



Storage Equipment Manufacturers'  
Association

# The Importance of Inspection and Maintenance for Warehouse Racking

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**For: Birmingham Health, Safety & Environment Association**



# Warehouse Safety

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## Why do we need rack safety inspections?

- To prevent and minimise the effect of accidents
- To comply with the requirements of 'The Workplace Health Safety and Welfare Regulations' or 'The Provision and Use of Work Equipment Regulations (PUWER)

# Warehouse Safety



**The possible  
consequences  
of a moment's  
carelessness**



# Warehouse Safety



.....and another one





# Warehouse Safety

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**Safety is just common sense**

**but this is often in short  
supply!**

## Types of inspection, frequency, records to be kept and action points from survey

### **1 Damage inspection by warehouse operatives**

Report all damage as it occurs.

### **2 Weekly inspections as a visual check from ground level**

Can be carried out as part of Supervisor's patrol with documented action points for serious damage found.



# The Importance of Racking Inspections



## ■ **3 Annual or bi-annual inspection by ‘technically competent person’**

- Carry out a detailed examination of the storage system
- Check records to confirm that items 1 & 2 are being carried out
- Confirm that repairs are being actioned on damage where necessary
- Review damage history looking for repetitive damage and propose solutions where appropriate
- Propose modifications to other training areas if appropriate
- Seek expert advice in cases of doubt
- Fully record findings and recommendations

# The Importance of Racking Inspections



Text/Bullet Points here

## Damage Report

Client:				Location:						
Job Reference:		Date:		Racking Manufacturer:						
Location Ref.										
Floor Fixings										
Front Uprights										
Bracing										
Rear Uprights										
Frame Bolts										
1st Level										
2nd Level										
3rd Level										
4th Level										
5th Level										
6th Level										
Row Spacers										
Wall Ties										
Frame Guards										
Shelves										
Accessories										
Floor Condition										

Key: Red Risk Items - R Major damage 1  
 Amber Risk Items - A Beam not located properly 2  
 Green Risk Items - G Beam locks missing 3  
 Satisfactory - S Slight damage 4

Inspector ..... Date .....





# The Importance of Racking Inspections



- **4 Seriously damaged 'red risk' items justify an immediate action note as illustrated**

## Immediate Action Report

### RED Risk Items

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Site Location:

Inspection Date:

Please be advised that immediate action is required to render your storage installation safe.

Fault found:

Action required:

Inspectors Name:

Signature: ..... Date:.....

Signature: ..... Date:.....

### **5. Action points as a result of the survey will include the following:**

- Offload and Isolate any '**red risk**' items
- Confirm that damage repairs are in hand
- Review damage types to identify repetitive problems



# The Importance of Racking Inspections

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Recommend changes to equipment and methods to prevent re-occurrence of the problem.

This may include such items as:

- Upright protection
- Briefing session to warehouse staff
- Changes to formal driver training programmes
- Housekeeping issues



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## **Responsibilities of : everyone**

- To ensure that the implications of any change is considered to ensure that adequate safety margins are maintained
- To recognise significant defects in the pallets and loads and initiate appropriate action
- To place loaded pallets squarely on the support beams with corner blocks supported
- To be aware that some loads are not rigid and can slump causing problems on removal from the racking



# The Importance of Racking Inspections

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## **Responsibilities of : everyone (cont)**

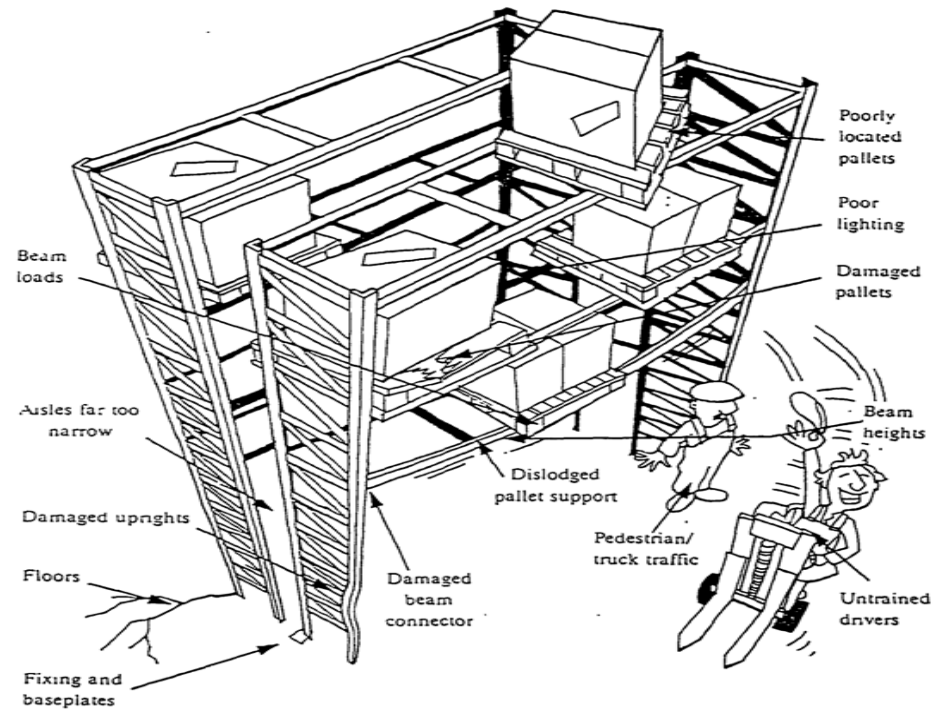
- Not to side shift loads against rack uprights
- The special requirements of small parts Storage
- The importance of cleanliness and tidiness in warehouse operations
- The essential requirement to report damage as it occurs or as it is noticed during patrols

