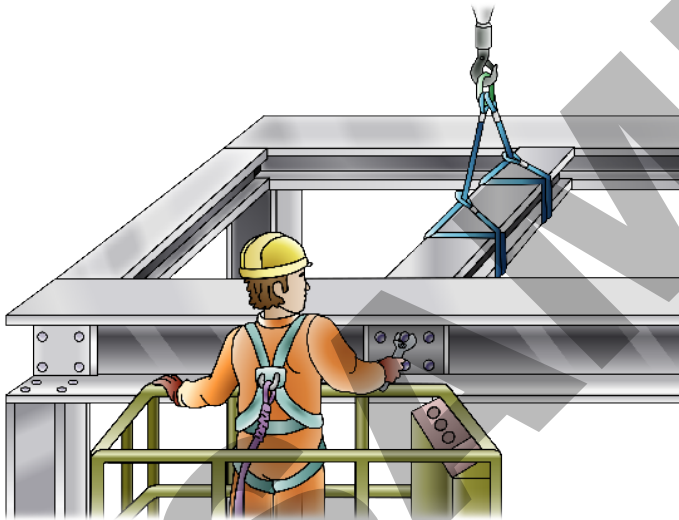


RIGGING – BASIC INFORMATION BOOK



Training support material for:

CPCCLRG3001
Licence to perform
rigging basic level



Produced by:



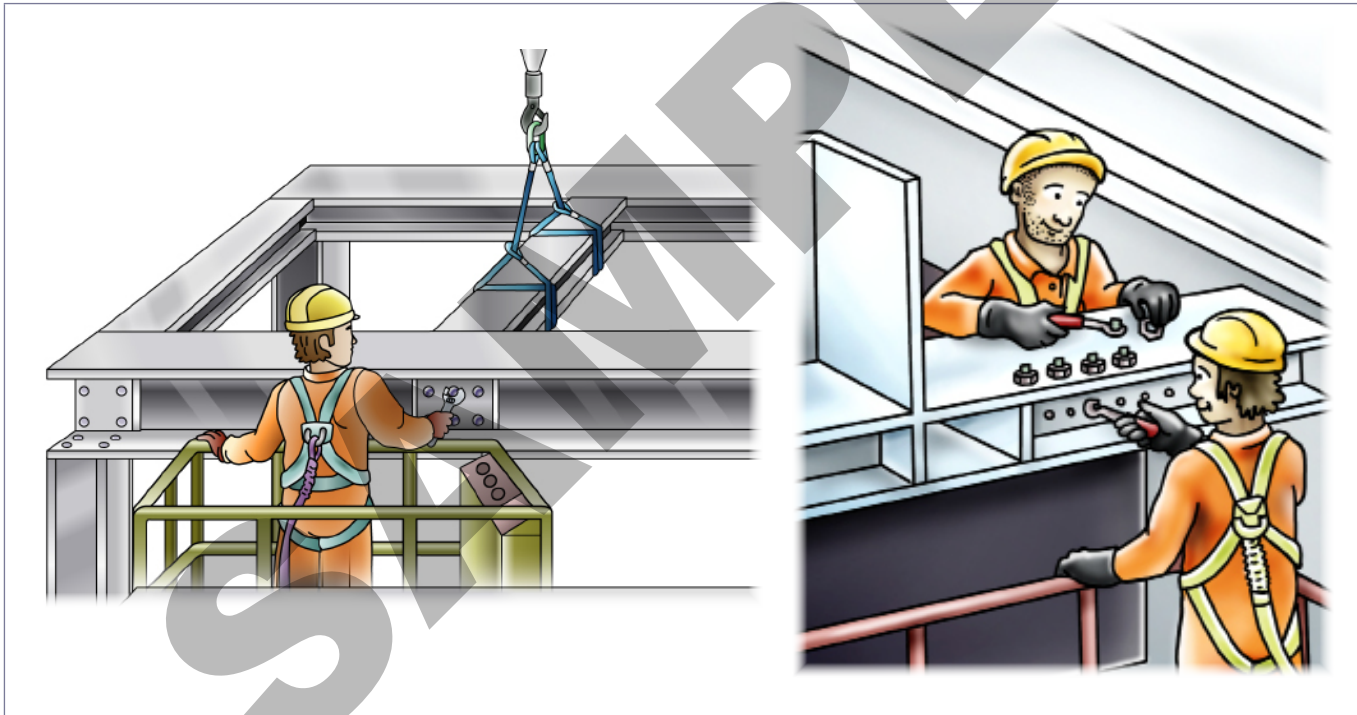
INTRODUCTION TO RIGGING — BASIC



What is rigging?

Rigging work means the use of mechanical load shifting equipment (and associated gear) to:

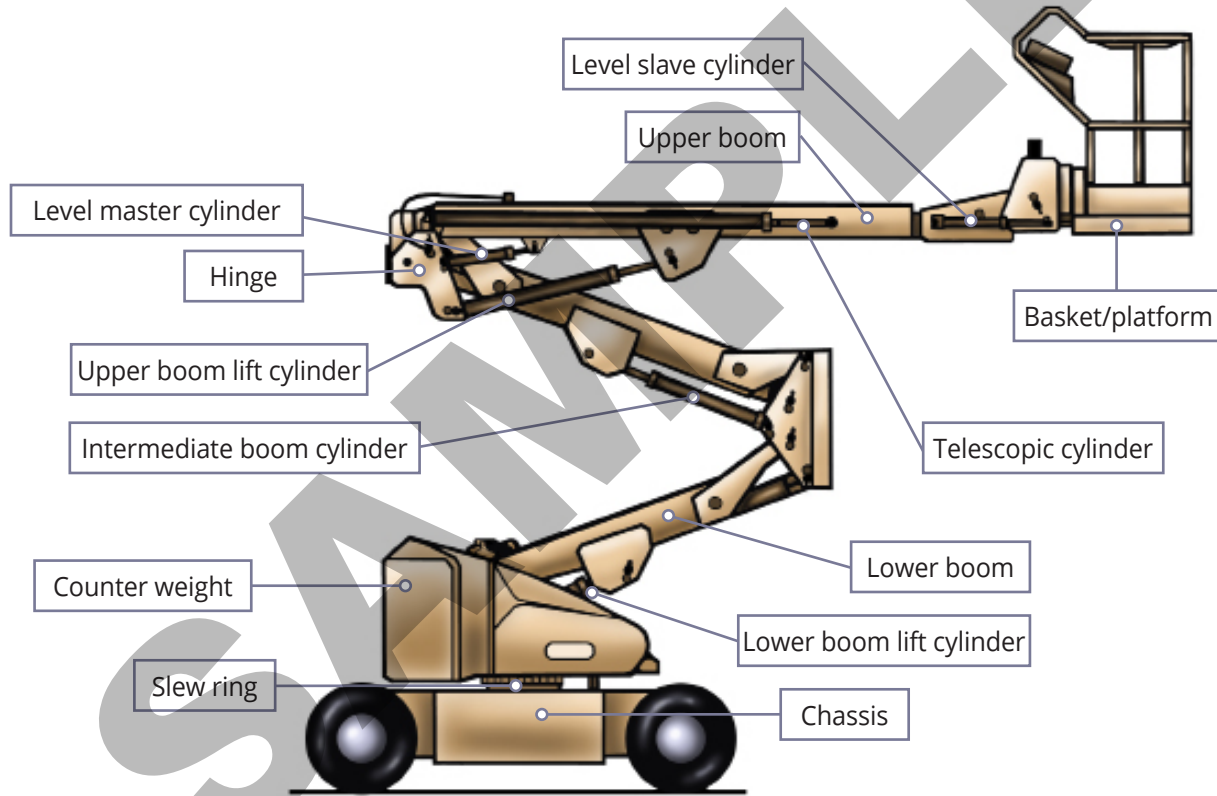
- Move, place or secure a load using plant, equipment or members of a building or structures to ensure the stability of those members
- The setting up or dismantling of cranes or hoists.



Boom-type elevating work platform

Riggers often perform their work from Elevated work platforms (EWP).

You must hold the correct High Risk Work License to operate an EWP with a boom length of 11 metres or more.



PLAN JOB

Element 1

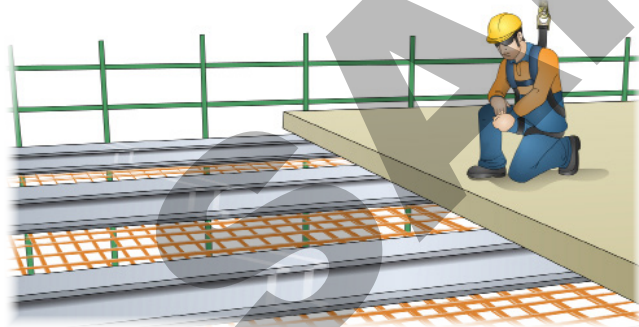


Common tasks

The first thing to think about is the task (meaning job) you are going to do.

Common tasks or jobs done by someone with a basic rigging licence are:

- Dogging work such as slinging loads and directing movement of plant and equipment
- Erecting steel structures
- Placing pre-cast concrete
- Setting up and dismantling safety nets and static lines
- Erecting mast climbers
- Installing cantilevered crane loading platforms
- Installing perimeter safety screens and shutters.



Assess the task

There are a number of things to think about when you plan your task.

These include:

- Task plans/drawings
- Entry and exit points
- Location of task
- Specifics of task
- Plant and equipment needed for task
- Availability of equipment
- Weights
- Permits.



Traffic

Pedestrians

People walking around are one of the biggest hazards on a work site.

Always make sure the area you work in is clear of people who **do not** need to be there.

Tell your workmates to keep a safe distance away from the load and the crane.

- Set up barriers and exclusion zones.



Vehicles

Always check the traffic routes on the worksite.

Make sure you have clear signs and barricades to stop any vehicles driving through the work area.

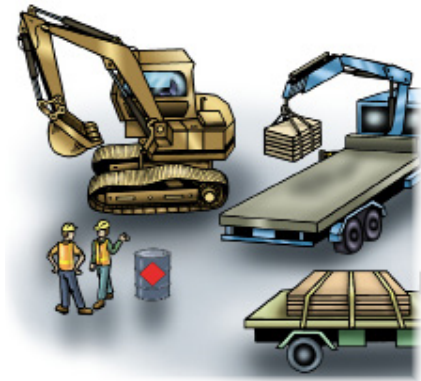
Also consider using a worker to manage and control the traffic.



Other mobile plant

When using the vehicle operated crane make sure the worksite is clear of other plant and equipment.

Make a plan to let other workers know about you using the crane so they **do not** get in each other's way.



Other site-specific hazards

Working at heights

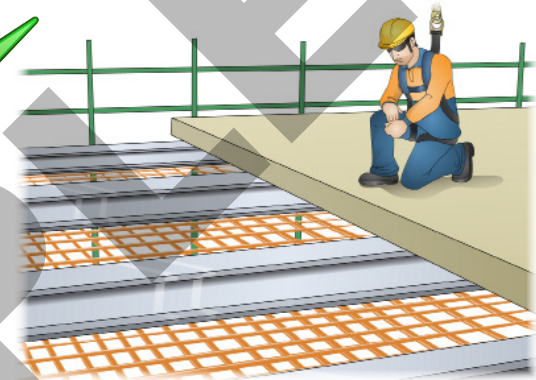
A fall from a height can injure or kill you.

Protect yourself with an approved safety system such as:

- Guardrails
- Scaffold
- Edge protection.

For extra protection, wear a safety harness properly anchored.

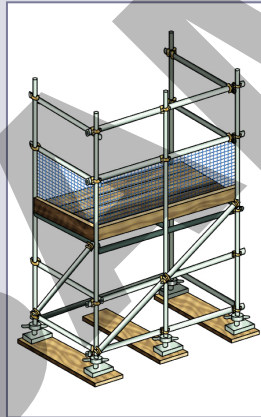
- You must have fall protection when working above 2 metres.



Note:

You need a licensed scaffolder to design and build any scaffold higher than 4 metres.

If there is a chance that a person may fall more than 2 metres you must make sure guardrails and kick boards are installed on the scaffold platforms.



Tripping over

Always **look** around and check for ground level hazards to avoid tripping over them. For example, have an electrician suspend any electrical leads up off the ground so no one trips over them.

Rubbish can also cause a tripping hazard. **Do not** let the rubbish build up on the worksite.

Keep the work area tidy. Try to put the rubbish in bins throughout the day.



Review the action you have taken

1. Eliminate the hazard (remove)

If possible, it is best to **remove the hazard** entirely.
This is the best option for hazard control.

