

## Section 3 Mechanical Handling and Storage



**CAPITAL COOLING<sup>®</sup>**

REFRIGERATION FOR THE NATION

## Health and Safety Instructions

### Section 3

## Mechanical Handling and Storage

- 1 Slings, Harnesses Chains
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# Section 3 Mechanical Handling and Storage

## 1 Slings, Harnesses Chains

RA Ref: 3/01

Risks: Death or Injury through falling objects  
Death or Injury from being hit by swinging slings, harnesses and chains

PPE: Hard hats, safety footwear, gloves

### Before Lifting

- Check that the slings, harnesses or chains have been subject to routing examination and when it was last checked
- Check that they are suitable for the job and capable of carrying the weight
- Check for any damage or defects
- Check shackles, hooks and eyebolts for any damage, cracks or defects

### General Lifting and Carrying Techniques

- Secure load using chains or straps using appropriate method (i.e. hooks, ties, )
- Ensure load is balanced before lifting
- Check area is clear of people and objects before lifting
- Using controls lift items and move to required position
- Constantly check for any people or obstructions when moving items. STOP IF NECESSARY
- Move items at a slow smooth speed
- Position items at the required position
- Lower items into place ensuring that they are stable and balanced before removing straps or chains

### **DO NOT**

- **Jerk load when lifting or moving**
- **Allow the load the swing**
- **Do not allow any free hanging control units, chains or straps to swing out of control**

## Section 3 Mechanical Handling and Storage

### 2 Forklift Trucks

**RA Ref:** 3/02

**Risks:** Injury through falling loads, collision with objects and people, defective vehicle

**PPE:** None

#### Pre - Start Checks

- Walk around your machine to check for defects and obstructions
- Carry out pre use checks e.g. brakes, oil, tyres, lights
- Report any defects in your machine to your supervisor

#### Use of Forklift Trucks

- Do not operate fork lifts unless you hold current certificate
- Travel with load in lowest position
- Do not raise or lower load when travelling
- Ensure mast is vertical or slightly tilting back
- When operating on slopes, ensure load is uphill and empty forks are downhill.
- If load obscures your view, travel in reverse
- Avoid sharp acceleration, braking and change of direction
- Sound horn or use warning sirens when travelling through access points

#### General

- Look for potential hazards, especially overhead cables
- Wear seat belts
- At end of use, remove keys and starting handles etc.

#### **DO NOT**

- **Do not exceed SWL when operating forklifts**
- **Do not carry passengers unless the vehicle is designed to do so**
- **Exceed speed limit**
- **Continue to drive when visibility is obscured**

## Section 3 Mechanical Handling and Storage

### 3 Storage of Materials and Equipment

RA Ref: 3/03

Risks: Injury through collapse of racking systems, toppling of units or items protruding from racks

PPE: None

Storage areas are designated for the following items

- Refrigeration units
- Gas bottles
- Equipment and tools
- Spares and Consumables
- Know where the designated storage areas are
- Ensure only those items are stored in their designated areas and racks
- Using the appropriate handling methods when moving items into or out of the storage areas
- Ensure that any racking in place is secure and capable of taking the weight of the items it will be holding
- Ensure the storage of items in racking systems do not overhang the edge of the rack
- Ensure when stacking items on pallets that the height does not cause potential toppling of the items
- Ensure when stacking items on top of each other ensure that the items can take the weight of others items and will not collapse

#### **DO NOT**

- **Over stack items**
- **Allow any items to protrude from their storage frame**

## Section 3 Mechanical Handling and Storage 4 General Housekeeping

RA Ref: 3/04

Risks: Injury through falling, tripping over, falling loads and contact with items

PPE: None

In order to avoid trips and falls, good housekeeping is to be observed in all areas including the workshop and offices.

### Cleanliness and Waste Materials

- Every workplace should be kept clean and tidy.
- Floors should be cleaned regularly.
- Cleaning and the removal of waste should be carried out as necessary by an effective method.
- Waste materials should be stored in suitable receptacles, or in areas designated for the purpose.

### Walkways

- Ensure all walkways are clear of materials and equipment.
- Ensure that electrical cables are not lying across walkways.
- Ensure all access points and doors are clear.
- Walk everywhere

### **DO NOT**

- **Run**
- **Obstruct doors or walkways with equipment or materials**
- **Lay electric cables across walkways or doors**
- **Continue to drive when visibility is obscured**

## Section 3 Mechanical Handling and Storage

### 5 Storage of Gas Bottles

RA Ref: 3/05

Risks: Injury or death through fire or explosion

PPE: None

#### Properties

- Gas is stored as a liquid in the cylinder under pressure
- A small leakage can form a flammable or explosive mixture
- The gas is heavier than air and will collect and remain at low level.

