

WAREHOUSE RACK COMPLIANCE

Everything you need to do to
prepare for an OSHA inspection



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OSHA'S MISSION

The Occupational Safety and Health Administration's (OSHA) mission is "to ensure safe and healthful working conditions for workers" by establishing and enforcing safety standards, tracking injuries and illnesses, requiring safety training, conducting inspections, and investigating complaints. **OSHA cares about safety, first and foremost.**



Impact of OSHA measures on the workplace

1970

2020

38 Deaths/Day

10.9 Incidents/100 workers

13 Deaths/Day

2.7 Incidents/100 workers

REASONS FOR CONDUCTING INSPECTIONS

OSHA must prioritize its on-site inspections based on set criteria.

The agency will prioritize examinations based on the following conditions:

- > Imminent danger situations
- > Severe injuries and illnesses
- > Worker complaints
- > Referrals
- > Targeted inspections
- > Follow-up inspections



Inspection notice

OSHA inspectors rarely give advance notice. Inspections may be unsolicited, or employees may also request them.

| EMPLOYER RESPONSIBILITY

The OSHA Act states that employers are responsible for providing “safe and healthful working conditions for working men and women” by setting and enforcing standards and providing training, outreach, education, and assistance.

Liability

It’s not just about NOT getting fined by OSHA. It’s also about the health and safety of your workers while in your facility. OSHA standards are meant to prevent trouble from happening.

**You do not want to
be held responsible
for a collapse!**



| WHY PREPARE FOR AN INSPECTION

Prepare your warehouse for an OSHA inspection by identifying and addressing potential hazards to:

- > Ensure compliance with federal safety regulations.
- > Minimize the risk of workplace accidents and injuries.
- > Demonstrate a commitment to safety.
- > Avoid fines and penalties.
- > Create a safer working environment for your employees.
- > Improve overall productivity.



FROM SMALL DAMAGE TO RACK COLLAPSE

Protect your people, products, and assets:

- > Prevent injuries from falling objects in pedestrian pathways and collapse.
- > Prevent stored products from falling.
- > Protect your racks, equipment, and building columns.

Avoid the stress of preparing for an OSHA inspection.

The best way to prepare is to ensure your workplace ALWAYS complies with OSHA regulations and standards EVERY DAY.

Regular rack maintenance is key.



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QUIZ: HOW SAFE IS YOUR WAREHOUSE

Get your safety score and receive recommendations. (3 min.)

1+ Are your racking systems inspected regularly?

- A Yes, they've been inspected by a 3rd party in the last 12 months, and internal staff regularly assesses for damage.
- B Yes, we periodically assess for damage, but not by a 3rd party.
- C Yes, we assess for damage, but there is no defined schedule.
- D They have been inspected in the past, but it's been a long time.
- E No, I am certain they've never been inspected.

OK ✓

HOW SAFE IS YOUR WAREHOUSE

Wondering where your warehouse stands regarding rack safety? Take the quiz to find out!

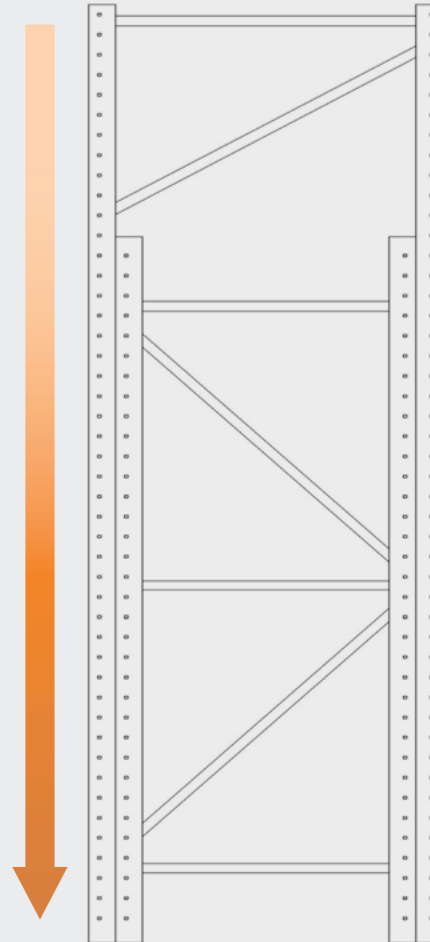
START QUIZ

RACKS, COMPONENTS AND ASSOCIATED ISSUES

Understanding load accumulation on frame columns

The lower parts of racks are at a higher risk of damage from forklifts or other machinery since they are closer to the ground and more likely to be hit during product movement. This risk is compounded by the limited line of sight forklift operators may have when placing items on lower levels, increasing the possibility of accidental impacts. To minimize rack damage and ensure the safety of everyone in the facility, implement proper protection solutions and employee training on safe operating procedures.

Load weight starts at the top and increases as it moves down to the bottom. The bottom of a rack has to bear more weight than the upper parts.



DID YOU KNOW

OVER 85%
OF RACK DAMAGE HAPPENS
IN THE BOTTOM 24"?

Frame columns are typically not designed to withstand large impacts.

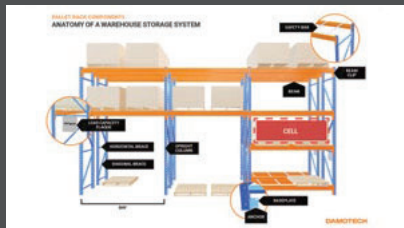
THIS IS THE MOST CRITICAL PART OF THE FRAME =
Load weight accumulates here!