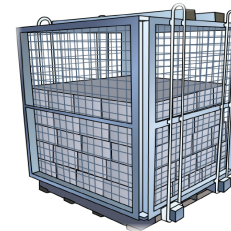
For example, remove dangerous materials from the work area.



2. Substitute the hazard (use something else)

If you are unable to remove the hazard, use something else.

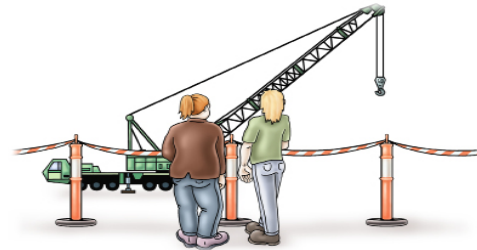
For example, use a pallet cage to lift a pallet of bricks instead of lifting the pallet without a cage.



3. Isolate the hazard (keep apart)

Put up barriers or fencing around the hazard to lower the risk of damage or harm. You call this restricting or preventing access to the hazard.

For example, put up barriers or fencing, restrict access to the area for an amount of time or put a distance restriction in place.



6. Use personal protective equipment (PPE) (wear safety clothing)

Wear safety clothing and PPE to control hazards. Avoid relying on these as the only way to control hazards. Make sure the PPE is right for you and the company has trained you in how to use it. For example, wear high-visibility clothing so workmates can see you more easily.



As a minimum, a rigger should wear a safety helmet, rubber-soled boots, a hi-vis vest/clothing and gloves.

Review the action you have taken (continued)

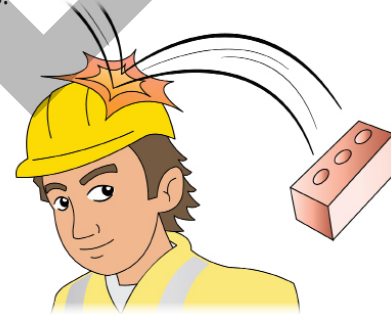
PPE examples

Here are examples of how personal protective equipment can protect you and your work mates.

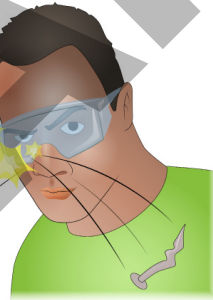
Safety shoes can protect your feet.



Safety helmet or hard hat can protect your head from falling objects.



Safety glasses or goggles can protect your eyes from harmful objects.



Dust masks can stop you from breathing in harmful substances such as gasses.



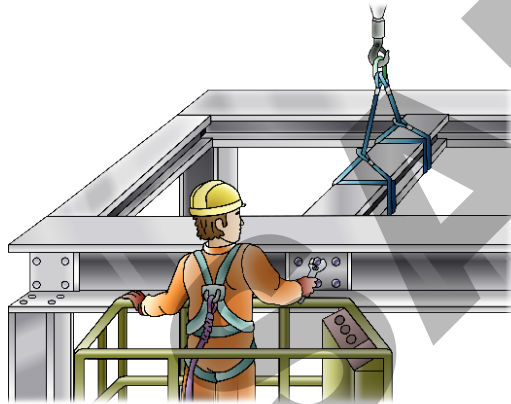
Rigging laws and industry standards

Governments make laws and standards to keep the workplace, workers and equipment safe from harm.

To do any rigging work you must have a **Licence to Perform High Risk Work** for the class of work being done.

You must obey all laws and industry standards for rigging.

This table is a list of laws to keep your workplace safe.



WHS/OHS Acts

'WHS/OHS Acts' are laws that explain how to improve health and safety in the workplace.

For example: Model National WHS Act. WHS has the same meaning as OHS in this document.

Regulations

'Regulations' explain specific parts of the Act.

For example: Part 4.3 – Confined spaces, Part 4.4 – Falls.

Codes of Practice/Compliance Codes

'Codes of Practice' are practical guidelines on how to comply with (meet the rules of) legislation.

For example: Hazardous manual tasks code of practice.

Australian Standards

'Australian Standards' are work guidelines that set the minimum accepted performance or quality for a specific hazard, processor product.

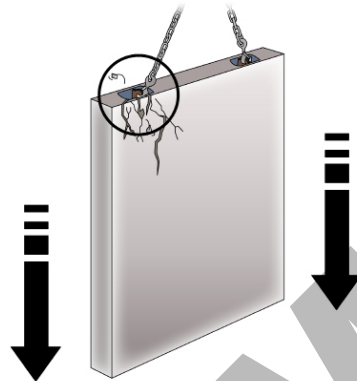
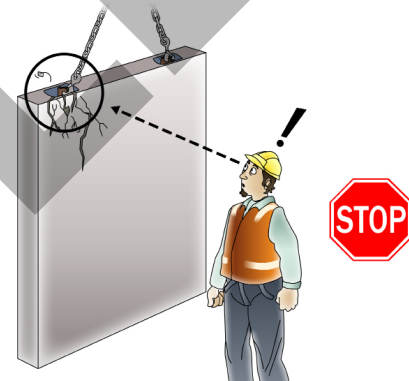
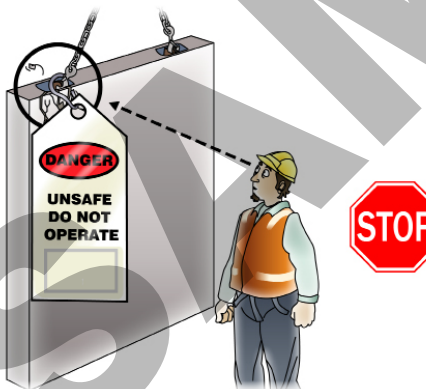

For example: AS 2550 – Cranes, hoists and winches – safe use set.

Manufacturer's specifications

Check all equipment requirements against manufacturer's specifications. For example: tilt panel braces WLL are suitable for the panels to be supported.

If a lifting insert breaks

Concrete panels have lifting inserts. Here are some rules to follow if a lifting insert breaks or fails.

<p>Lower the load</p> 	<p>Stop working</p> 
<p>Tag the panel out of service</p> 	<p>Do not use the lifting insert. Report the defect to the manufacturer of the panel. They might fix or replace the panel.</p> 

Associated plant

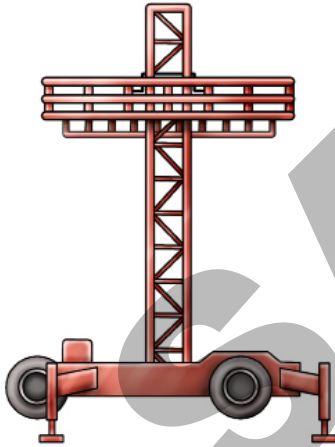
You will also need to think about any associated plant and the forces applied to them. This may include:

Mast climbers

A mast climber is a platform raised for temporary access to heights.

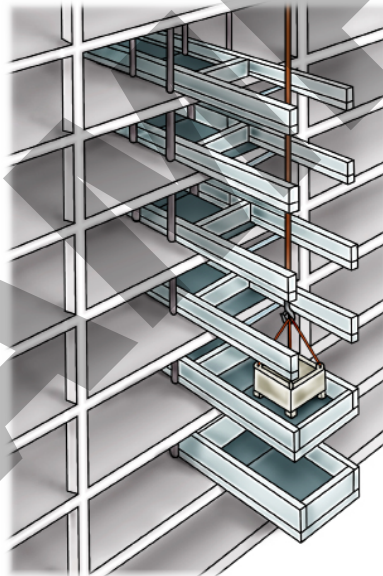
A dead load is a mast climber weight on the ground with no elevation or movement.

A dynamic load is a mast climber being elevated with workers, tools and materials on it.



Cantilevered crane loading platform

A temporary loading bay cantilevered from the face of a building or structure to land or lift crane-handled loads.

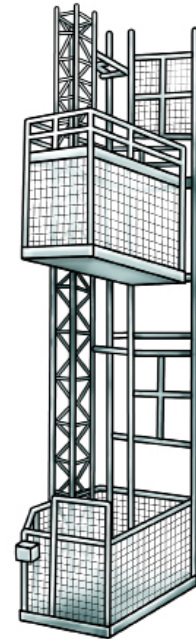


Materials hoist

A materials hoist is a powered elevator you use to move materials up and down a building.

A wind load is the wind force on the materials hoist.

A dynamic load is a barrow hoist with a wheelbarrow of sand.



Identify rigging equipment

You need to know a wide range of rigging and associated plant and equipment to carry out rigging work.

Associated equipment – Part 1

Scaffolds

Scaffolds are temporary frames used to support people and materials in the construction or repair of buildings and other large structures.

Any scaffold higher than 4 metres needs to be designed and built by a licensed scaffolder.



Static line

A wire line used to anchor you to the building, but still offering the freedom to walk around and work freely.



Beam clamps

Beam clamps are used to attach or suspend equipment such as temporary lifting gear to the bottom flange of an over head beam or girder.



Eyebolts

An eyebolt is a lifting lug (a projection by which something is held or supported) that is screwed into a load. There are two types of eyebolts.

Collared eyebolt

Uncollared eyebolt



Turnbuckle or rigging screws

An attachment used to tension:

- Rope
- FSWR
- Chain
- To provide fine adjustment.



Wire rope grip (bulldog grip)

A removable device used to secure the end of wire ropes.

Used in permanent fixed stays or guys.



Lever block

A hand-powered device used to hoist a load suspended on a chain.

Also called a come-along, com-a-long or chain puller.



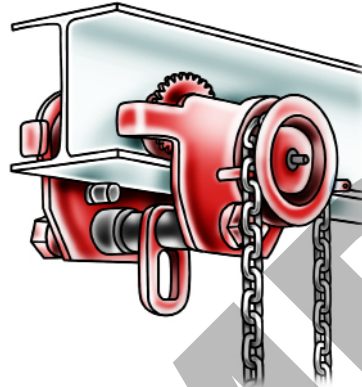
Chain block

A portable device used to hoist a load suspended on a chain.



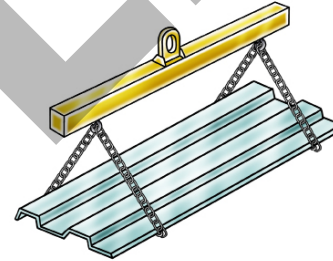
Girder trolley

A girder trolley is a movable lifting anchor device mounted on a beam for the attachment of lifting gear.



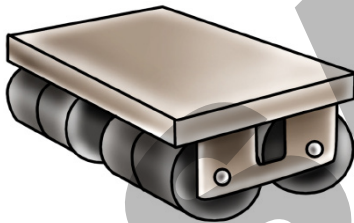
Lifting beam

A lifting beam does a similar job to a spreader bar. Generally the lifting beam is connected to the crane's lifting hook by a large shackle.



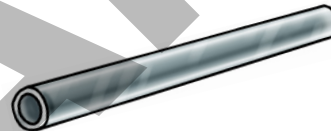
Skate

A frame with rollers set in bearings used to move heavy loads.



Roller

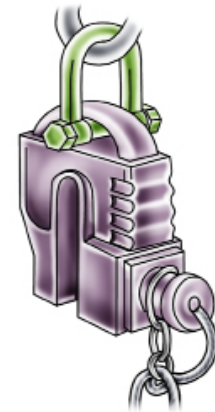
Cylinders placed under objects to help move them.



Remote release ratchet

A remote release ratchet can be released from ground level to disengage the lifting gear from the top of a steel column.

It reduces the need to work at heights.



Read the specifications first (procedures)

Before you use **any** equipment first read the specifications that come with it. They tell you how to safely use and maintain the equipment. Always follow the specifications for the working load limit.

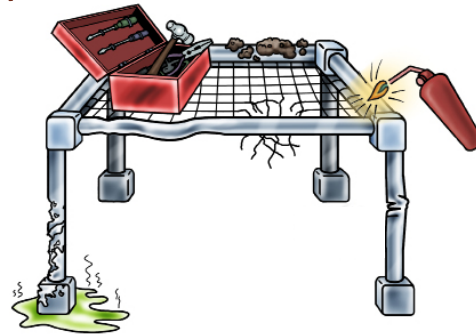
Manufacturer's guidelines may contain:

- Instructions
- Specifications
- Checklists.

These guidelines explain and instruct you how to **safely** use and maintain the equipment.



Do not use equipment in ways that it was not intended to be used by the manufacturer.