# The Importance of Racking Inspections



Some points to consider during racking inspections

**Responsibilities  
of :  
everyone (cont)**





# The Importance of Racking Inspections

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## **The original supplier of the racking is responsible for:**

- Ensuring that the structure is designed with and manufactured from materials that are fit for purpose
- Allowing for adequate factors of safety in the design calculations to provide sufficient strength and stability to accommodate the specified loads (normally by confirming that the design is prepared to the SEMA standards or to the appropriate structural codes BS5950, EC3 etc.)



# The Importance of Racking Inspections

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## **The original supplier of the racking is responsible for: (cont)**

- Having in place adequate quality control procedures for design, manufacture and installation
- Providing sufficient information to the users to allow them to use the equipment safely, normally being the provision of details of beam or support arm sizes, locations and safe working loads for the system
- In addition information provided on notices usually located on the ends of the racking





# The Importance of Racking Inspections

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The User is responsible for ensuring:

- Pallets are in good condition and the loads are correctly stacked on the pallets:

Pallets can collapse if they are: -

- Damaged
- Poorly constructed
- Of the 'one trip' type
- The load is not uniformly distributed across the load area



# The Importance of Racking Inspections

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The User is responsible for ensuring: (cont)

A reporting system is in place to to monitor accidental damage

Damage reporting by warehouse personnel is the most important inspection procedure but this relies on operator integrity

Disciplinary procedures as a result of such reporting must be the exception or little will be reported however it is necessary that accident-prone individuals must be identified for extra training



# The Importance of Racking Inspections

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## **Red risk**

**Areas where a high level of damage is identified which warrants immediate offloading and isolation until repair work is carried out**

## **Amber risk**

**Areas where the damage is sufficiently severe to warrant remedial work but not sufficiently severe to warrant the immediate offloading of the rack. Once the pallet positions in this area are emptied they should not be refilled until the repairs are carried out. If repairs are not effected in 4 weeks an Amber risk item automatically becomes a Red Risk item**

## **Green Risk**

**Areas where damage is present but it falls within the SEMA allowable limits and should be recorded for further consideration at the next inspection**