| RACK COMPONENTS

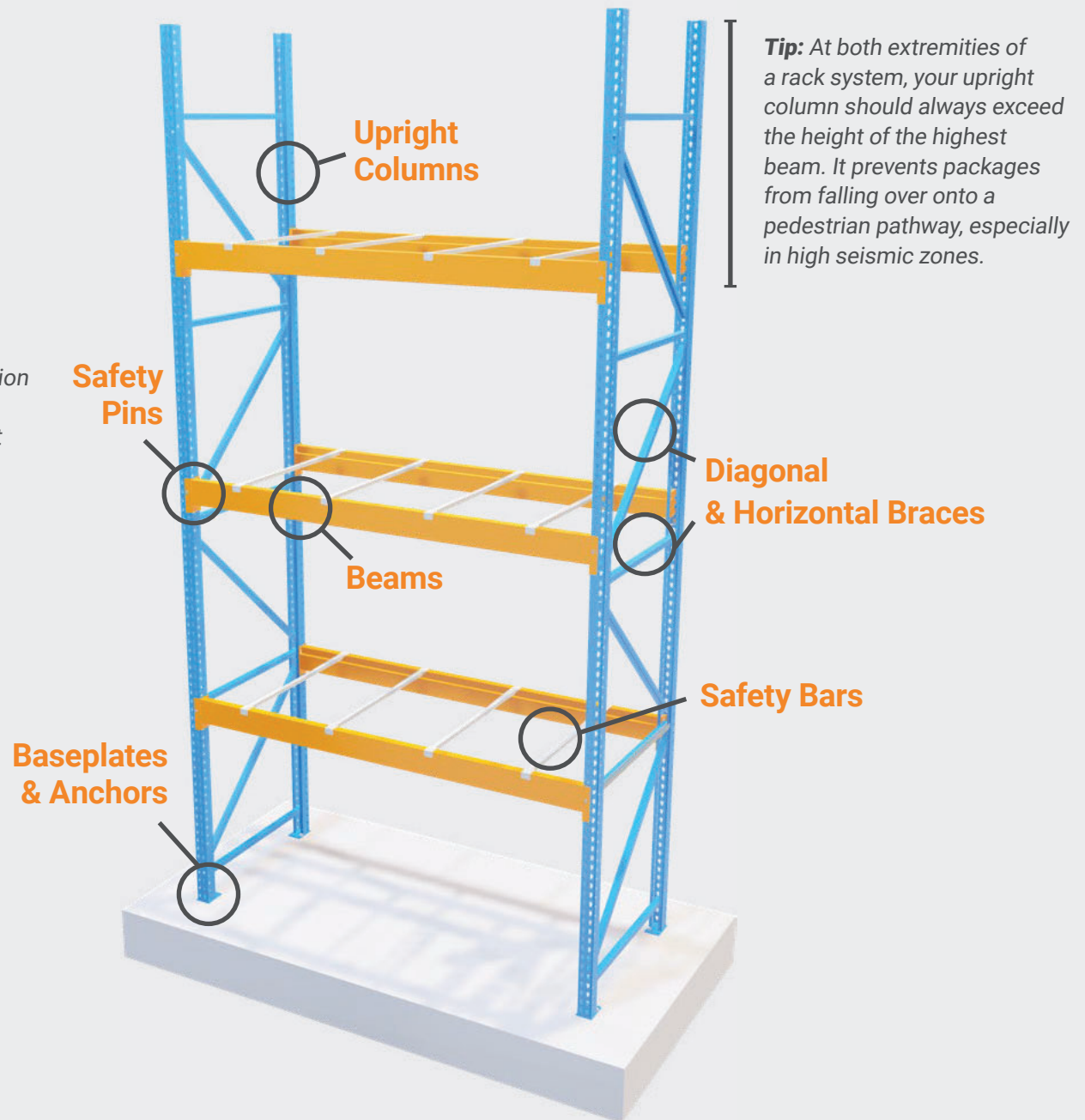
What you need to look for on the racking system

Note: When assessing your pallet racks and finding damage, it can be challenging to address the situation if you don't know the exact term for the affected component. Knowing the name of each component will make it easier to repair or replace damaged parts before the visit of an OSHA inspector.

