



新加坡建築商公會有限公司
THE SINGAPORE CONTRACTORS ASSOCIATION LTD
Building Our Nation Together

Good Practices on Safe Use of Ladder

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Use of ladders

01



Use of Ladders

- Ladders

- a piece of equipment consisting of repeated bars or steps (rungs) between two upright lengths of metal, wood, or rope, used for climbing up or down to facilitate a work activity.
- Common piece of equipment that can be found at home or at the workplace.
- Relatively low-cost piece of equipment that is readily available
- So commonly used that people can sometimes forget the risks of using them



Key considerations of using a ladder

02



Key considerations of using a ladder

- Location of work
- Height/Depth that the person is required to reach
- Availability of other forms of access systems
- Type of work being carried out



Key considerations of using a ladder

- Location of work



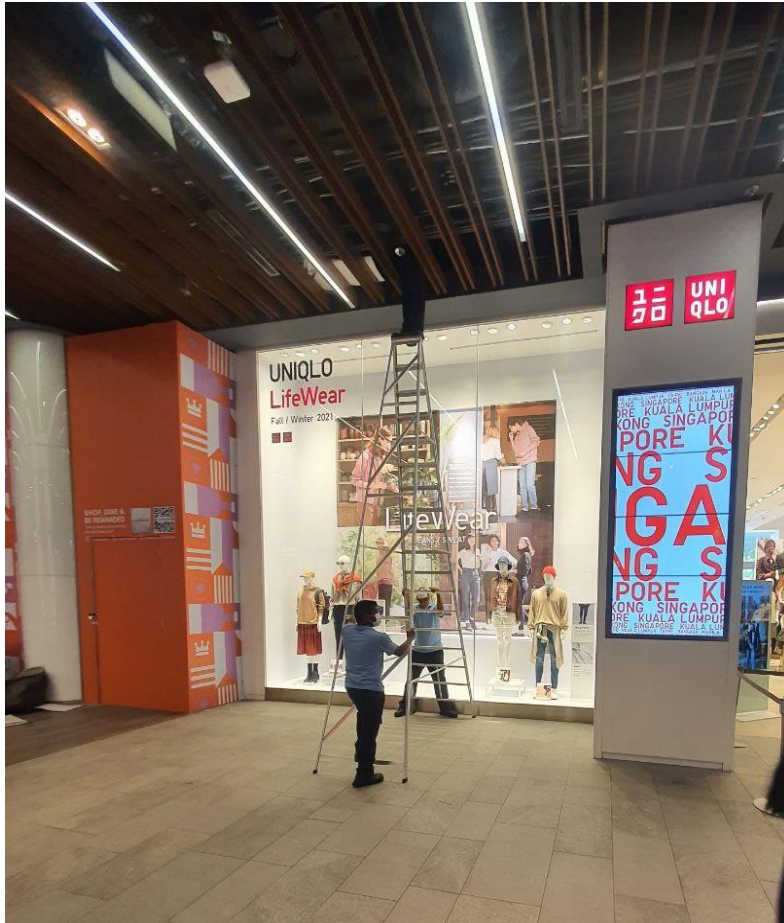
Cantilever Platform



Above the guardrail next to the edge of the building

Key considerations of using a ladder

- Height/Depth that the person is required to reach



Key considerations of using a ladder

- Availability of other forms of access systems



Key considerations of using a ladder

- Type of work being carried out



Proper selection of
ladders before
commencement of work

03



Proper selection of ladders before commencement of work

- Before commencement of work, carry out a risk assessment of the work activity to identify the hazards.
- Ensure that all risk levels are reduced to as low as reasonably practicable using the hierarchy of control.
- Brief all parties involved on the hazards identified and the control measures
- Ensure the personnel carrying out the work are trained on the safe use of ladder



Proper selection of ladders before commencement of work

- Different types of ladders available

Ladder Types



Step stool



Step ladder



Step ladder



Platform ladder



Telescoping ladder



Extension ladder



Proper selection of ladders before commencement of work

- Selection of ladders

- Purpose - Used for access or work
- Height of ladder needed
- Capacity of the ladder
- Material of the ladder – Metal, Fiberglass etc.



