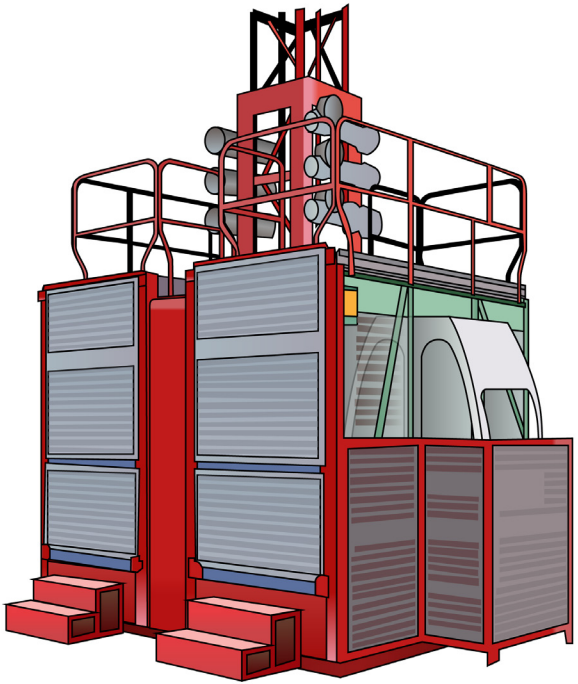
PERSONNEL & MATERIALS INFORMATION BOOK



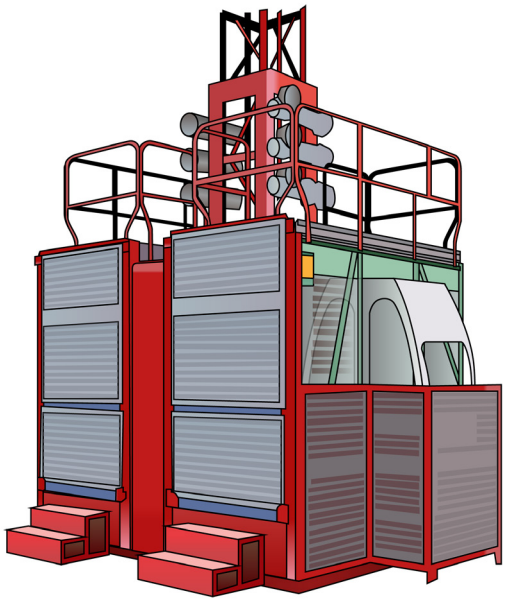
Training support material for:

CPCCLHS3001
Licence to operate a personnel and materials hoist

Produced by:

