

# RACK SAFETY

## ASSESSMENT GUIDELINES

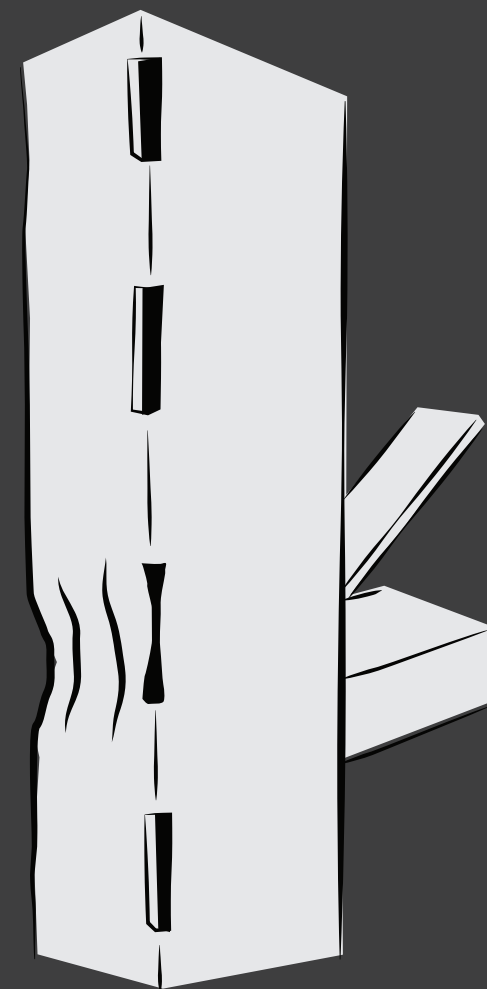
### THE 1-2-3 RULE

Use the 1-2-3 rule to determine if a deflection on an upright should be addressed:

#### 1 UPRIGHTS FRONTAL

Over 1/8" of frontal deflection within a span of 40"

Deflection > 1/8"

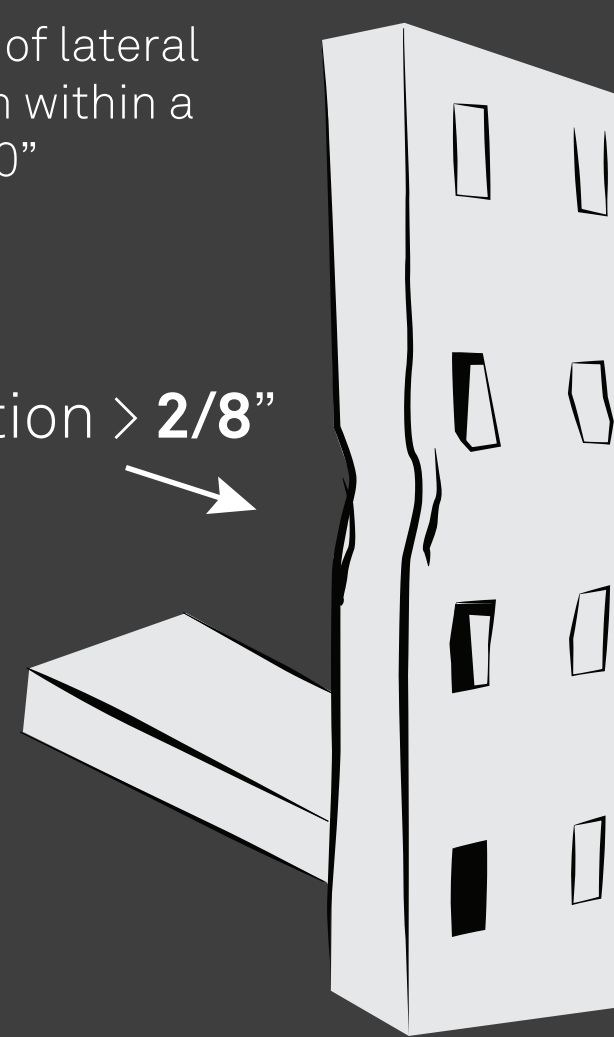


Look for other types of damage such as dents, cracks, bulges, pinched columns and signs of corrosion.

