F(b)]}{[E + F(a) + F(b)]} \\ &= \frac{(58 \times 72,800) + (119.5 \times 117,000) + (82 \times 68,400)}{(72,800 + 117,000 + 68,400)} \\ &= \frac{4,222,400 + 13,981,500 + 5,608,800}{258,200} = \frac{23,812,700}{258,200} \\ &= 92.23" \text{ above top of rail} \end{aligned}$$

## **GENERAL RULES - CLOSED CARS**

### **RULE 9. SPECIAL EQUIPMENT**

Load protection devices in specially equipped cars must be used in accordance with carrier instructions. Cross members or other equipped restraining devices must be left in car when empty and properly secured.

### **RULE 10. OPENING AND CLOSING OF DOORS**

Mechanical trucks (forks lifts, etc.) must not be used to open or close freight car doors. If doors can not be opened, the serving railroad should be contacted for assistance.

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## General Information Series Publications

(Listing updated 10/1/2010)

- 542 Loading Fresh Fruits and Vegetables in Refrigerated Trailers (3/71)
- 549 Loading of Hardboard Products (1/74)
- 561 D.I.D. Bags in Loads of Preassembled Millwork Products (8/81)
- 562 D.I.D. Bags in Loads of Electric Stoves and Ranges (11/81)
- 566 Loading 55 Gallon Drums in a 4-1-4 Pattern (12/82)
- 572 Palletized Coils of Aluminum in Cars w/High Capacity Bulkheads (3/84)
- 583 Sealless Straps for Rigid Commodities (5/86)
- 592 Non-Metallic Strap for Unitizing Lumber in Boxcars (2/88)
- 596 Studs Loaded in Boxcars w/Staggered Doorway Packages (3/88)
- 598 Particle Board in Boxcars Braced by 6 Ply D.I.D. Bags (7/88)
- 616 Use of Polyester Package Strap for Manufactured Board Panels (6/91)
- 628 Coil Aluminum on Skids with Contour Pads in Cushion Equipped Boxcars with High Capacity Bulkhead Doors (9/92)
- 629 Double Layer Brick - Offset Loading Method (5/93)
- 633 Unitized Ingots Braced by a Six-Ply D.I.D. Bag in Boxcars (8/93)
- 635 Coil Aluminum on Skids in 1-1 Offset Pattern in Cushion Equipped Boxcars with High Capacity Bulkheads (9/93)
- 638 Use of Prefab Steel Racks for Dbl Layering Compressible Lading in Cushion Equipped Boxcars with Bulkhead Doors (11/93)
- 640 Plywood Braced by Disposable Inflatable Dunnage and Lengthwise Void Fillers in Boxcars (8/94)
- 645 Particle Board (Nominal 5' x 8') Braced by a Single 8 Ply D.I.D. Bag in Boxcar (7/95)
- 651 Unitized Zinc Slabs in a Through Load in Boxcars (6/96)
- 653 Steel Coils on Skids Unitized by 1¼" x .031" Steel Strapping on Rubber Mats in Cushion Equipped Boxcars (1/97)
- 654 Lengthwise Void Fillers with Plywood and Similar Panel Products (i.e. OSB) in Cushion Equipped Boxcars (1/97)
- 655 Polyester Cord Strap Used to Unitize Doorway Stacks in Plywood & Similar Panel Products in Boxcars (3/97)
- 656 Web Strap Securement System for Wide Rolls of Printing Paper in Cushion Equipped Boxcars (3/97)
- 657 Multi-wall Corrugated Fiberboard Void Fillers with Plywood, OSB & Similar Panel Products Braced by Disposable Inflatable Dunnage Bags in Boxcars (7/97)
- 658 Pre-crushed Void Filler as a Buffer and/or Void Filler/Spacer in Approved Roll Paper Methods in Boxcars (7/97)
- 659 Polypropylene Bulk Bags with an Incomplete Second Layer Secured by Polyester Web Strapping in Boxcars (7/97)
- 662 Wall Anchored Web Strap Securement System for Wide Rolls of Paper in Cushion Equipped Boxcars (10/97)
- 667 Offset Stack Loading to Eliminate Lateral Void Fillers with Products in Cartons or Trays Unitized by Stretch Wrap in Bulkhead Equipped Cushioned Boxcars (Cancels G.I.S. No. 652) (7/98)