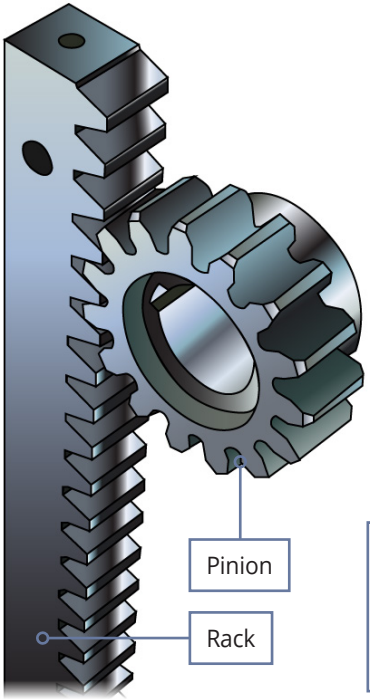
EASY GUIDES
Australia Pty Ltd

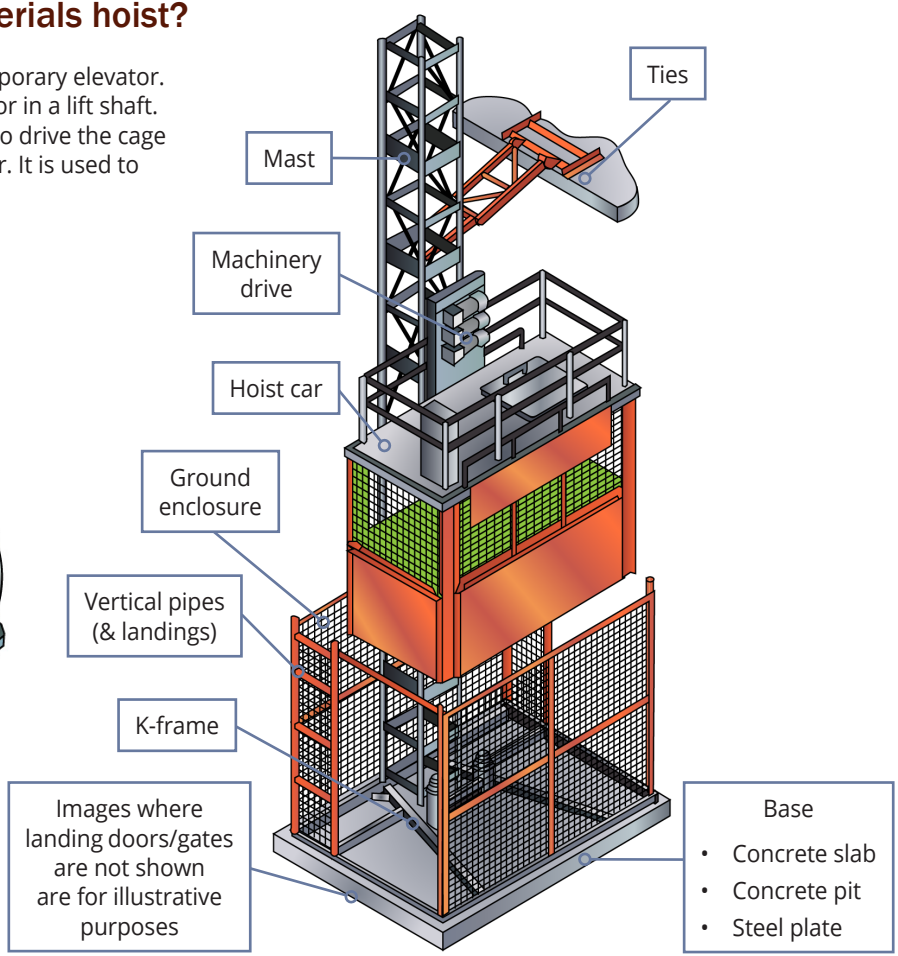
INTRODUCTION TO PERSONNEL & MATERIALS HOIST



What is a personnel and materials hoist?

A personnel and materials hoist is like a temporary elevator. It is attached either to the side of a building or in a lift shaft. The hoist uses a motorised rack and pinion to drive the cage assembly up and down a stacked mast tower. It is used to hoist people, goods and/or materials.





PREPARE FOR HAZARDS

Prepare for hazards

Hazard

A hazard is anything that can harm you or others while you work.

Risk

A risk is the chance of a hazard injuring or hurting a person. In other words, what is the chance of the hazard hurting you?

Control

A control is what you can do to stop the hazard from hurting or killing someone.

Assess the risk (risk assessment)

You need to identify (know) the worksite's hazards before you start work. Look for hazards. When you find a hazard, you need to work out two things:

- How dangerous is the hazard?
- How likely (risky) is it that the hazard will hurt someone?

For example, you find a very dangerous hazard but the risk of it hurting someone is low. Because the danger is high, you need to find a way to control it. Use the risk assessment and control form on the next page, and the hierarchy of hazard control to help you. Talk to workmates or OHS people to work out the best way to reduce the risk.

How dangerous? How likely?

Putting it all together

Shown below is an example of a risk assessment and control form. You can use it at your workplace to help with risk management. You can find out more about risk management in the Queensland Workplace Health and Safety codes of practice.

Example of a Risk Assessment and Control Form

Workplace area or grouping: ..... Reference no: .....
Form completed by: ..... Date form completed: .....
Signature: .....

Hazard Identification

Hazard: .....
Associated risk: .....
Specific circumstances relating to the risk: .....
Persons at risk: .....