#### 2 UPRIGHTS LATERAL

Over 2/8" of lateral deflection within a span of 40"

Deflection > 2/8"

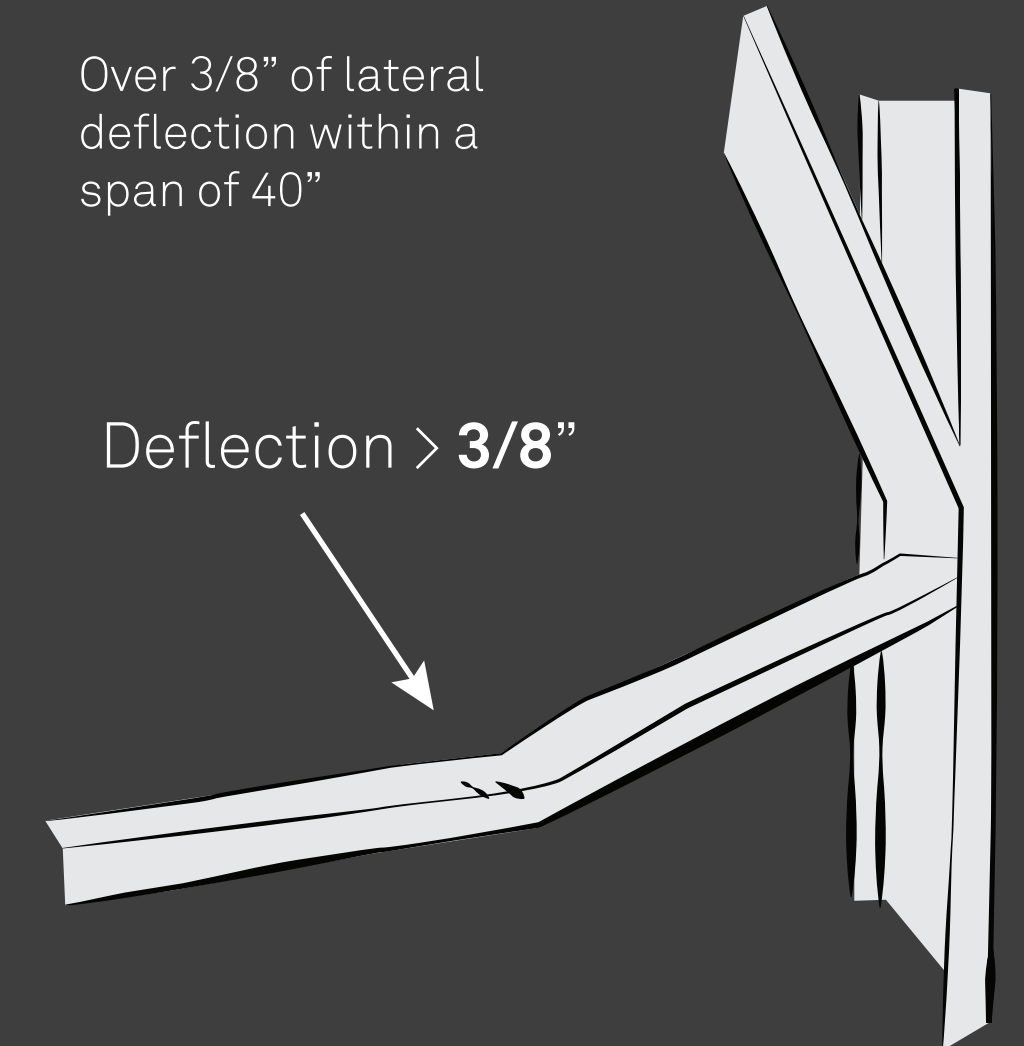


Look for damage occasionally hidden behind the beam connectors.