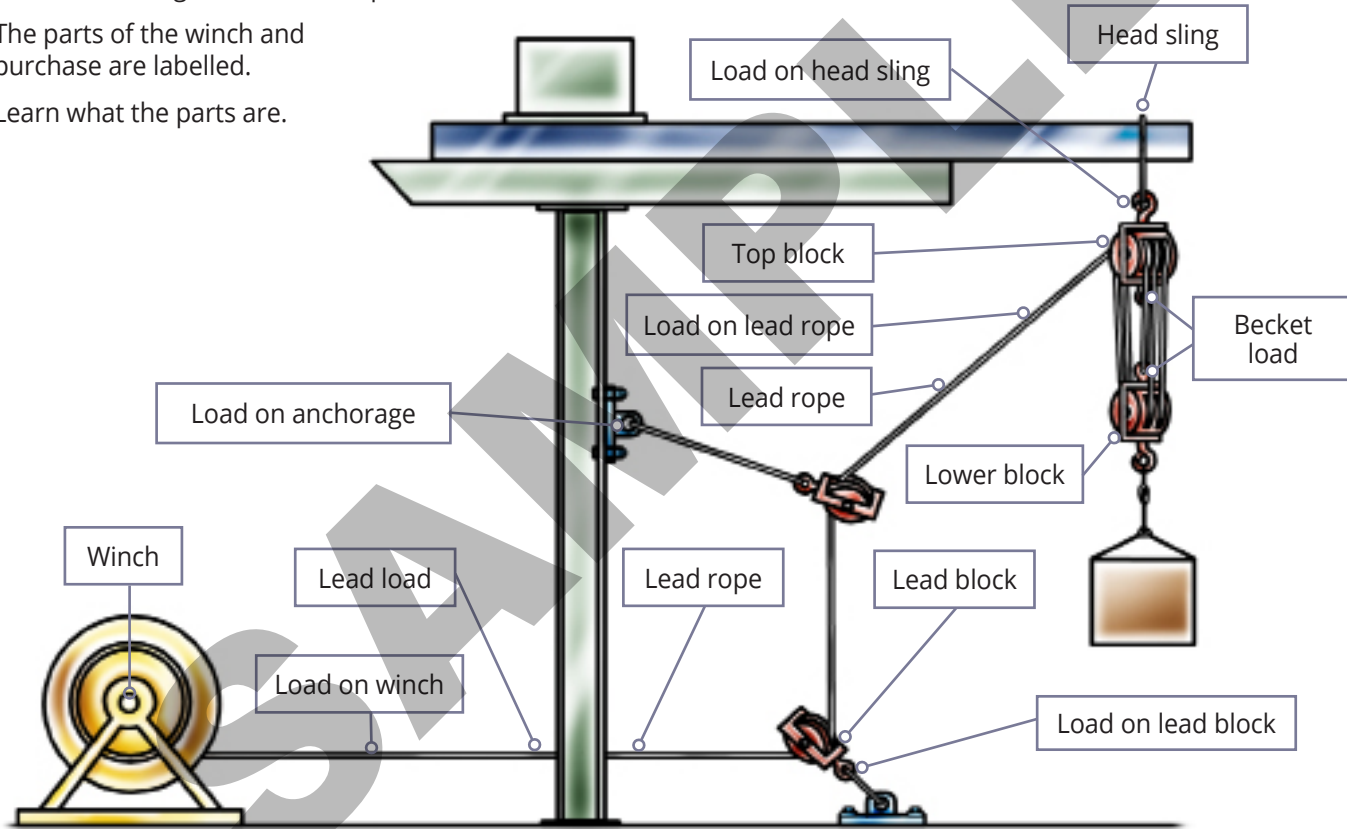
The parts of a winch and purchase

You **must** know the equipment you are working with.

This is a drawing of a winch and purchase.

The parts of the winch and purchase are labelled.

Learn what the parts are.



Identify high-strength bolts, nuts and washers

When erecting steel structures you need to use special high-strength bolts, nuts and washers.

You need to know how to identify each one.



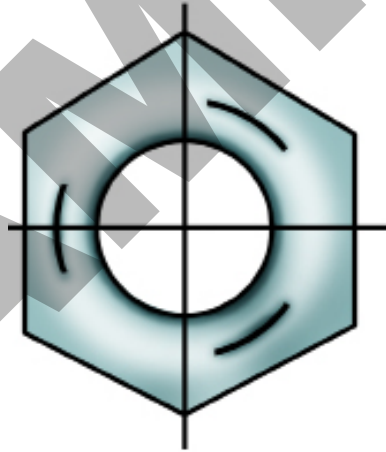
High-strength bolt

This bolt is marked with 8.8 and has 3 radial lines



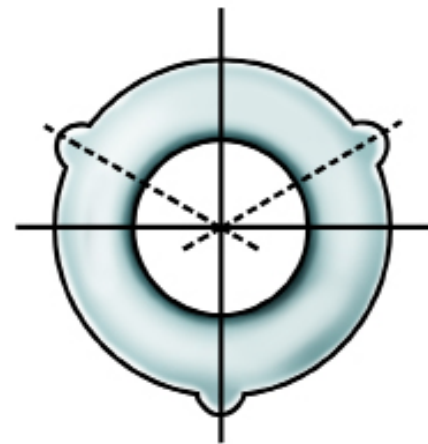
High strength nut

This nut is marked with 3 arcs



High-strength washer

This washer has 3 nibs sticking out



SELECT AND INSPECT EQUIPMENT

Element 2

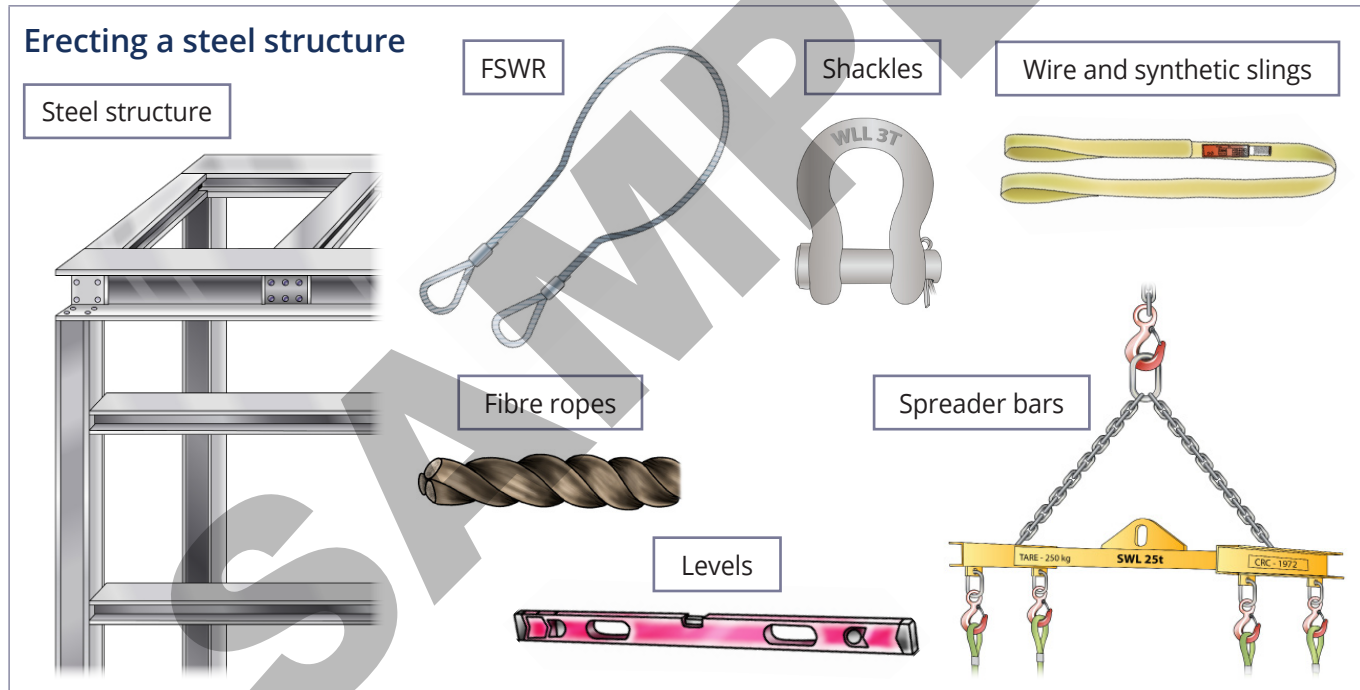


Select and inspect rigging equipment

When you start a job you need to select and inspect the right rigging equipment.

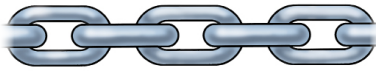
Choosing the right equipment for the task

There are many different rigging tasks you will have to do. For each task, there are common pieces of equipment you will need. The following details show some examples of common basic rigging tasks and the equipment needed for them.



Erecting a steel structure (continued)

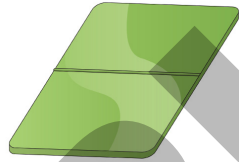
Chains



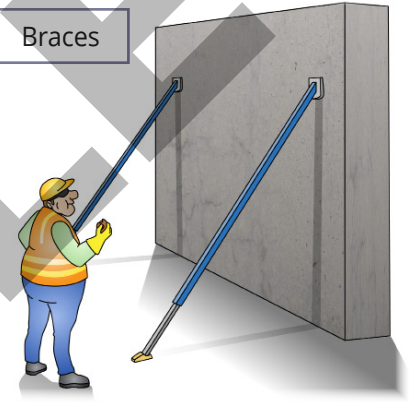
Bolts



Wedges



Braces



Spanners



Podger bars

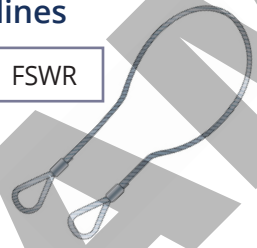


Setting up horizontal lines

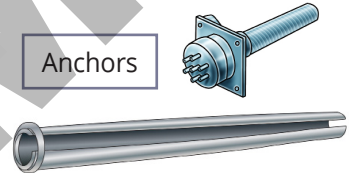
Horizontal line



FSWR



Anchors



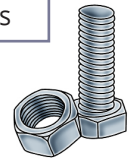
Eye bolts



Rope grips



Bolts



Turnbuckles



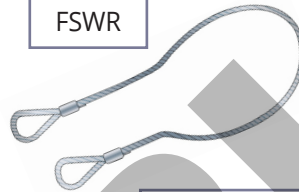
Choosing the right equipment (continued)

Working with precast selections

Precast selection



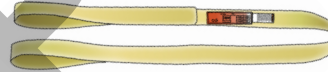
FSWR



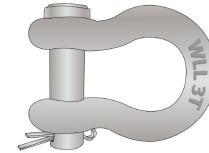
Eye bolts



Wire and synthetic slings



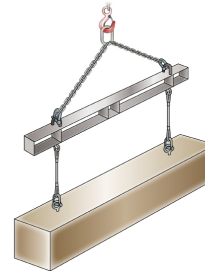
Shackles



Levels




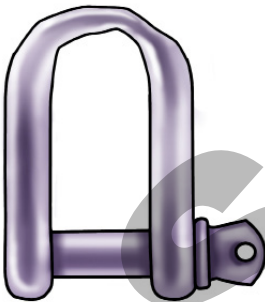
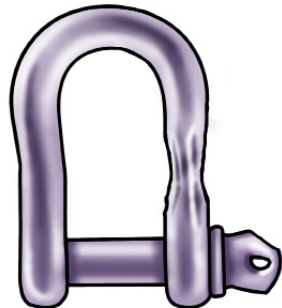
Spreader bars - Chains should be attached to points you are lifting from



Braces



Checking the condition of chains and shackles

<p>Cracks or spot welds</p> 	<p>Twists, knots and kinks</p> 	<p>Too much rust</p> 	<p>Locked or stretched</p> 
<p>Pitting</p> 	<p>Gouge marks or cuts</p> 	<p>Heat damage</p> 	<p>The link has over 10% wear in the diameter.</p> 

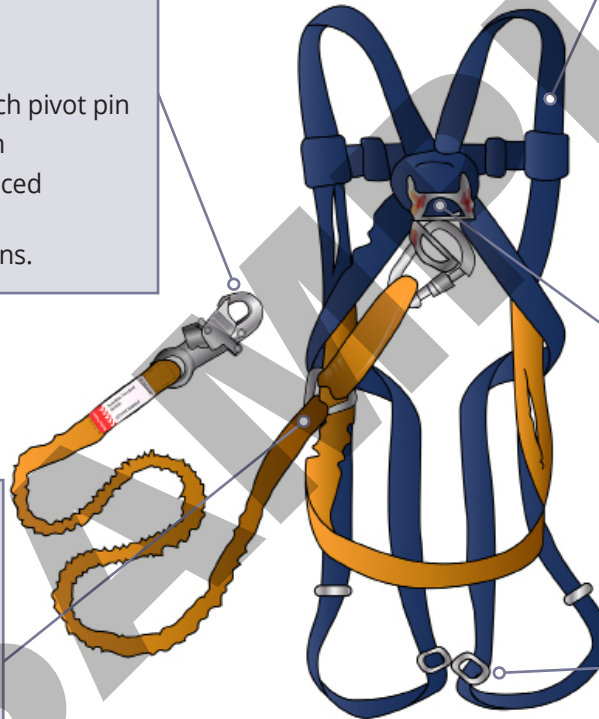
Harness defects

Snap hooks

- Distortion of hooks/latch
- Cracks or forging folds
- Open rollers
- Wear at swivels and latch pivot pin
- Free movement of latch
- Broken, weak or misplaced latch springs
- Dirt or other obstructions.