Risk Assessment

Existing control measures (if any): Staff follow policy and operating instructions to use the mixer safely.

Likelihood: ❑ Almost certain ❑ Likely ❑ Possible ❑ Unlikely ❑ Rare
Consequences: ❑ Catastrophic ❑ Major ❑ Moderate ❑ Minor ❑ Insignificant

Risk Control

Possible control options: .....
Elimination: .....
Substitution, Isolation or Engineering: .....
Administrative or personal protective equipment: .....
Preferred control options (and why): .....
.....

Implementation Plan

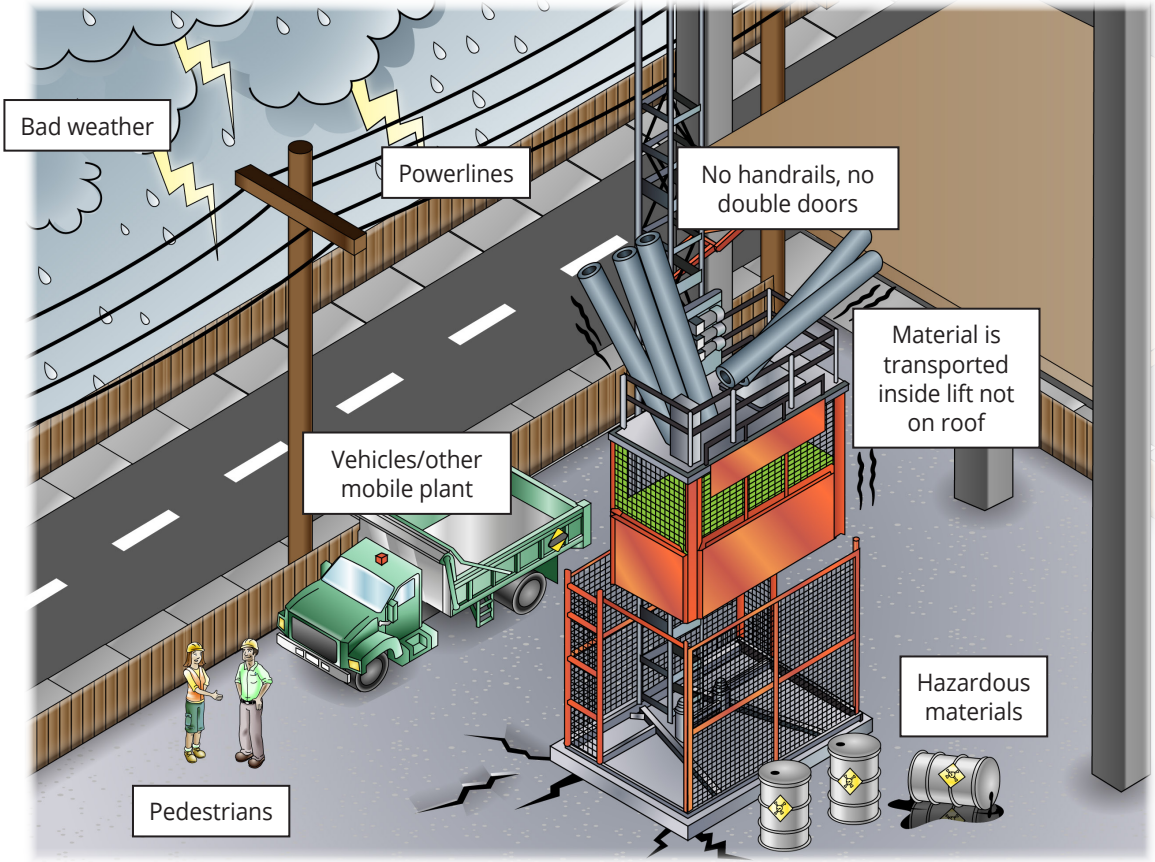
Control option	*Associated activities*	*Resources required*	*Person(s) responsible*	*Proposed implementation date*	*Sign off and date*	*Scheduled review date*

Review

Are control measures in place? ❑ Yes ❑ No Why not? .....
.....