# The Importance of Racking Inspections

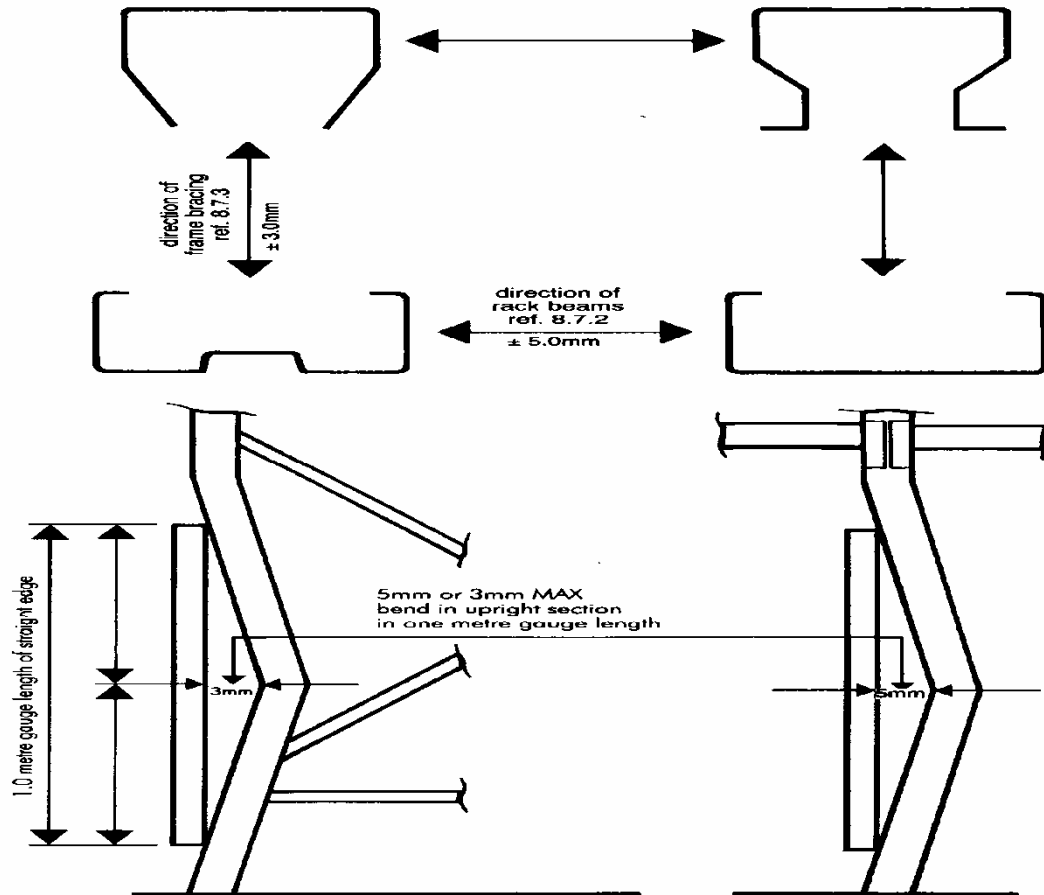


Fig 1. Showing typical Upright Sections and Method of Measurement

# The Importance of Racking Inspections



# The Importance of Racking Inspections



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# The Importance of Racking Inspections







## The Importance of Racking Repair

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When damage is identified that effects the safety of the racking system the racking should be offloaded and controls introduced to prevent it being used until repair work has been carried out.

Repairs by such means as welding or straightening are not approved by SEMA or by any of the SEMA manufacturing members



## The Importance of Racking Repair

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All repairs should be done by the removal of a damaged component and the replacement of it by an undamaged one. All such work is done on an unloaded rack.

# The Importance of Racking Inspections



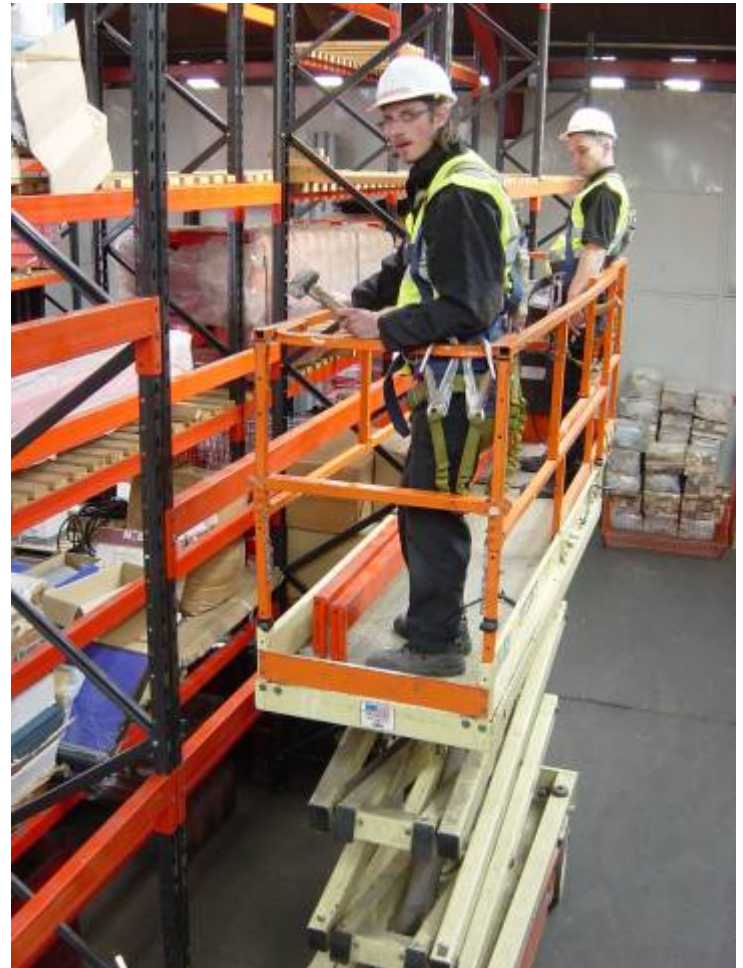
Some repairs can be easily done from the floor



# The Importance of Racking Inspections



Others are a bit more complex however climbing of racking should never be necessary



# The Importance of Racking Inspections



Changing an upright should not involve Climbing or heavy lifting





## The Importance of Racking Repair

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Further guidance:

“SEMA Code of practice for the Use of Static Pallet Racking” – free PDF available on request by e-mail to SEMA web site.

Warehousing and Storage, A guide to health and safety - free down load from HSE website, ref HSG 76



# The Importance of Racking Inspections

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**Any questions?**