Sewing

- Broken, cut or worn threads
- Damage or weakening of threads due to contact with heat, corrosives, solvents or mildew.



Webbing

- Cuts or tears
- Abrasion damage
- Excessive stretching
- Damage from heat, corrosives or solvents
- Damage from rotting or mildew
- Ultraviolet exposure.

D-rings

- Too much vertical movement of straight part of D-ring
- Cracks
- Distortion
- Wear to cross-section.

Buckles and adjusters

- Distortion
- Cracks and forging laps
- Open rollers
- Bent tongues.

SET UP TASK

Element 3



Setting up hazard controls

Before you start any rigging work, you need to put in place measures to prevent and control hazards.

This could include but is not limited to:

- Restricting access to an area
- Removing any hazards
- Moving equipment, plant or vehicles that are not involved in the rigging work
- Setting up warning signs and barricades
- Erecting overhead protection
- Creating pedestrian exclusion zones
- Perform any control measures listed on the JSEA or SWMS.



Trenches

Cover any trenches in the area to stop workmates falling in.



PPE

Make sure all people involved in the rigging work wear the appropriate personal protective equipment (PPE.)



Too dark

Make sure there is enough lighting to do the work safely.

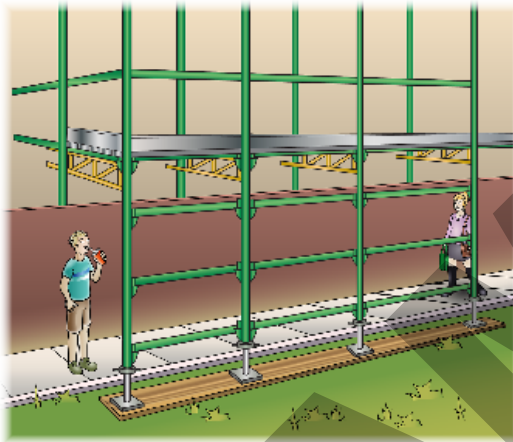
You may need to set up lights.



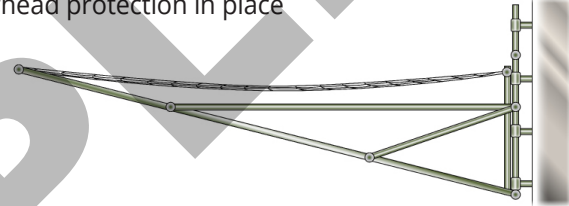
Erecting a structure near a footpath

You might need to erect a structure near a footpath. If you do, there are some things you need to do to make the worksite safe.

Put up gantries or scaffolds



Put overhead protection in place



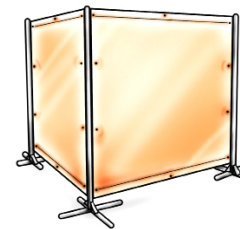
Keep people clear with signs and barriers



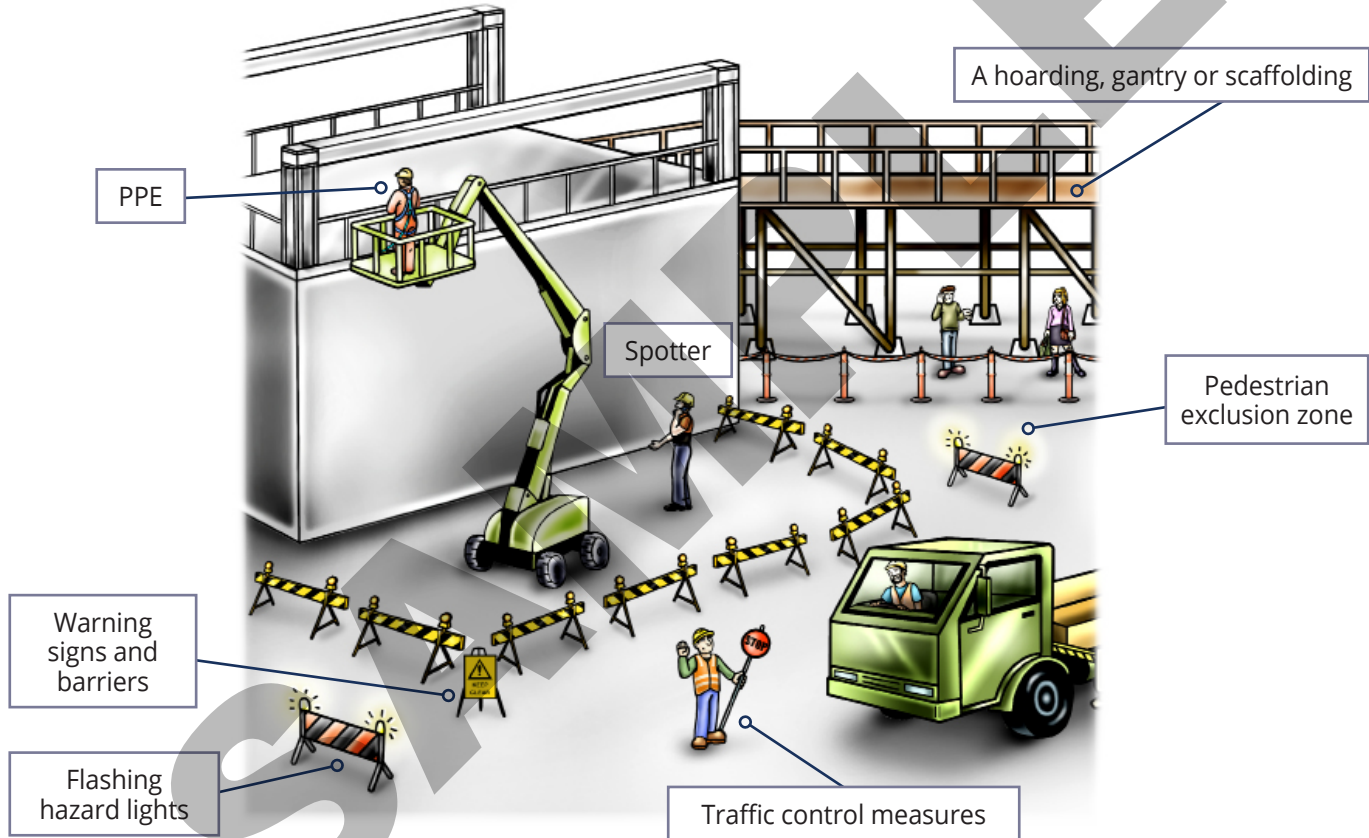
Safety screens

Set up any safety screens or shutters as needed.

Refer to manufacturer's specifications.



Measures to prevent and control hazards



Working closer to powerlines

A job may require you to work closer than the allowable safe working distance to powerlines.

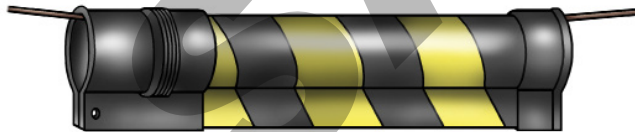
In some states/territories a spotter may be allowed to guide you as you work closer. In some cases an exemption may be allowed.

Contact your local power supplier if you need the power isolated.



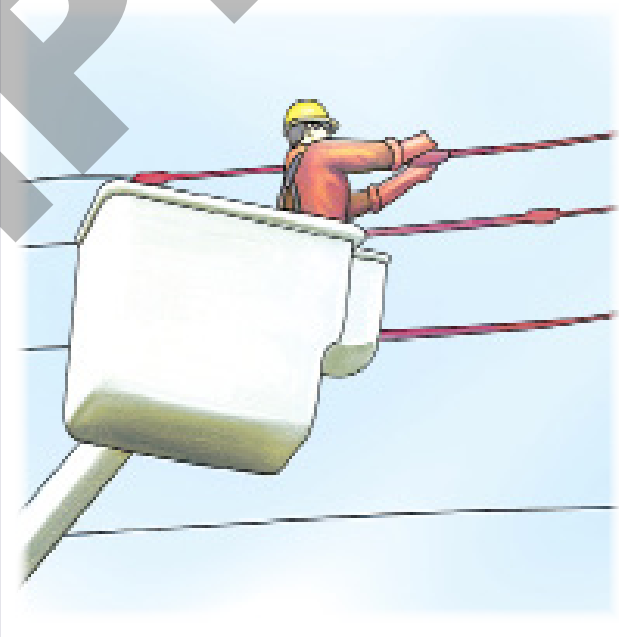
In some states/territories, tiger tails — which are black and yellow warning devices — can be fitted as a warning device only.

These must be fitted by the supply authority.



If the power can't be turned off, the powerlines will need to be covered by insulation.

This must be done by the power supply company.



Spotter

In some states/territories a spotter may be allowed to guide you as you work closer to powerlines.



Lock out, lock out system and permit system

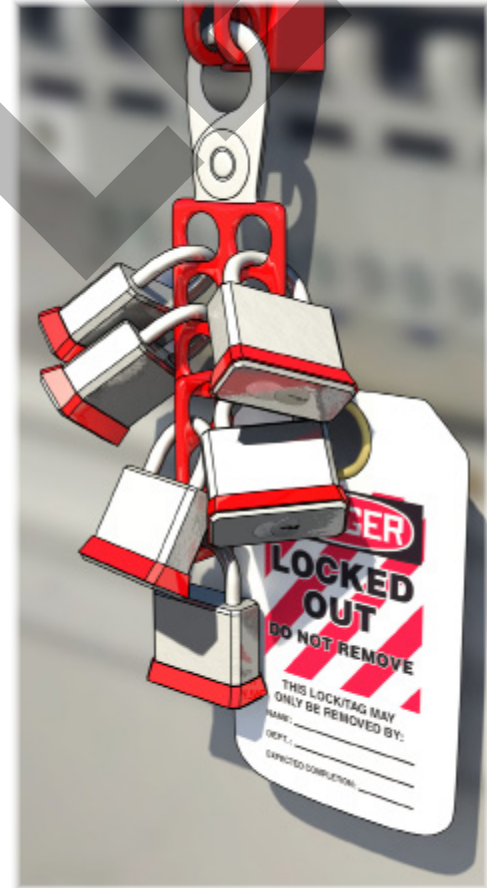
A **lock out system** is often used with a **permit system** to make sure that a piece of plant cannot be started while work is still being undertaken.

A good lock out system is a mainstay of an effective safety procedure.


A common lock out system is one that has a claw like device which secures the switch or lever, the claw is held shut by each person fitting their own lock into a separate claw hole, no two locks have the same key.

With this type of system the equipment cannot be returned to service until all locks and the claw device is removed.

When there are more people working on the equipment than holes in the claw, another claw is fitted to a hole in the first claw to give a daisy chain effect and more locks placed on that claw.