Are controls preventing or minimising the risk? ❑ Yes ❑ No Why not? .....
.....

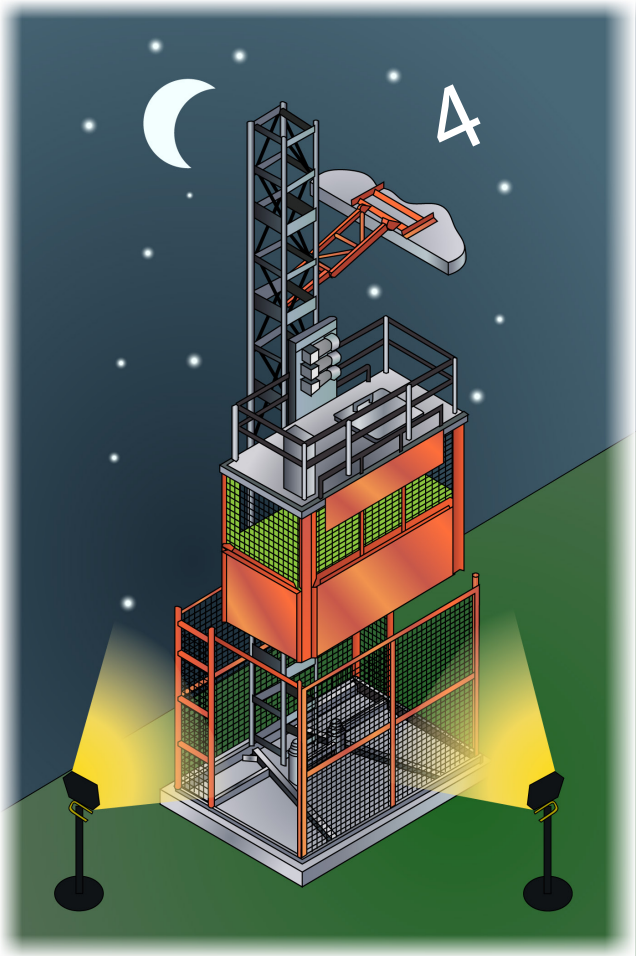
Are there any new problems with the risk? ❑ Yes ❑ No What are they? .....
.....



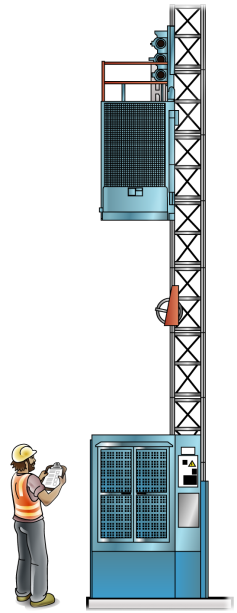
Too dark

Hazard: If the work area is dark or dimly lit you might not be able to see clearly.

Control: The hoist and the area around the hoist need to be well lit. This includes the landing, tower head, the hoist itself and all entrances to the hoist. Use extra lighting such as portable lamps, or try to find a brighter area if you can.



CHECK THE HOIST



Check the hoist

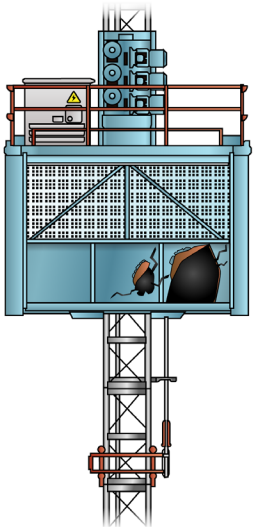
Look for any damage or defects

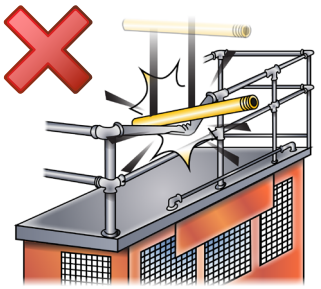
Look at the physical appearance of the hoist before you use it. You may notice the hoist looks different to the last time you used it.