#### Storage

- Store outdoors in a cool location (preferably a Gas Store)
- Store full and empty cylinders separately from each other and away from other gas cylinders
- Store cylinders upright

#### EMERGENCY

##### **In the event of a leak :**

- Turn off gas at cylinder remove any source of ignition and ventilate the area

##### ***In the event of a fire :***

- Where possible, turn off gas at cylinder and remove cylinder to a safe place.
- Where this is not possible EVACUATE ALL PERSONNEL from the area and ADVISE THE FIRE BRIGADE that a cylinder is involved in the fire

#### **DO NOT**

- **Smoke or use any ignitable items in the storage area if when handling gas bottles**
- **Use gas bottles which show signs of damage**

## **Section 3 Mechanical Handling and Storage 6 Handling of Refrigeration Units / Gas Bottles**

**RA Ref:** 3/06

**Risks:** Injury to self or third parties from falling units

**PPE:** Safety footwear, gloves

### **Refrigeration Units**

#### **Units with Wheels**

- Ensure the way is clear of obstructions and people
- Push the unit using manual Handling Methods in Section 1 General
- If the unit is too heavy use 2 or more people

#### **Using Trolleys**

- Use a minimum of 2 people
- Tilt on end of the unit and place a wooden chock under the base
- Lower the end onto the chock
- Repeat action at the other end
- Roll the trolley under the unit and elevate to take the weight of the unit
- Manoeuvre the unit into position using one person the steady the unit
- Place the wooden chocks under the unit and lower the trolley onto the chocks
- Tilt one end of the unit and remove the chock
- Lower the unit to the floor
- Repeat action at the other end of the unit

#### **Loading and Unloading Units from Vehicles**

- Use the vehicles hydraulic lift to raise and lower the unit from or into the vehicle

### **Gas Bottles**

#### **Manual Handling**

- Use standard manual handling techniques
- Where fitted lift gas bottles using hand holes
- If the unit is too heavy use 2 or more people

#### **Using Trolleys**

- Lift gas bottle onto trolley
- Strap in place to prevent unit from falling off trolley

#### **DO NOT**

- **Attempt to move a unit manually when the weight of the item prevents easy movement**
- **Drop or throw gas bottles**
- **Place gas bottles near heat sources**
- **Move vehicles without securing units or gas bottles**

# Section 3 Mechanical Handling and Storage

## 7 Carriage of Refrigeration Units in Vehicles

RA Ref: 3/07

Risks: Injury to self or third parties from falling units

PPE: Safety footwear, gloves

### Handling

- Handling of Refrigeration Units must be undertaken as per the Capital Health & Safety Handbook Section 3 Handling and Storage No 6 Handling of Refrigeration Units / Gas Bottles

### Loading and Unloading Units from Vehicles

- Lift unit using Manual Handling techniques
- Where available use the vehicles hydraulic lift to raise and lower units from or into the vehicle

### Securing Units in Vehicles

Secure units in place using the racking system and straps or chains.

### Arrival on Site

- Contact site manager and make them aware of presence on site.
- Complete any permits required for delivering units
- Check to establish access for off loading units making sure the area is clear
- Ensure no unauthorised persons are in the immediate area when off loading

### Off Loading

- Lift unit using Manual Handling techniques
- Where available use the vehicles hydraulic lift to raise and lower units from or into the vehicle

### **DO NOT**

- **Attempt to move a unit manually when the weight of the item prevents easy movement**
- **Use manual handling techniques when mechanical handling is available**
- **Allow units to be unsecured during transit**

## Section 3 Mechanical Handling and Storage 8 Carriage of Gas Bottles in Vehicles

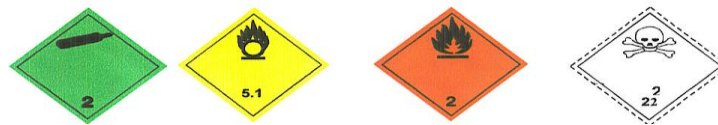
RA Ref: 3/08

Risks: **Injury or death through fire or explosion**  
Injury from falling units

PPE: Safety footwear, gloves

### Vehicles

- All vehicles must carry a 5Ltr Dry Powder extinguisher
- All vehicles must be vented
- All vehicles must display stickers to indicate what gases are being carried (As per label on cylinder)



### Loading and Unloading Units from Vehicles

- Lift unit using Manual Handling techniques
- Where available use the vehicles hydraulic lift to raise and lower units from or into the vehicle

### Securing Units in Vehicles

- Secure gas bottles in place using the racking system and straps or chains.

### EMERGENCIES

- **Gas leaks** – turn of engine and contact Service Department. Prevent third parties from approaching the vehicle apart from those authorised
- **Accidents and fire** - Prevent third parties from approaching the vehicle apart from those authorised. Advise the fire brigade of the types of gases in the vehicle

### **DO NOT**

- **Attempt to move a unit manually when the weight of the item prevents easy movement**
- **Allow units to be unsecured during transit**
- **Drop or throw gas bottles**
- **Place gas bottles near heat sources**

## Section 3 Handling and Storage

### 9 Vehicle Tailgate Lift Operations

**RA Ref:** 3/09

**Risks:** Injury to self through falling off tailgate lift  
Injury to self and others through objects falling off tailgate lift

**PPE:** Safety footwear, gloves

#### **Before Operating Tailgate Lift**

- Park vehicle on level ground and apply handbrake
- Check the rear access is clear of objects, vehicles and people
- Check tailgate lift can handle the weight of the unit

#### **Operating Tailgate Lift**

- Lower or raise tailgate lift
- Ensure hazard warning lights are operating
- Position unit onto the centre of tailgate using manual handling techniques
- Raise the end stops on the tailgate to prevent unit rolling off the end of the tailgate lift
- Raise or lower the tailgate slowly and at even speed
- Stand clear of the edge when operating the tailgate lift
- Move unit using manual handling techniques
- Raise tailgate lift after operation and lock into position

#### **General**

- Look for potential hazards during the operation and where required stop the tailgate lift
- Report any defects to managers

#### **DO NOT**

- **Use tailgate lift of slopes or uneven ground**
- **Lift units without raising the end stops**
- **Do not lift units which exceed the SWL of the tailgate lift**