Proper selection of ladders before commencement of work

- Access or work



Access



Facilitate work



Proper selection of ladders before commencement of work

- Height of the ladder needed

	Model	Step	Highest Reach according to user's height			
			140+cm	150+cm	160+cm	170+cm
	AAMS04	4	180cm	195cm	210cm	225cm
	AAMS05	5	210cm	225cm	240cm	255cm
	AAMS06	6	240cm	255cm	270cm	285cm
	AAMS07	7	270cm	285cm	300cm	315cm
	AAMS08	8	300cm	315cm	330cm	345cm
	AAMS09	9	330cm	345cm	360cm	375cm
	AAMS10	10	360cm	375cm	390cm	405cm
	AAMS11	11	390cm	405cm	420cm	435cm
	AAMS12	12	420cm	435cm	450cm	465cm



Proper selection of ladders before commencement of work

- Capacity of the ladder

Duty Rating Chart

MAX. LOAD CAPACITY	RATED USE	CSA	ANSI
200 lbs (≈91kg)	Light Duty Household Designed for infrequent household chores, cleaning, painting, etc.	Grade 3	Type III
225 lbs (≈102kg)	Medium Duty Commercial Designed for moderate use by homeowners, painters, handymen, etc.	Grade 2	Type II
250 lbs (≈113kg)	Heavy Duty Industrial Designed for use by contractors in maintenance construction and industrial applications	Grade 1	Type I
300 lbs (≈136kg)	Extra Heavy Duty Designed for frequent use in maintenance, construction and industrial applications.	Grade 1	Type 1A
375 lbs (≈170kg)	Special Heavy Duty Designed for the most demanding industrial and construction applications.	Grade 1	Type 1AA



Proper selection of ladders before commencement of work

- Material of Ladder

- ✓ Aluminum Ladders

- Light and portable
- Not as durable
- Conducts heat and electricity
- Not to be used near
 - Electricity
 - Corrosives
 - Flammables



- ✓ Fiberglass ladders

- Durable and has superior resistance to weather
- Resistant to heat and electricity
- Heavy and not as portable