#### 3 BRACES HORIZONTAL & DIAGONAL

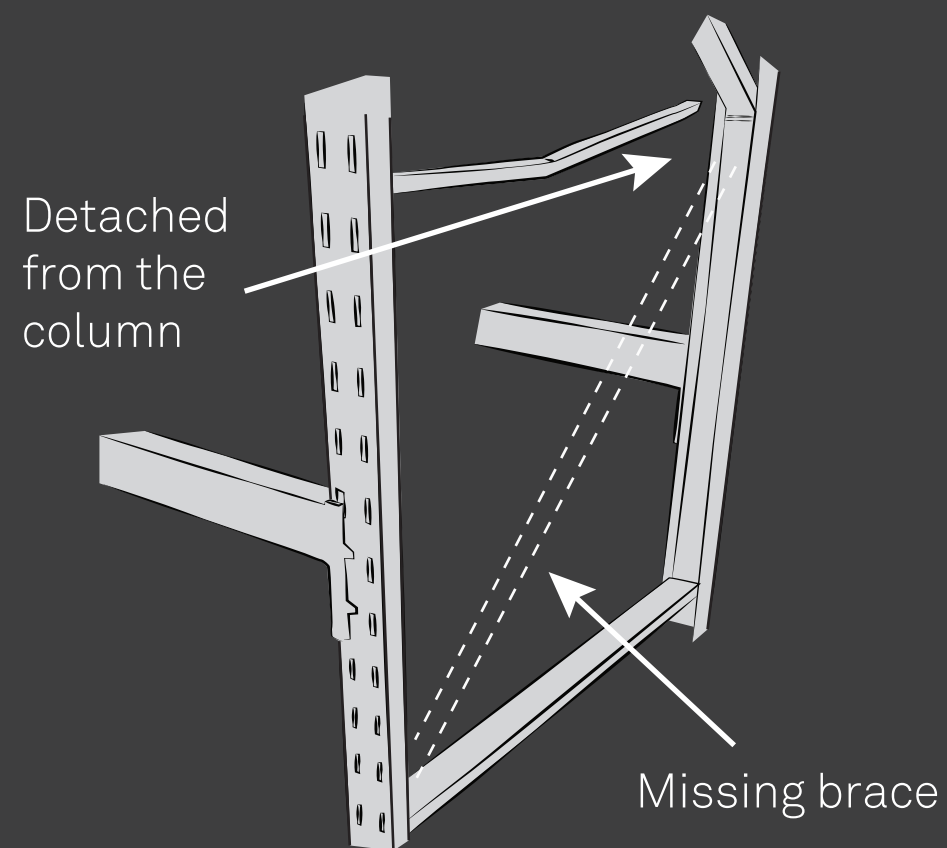
Over 3/8" of lateral deflection within a span of 40"

Deflection > 3/8"



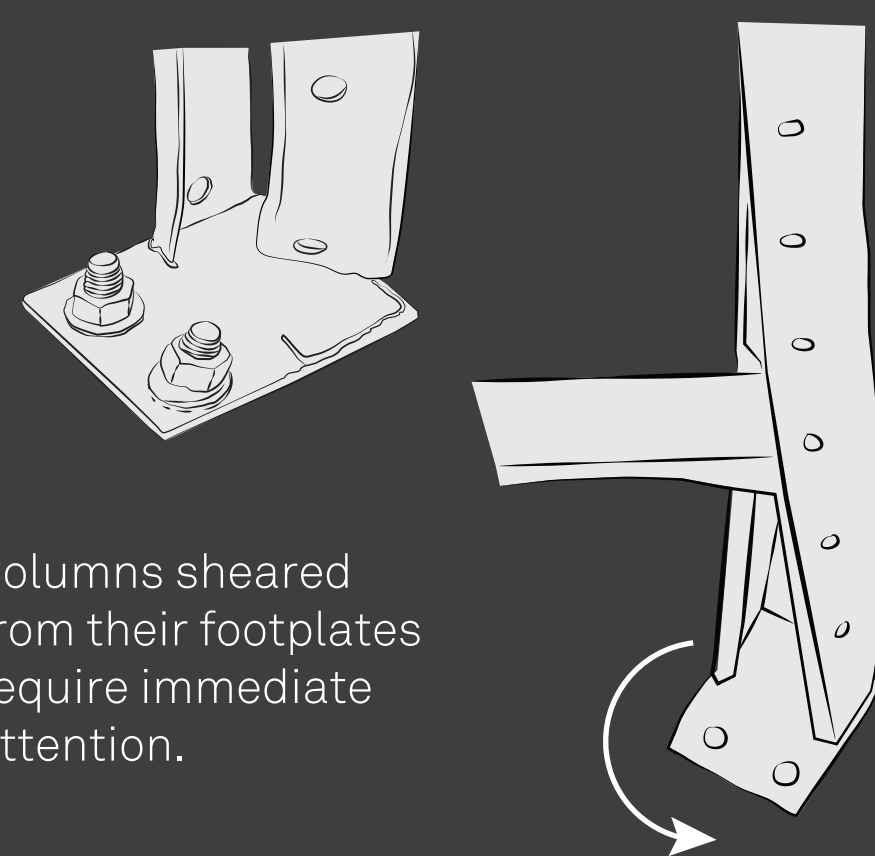
Look for cracked or broken welds between the column and the brace.