Lock out system



Lock out tag



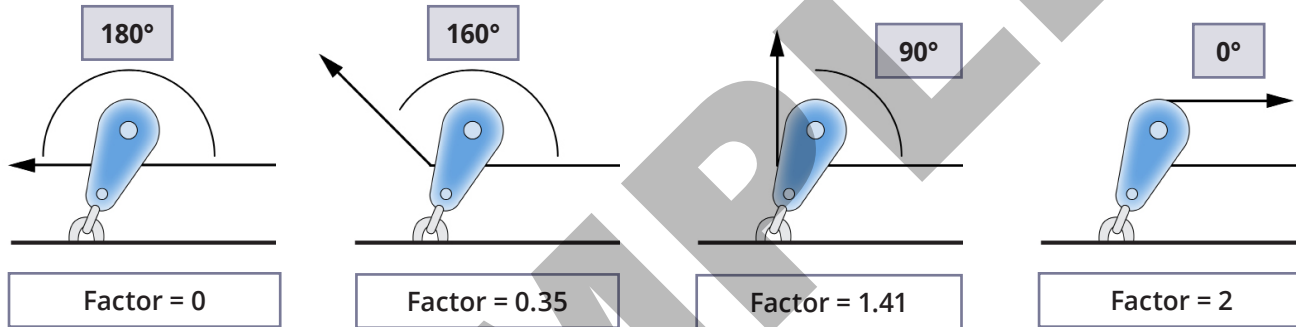
Permit system



Task	Time on	Signature on
Isolate power and confirm safe	7:35 am	Paul Jones
Disconnect power	8:10 am	E. Miller
Welder remove motor	8:25 am	B. Smythe
Trades assistant	8:25 am	P. A. Kicker

Angle and load factors (continued)

As the angle gets smaller, the load factor (force on the block) gets larger.



This table shows different angles and angle factors:

Angle	Factor
0°	2.00
10°	1.99
20°	1.97
30°	1.93
40°	1.87
45°	1.84

Angle	Factor
50°	1.81
60°	1.73
70°	1.64
80°	1.53
90°	1.41
100°	1.29

Angle	Factor
110°	1.15
120°	1.00
130°	0.84
135°	0.76
140°	0.68
150°	0.52

Angle	Factor
160°	0.35
170°	0.17
180°	0.00

Formulae

Distance between drum and first block = width of drum \times 0.5 \times fleet angle ratio

Becket load = (total load on lower block \div number of parts in purchase)

Load in lead rope = BL + [(BL \times number of sheaves) \div friction allowance]

Minimum diameter = $\sqrt{\text{Load in lead rope} \div 8}$

Head sling load = load + load in lead rope

Diagram 1 — Setting up a winch

Use these details for calculations

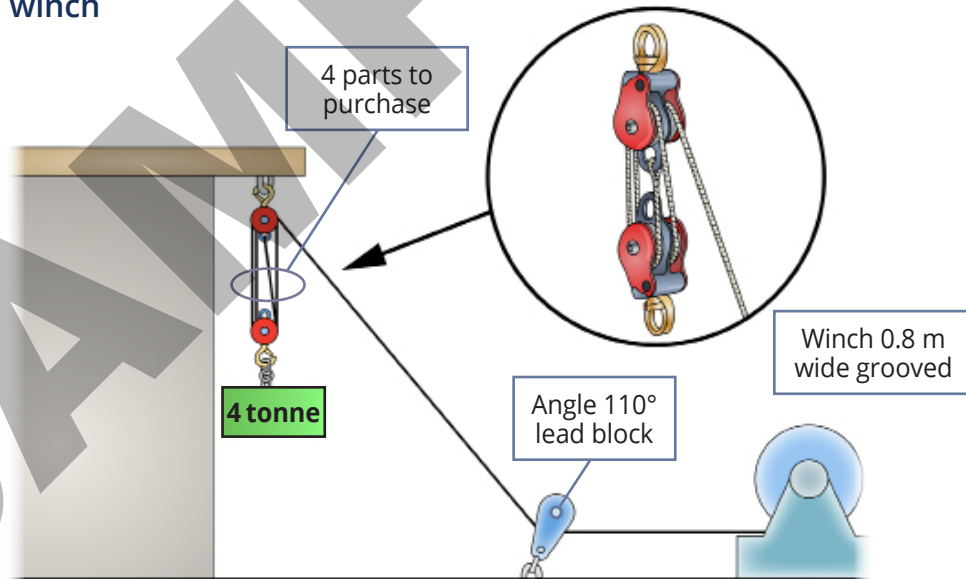
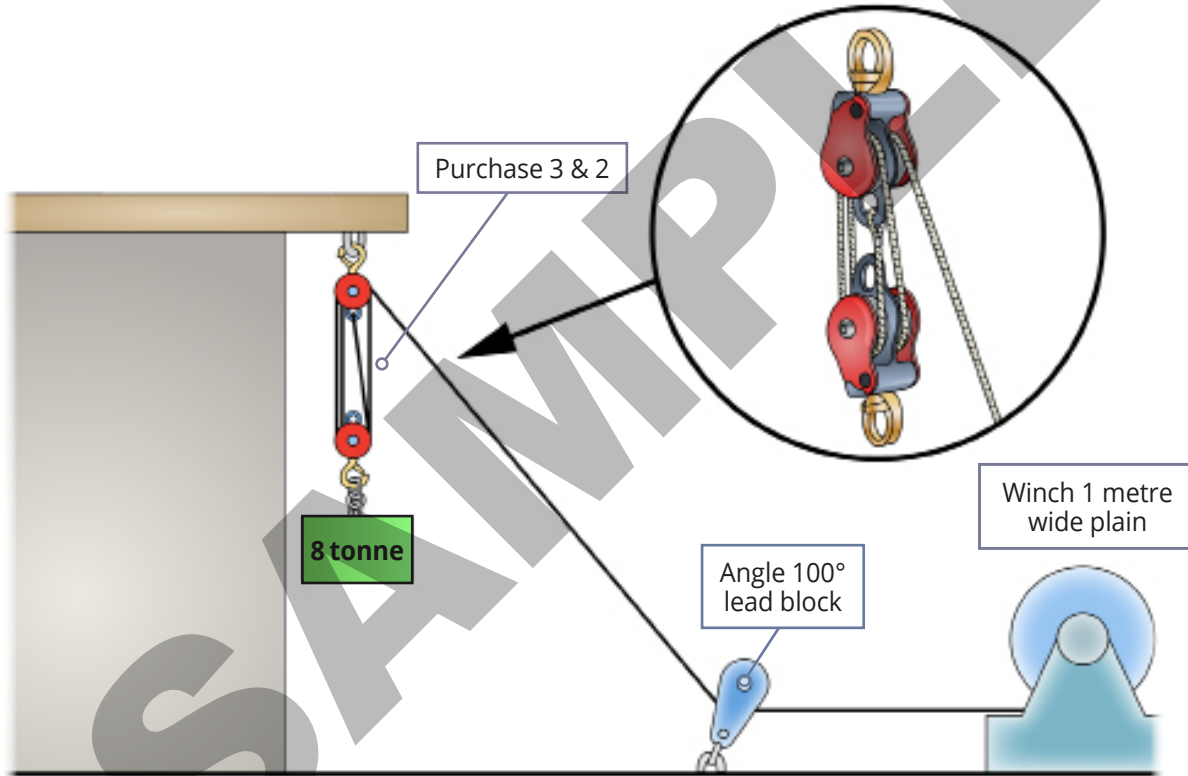


Diagram 2 — Setting up a winch

Use these details for calculations



Safety equipment

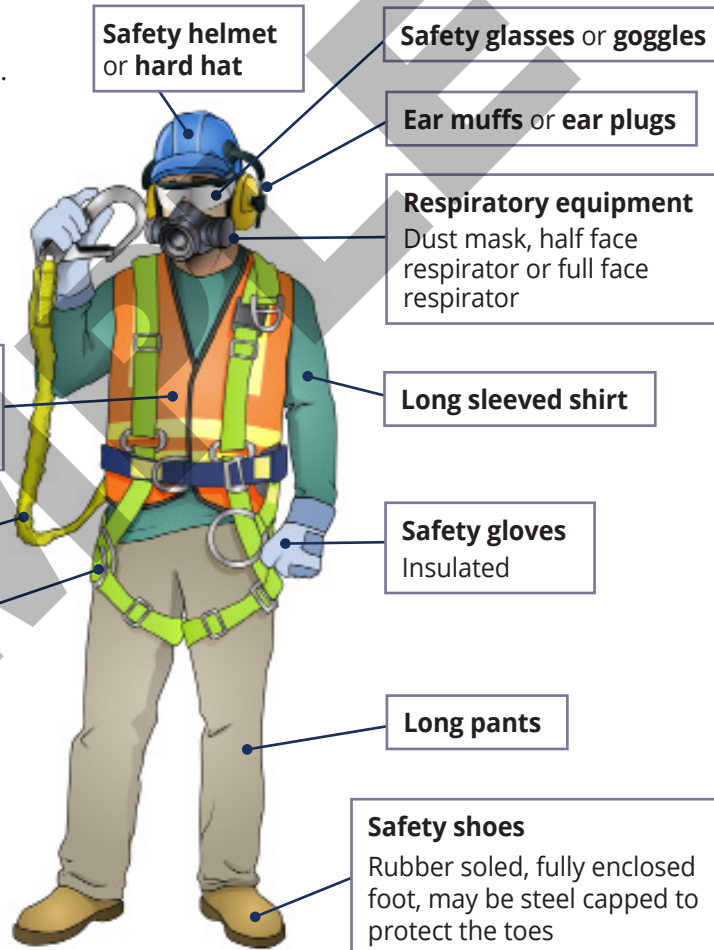
You need to check your safety gear when doing rigging.

Personal protective equipment (PPE)

PPE is clothing or equipment worn on the body to **protect** you from hazards.

Make sure any PPE you wear is in good condition and fits properly.

PPE will not take away the risk of harm altogether, but it will help keep you safe.



High visibility clothing
Safety vest, hi-vis shirt or hi-vis jumpsuit

Lanyard

Safety harness

Safety harness
If you work at heights make sure you wear a safety harness.
Always check:

- It fits properly
- That any clips or connectors work
- It is in good working condition and has no faults.

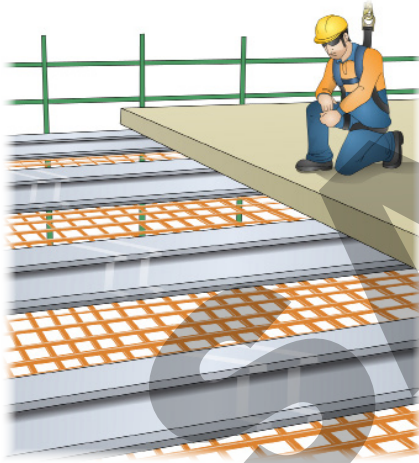
Safety nets

Below are some important points for you to remember when setting up a safety net.

Gaps

Gaps between safety nets and the building or structure should be as small as practicable.

The maximum gap you would allow between the edge of a safety net and a building or structure is 200 mm.

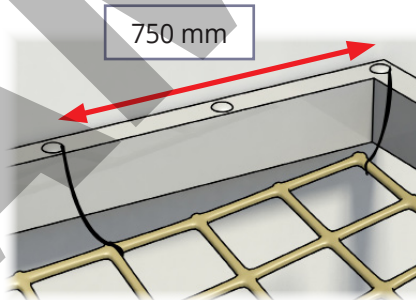


Attaching the net

Nets should be securely attached to the supporting framework using:

- Tie cords
- Hooks
- Rings
- Thimbles.

These must be equally spaced at a maximum of 750 mm intervals.

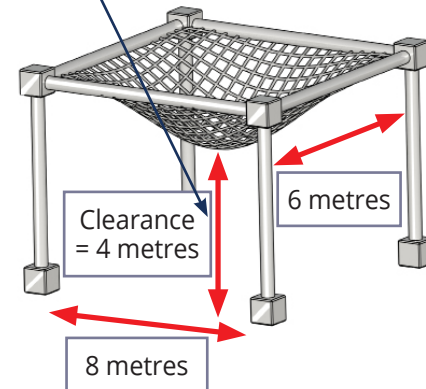


Clearance

Clearance should be kept below the net at **all** times to allow for stretch if someone falls into it.

The minimum distance is $\frac{2}{3}$ of the length of the shortest side, or 2 metres, whichever is greater.

Example:
 $\frac{2}{3}$ of 6 metres = 4 metres



Fall arrest systems (static lines)

Below are important things you need to think about when installing a fall arrest system (static line).

Setting up a fall arrest system

Fall arrest systems (for example, a horizontal line) must be anchored in place.

You must make sure you know the amount of force the anchor points can take.

