APEX RACK REPAIR CHECKLIST

Upright Frame Damage

- ❑ Inspect the upright from front-to-back, down-aisle, and at the corners, looking for damage and or deflection (bend in the upright column greater than ½").
- ❑ Report any deflection gap greater than ½" at its widest point.
- ❑ Report tears in the steel.
- ❑ Report separation between column and seismic backer if applicable.
- ❑ Inspect for leaning uprights – up-and-down, front-to-back, and side-to-side. Uprights that are leaning (or out of plumb) have a reduced capacity and are considered unsafe.
- ❑ Measure if the upright is too far out of plumb -- divide the total height by 240. **If the upright is out of plumb by more than 5/8", it should be unloaded and replumbed.**
- ❑ Areas with extra space between beam levels, known as the unsupported span, have fewer connections to stabilize the system in the event of a strike. Note any damage in these areas as it may be significant.
- ❑ Note all damage to standalone racking, as it has fewer stabilizing features than secured systems.

Row Spacers - Back-to-Back Racking

Single rows of rack should meet the recommended height-to-depth ratio of 6:1, which is equivalent to the distance from the floor to the top beam level, divided by the depth of the frame.

Systems with a height/depth ratio of 6:1 or greater require row spacers at a maximum of 8' to 10' apart to help secure the rack.

- ❑ Check for special anchors and footplates or overhead rack ties also used to stabilize the systems.
- ❑ Record any deficiencies or damaged components as well as any missing spacers.

Struts

- ❑ Record any deflection in the strut of more than ½".
- ❑ Record tears or broken welds where the struts connect to the upright.

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APEX RACK REPAIR CHECKLIST

Footplates, Shims & Anchors

- ❑ Record as damaged if there are rips or tears.
- ❑ Record as damaged if twisted by more than ½".
- ❑ Check that shims are secure and not sliding out.
- ❑ Check that each footplate has a secured anchor.
- ❑ Record loose, missing, or damaged anchors.

Beam Damage

- ❑ Record dents or tears in the beam.
- ❑ Record extensive beam deflection (or bowing) typically caused by rack overloading.

Allowable beam deflection calculation - divide the beam length (from the inside of the columns) by 180. If the deflection gap is equal to or greater than ½", the beam is overloaded and unsafe.

Beam Connectors & Supports

Examine beam connections, including connectors, flanges, and safety pins.

- ❑ Record damaged beam connectors or flanges.
- ❑ Record damaged safety pins and clips, if applicable.
- ❑ Record damaged or missing wire decking.
- ❑ Record damaged or missing pallet supports.

Addressing Immediate Warehouse Safety Risks

Unload severely damaged rack and mark with caution tape to prevent further damage or injuries.

General guidelines for immediate rack safety concerns include:

- ❑ Rack that is not anchored to the ground
- ❑ Severe beam damage where the beam is creased or buckled
- ❑ Upright damage where the upright is completely creased or out of plumb
- ❑ Excessive strut damage, or multiple damaged struts, in a frame line or row
- ❑ Multiple damaged items in a row or system

Additional Warehouse Safety Concerns

While your conducting your pallet rack inspection, note the following warehouse safety features to ensure everything is in place & in good condition:

- ❑ Capacity load plaques provided by the rack manufacturer must be conspicuously posted for each rack type
- ❑ Inspections must also include fire suppression systems to ensure they are in compliance.
- ❑ Check that there is sufficient lighting and it is in working order.

Contact the Apex PROs for certified rack inspection support. If you're using the **Apex Rack Repair App** to conduct your pallet rack audit, upload your completed findings to the Apex PROs for a comprehensive review and independent repair solution.

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