

# PALLET RACKING SAFETY GUIDELINES: WHAT THEY ARE AND HOW TO COMPLY

*REB Storage Systems International*

Pallet racking safety guidelines should be followed for all steel industrial pallet rack systems. These guidelines are established by the American National Standards Institute (ANSI) as well as the Occupational Safety and Health Administration (OSHA). These are intended to ensure your employees and products remain safe.

Read below to find out what these guidelines are and how you ensure that your warehouse complies.

## What are the ANSI Pallet Racking Safety Guidelines?

ANSI/RMI 16.1 covers pallet rack safety regulations for all industrial pallet rack systems, movable shelf racks, and stacker racks made of cold-formed or hot-rolled steel structural members. It does not apply to other types of racks, such as drive-in or drive-through racks, cantilever racks, portable racks or racks made of material other than steel.

There are four sections in this that pertain to rack safety and repair, shown below. Additionally, the video in this section provides an overview.

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# What are the ANSI Pallet Racking Safety Guidelines?- Continued

**Repair and Replacement of Damaged Components:** These shall be replaced by qualified persons following recommended and documented procedures. Repair components must be at least as strong as undamaged components.

The repair process (assessment, design, and installation) should be overseen by a qualified rack design engineer (supervising engineer). The assessment and design of rack repairs should address all loads that can be imparted on damaged members (static, seismic, etc.), not just on the specific members being repaired.

**Owner Maintenance:** The owner shall maintain the structural integrity of the installed rack system assuring proper operational and maintenance procedures. Regularly inspect for damage and immediately unload the affected area and replace or repair the damaged column(s), beam(s), and other structural components.

Owners should avoid attempts to repair rack despite possibly having personnel or resources in their facility to attempt repairs. Without proper engineering oversight, there is no proof or assurance that the repair is sound and will yield a safe operating system.



**Additions, Alterations, and Reconfigurations:** All additions, alterations and reconfigurations should be reviewed by a qualified engineer to ensure any changes meet the same requirements as the original installation. Engage a licensed professional engineer to review the proposed racking configurations.

**Rack Damage:** Upon any visible damage, the pertinent portions of the rack should be unloaded immediately by the user until the damaged portion is repaired or replaced. Contact a qualified representative for an evaluation of the effects of the damage to the structural integrity of the rack system. Only after such an evaluation (after repairs if necessary are competently completed, and after approval of the work is done) should the rack section be returned to service.

# OSHA Guidelines for a Safe Warehouse

The Occupational Safety and Health Administration (OSHA) has also established regulations to ensure a safe working environment for employees.

The main OSHA regulation that pertains to those employees in a distribution center who work around the racking structure is as follows:

OSHA General Duty Clause Section 5(a)(1): Employers are required to provide their employees with a place of employment that is free from recognizable hazards that are causing or likely to cause death or serious harm to employees.

## How Can You Comply with These Rack Safety Standards?

There are several things that should be done to comply with ANSI/RMI and OSHA pallet racking safety guidelines.

First, you should have regular in-house assessments of the safety of your racking system. This should alert you to any visible compromise to the racking structure. Damage to look for include:

- Column damage
- Horizontal and diagonal strut damage
- Footplate damage
- Overloaded beams and frames
- Anchor damage
- Missing or damaged components (wall ties, cross-aisle ties, crossbars, beams safety pins, etc.)
- Beam damage
- Leaning frames
- Damaged decking

While frequent in-house inspections will identify some of the more overt damage to the rack system, they will not be able to identify all damage. There is often rack damage that is not obvious but still compromising to the safety of the rack system. Therefore, it's highly recommended to have a professional pallet rack inspector survey your rack at least annually.

A professional will identify all instances of compromise to your rack system. OSHA defines a qualified person in 29 CFR 1910.21(b): a person who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience has successfully demonstrated the ability to solve or resolve problems relating to the subject matter, the work, or the project.

These professionals, such as those at REB Storage Systems, have a thorough understanding of all pallet rack safety guidelines as well as the rack structure and components. Through this understanding they can identify even slight (but important) rack safety concerns.

# What To Do If Damage Is Found

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As stated in ANSI/RMI, once damage is identified, employees should discontinue use of that area until the proper repairs can be made.

A professional rack repair company, such as REB Storage Systems International, should be contacted to assess the damage and make repairs that follow the ANSI/RMI regulations.

## Your Next Step for a Safe Pallet Rack System

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The rack safety team at REB Storage Systems International are experts in pallet rack safety and repair. We provide rack safety assessments nationwide. Our assessments will help you comply with the rack safety guidelines presented in this article.

Once your assessment is complete, you'll be provided with a scope drawing of all damage found. You'll then have the option of having REB repair any or all of the damage.

Contact our rack safety team to find out more. Call or email us at the information provided below.



**CONTACT US:**

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