Two ways you can do this are:

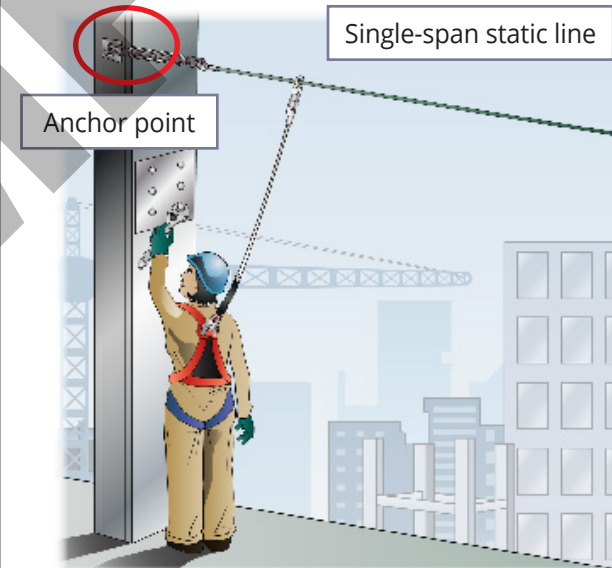
- Check the manufacturer's specifications
- Follow the instructions for installing the fall arrest system.



Single-span static lines

When setting up a single span static line, you **must** know the minimum friction pressure.

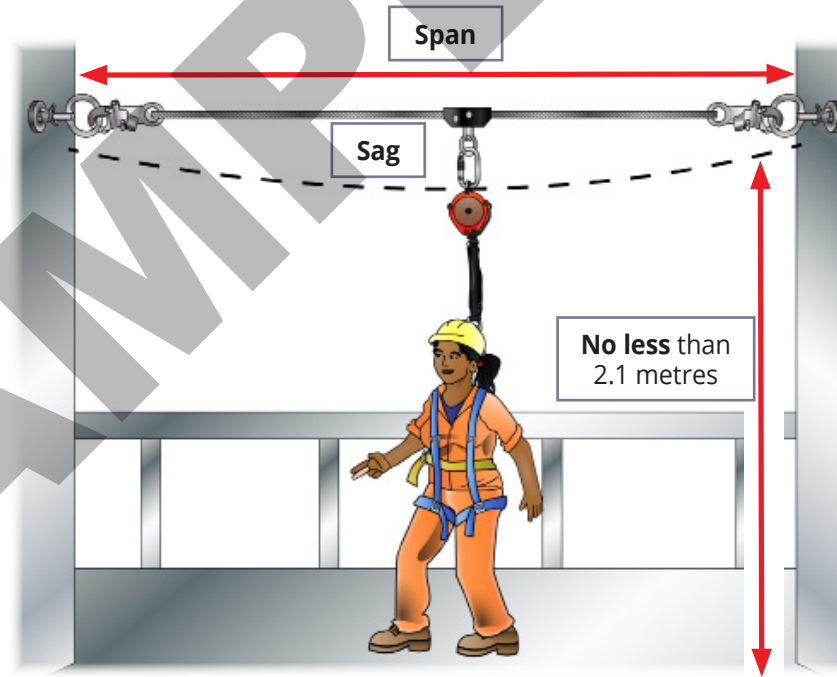
The minimum friction pressure on the anchor point of a single span static line is 40kN (4 tonne).



Single-span static lines (continued)

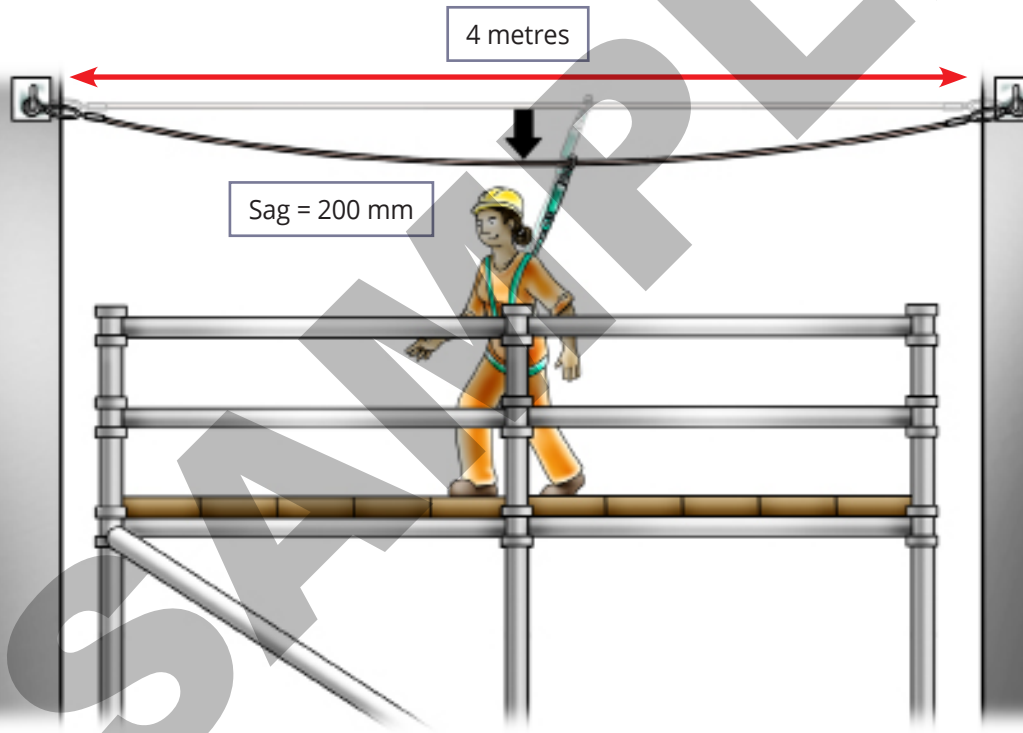
The static line **must**:

- Support 40kN (tonne) of force
- The maximum span of a single-span safety line is 4 to 6 metres
- The sag of a single-span safety line should be no more than 50 mm
- The static line should be **no less** than 2.1 metres from the floor of the work area.



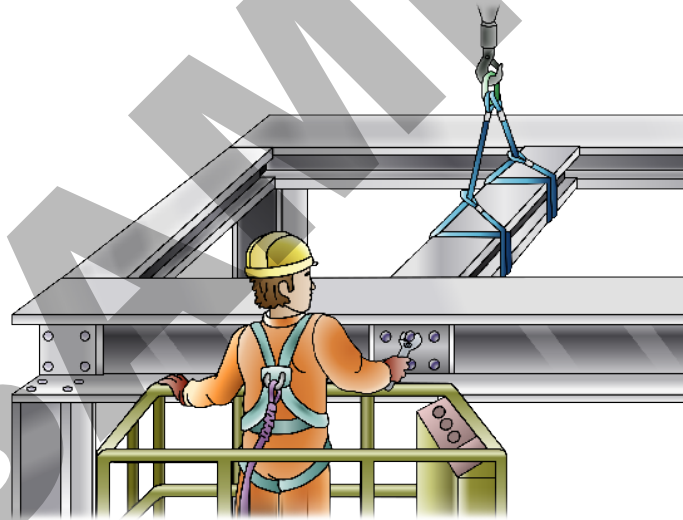
The maximum line sag for a span of safety line

The maximum line sag you can have is 50 mm of sag for every metre of line you have.
For example, if you had a line that was 4 metres long the maximum sag would be 200 mm.



ERECT STRUCTURES AND PLANT

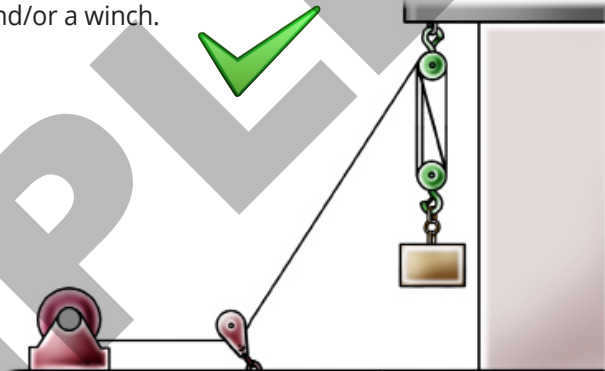
Element 4



Carry out rigging work

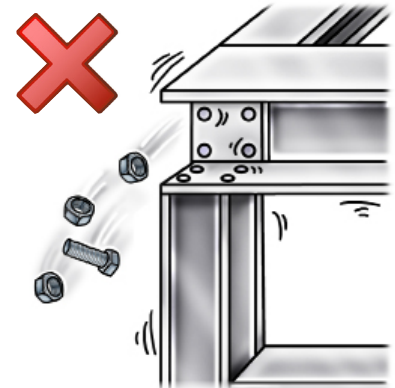
All rigging work should be done according to workplace procedures, manufacturer's guidelines and site information.

Do a **test lift** before lifting and moving loads with a crane and/or a winch.
Check the security of slings and the slinging method.



If a problem or accident happens while you are rigging, you should:

- **Stop**
- Try to sort out the problem
- Get help
- **Report** the problem or accident to your supervisor.



Erect structures

Erecting structures in rigging work includes:

- Erecting steel
- Installing precast concrete panels.

Make sure you complete a test lift **before** moving loads.

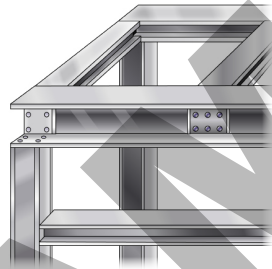
Erect steel structures

Some points to remember when erecting steel structures are:

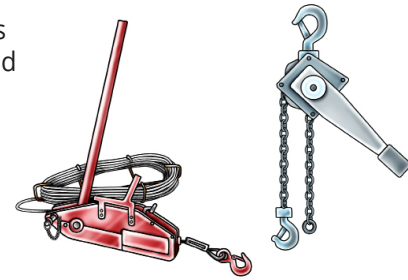


The structure at all times must remain structurally:

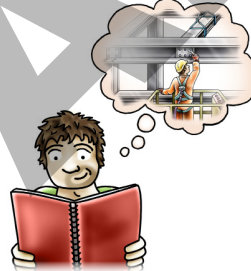
- Sound
- Strong
- Stable.



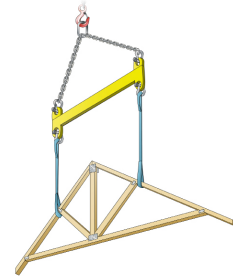
Correct equipment is selected, checked and employed according to procedures.



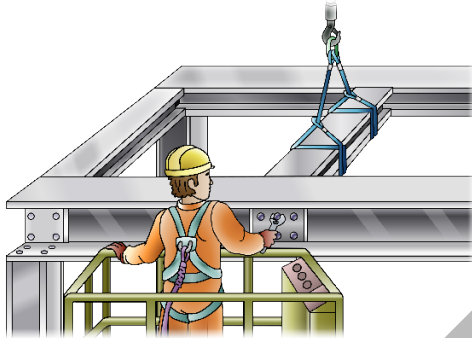
Designer's drawings and manufacturer's specifications are examined and understood.



Flat-pitched gable roof trusses should be bridled and slung with a central vertical sling (or as in the engineer's specifications).



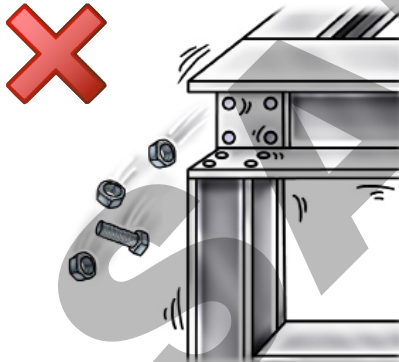
Only use one hand when working at height to **podgy** a steel beam into position.



Prefabricate as much as possible on the ground. This reduces the number of lifts needed by the crane.



Structural issues and unsafe situations can occur if **incorrect** nuts, bolts or washers are used.



Do not erect steel structures in windy conditions.

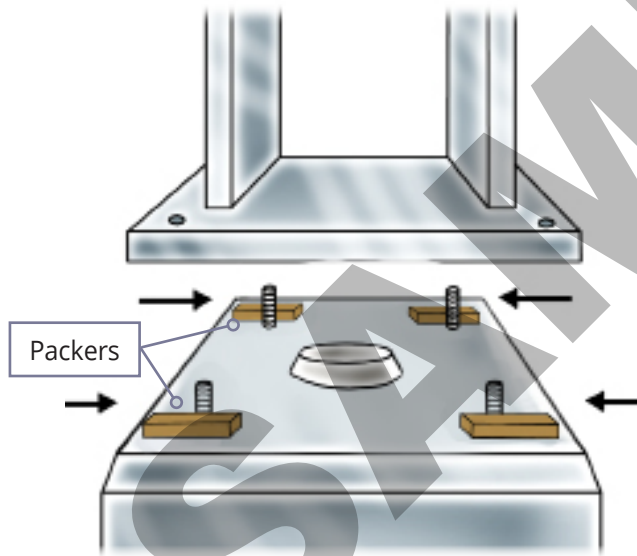


Erect structures (continued)

Packers

Make sure there is a **packer** (elevation pad) underneath every concrete plinth or pedestal.