- 668 Inset Loading of the Doorway Area for 45" & 50" Dia. Roll Paper in Boxcars Equipped with Double Plug Doors (4/99)
- 670 Controlled Floating Loads of Lead Ingots Using Rubber Floor Mats in Boxcars (6/99)
- 672 45" - 50" Diameter Roll Paper Less Than 113" Wide Secured by Steel Anchor Straps in Cushion Equipped Boxcars (11/99)
- 673 Unitized Bundles of Cathodes Loaded on Rubber Mats in Non-Cushioned Boxcars (4/00)
- 679 Wall Anchored Web Strap Securement System for Wide Rolls of Printing Paper in Cushion Equipped Boxcars (8/01)
- 681 Wide Roll Printing Paper Secured by 1½" Wide Polyester Cord Straps in Cushion Equipped Boxcars (Cancels G.I.S. No. 675) (1/02)
- 684 Metal Coils on Platforms/Skids Loaded on Rubber Mats and Secured by Two Floor Anchored Web Straps (9/02)
- 685 Large Aluminum Coils on Skids Secured by Stretch Film Ropes in Cushioned Specially Equipped Boxcars (10/02)
- 686 Bagged Products on Wood Pallets Secured With Cargo Nets in Cushioned Specially Equipped Boxcars (10/02)
- 688 Metal Coils on Platforms/Skids Loaded on Rubber Mats and Secured by Floor Anchored Web Straps (5/03)
- 689 Corrugated Anti-Skid Mats Used for Doorway Protection with 58" Diameter Roll Pulpboard and Similar Roll Paper Products in a Single Layer in a 1-1 Offset Pattern (5 /03)
- 690 Doorway Protection for Baled Paper Products in Boxcars (Cancels G.I.S. No. 665) (6/03)
- 693 Slip Sheeted Beverage Products Unitized with a Polyester Web Strap System and Secured with D.I.D. Bags in Boxcars (8/03)
- 694 Use of Non-metallic Package Strap with Bundles of Aluminum Ingots (11/03)
- 695 Plastic Intermediate Bulk Containers Holding Liquid and Bulk Tomato Products Braced by Disposable Inflatable Dunnage Bags and Lengthwise Void Fillers in Boxcars (1/04)
- 698 Loading Partial Packages of Plywood On-End or On-Edge (Cancels G.I.S. No. 613) (2/05)
- 699 Loading Partial Packages of Stud Lumber on End in Boxcars (Cancels G.I.S. No. 636) (2/05)
- 701 Use of One-trip Disposable Inflatable Non-Paper Dunnage Bags for Use in Rail Shipments (Canceled 4/08)
- 705 Use of Non-metallic Package Strap with Building Brick (Cancels G.I.S. No. 702) (9/06)
- 706 Plywood Secured by Disposable Inflatable Dunnage Bags in Boxcars (Cancels G.I.S. No. 630) 1/07
- 707 Plastic Intermediate Bulk Containers Holding Tomato Products Braced by Disposable Inflatable Dunnage Bags and Lengthwise Void Fillers in Boxcars (Cancels G.I.S. No. 692) (2/07)
- 708 Use of Non-metallic Package Strapping with Lumber, Plywood and Similar Products (Cancels G.I.S. No. 648) (3/08)
- 709 Use of Polyester Cord Strapping in Approved Load Securement Applications (Cancels G.I.S. No. 682) (10/08)
- 711 Wood Bins Containing Tomato Products Braced by D. I. D. Bags and Lengthwise Void Filler in Boxcars (Cancels G.I.S. No.680) (1/09)
- 712 Use of Non-metallic Package Strap with Wood Bins Containing Products in Liquid (Cancels G.I.S. No. 703) (1/09)
- 713 Securement of Partial Second Layers of Roll Printing Paper in Cushion Equipped Boxcars Using 1½" Non-Metallic Strap Anchored to Sidewalls (4/09)
- 714 Woven Polypropylene Bulk Bags (Super Sacks) in an Incomplete Second Layer Secured by Non-metallic Strapping in Cushioned Boxcars 5/09)
- 715 Non-metallic Strap Substitution for Steel Strap as Doorway Protection in Boxcars (Cancels G.I.S. No. 710) (12/09)
- 716 Reusable Polyethylene Void Fillers and Disposable Inflatable Dunnage Bags for Securing Wood Bins Containing Tomato Products in Boxcars (5/10)
- 717 Aluminum Coils on Platform/Skids Loaded on Rubber Mats & Secured by Two Floor Anchored Web Straps & Top Harness (9/10)