#### BRACES



Horizontal and diagonal braces are essential to the capacity and stability of the racking system.

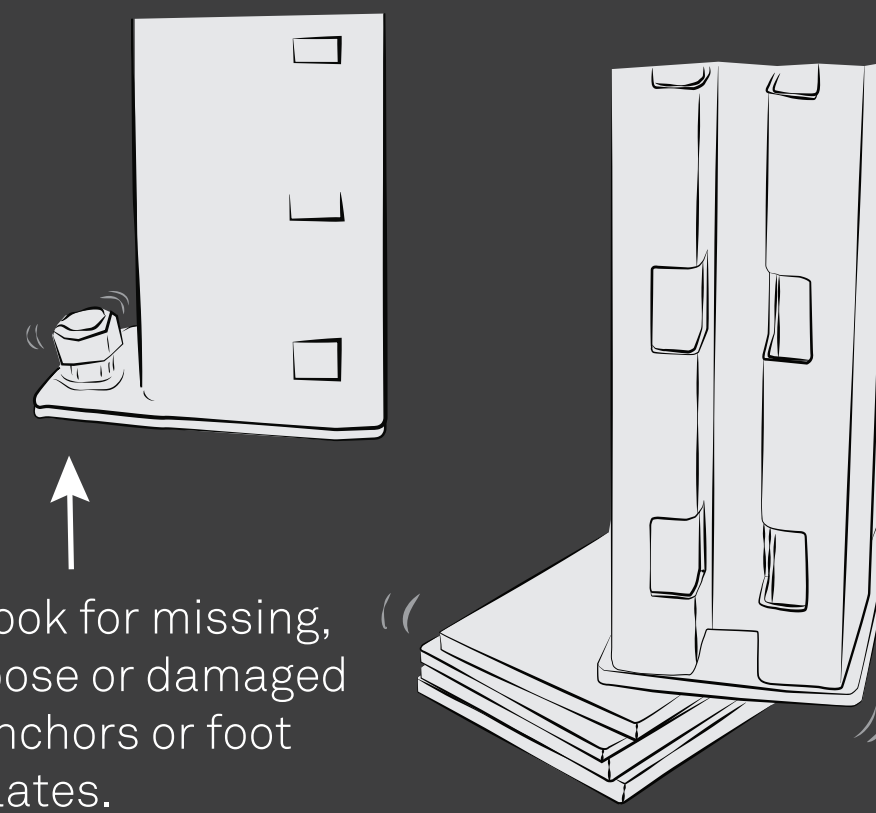
#### TWISTED COLUMNS



Columns sheared from their footplates require immediate attention.

Twisted columns impede the load capacity of the rack. We recommend calling an expert.