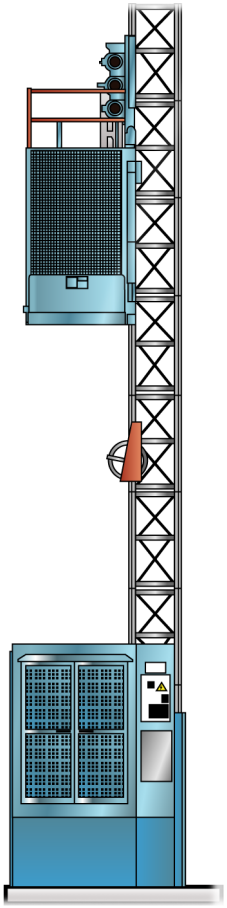
For example, someone might have dropped a big pipe or tube on to the hoist. Or you might notice the handrails are bent.

While loading the hoist with a pallet jack or forklift someone might have put a hole or holes in the side of the hoist.

Do not use a damaged or defective hoist. Follow the tag out procedures, which are explained later.





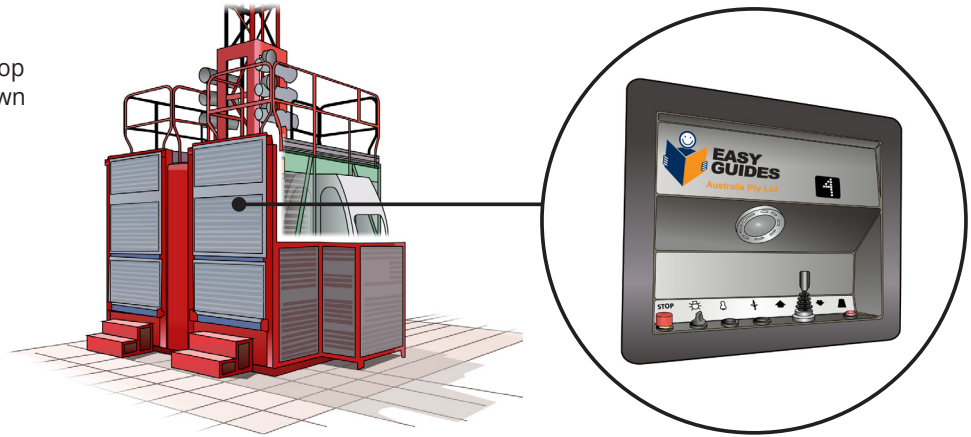


Danger tag

If you find a DANGER DO NOT USE tag on a hoist you are checking you should NOT take it off and use the hoist. Only the person who put the tag on can take the tag off. Some workplace safety procedures may allow others such as supervisors to take off the danger tag.

Car drive station (cage) checks:

Check the controls such as the stop button, the cage light, up and down controls and emergency buttons.



Rated load (kg), safety signs, tools

Make sure 'Max. No. Of Persons Allowed on Platform' and Brake Release Procedure' signs are intact and clearly readable. Check no are tools missing—for example, T-bar, brake reset socket, brake release tools and wedges.

