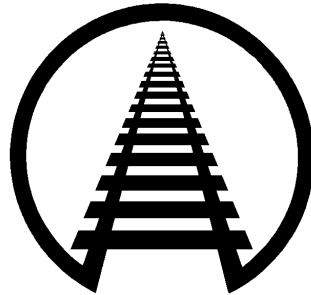


General Information Series No. 768

Gearboxes Mounted on Sleds in 20 ft. Long ISO Containers

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



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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-L 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This approval may be withdrawn if the loads using these methods exhibit consistent load failure during actual shipments.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 Director Damage Prevention and Loading Services, AAR/TTCI, 55500 DOT Road, Pueblo, CO 81001.*

GENERAL

1. This loading method is for gearboxes weighing up to 38,500 lbs. (17,500 kg) in 20 ft. long ISO containers. Gearboxes are rigidly mounted on steel sleds and secured with four 1½ in. woven polyester straps having a minimum MBS of 2,200 lbs (1,000 kg). See Photo 1.
2. Select containers that are equipped with suitable D-rings at locations consistent with the load plan. It is the shipper's responsibility to inspect and assure that the D-rings are in sound condition and that the load does not exceed the capacity of the D-rings for the container being loaded¹.
3. Prior to loading, a 2 in. x 8 in. x 95 in. long steel beam with a 0.125 in. wall thickness is installed across the front end wall of the container. Two 16 in. x 8 in. x 0.25 in. (minimum) rectangular steel load distribution beams, 19 ft. long, are installed, one on either sidewall of the container. Alternately, wood beams of the same dimension may be substituted (as tested). See Figure 2.
4. The sled mounted gearbox is loaded onto these load distribution beams, on top of damping pads measuring 16 in. x 16 in. x 3 in., at fixed locations on the distribution beams. Maintain proper lengthwise and crosswise weight distribution.
5. A 2 in. x 8 in. x 95 in. long steel beam with a 0.125 in. wall thickness is installed across the doorway, in the doorpost slots of the container.

¹ Reference ISO 1496 Annex F, for D ring specifications.

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- The gearbox is attached to securement points in the container with a minimum of 12 straps, minimum of 3 per corner, each strap having a minimum breaking strength of 11,000 lbs (5,000 kgs). Each strap is anchored to a different container lashing point: either upper or lower D rings, or lashing bars in container forward corners, or the rear doorpost slots as shown in Figure 3. One of the 3 straps from each corner is secured to D rings at the container floor. Two of the 3 straps are secured to lashing bars as depicted in Figure 3. Should an unsuitable lashing bars be available, the straps are secured to separate upper D rings furthest away from the gearbox. Straps are secured to anchors mounted to the gearbox. Install and tension straps per manufacturer's instructions.
- Do not use container lashing points that appear to be damaged, cracked, bent or otherwise of changed from their original condition. If uncertain, do not use. Do not reuse straps that are cut, split frayed or otherwise damaged.



Photo 1: Gearbox mounted on transport sled and secured with 4 - 1 ½ in. polyester straps