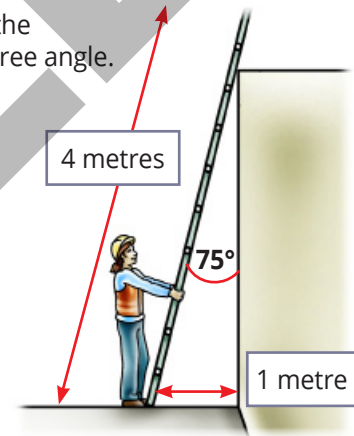
Further packers should be placed around the holding down bolts. They will make it possible to insert wedges to help keep the columns level and at the correct height.



Ladders

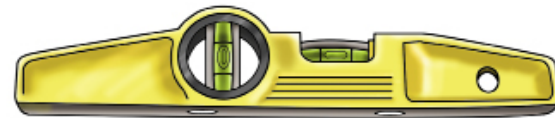
Fix access ladders to the structure at a 75° degree angle.

For example, 1 metre horizontal to 4 metres vertical.



Levels

Level the first-placed structural members and plumb using spirit levels, dumpy levels or a plumb bob.



Erect associated plant (continued)

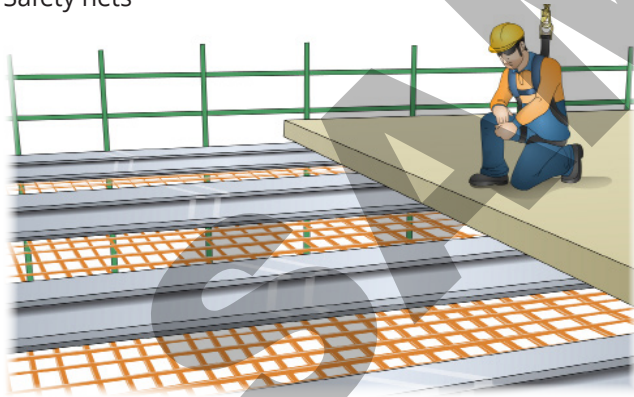
Static lines



Loading platforms



Safety nets

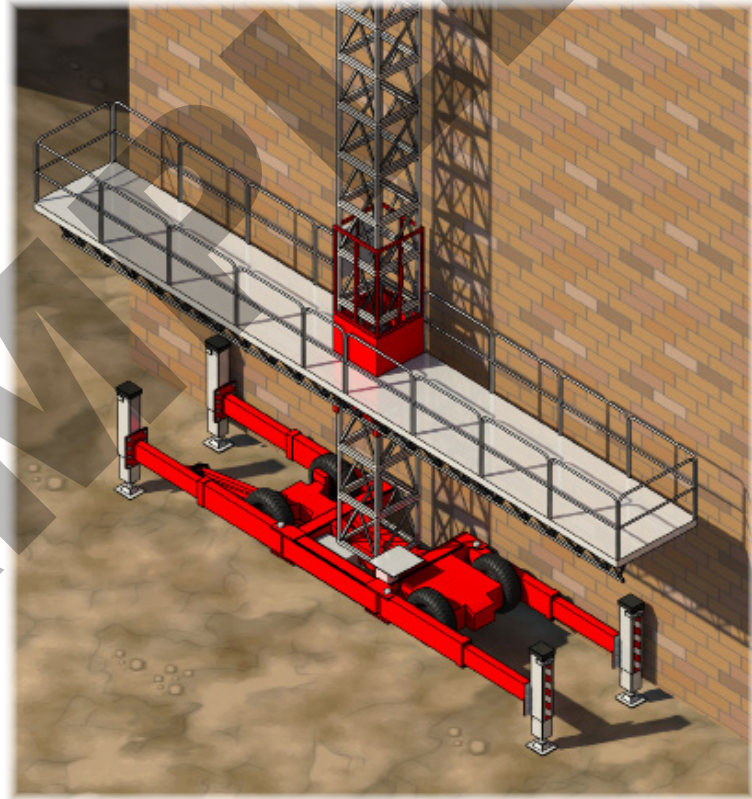


Following are some examples of how these are erected.

Erect a mast climber

When erecting a mast climber make sure you:

- Check ground conditions/bearing pressure
- Check for powerlines in the area
- Read the manufacturer's specifications
- Barricade the area
- Extend, lock and pack outriggers
- Anchor the mast
- Keep the platform fully lowered when not in use
- Install and test limit switches
- **Do not** erect in high winds.

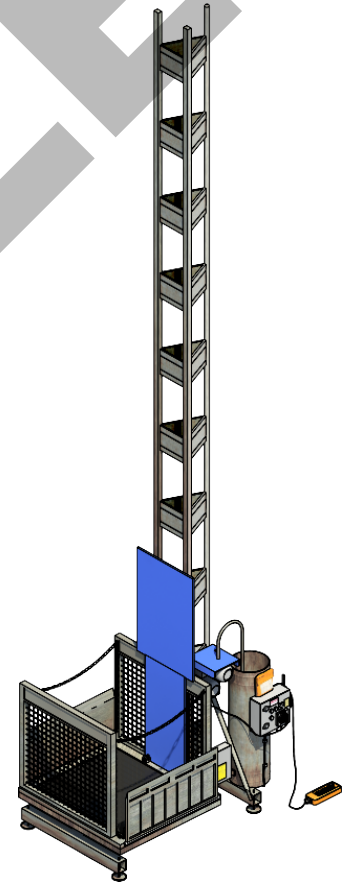


Erect associated plant (continued)

Erect a materials hoist

A few important points to remember when erecting a materials hoist are:

- People should never ride in a materials hoist unless they are a licensed rigger
- The minimum and maximum horizontal clearance between the moving platform of a cantilevered hoist and any landing or floor is 25 mm and 100 mm.
- The tower must be guyed or tied every 6 metres with no more than 3 metres free-standing above its top tie
- The minimum height of a landing gate for a cantilevered platform hoist is 1.8 metres
- The handrail should be placed 800 mm from the base of the hoist tower to stop people leaning over the handrail and being hit or crushed by the platform as it comes down.
- Handrails should be placed on the floors to prevent falls
- Install and test limit switches
- Display signs showing WLL (Working load limit) and SWL (Safe working load).

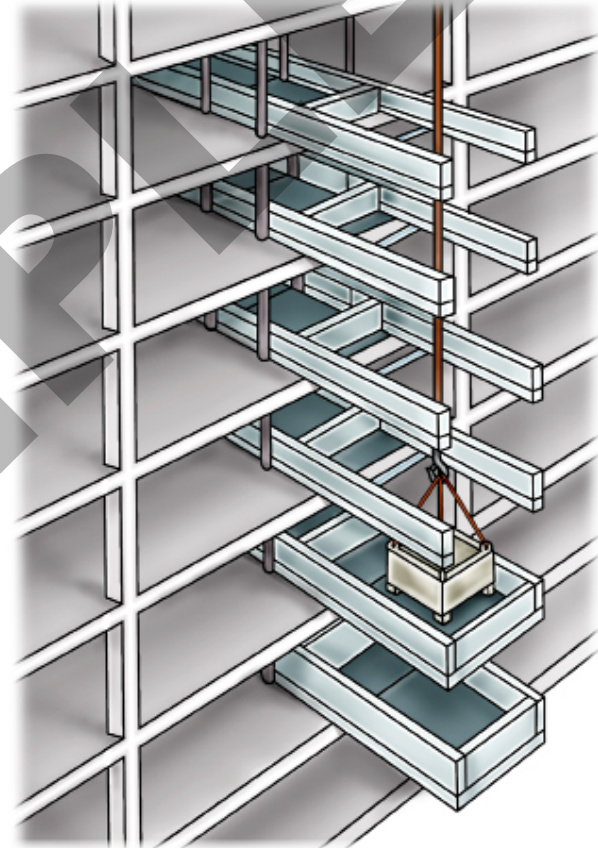
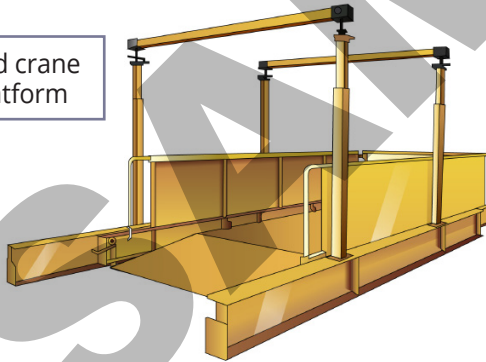


Erect a cantilevered crane loading platform

A few important points to remember when erecting a cantilevered crane loading platform are:

- The platform should be used only for its designed purpose. Any alterations or different use should be an engineered design.
- All bolts and connectors should be secured tightly (no friction anchors)
- Platform landings should be flush with the floor slab or suitable ramps should be fitted
- All props must be plumb with rear ties positioned
- Rear handrails should be in position

Cantilevered crane loading platform

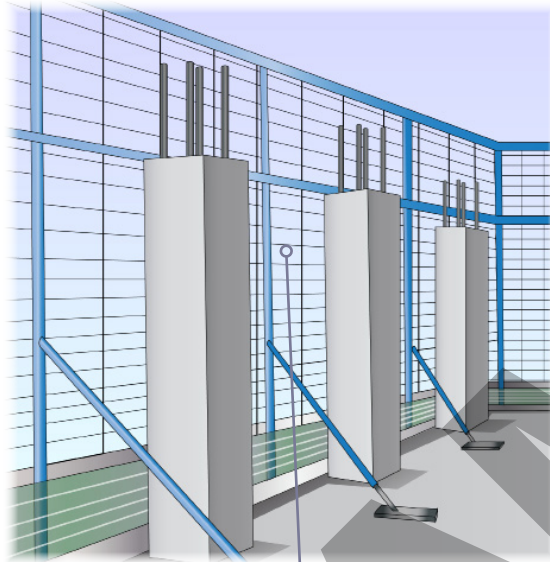


Erect a cantilevered crane loading platform (continued)

- There should **not** be any gap between the side of the platform and the site handrails
- Platforms facing a public roadway should not extend beyond the line of the overhead protection provided for the public
- The platform needles should be secured against lateral displacement
- Side panels and gates should be fixed in position
- The platform decking should be flush with and butting the floor slab. If this is not possible then ramps should be fitted.
- Adjustable props must be adjusted to make sure of minimal adjustable jack extension
- Engineer's approval may be required
- Signs showing the maximum load information should be clearly shown
- Only a person with a basic rigging or intermediate scaffolding licence can directly supervise the installation and dismantling of a cantilevered crane loading platform.



Set up shutters and safety screens

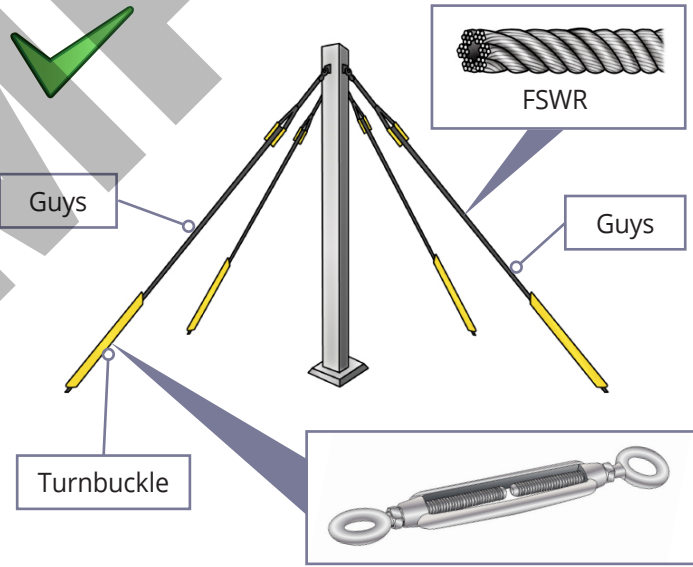


Safety screens

Stabilise free standing column

A free standing column needs to be stabilised.