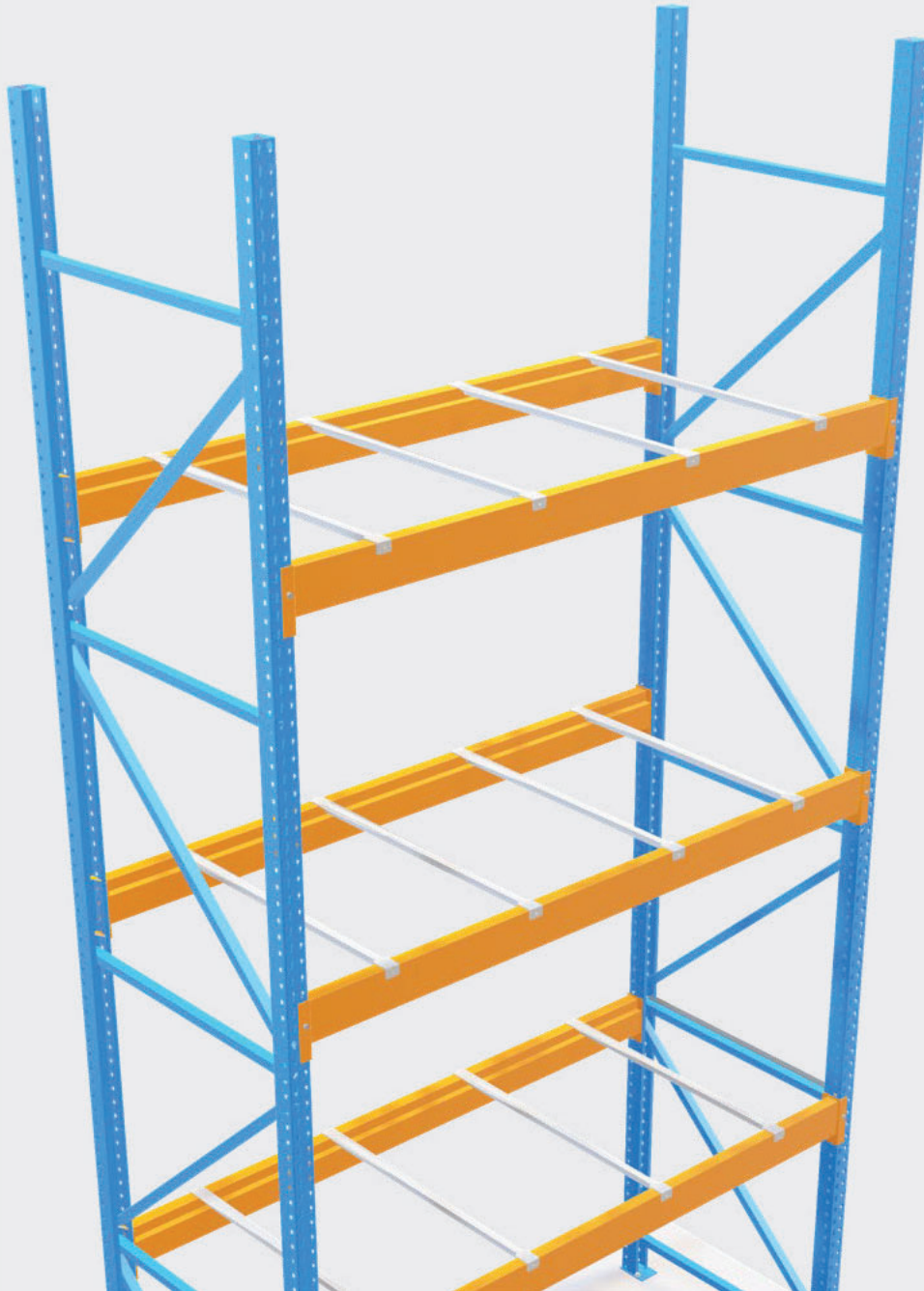


PALLET RACK COMPONENTS GUIDE

DOWNLOAD

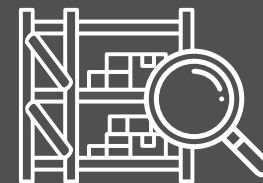


| UPRIGHTS



The upright frame consists of columns and bracing members. Look for the following issues:

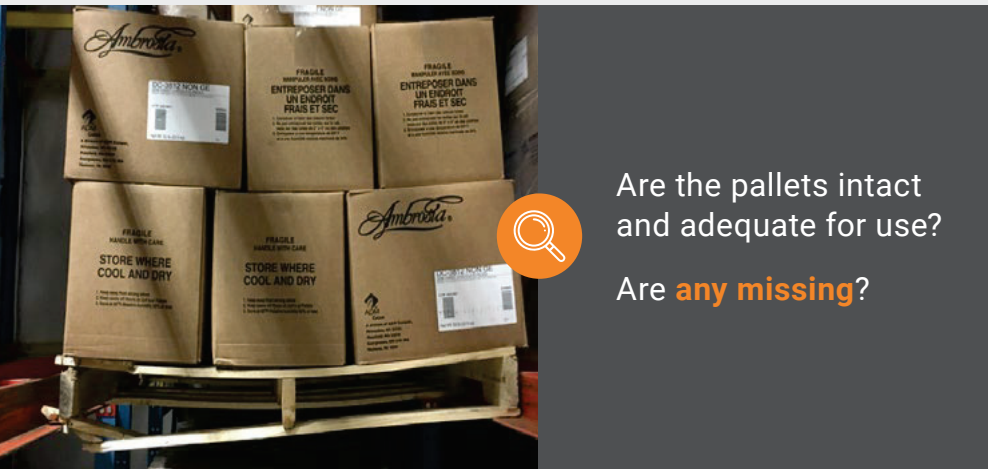
- > Are the columns straight?
- > Is there any evidence of impact?
- > Are the columns twisted?
- > Are the columns rusted?
- > Are the welds intact?