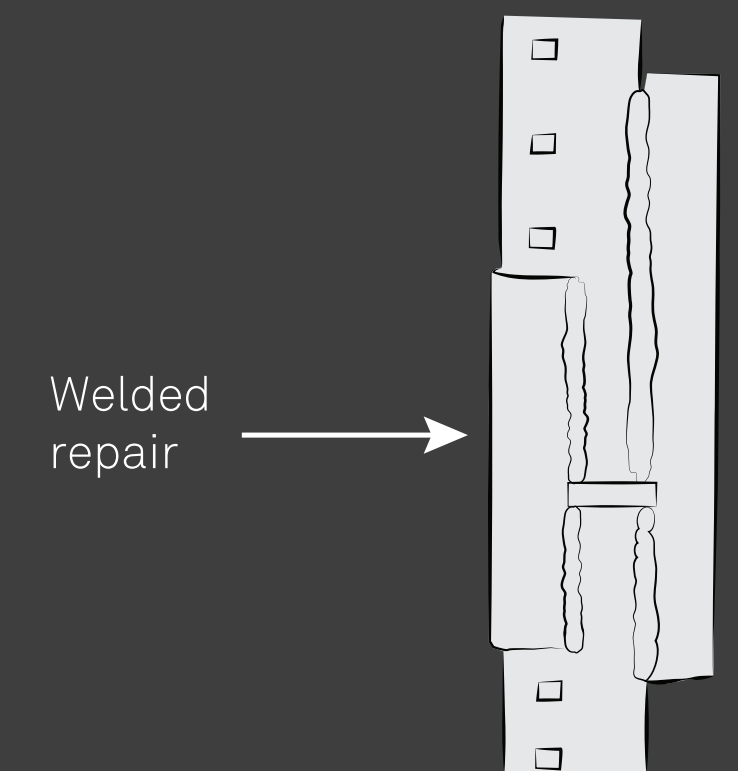
#### ANCHORING



Look for missing, loose or damaged anchors or foot plates.

Shims should be well seated, secured and of equal size to the footplate.

#### HOMEMADE REPAIRS

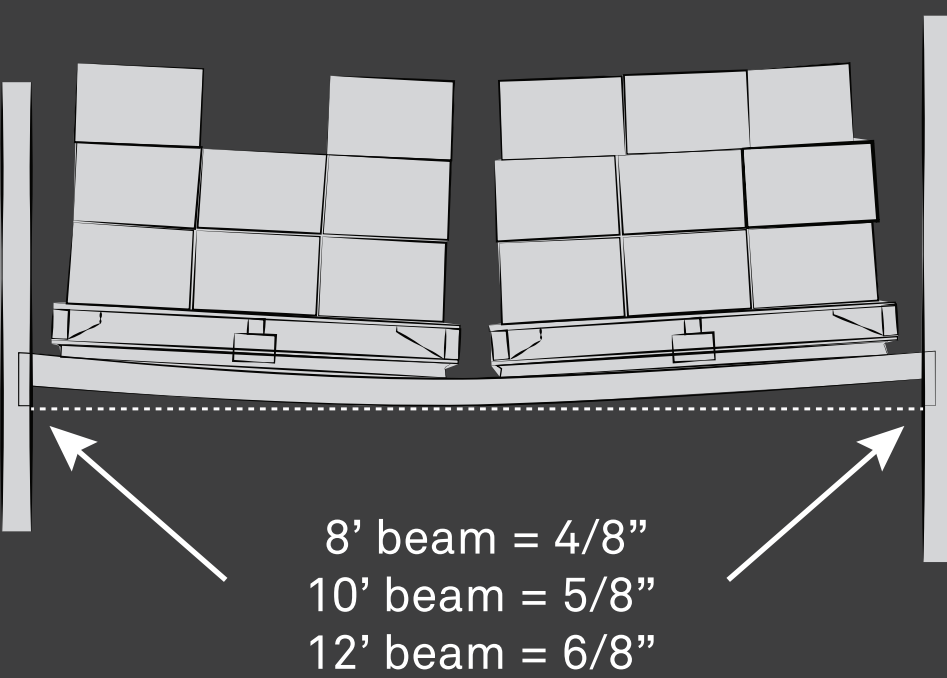


Welded repair

Any homemade or welded repairs should be replaced by an engineered repair solution.