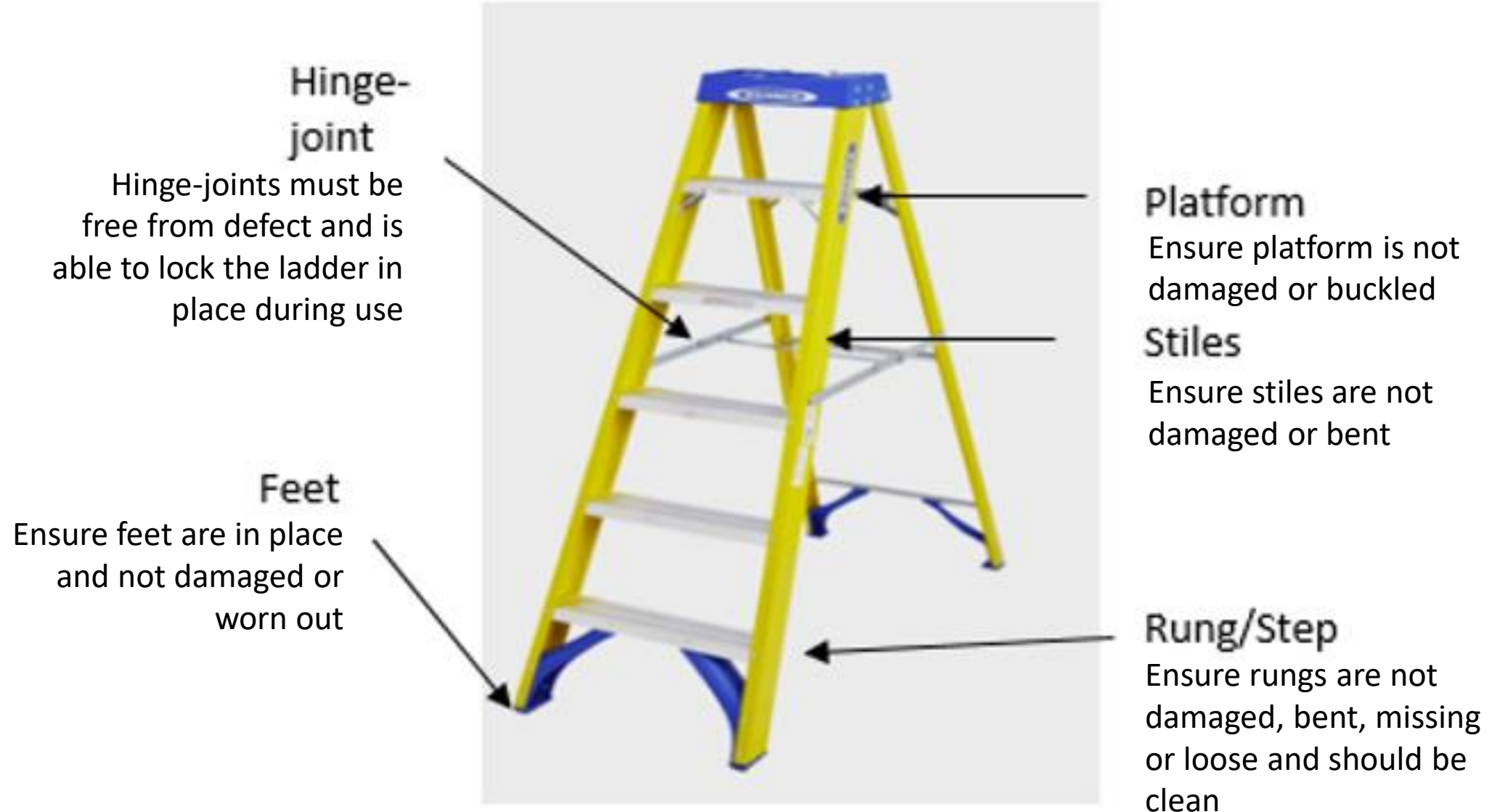
Setting up of ladders

04



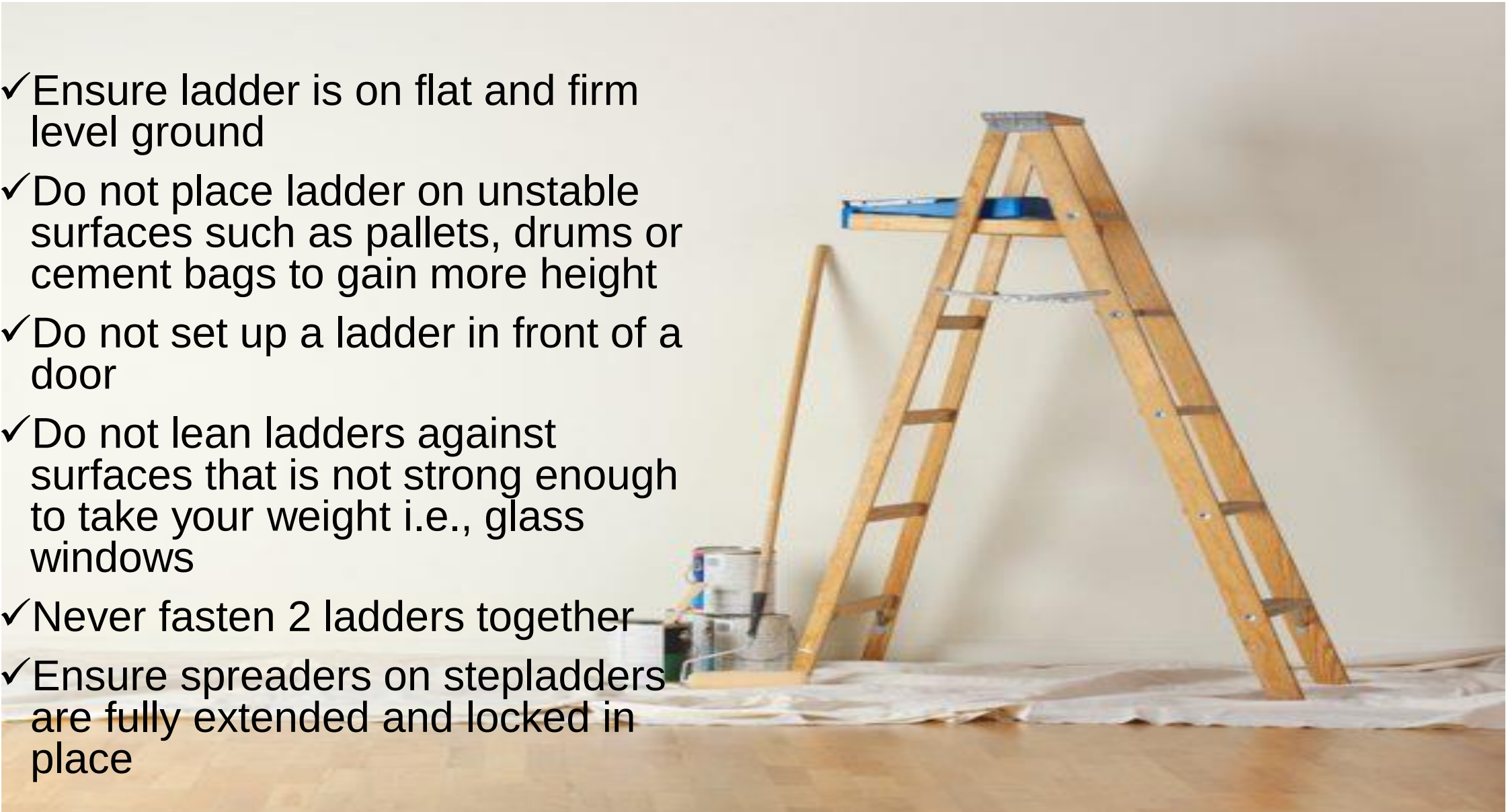