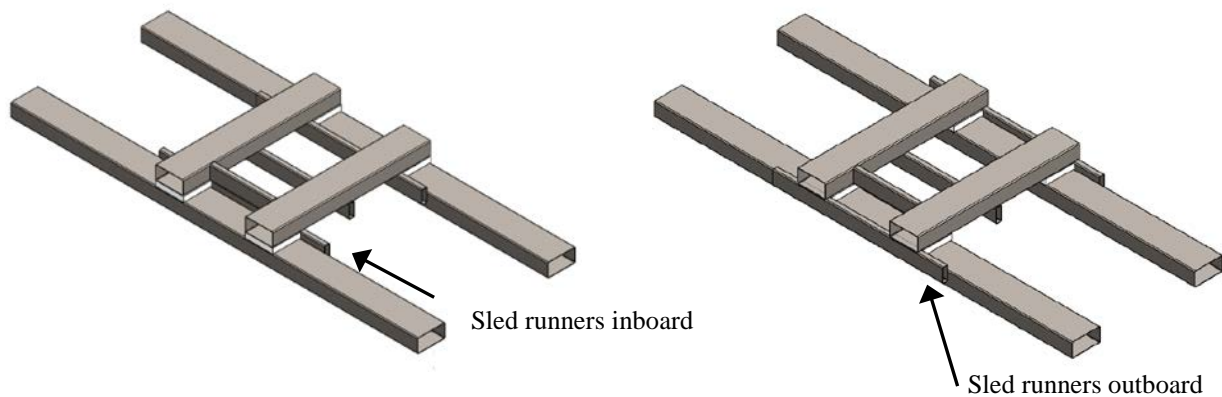


Figure 1: Gearbox Sled with Runners Inboard or Outboard of Distribution Beams

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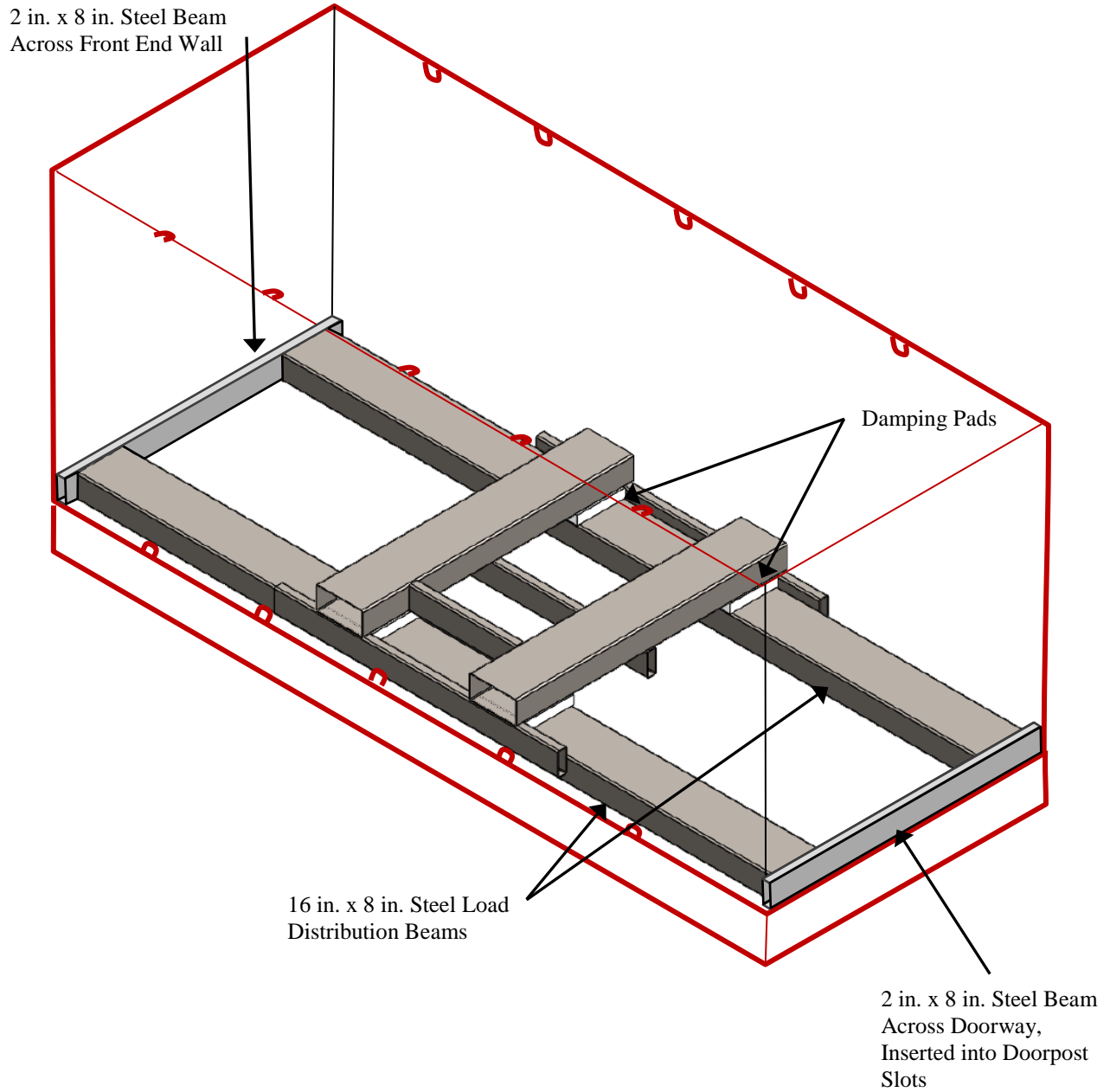