Make sure to inspect both the **front and **rear** columns.**

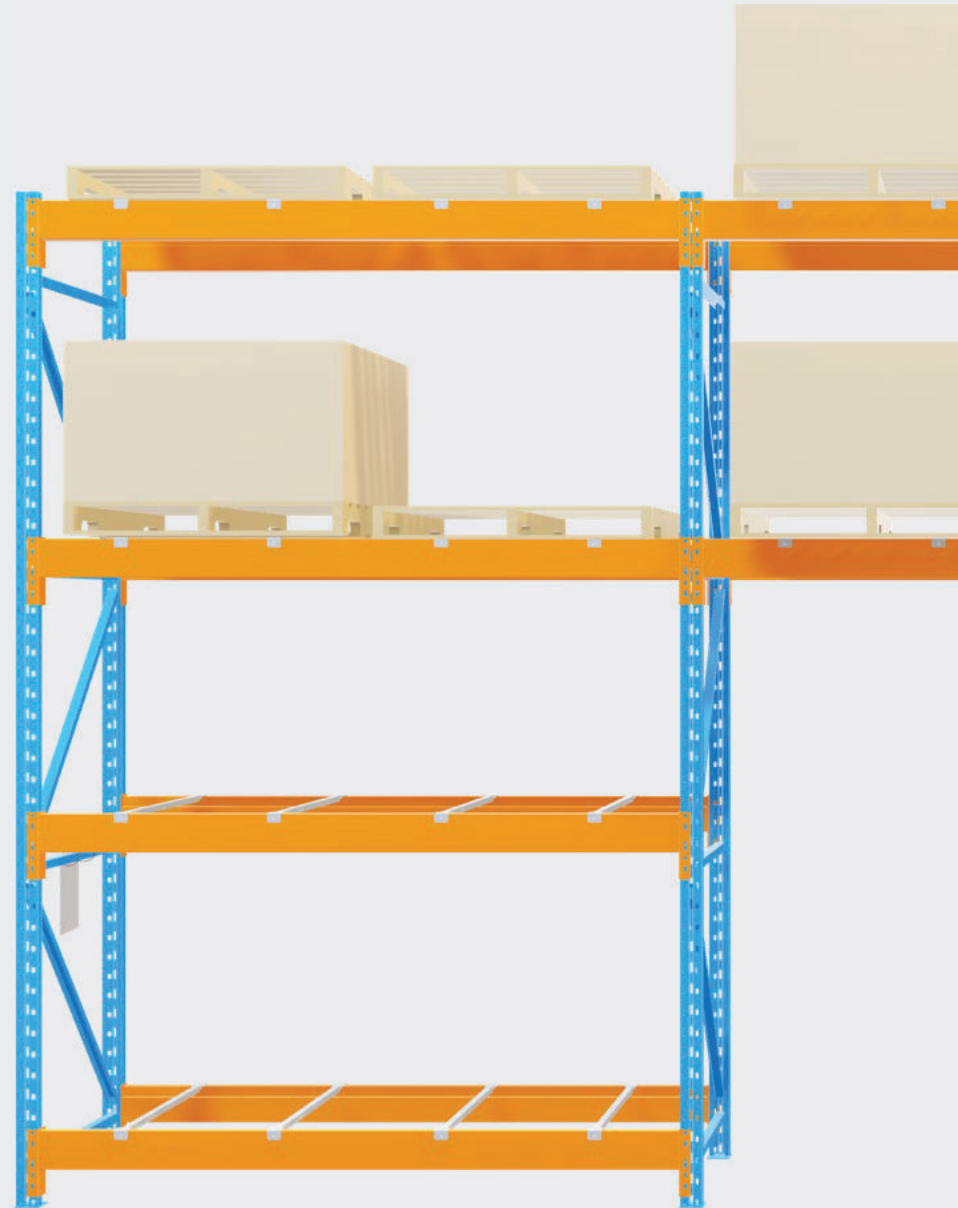
BEAMS AND PALLET POSITIONING

- > Are the beams straight? Do you notice any deflection?
- > Are they adequately attached?
- > Are beam connectors safely attached to the column?
Are safety pins missing? Are bolts adequately torqued?
- > Do the beams appear overloaded?



Are the pallets intact and adequate for use?

Are **any** missing?



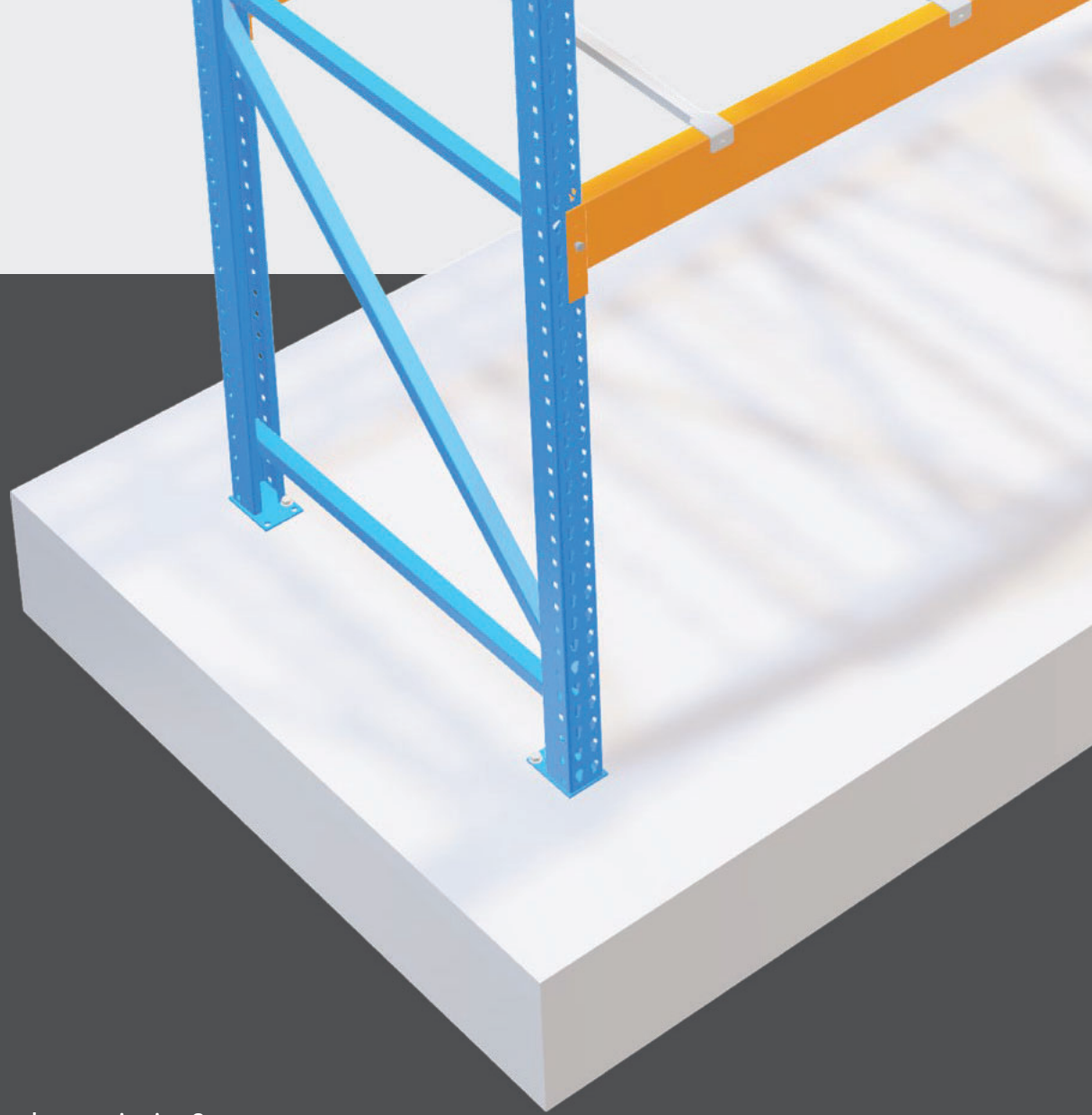
| BRACES



- > Do you notice any dents or deflections?
- > Are the braces adequately attached (i.e. are the welds intact)?