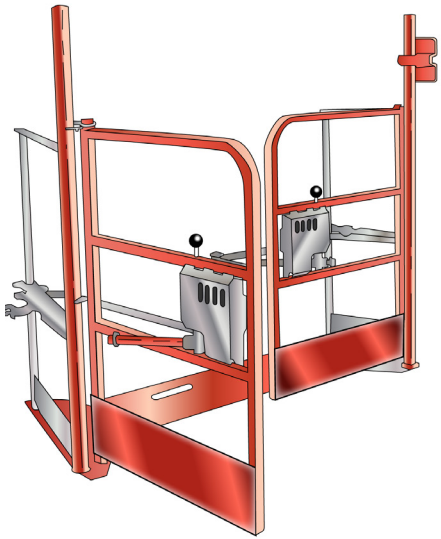
Alarm and car and roof lights

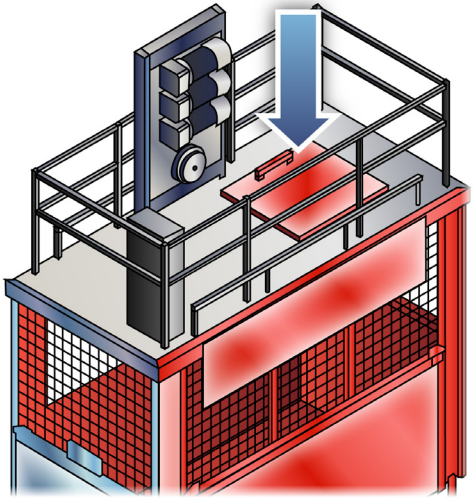
Check they work.

Safety devices

With the hoist level at a landing and with the landing gates, car door and trapdoor shut, check the hoist does not operate:

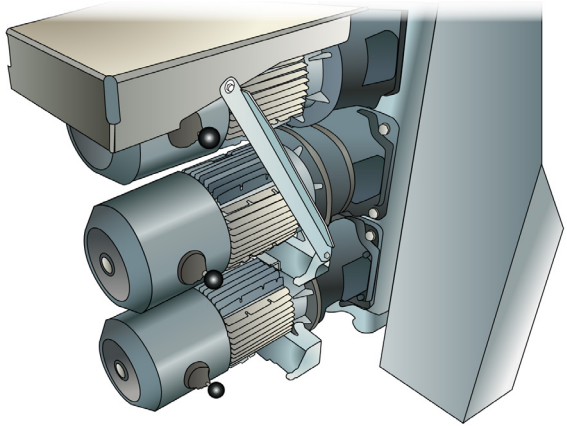
- With emergency stop on.
- With deadman's control or button released.
- With any landing gate open.
- With bi-parting doors open.
- With trapdoor open.

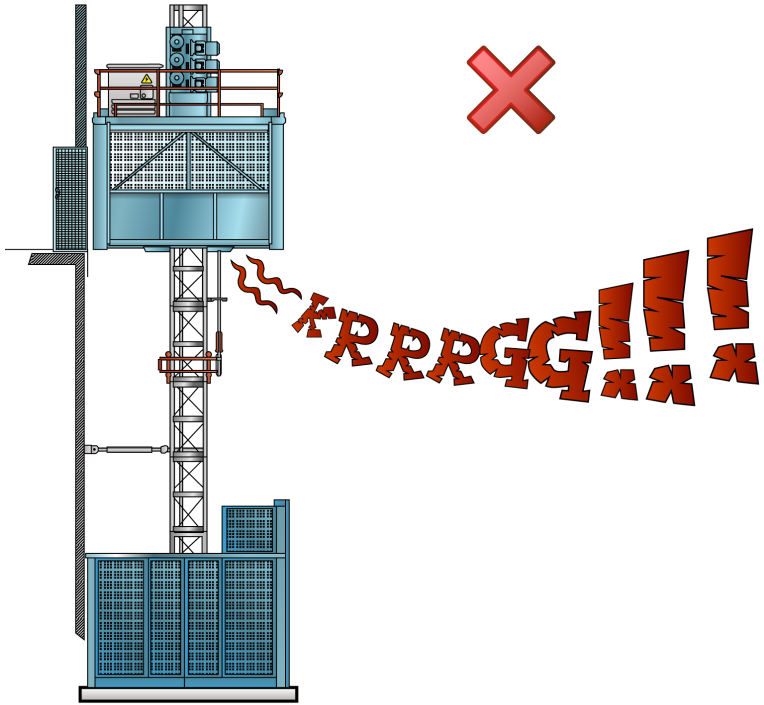




Brakes

With doors and trapdoors shut, drive the hoist a short distance (3 or 4 metres) up and down with no load. Check that the controls do not stick, the hoist travels and brakes smoothly, and there are no strange noises.