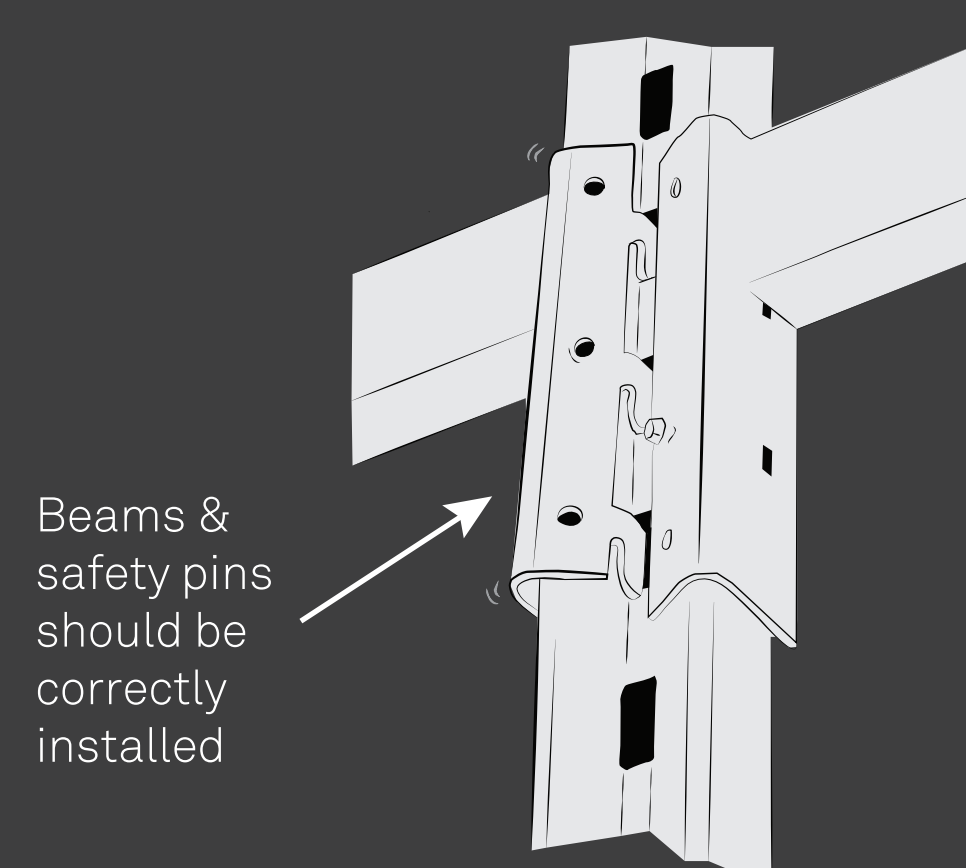
#### BEAMS

Maximum allowable beam deflection:  
Length (inches) / 180



Look for deflected, damaged, unclipped, or overloaded beams, missing safety bars, badly positioned or damaged pallets.

