



**Labour and Workforce Development**

**OCCUPATIONAL HEALTH AND SAFETY DIVISION**

## **Hoists and Mobile Equipment**

**A guide to Part 7 of the**

**Occupational Safety General Regulations**

*October 2007*

A GUIDE TO PART 7 – HOISTS AND MOBILE EQUIPMENT - of the OCCUPATIONAL  
SAFETY GENERAL REGULATIONS

The information contained in this publication is a guide only and should be read with the *Occupational Safety General Regulations* for specific requirements. The Regulations are available through our web site at <http://www.gov.ns.ca/lwd/healthandsafety/pubs.asp> or copies may be requested by calling the Information Specialist at 902-424-5400 or toll-free 1-800-952-2687. For your reference and convenience the section of the Regulation has been included where possible

## **Part-7 Hoists and Mobile Equipment**

### **General provisions (sections 55-56)**

#### **What is a hoist?**

A hoist is equipment used to move, lift or lower material. Mobile cranes, tower cranes, automotive lifts, winches and palette jack are all types of hoists.

#### **What is a mobile equipment?**

Mobile equipment is self-propelled equipment designed for use off- highways but not designed primarily to carry passengers. Tractors, riding lawn mowers and excavators are all types of mobile equipment.

All terrain vehicles, forklifts and elevating work platforms are not mobile equipment.

#### **What is does the term "designated" mean?**

Designated means identified, in writing, by the employer.

#### **What are my duties when using hoists and mobile equipment?**

Anyone who operates a hoist, forklift or mobile equipment must follow the manufacturer's specifications, or the specifications of an engineer.

#### **Who can operate a hoist, forklift or mobile equipment?**

Anyone who operates a hoist, forklift or mobile equipment must have the knowledge, training and experience to do so safely.

#### **Do damaged safety guards need to be replaced?**

Yes, the employer must ensure that a hoist, forklift or mobile equipment:

- Has gears and moving parts securely guarded to prevent a hazard to a person
- Has any load on it secured
- Is provided with a safe means of access and exit.

### **Signaller (section 57)**

#### **When is a signaller required?**

A signaller is required to direct a load, hoist, forklift or mobile equipment when the operator:

- Does not have a clear view of the load
- Does not have a clear view of the route the load has to take
- Cannot see clearly where the hoist or its load may approach an electrical system.

### **As a signaller, what are my duties?**

A signaller must:

- Be recognizable to the operator
- Direct the movement of the load or equipment by hand signals or another effective system
- Warn the operator if any part of the hoist or its load approaches an electrical system
- Obtain the assistance of another signaller if either signaller or operator cannot see all or any of the load or route.

Note the operator can only move the load on signal from the signaller.

### **Safety equipment and precautions (sections 58-61)**

#### **What safety equipment is a forklift or mobile equipment required to have?**

- An automatic audible back-up alarm or equivalent warning device
- A horn, if a horn was installed at the time of manufacturing
- Front and rear lights when the equipment is used after dark or in dim areas
- Braking system
- A screen, shield, grill or other protection for the operator where there is a risk of flying objects or objects that might hit the operator.

#### **Do I have to use outriggers when operating a hoist or mobile equipment?**

Yes, unless the manufacturer's specifications allow otherwise, outriggers or stabilizers must be used if a hoist or mobile equipment is equipped with them.

#### **Can I make changes to a safety device?**

No safety device can be changed in any way that might make it less effective. A change is allowed if it provides an equal or greater level of safety. Any change must be certified by the manufacturer or an engineer.

#### **I am operating equipment on a steep ramp. What precautions should I take?**

Precautions must be made to ensure that a hoist, forklift or mobile equipment does not tip or roll over.

#### **Overhead protection (section 62)**

#### **I am operating mobile equipment in the forest industry. Is overhead protection required?**

Unless there is clearly no hazard, overhead protection is required on mobile equipment used in construction, mining and forestry work.

