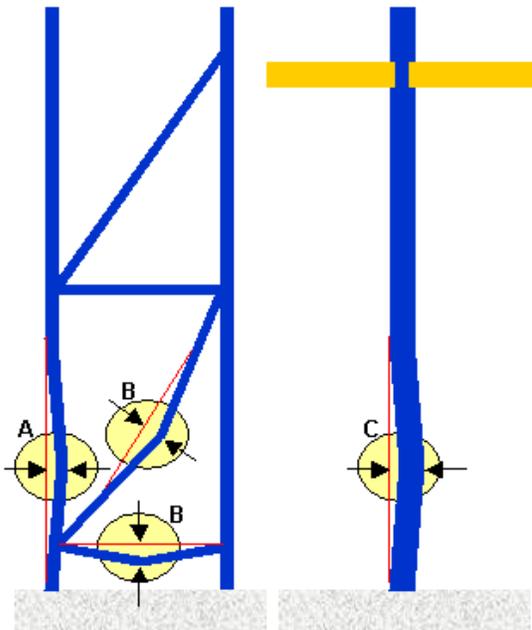
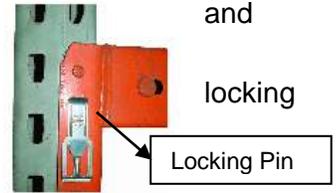


## Guideline for Rack frame inspection

1. A rack frame may be found in a warehouse or manufacturing plant. Utilize this alert to increase awareness on the potential consequences of a racking collapse caused by deterioration.
2. Re-emphasize the need to report any impacts on racking structures.
3. Conduct frequent inspections (monthly or more frequently) to check label abnormalities such as loose bolts or misalignment. Make minor repairs, e.g., replace or tighten bolts and nuts, and replace missing pins.
4. Contract technical experts for detailed inspections at least yearly. If unavailable, use the information below from a company that specializes in storage equipment safety to guide your own inspection.



- When measuring a frame for immediate replacement, place a straight edge 1.0 meter (3.3 ft) long on a flat surface of the concave side of the damaged frame such that the damaged is centered, as near as possible, along the length of the straight edge.
- For uprights bent in the plane of the frame:
  - A: The maximum gap between the upright and the straight edges should not exceed 3.0 mm ( $\pm 0.12$  inch)
  - B: For bracing members bent in either plane the gap between the straight edge and the bracing member should not exceed 10mm ( $\pm 0.395$  inch)
  - C: For an upright bent in the direction of the rack beam spans, the maximum gap between the upright and the straight edge should not exceed 5.0 mm ( $\pm 0.197$  inch).

5. Be aware that drive-in or drive-through frames are less stable than conventional racks, and the critical points to observe are:
  - Lock the top section.
  - Anchor it to the floor with anchor bolts when fixing base plates.
  - Arrange load evenly.
  - Assemble parts per manufacturer's recommendations.
6. Whenever making changes to the racking system, contact the supplier for a structural design, and execute modifications under the supplier's technical supervision.
7. Install protection devices to reduce/eliminate impacts from forklift trucks on the uprights of your warehouse.
8. Discuss this incident during your own refresher training about machine safety with technicians, operators and EHS professionals.

# Racking Inspection Traffic Light System

(Damage Guidelines & Risk Assessment)

Beam	Upright (Side Impact)	Upright (Front Impact)	Bracing
1mm-10mm Over entire beam length	1mm-5mm Over 1m length	1mm-3mm Over 1m length	1mm-10mm Over 1m length
11mm-20mm Over entire beam length	6mm-10mm Over 1m length	4mm-6mm Over 1m length	11mm-20mm Over 1m length
>20mm Over entire beam length	>10mm Over 1m length	>6mm Over 1m length	>20mm Over 1m length



**Risk Level & Required Action**

**Green: Minor damage**  
Surveillance - Indicate as safe (for now) and reassess at future inspections.

**Amber risk: Significant damage**  
Repair as soon as possible - Specify the damage and do not load/ reload the component until certified as safe.

**Red risk: Critical damage**  
Immediately offload all affected bays and replace damaged components before use.