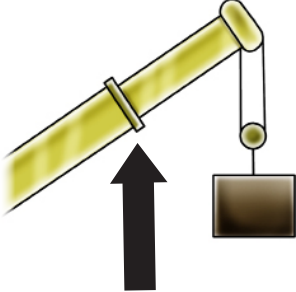


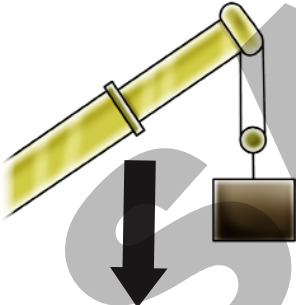
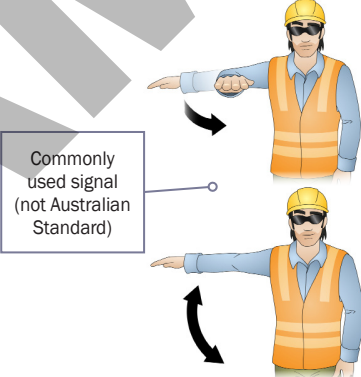

- Use guying, lashing or bracing to keep structures stable during erection
- If guys are to be left overnight, the right guys to use are flexible steel wire rope (FSWR)
- **Do not** leave a lattice section or steel truss unsupported once erected.



Hand and whistle signals

There is a series of hand and whistle signals that fall under AS. 2550.1 - 2002 (Australian Standard). The dogger and the crane operator need to check that they understand the signals that are going to be used.

Signals can vary on different sites.

Hoisting raise					
Motion		Hand signal		Whistle	 ● ● 2 short
Hoisting lower/down					
Motion		Hand signal		Whistle	 ■ 1 long

Work with associated equipment (continued)

Checks before you use a Cantilevered crane loading platform (CCLP)

All the following checks should be done before you use a CCLP.

- Check all connectors and bolts are tight and in position
- Check adjustable props are set up to prevent the jack extending too much
- Check handrails are in the right position
- Make sure the platform floor and floor slab have no gaps
- Check props are plumb and the rear ties are in position
- Check if an engineer's permission is needed.

Check with an engineer



Minimum jack extension

Props plumb

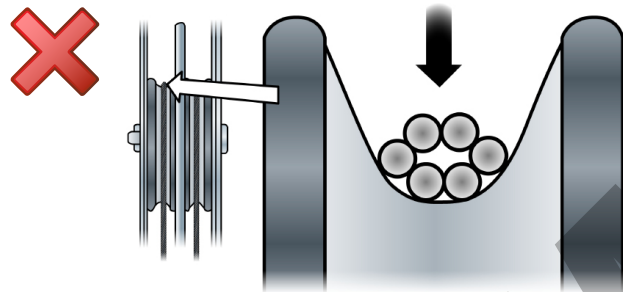
Connectors and bolts

Handrails

Platform floor

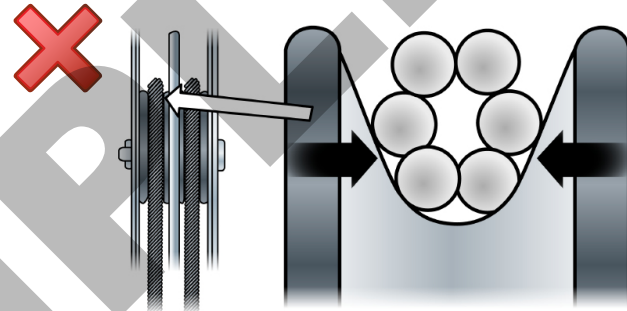
If the sheave groove is too big

In the sheave below, the groove is too big.
A big groove can affect the FSWR by flattening it out.



If the sheave groove is too small

In the sheave below, the groove is too small. A small groove can cause pinching and abrasion of the FSWR.



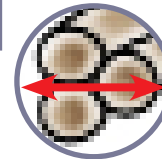
Power operated lifts using FSWR

You will be doing a power-operated lift with an FSWR.

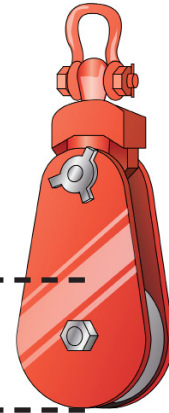
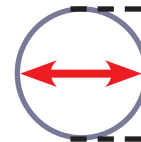
Remember that the size of the rope and the size of the sheave affect each other.

The sheave diameter should be 15 times bigger than the rope diameter.

Rope diameter



Sheave diameter

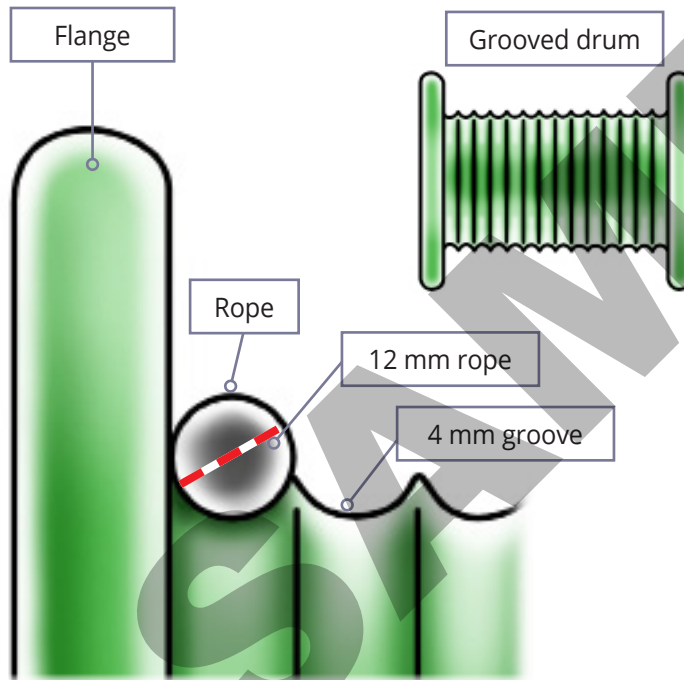


Work with associated equipment (continued)

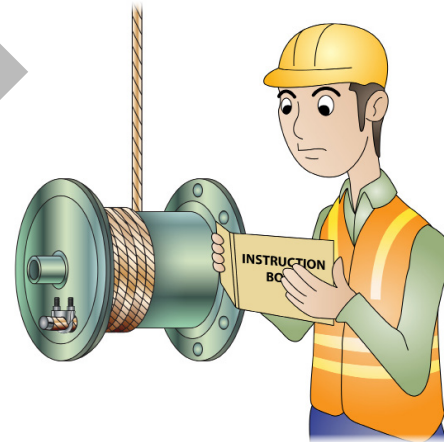
Using a grooved winch drum

You are using a grooved winch drum. The minimum depth a groove can be is:

At least one third ($1/3$) of the rope diameter

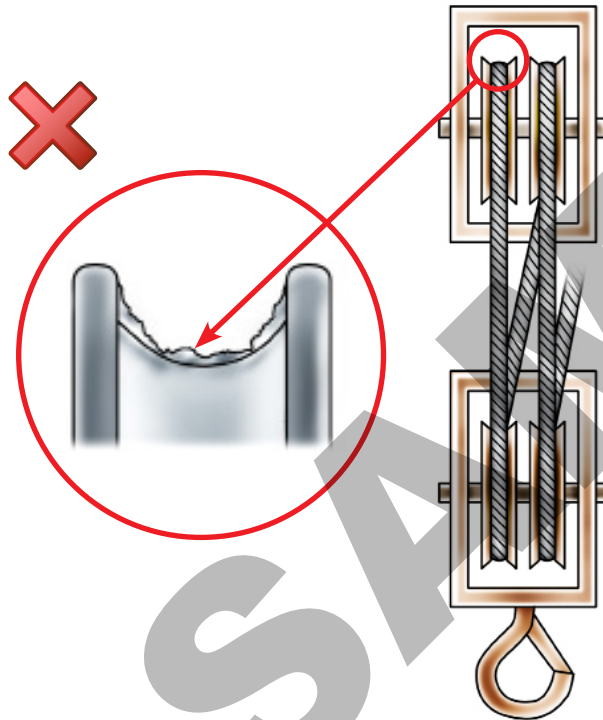


Whatever the manufacturer's instructions say it should be.



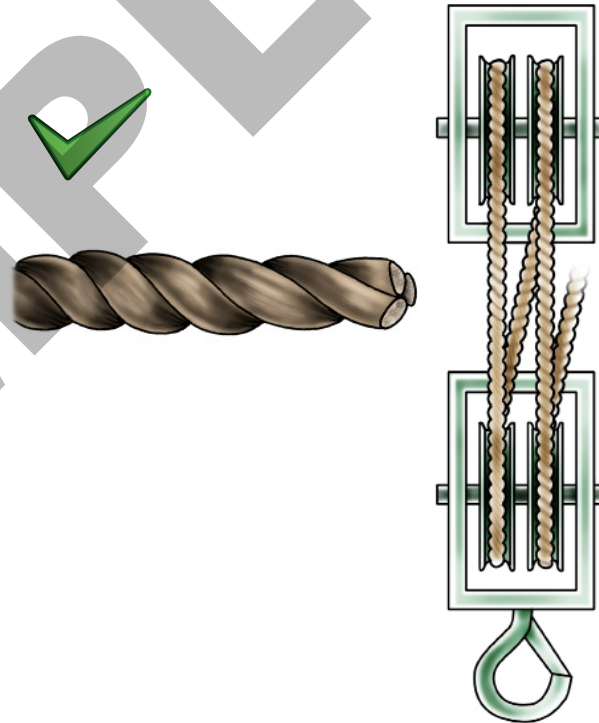
FSWR and fibre rope tackle blocks

You must never use FSWR in a fibre rope tackle block.
The wire can damage the tackle block.



Fibre ropes and wire rope purchase blocks

Fibre ropes can be used in a wire rope purchase block.
This is because wire rope purchase blocks are much stronger than fibre rope purchase blocks.



DISMANTLE STRUCTURES AND PLANT

Element 5



Dismantle structures and associated plant

Always check the manufacturer's specifications when you dismantle (meaning take apart) any structures and associated plant.

Make sure you pack up and store the parts properly.



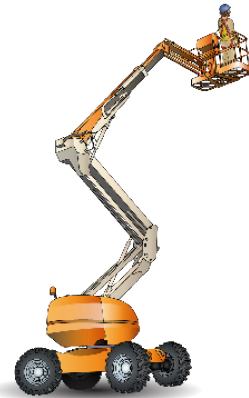
Separating the lifting gear without climbing

There are ways to separate the lifting gear from the load without climbing. Some ways you can do this are:

Remote release shackles



Elevating work platform (EWP)



Talk to other workers

Before you start to dismantle (take apart) structures or equipment, talk with the other workers who will help you.

Safely conducting work at heights

To work safely at heights you should:

Wear the right personal protective equipment (PPE) for the job



Ensure you anchor the lanyard and inertia reel correctly



Use clear, easy-to-understand words and hand signals with other workers.



Communication

Make sure you communicate clearly with other personnel when you dismantle structures and plant.

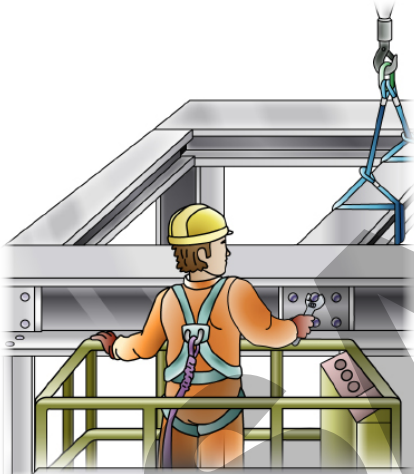


Working safely at heights when dismantling structures

It's important to make the dismantling of structures as safe as possible.

Because you will work at heights, there are things you can do to make this safer.

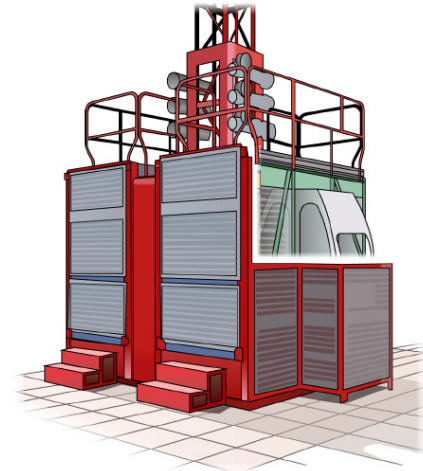
Use an elevating work platform (EWP)



Use horizontal (static) lines



Use a personnel and materials hoist



Dismantling structures safely

Check the manufacturer's information before you take apart equipment.

You need to do this to make sure you dismantle equipment safely.



Sometimes you will need to use equipment (including braces, guys and lashing) to keep the structure safe and stable.