Figure 2: Gearbox Sled with Runners Outboard of Distribution Beams

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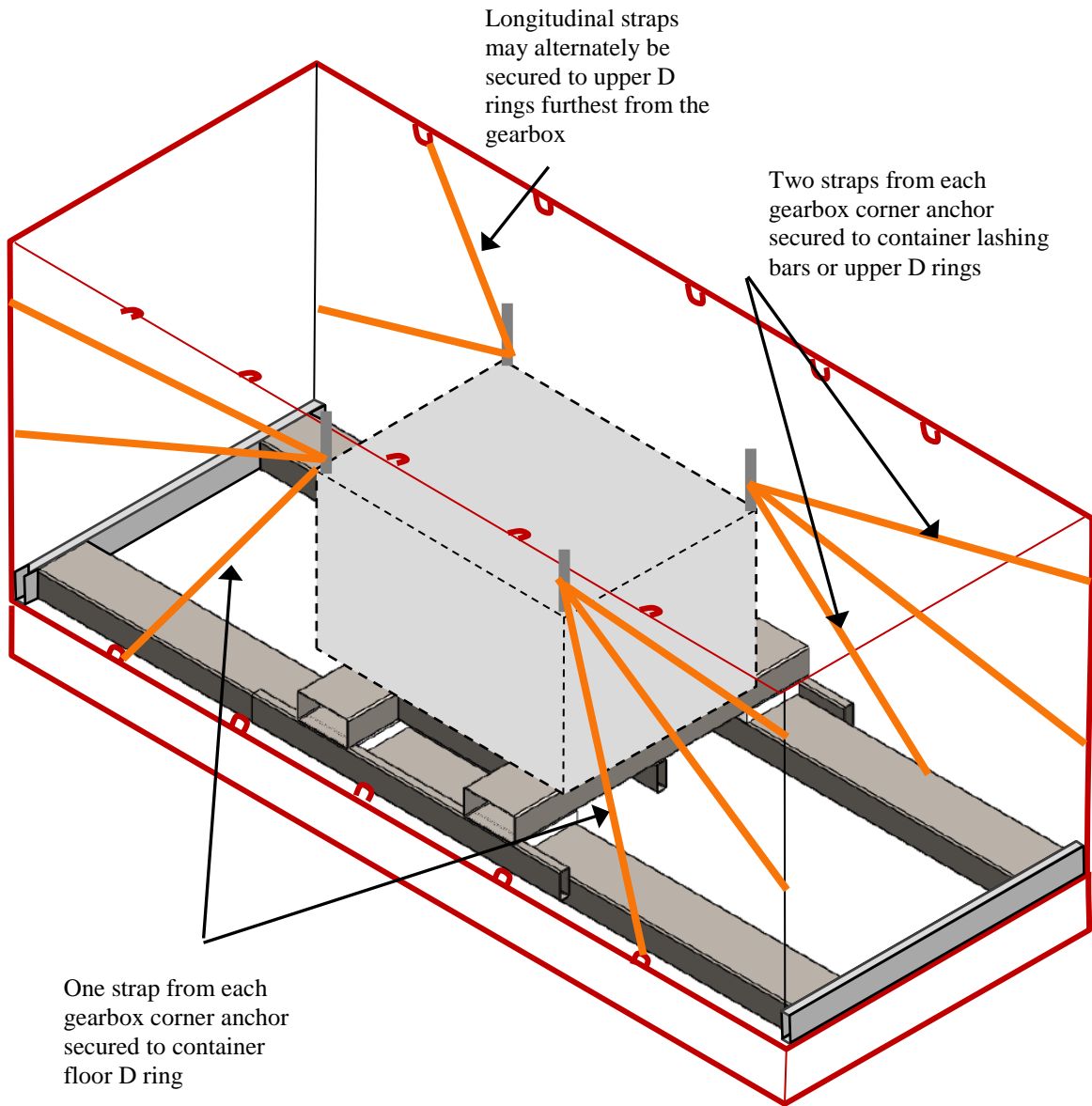


Figure 3: Gearbox Anchored to Container Securement Points

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General Information Series Publications

- 744** Double Layer Load Secured with Cordstrap® Barriers in a 20-ft Container (ILG Method I-4) (7/15)
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- 767** Horizontal Air Bags in Boxcar Loads of 50 in. Diameter Roll Paper (8/17)
- 768** Gearboxes Mounted on Sleds in 20 ft. Long ISO Containers (9/17)