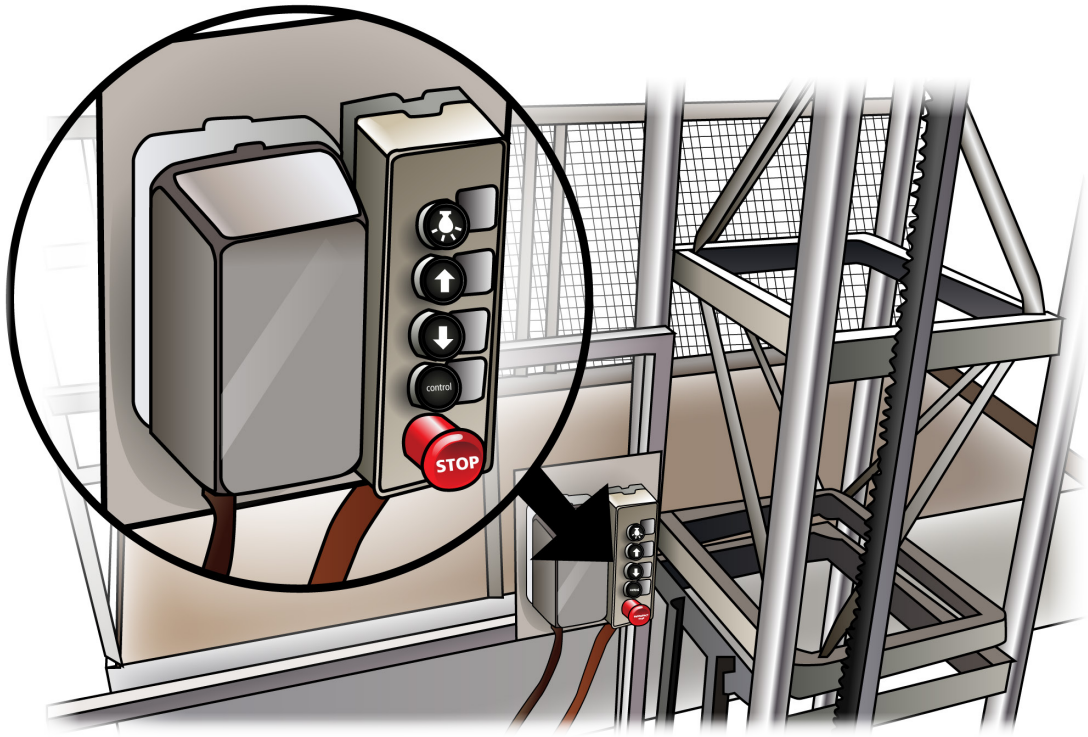




Roof drive station checks

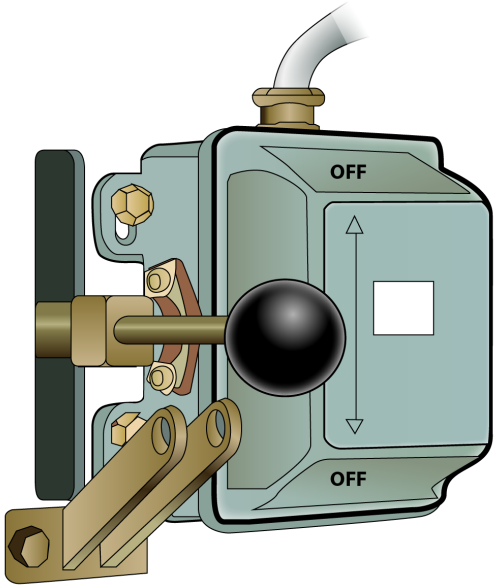
Drive hoist from roof and visually inspect the following:

- Check hoist does not operate with the roof drive station emergency stop switch on.
- Check mast alignment; no loose bolts or damage to mast, rack or ties.
- Check no damage/cuts to outer sheath. Cable running within guides if wind brace fitted.