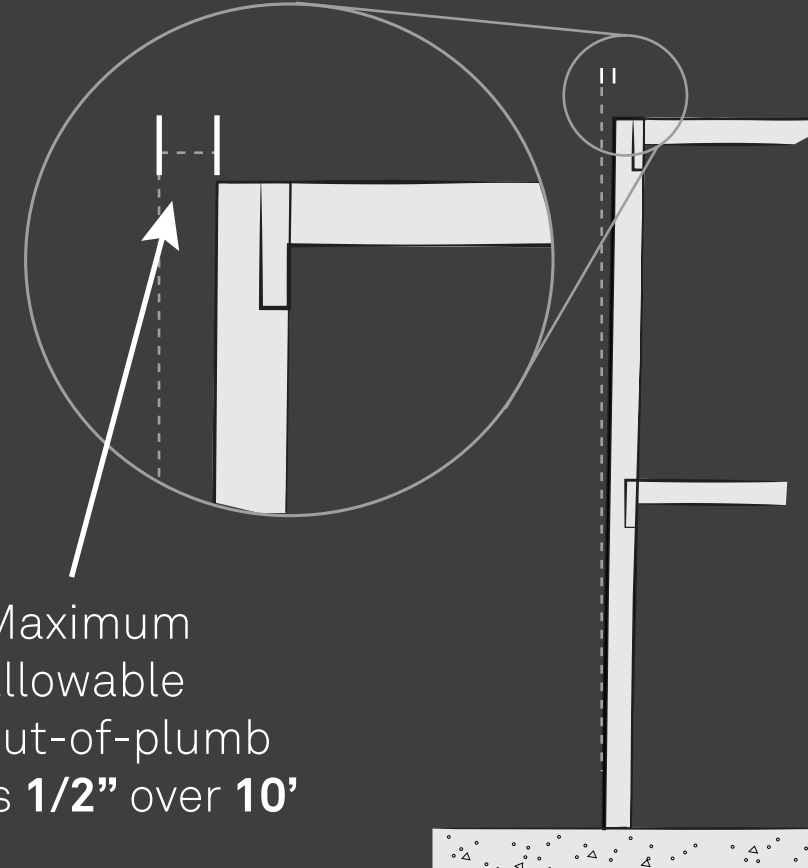
#### BEAM CONNECTORS



Beams & safety pins should be correctly installed

Look for corrosion, deformations, cracks in the welds, broken connectors or missing safety pins.

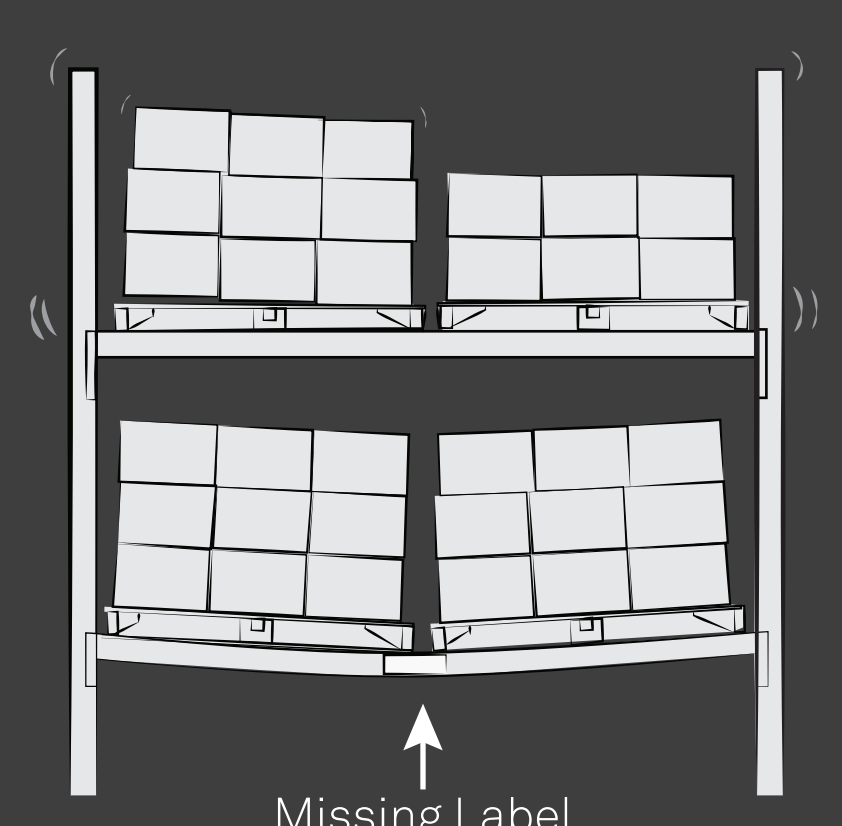
#### OUT-OF-PLUMB



Maximum allowable out-of-plumb is 1/2" over 10'

An out-of-plumb upright means that it is not exactly vertical. Always look in the cross-aisle and down-aisle directions.

#### LOAD CAPACITY



Missing Label

Labels informing of maximum load capacity should be visible. Unknown load capacities need to be calculated by an Engineer.

### Rack Safety in Five Easy Steps

#### ASSESS

Regular inspections are a great way to prevent further damage and reduce the risk of rack failure.

#### INFORM

All damage should be reported. Severely damaged uprights should be unloaded immediately.

#### PRIORITIZE

An expert in pallet rack inspection can help assign priority and course of action on the reported damage.

#### REPAIR

Addressing the issues and fixing the racks will ensure a safe and efficient warehouse environment.

#### RE-ASSESS

Racks are living entities that require regular inspections as part of an established rack maintenance program.

RACK REPAIR + PROTECTION  
CONFORMITY INSPECTION  
LOAD CAPACITY CALCULATION

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