| ANCHORING

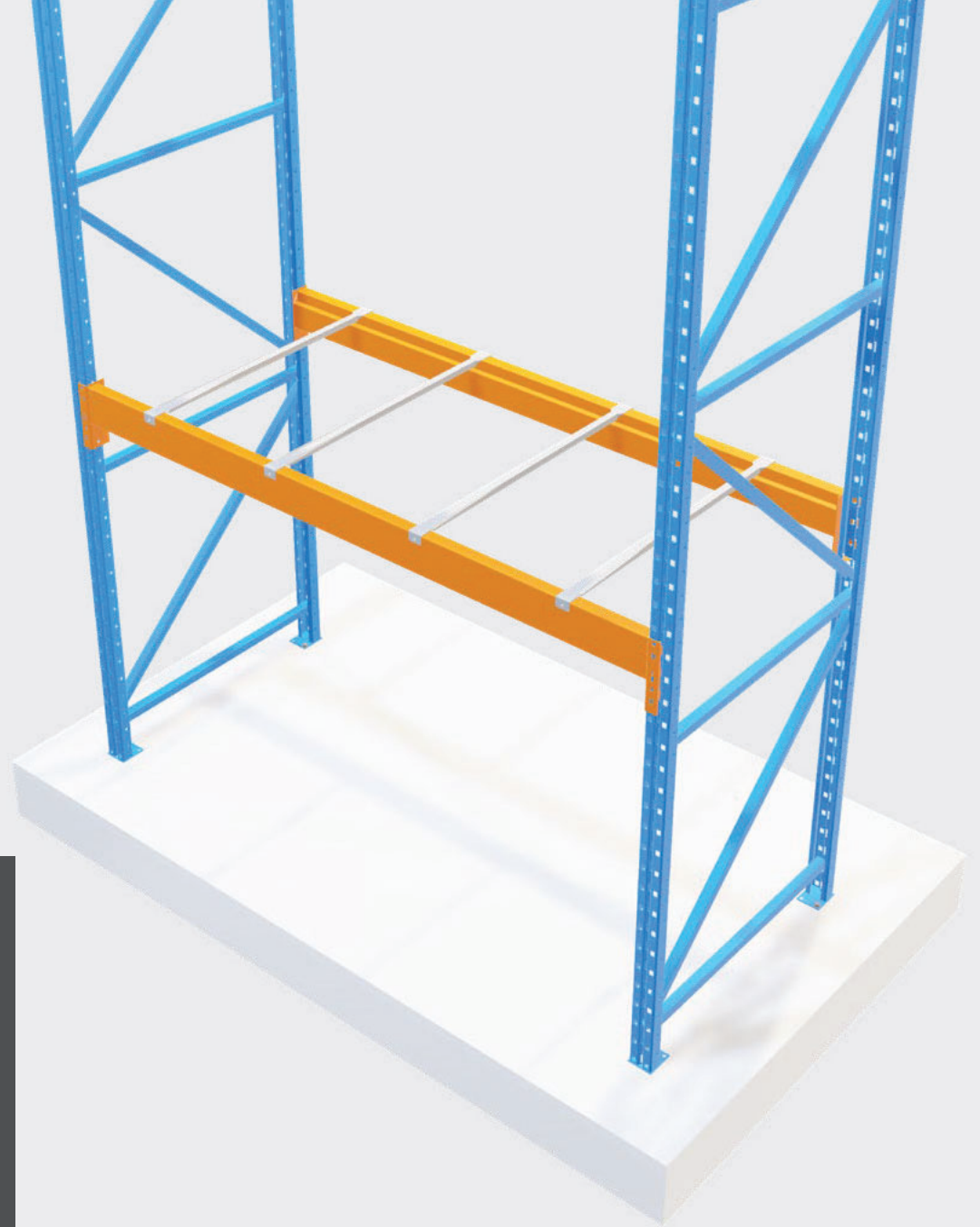


- > Are any anchors missing?
- > Are the anchors damaged, loose, or bent?

| SAFETY BARS

Safety bars prevent pallets from falling between the beams.

- > Are safety bars in place and secured to the beams?
- > Are they positioned at first and third quarter of pallet width?



Are the safety bars
**preventing pallets
from falling through?**

| RACK ACCESSORIES

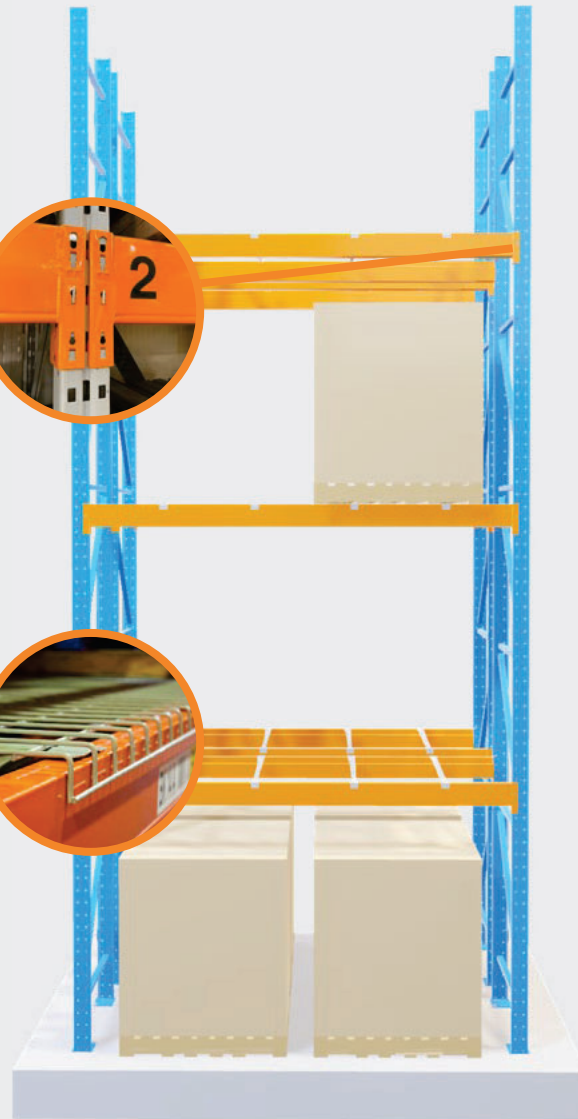
Safety pins

Small but mandatory safety devices to prevent beams from dislodging.