### **I am operating a farm tractor. Is overhead protection required?**

If the operator could be hit by falling objects, the employer must ensure the equipment has a protective structure.

### **Rollover protection (sections 63-65)**

#### **Is rollover protection always required?**

Rollover protection is required, unless the employer can justify otherwise. For instance, rollover protection may not be required in a farmer's field, if the field is flat. However, if the tractor has to drive through a ditch to get to the field, then rollover protection may be required.

#### **Is wearing a seatbelt required?**

If the equipment has a rollover protective structure, it must have seatbelts and the seatbelts must be worn while the equipment is in motion.

### **Precautionary arrangements (section 67)**

#### **I am operating a bobcat. Can I give a crew member a ride in the bucket?**

No passenger can ride on a fork lift or mobile equipment, unless the manufacturer's specifications state passengers can be carried safely.

#### **Is fire protection equipment required for forklift?**

Internal combustion mobile equipment and forklifts must have fire protection equipment.

#### **I operate a forklift in a warehouse that has blind spots. What precautions do I need to take?**

Where there may be a danger of a collision, you need mirrors or other devices at blind intersections, or a written procedure that provides an equivalent level of safety.

### **Visibility (section 68)**

#### **I operate a bobcat with a sweeper attachment. I am worried that with all the dust in the air that I might back into something. What is the duty of my employer?**

If work is done in a dusty area, the employer must take steps to reduce the amount of dust.

### **Operating precautions (sections 69-71)**

As an operator of a mobile crane, a forklift or mobile equipment, what are my duties?

An operator of a mobile crane, a forklift or mobile equipment must:

- Not operate equipment until all air and hydraulic pressures are fully built up

- When leaving the equipment unattended
- Park on ground level
- Set the parking brake
- Lower the blades, bucket or other attachment or block the attachment
- Where applicable, disengage the master clutch; and
- Shut off the engine or take other precautions to ensure the equipment is not accidentally set in motion
- Not carry containers of gasoline, diesel or other flammable substances
- Ensure that there are no loose articles that may present a hazard.

**The equipment I operate has wire ropes. Is a visual daily inspection of these ropes enough?**

No, the employer must ensure that a hoist, forklift or mobile equipment that has wire ropes, drums and sheaves is inspected:

- Visually on a daily basis by the operator; and
- Visually and manually by a designated person on a weekly basis.

**I will be working under a hoist. What precautions must I take?**

The hoist must have two independent systems to support the equipment. For example, where a person is working under an automotive lift, blocks should be used in case the lift system failed.

I am doing maintenance on the point of articulation on a dump truck. Are there extra precautions I should follow?

If repair or maintenance work is being done on the point of articulation, the employer must ensure that lock bars or an equivalent measure are used to prevent movement.

**Where do I get a statement of the rated load?**

The employer must obtain a statement of the rated load from the manufacturer of the hoist. If this cannot be obtained, the statement must come from an engineer.

**How often does a hoist need to be inspected?**

- A designated person must inspect a hoist at least once a year
- For a mobile or overhead crane with a capacity of greater than 5t, a certificate from an engineer is required yearly (5t≈ 11,0000lbs)
- For a tower crane, a certificate from an engineer is required
- Prior to the tower crane being put into service,
- each time it is erected; and
- once during each year of operation.

**Are there tests that need to be done during the inspection for a crane?**

A running test, load test, deflection test and brake test need to be performed, where appropriate.

### **What is done with the statement of the rated load?**

The employer must post a statement of the rated load on the hoist. The operator should be able to see the statement when operating the hoist.

### **As an operator, where do I get information on the load the hoist is capable of lifting?**

The employer must ensure the operator has sufficient information to determine the load that the hoist is capable of lifting with under different condition. This is usually in the form of a load chart. The load chart gives the maximum rated load and applicable set-up conditions.