## **Closed Car/Trailer Loading Pamphlets**

(Listing updated 10/1/2010)

- 1** Freight Forwarder (2/80)
- 3** Bags, Commodities In (10/93)
- 4** Barrels, Drums or Kegs (11/65), Includes Special Supplement (6/74)
- 6** Building Brick in Closed Cars (8/83)
- 8** Plywood in Closed Cars (11/85)
- 14** Minimum Loading Standards for Freight (12/84)
- 15** Furniture (7/79)
- 17** Packaged Food Products (10/88)
- 20** Lumber in Closed Cars (10/87)
- 21** Machinery (5/95)
- 23** Steel Products in Closed Cars (4/95)
- 25** Flat Paper Stock in Closed Cars & Trailers & Containers for TOFC/COFC Service (5/93)
- 29** Household Appliance (10/79)
- 37** High Density Metallic Commodities (11/84)
- 39** Supplemental Loading Standards for Roll Paper/Pulpboard in Closed Cars (11/96)  
Also see, “Best Practices for Loading of Roll Paper in Rail Cars” for additional information.
- 41** Dictionary of Standard Terms (7/82)
- 42** Glass, Flat (6/94)

**Intermodal Loading Guide for Products in Closed Trailers and Containers** (7/95, Updated 2/97, 3/98, 6/01)

**Best Practices for Loading of Roll Paper in Rail Cars** (8/96)

Also see Pamphlet No. 39, “**Supplemental Loading Standards for Roll Paper/Pulpboard in Closed Cars**” for additional information.

## **Circulars**

(Listing updated 10/1/2010)

- 43-C Rules Governing the Loading, Blocking and Bracing of Freight in Closed Trailers and Containers for TOFC/COFC Service (1995)
- 42-K General Rules Covering Loading of Carload Shipments of Commodities in Closed Cars (11/10)

## **General Information Bulletins (G.I.B.)**

(Listing updated 10/1/2010)

- 1** Handling and Shipping Fresh Fruits and Vegetables by Rail (5/76)
- 2** Rules and Procedures for Testing of New Loading and Bracing Methods of Materials (8/07)
- 3** Instructions for Applying Polyethylene Sheets as Weather Protection in Boxcars (11/91)
- 4** Weather Protection for Open Top Wallboard Shipments (4/93)
- 5** Overloaded or Unbalanced Hopper Cars are Unsafe (8/93)
- 6** Measurement Requirements for Remote Ride Quality Monitoring (9/96)
- 7** Evaluating and Loading Auto Parts Racks in railcars or Transportation via the North American Rail System (2/99)
- 8** Practical Guidelines for Stretch Film Roping of Steel Coils Shipped Eye Vertical in Boxcar and Intermodal Shipments (4/03)
- 9** Product Performance Profile for Pneumatic Dunnage (7/05)