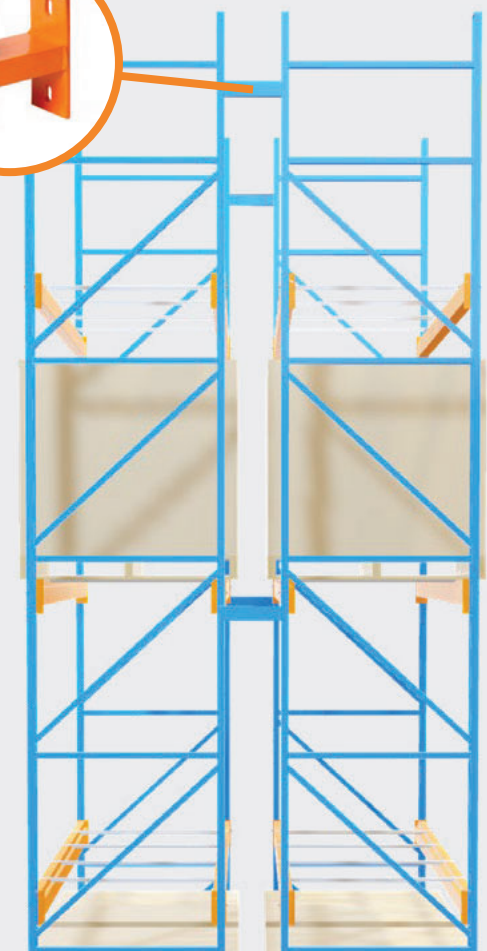
Wire mesh decks

An extension of safety bars to help prevent pallets, products, and debris from falling between beams.



Row spacers

Row spacers, or back-to-back ties, are load-carrying members designed to stabilize two rows of upright frames. Their size and position are determined by structural analysis and must be present for the rack system to perform to its expected load capacity.



Are they in place and properly secured?
Are **any** missing?

| THE 1-2-3 RULE

Use the 1-2-3 rule to determine in what priority you should address damages before an OSHA inspector shows up. But what is the 1-2-3 rule?

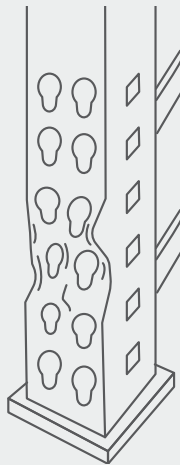
The name 1-2-3 refers to three different damage tolerances ($1/8"$, $2/8"$ and $3/8"$), allowing you to evaluate the degree of deformation on upright elements. It can be helpful for you to assess rack damage in your warehouse. Not only is it easy to remember, but it will make your inspection more concise.

UPRIGHTS FRONTAL

Local deformation > $1/8"$

Over $1/8"$ of frontal local deformation within a span of 40".

Look for other types of damage such as dents, cracks, bulges, pinched columns and signs of corrosion.

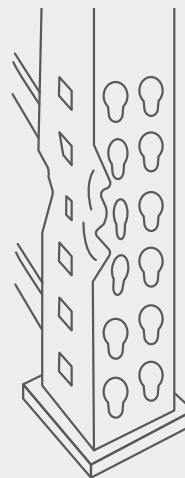


UPRIGHTS LATERAL

Local deformation > $2/8"$

Over $2/8"$ of lateral local deformation within a span of 40".

Look for damage occasionally hidden behind the beam connectors.

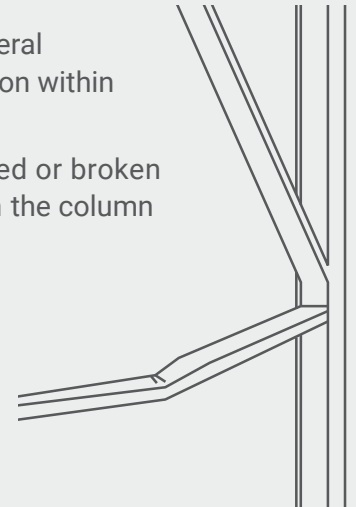


BRACES HORIZONTAL & DIAGONAL

Local deformation > $3/8"$

Over $3/8"$ of lateral local deformation within a span of 40".

Look for cracked or broken welds between the column and the brace.



| ASSESSING PRIORITY LEVELS

Unload

Unload
immediately

Severe damage requiring
immediate unloading
of the rack (bay).

**High
priority**

Address
ASAP

Address this damage
as soon as possible.

**Moderate
priority**

Address in a
timely manner

Address promptly
(6 to 12 months).

**Low
priority**

No immediate
action needed
(watch)

Report and watch
during subsequent
inspections.

UNLOAD VS. LOW-PRIORITY DAMAGE

UNLOAD

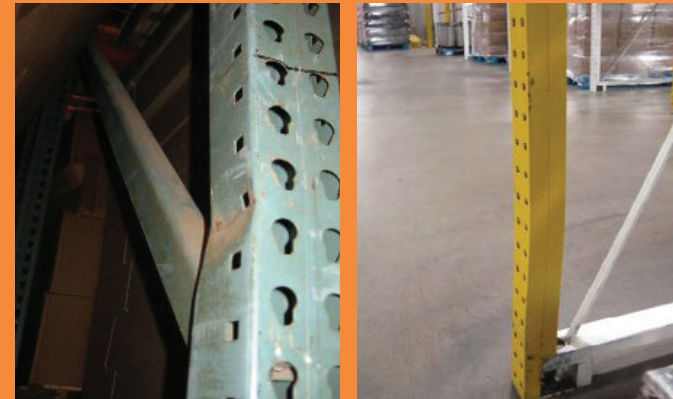
This type of damage is defined as one that constitutes an emergency and a definite safety hazard that requires the unloading of the damaged rack.



Note: Rack welding is not recommended. A proper weld can be difficult to achieve in a warehouse environment and can impact the metal and the rack's load capacity. If damage is not repaired correctly, then this damage can become an issue.

LOW-PRIORITY DAMAGE

Low-priority damage is slight and, taken on its own, does not compromise the integrity of the entire racking system.



Note: Several low priorities must be addressed because their sum could constitute a high risk for the system. It could still lead to extraordinary consequences, especially if left unaddressed for a long time or if damage accumulates in the exact location.

VS.

TAKE NO CHANCES!

When in doubt, have a rack expert come in and evaluate the situation.