### **How often does a hoist have to be visually inspected?**

A designated person must visually inspect the hoist, including safety devices:

- Before it is put into use and after a month or more of disuse
- After any incident or repair, including contact with an energized line.

### **Do records of the inspection need to be kept?**

The employer must keep a record of:

- Each manual inspection of a hoist; and
- Each repair potentially affecting the structural integrity of a hoist.

These records must include the date, time, nature and results of the inspection or repair.

### **As an operator of a hoist, what are my duties?**

- Visually inspect the hoist daily
- Not carry a load over any person, except where the employer has developed a written work procedure
- Not leave a suspended load unattended; and
- Where an uncontrolled swing or rotation of a load may endanger a person, ensure that a guide rope or equivalent is used to stabilize the load.

### **Mobile cranes (sections 77-79)**

#### **What must a mobile crane be equipped with?**

- A device that warns the operator when continued movement may cause the load to strike the upper sheaves
- If equipped with a boom that is not articulating, a boom angle indicator.

#### **Are barriers required to prevent a person from entering the swing radius of a mobile crane?**

Yes, barriers or equivalent are required to prevent a person from entering the swing radius of a mobile crane.

## **Rigging hardware (section 80)**

### **What is rigging hardware?**

Rigging hardware means a chain, cable, webbing, bucket, grapple, hook, ring, sling or other device used to attach a load to a hoist.

### **Does rigging hardware need to be inspected regularly?**

Yes, rigging hardware must be inspected:

- Before it is put into initial service or after a month or more of disuse
- Once during every year it is in operation.

The employer must maintain a record of inspection and repairs. The record must include the date, time, nature and results of the inspection or repair and the name of the person who performed the inspection or repair.

### **Example Rigging Inspection record:**

Rigging Hardware: \_\_\_\_\_WEBBING\_\_\_\_\_

Inspected By: \_\_\_\_\_John Doe\_\_\_\_\_

Date of Inspection: \_\_\_\_\_July 5, 2006\_\_\_\_\_

Time: \_\_\_\_\_1405h\_\_\_\_\_

Reason for Inspection: \_\_\_\_\_initial service\_\_\_\_\_

Results: \_\_\_\_\_clean, not worn\_\_\_\_\_

\_\_\_\_\_  
Signature: \_\_\_\_\_John Doe\_\_\_\_\_

Rigging Hardware: \_\_\_\_\_

Inspected By: \_\_\_\_\_

Date of Inspection: \_\_\_\_\_

Time: \_\_\_\_\_

Reason for Inspection: \_\_\_\_\_

Results: \_\_\_\_\_

\_\_\_\_\_  
Signature: \_\_\_\_\_

### **Does rigging hardware have to be labelled with the lifting capacity?**

Yes, the lifting capacity must be permanently identified on the rigging hardware.



### **What precautions must be taken before I lift a load?**

A person trained in the capacity of the rigging hardware must ensure the load is secure before the load can be lifted.

### **Forklifts (sections 81-83)**

#### **What are my duties towards forklifts?**

An forklift must be designed and maintained according to the manufacturer's specifications or the specifications of an engineer.

#### **Where can I not use a forklift?**

- If propelled by an internal combustion engine, in a building or other enclosed structure, unless adequate ventilation, monitoring and record keeping practices are carried out
- Near an area containing airborne dust or flammable vapour in concentrations that may cause an explosion.

#### **How much width is needed to operate a forklift safely?**

- In a one-way aisle, the width of the aisle must equal at least the width of the vehicle or load being carried, whichever is wider, plus 600 mm (600 mm $\approx$ 2 ft); and
- In a two-way aisle, the width of the aisle must equal at least twice the width of the vehicle or load being carried, whichever is wider, plus 900 mm (900 mm $\approx$ 3 ft).

#### **How often does an forklift need to be inspected?**

A forklift needs to be inspected at the beginning of each shift. Where the forklift is used with a platform for lifting a person, the forklift needs to be certified annually by an engineer.