Hoist controls

Get to know the position and use of all controls on the personnel and materials hoist. These include:



Final limit switch

Emergency stop button

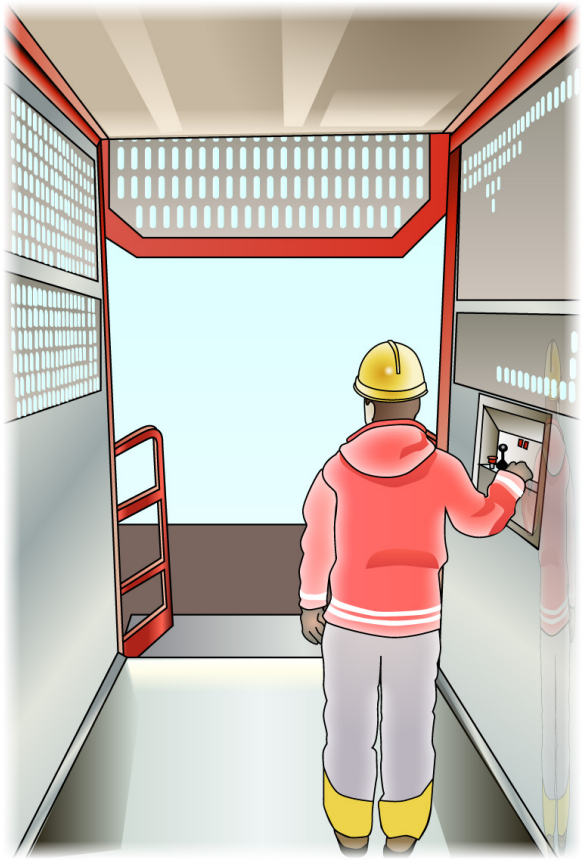
Up, Down and Stop Next Landing push buttons

Joystick

Test the controls

To test the controls, try to operate the hoist with the:

- Landing doors open
- Car door open
- Emergency stop applied
- Trapdoor open.



PLAN THE MOVE

Plan the move

Check the Safe Working Load (SWL)

Hoists can lift anything from 1000 kg to 3.9 tonnes. Before you move a load, find out its weight and size. Check the safe working load (SWL) on the hoist's data plate to make sure your hoist can lift the load. New hoists have an overload system set to the SWL of the hoist. For example, if you get to 90 per cent of the SWL, a red light flashes. Once you reach 100 per cent of the SWL or exceed it, the red light stays on and breaks the control and safety circuits. You can't drive the hoist until you reduce the weight.

Important: If you use loading equipment (for example, a forklift or electric pallet trolley), make sure it does not exceed the SWL of the hoist. If the equipment is very heavy, there is a risk of extreme overloading. You could cause the hoist to fail or injure someone.

Data plate

The hoist must have a data plate in the cage. On the data plate you might find:

- Model number
- Maximum lifting height
- Hoisting speed
- Power consumption
- Power fuses
- Voltage and power cycle
- Counterweight
- Wire rope diameter and breaking strength of rope
- Base unit weight
- Car weight
- Car buffer part number
- Safety device part number
- Manufacturer's number
- Year of manufacture.

Calculate the weight of a load

The weight of a load tells you the lifting equipment you need to lift it. Always check the weight of a load before you move it.

To find the weight of an unmarked load:

Read the weighbridge certificate, consignment note or other paperwork

Look at the load itself or the packing it comes in

It may be necessary to calculate the weight of the load yourself.

For example:

20 kg × 10 kg

= 200 kg + 15 kg pallet

= 215 kg

Weigh the load

Common weights

Shown below are the weights of some common materials.

Material	Size	Weight
Beer	50L + keg	64kg
Blue metal	1m³	1900kg
Bricks	1 pallet	1000kg
Cement	Bag	20kg (50 bags per tonne)
Concrete	Wheelbarrow full	250kg
Drum (empty)	200L	13kg
Drum (full of liquid)	200L	213kg
Scaffold tube	48mm outside diameter, Steel 3.6mm Aluminium 4.2mm	5.2kg per metre
Solid bricks	Wheelbarrow full (45 bricks)	216kg
Timber (hardwood)	1m³	Approx 1100kg, if wet up to 50% more
Timber (softwood)	1m³	640kg
Water	1m³	1000kg