CONTACT US

| INSPECTION PROTOCOL & TOOLS

FREQUENCY

There are no clear guidelines about how often to have your racks inspected. A best practice is to do a thorough yearly inspection by a third party and do your assessments periodically based on your warehouse's activities.

RECORDS

If OSHA asks for documentation, you must be able to provide them. Load capacity plaques should be visible on pallet racks and coincide with up-to-date load application and rack configuration drawings (LARCs). You should not operate with racks for which you don't have the drawings and capacities.

WHAT TO REPORT

Keep track of issues and their location on the racks (upright columns, horizontal or diagonal braces, beams, base plates, anchors, safety pins, etc.). Identify the priority level of each issue and how they are being addressed.



WHO SHOULD INSPECT

Safety is a team effort. Once your warehouse employees are trained on recognizing damage, they can do routine assessments. But when in doubt, bring in an expert to do a baseline or thorough inspection.

| DOCUMENTATION

Whichever classification system you choose to prioritize rack damage, ensure that it is documented, labeled, and tended to in a reasonable amount of time.

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RACK INSPECTION CHECKLIST

DATE _____ SHEET # _____
INSPECTOR _____ FREQUENCY _____
LOCATION _____

LOCATION	UPRIGHT COLUMNS	BRACES	BEAMS	ANCHORING	BEAM CONNECTORS	LOCAL REPAIRS	LABELS/PLAQUES	OUT OF PLUMB	OTHER	PRIORITY	OBSERVATION
1											
2											
3											
4											
5											
6											
7											
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9											
10											
11											
12											
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To schedule a complete inspection, contact us: sales@damotech.com

PALLET RACKING INSPECTION CHECKLIST

To help you conduct your rack damage surveys, you could use a rack inspection checklist, each row representing an individual damage or issue that needs to be addressed.

[DOWNLOAD CHECKLIST](#)



It is good practice to keep a history of your inspections in a binder. If OSHA asks for documentation, you can provide it to them immediately.



RACK DAMAGE ASSESSMENT RESOURCES

Various resources are available to help you navigate rack damage assessment and prepare your warehouse for an OSHA inspection.

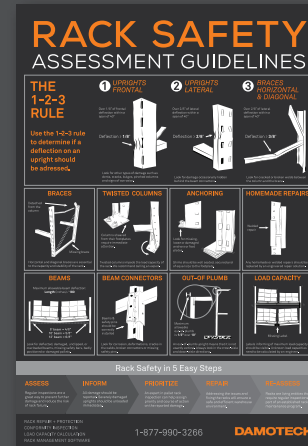
PRACTICAL GUIDE TO RACK DAMAGE ASSESSMENT

DAMOTECH

RACK DAMAGE ASSESSMENT GUIDE

This pocket guide provides clear guidelines to help you determine what to address when assessing an engineered rack system's condition.

DOWNLOAD GUIDE



FREE WAREHOUSE RACK SAFETY POSTER

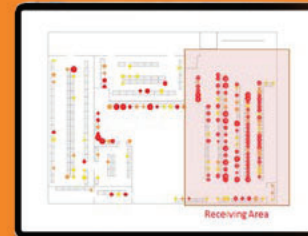
You can order a free safety poster and hang it on a wall of your warehouse to educate your workers on the importance of regular rack inspections and what to assess.

ORDER POSTER

RACK INSPECTION AND ASSET MANAGEMENT SOFTWARE

You could also use an inspection and maintenance software to manage your rack assets' maintenance and better track your progress. It can help improve safety in your warehouse by ensuring that the inspections are completed correctly.

It allows you to access your data in real time and simplifies tracking issues in your warehouse. If OSHA asks for your inspection information, you can provide it to them immediately.



Want to learn how you can modernize the way you manage your rack inspections at your company?

EXPLORE THE DAMOTECH PLATFORM BY CREATING A DEMO ACCOUNT.

GET A DEMO ACCOUNT

ADDRESSING ISSUES AND DAMAGE

SAFETY PROCEDURES

To avoid any injuries:

- > Cordon off the affected areas.
- > Unload if necessary (complete unloading of the rack is necessary for its dismantling).
- > Investigate the incident.
- > Repair or replace the damaged component.



| RACK REPAIR SOLUTIONS

Before replacing a whole damaged column or brace, consider repair solutions that offer the following benefits:

- > Engineered to ensure structural integrity.
- > Offer built-in protection against future damage.
- > Restore original load capacity.
- > Maintain the original configuration.
- > Minimize impact on operations during the repair process.
- > Provide lifetime protection.

You are guaranteed to avoid facing the same situation twice.



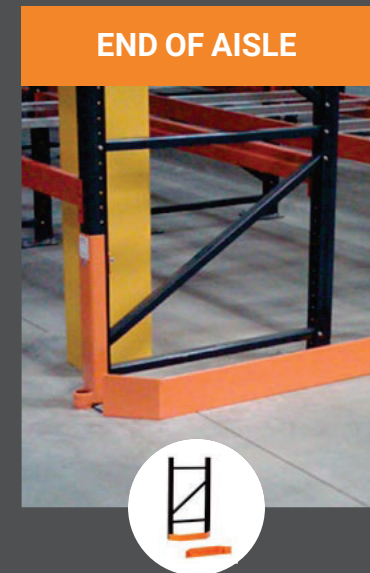
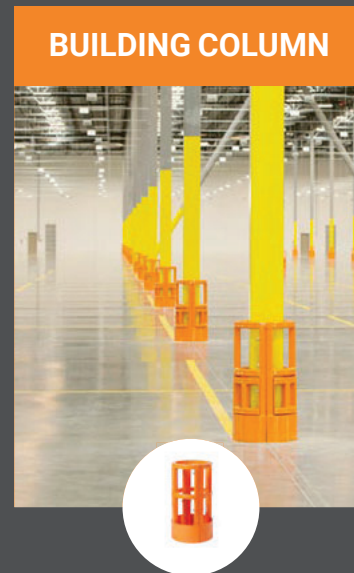
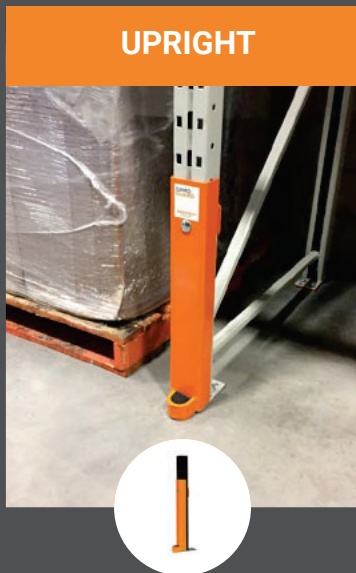
| PROTECTIVE SOLUTIONS

To minimize damage in your warehouse, you should install protection first.

For example, protecting your **pallet rack uprights** is crucial because they are the most vulnerable to impact. A post guard can prevent damage to your warehouse storage systems, minimize maintenance costs over time, and extend the life of your racks.

But there are more than racks in your warehouse. Guardrails can help you protect your **workers** and pathways.

Your **building columns** should also be protected, being the backbone of your building's structural integrity. They cost a lot to repair and can have dramatic consequences if severely damaged. A column protector will protect them from impact by forklifts or any other machinery or vehicle.



OSHA FAQ: ANSWERS TO MOST POPULAR QUESTIONS

Q: Are employers required to provide safety training to their employees?

A: OSHA requires employers to train workers who face hazards.

Q: What is an OSHA recordable injury?

A: Companies with more than 10 employees must record all OSHA-defined work-related severe injuries and illnesses.

The main ones are:

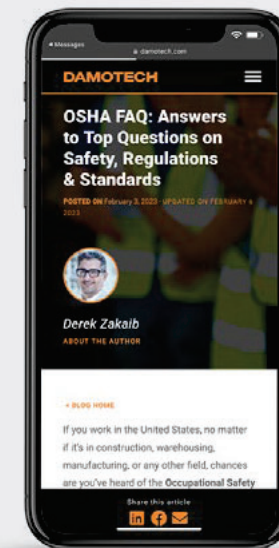
- > Any work-related fatality.
- > Any work-related injury or illness that results in loss of consciousness, days away from work, restricted work, transfer to another job, or requiring medical treatment beyond first aid.

Q: What is an OSHA citation, and when are they issued?

A: An OSHA citation is a document issued to an employer that has violated any standard or regulation with a possible fine. These fines are to help keep workers safe, not to make money.

Q: Which OSHA standards cover general requirements for storage and racks?

A: OSHA Safety and Health Regulations for Construction – Part 1926.250 outlines all general requirements for storage. The regulations cover everything from storage, material handling, use, and disposal.



For more Q&A
on OSHA, please read
the Damotech blog.

[READ NOW](#)

| KEY TAKEAWAYS

How do you prepare your racking for an OSHA inspection? Remember the steps you should follow to prepare your warehouse and avoid fines.

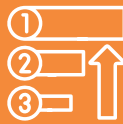
PREPARING FOR AN INSPECTION

1



Identify issues and damages on your racking systems. Don't forget the 1-2-3 rule.

2



Assess the priority level of the issues, whether each is low, moderate, high, or if you must unload immediately.

3



Communicate the situation clearly and keep track of it using different tools, like an inspection checklist, a binder, or rack inspection management software.

4



Create a plan to address the issues you found.

THE **BEST TIME** TO PLAN FOR AN OSHA INSPECTION IS BEFORE IT HAPPENS.

Your workplace should always follow OSHA regulations and standards.

PARTNERING WITH EXPERTS

Remember that since an OSHA inspector can show up at any given time without notice, your best way to prepare is to **ALWAYS** comply with OSHA regulations.

If you are looking for guidance on preparing your warehouse and pallet racks for an OSHA inspection, resources are available to help you. Ensuring your facility meets all the necessary safety regulations can be challenging, but finding a reliable safety partner can make the process much smoother. Consider reaching out to industry experts for assistance in navigating your warehouse safety.



NO MATTER THE QUESTIONS,
Damotech experts are ready to listen and share their knowledge so that you can succeed in achieving your safety goals.

- > Rack safety inspections
- > Rack safety products
- > Warehouse employee training



ARE YOU TRAINED ON WAREHOUSE SAFETY?

Learn how Damotech's pallet rack safety training can help your workers understand the potential hazards and know the steps to take when damage occurs.

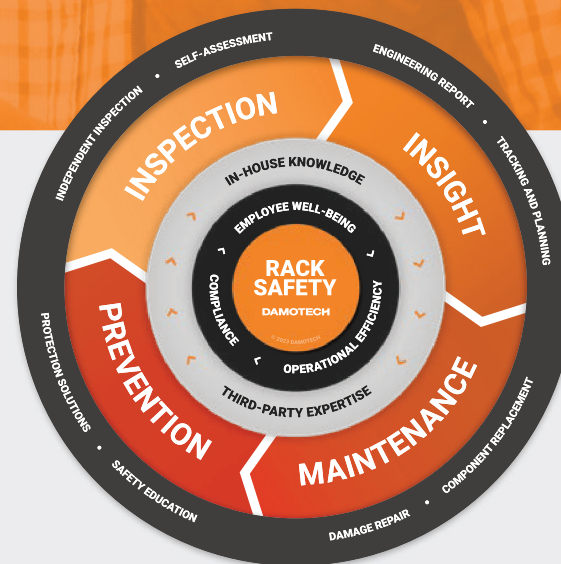
REQUEST MORE INFO

| RACK SAFETY AS A SERVICE

Upgrade your rack safety with the all-inclusive warehouse safety program designed by industry-leading experts! Founded on the Rack Safety Flywheel, a 360-degree approach to ensuring the safety of your warehouse racks, DAMO CARE can help you achieve peace of mind and eliminate the stress of potential rack failures. Count on rack safety experts to assist you in preventing costly accidents and keeping your employees and warehouse safe, and let Damotech handle your rack safety needs while you focus on your business operations.

**DISCOVER HOW DAMO CARE
AND THE RACK SAFETY FLYWHEEL
CAN BENEFIT YOUR COMPANY!**

[LEARN MORE](#)





TALK TO AN EXPERT