Setting up of ladders

- Pre-use check of ladder



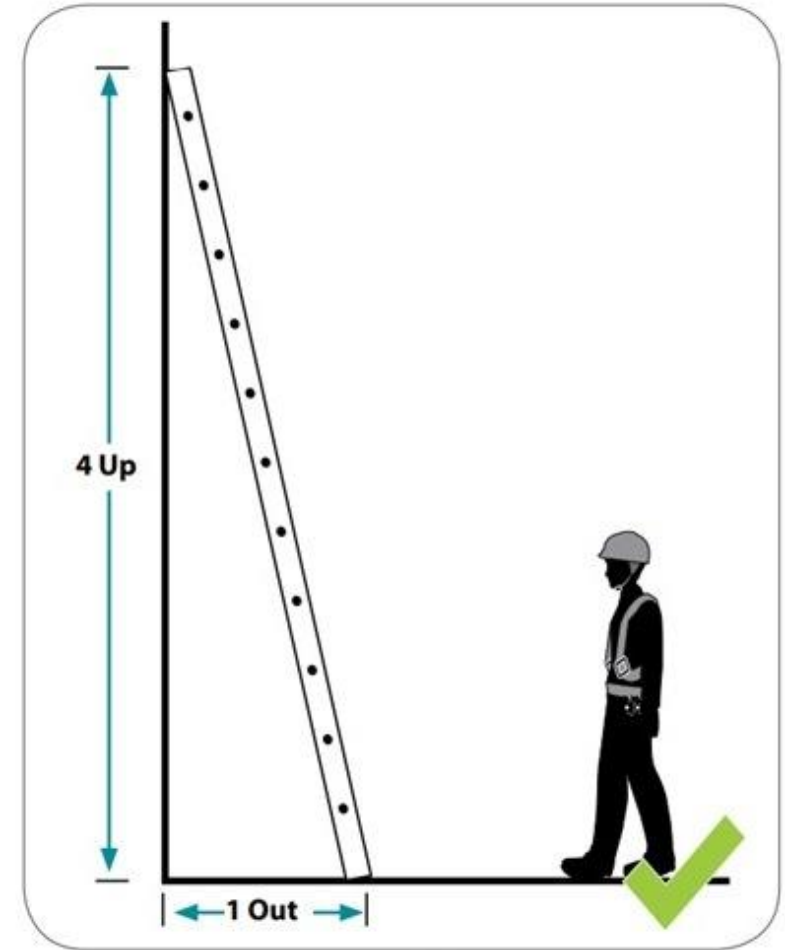
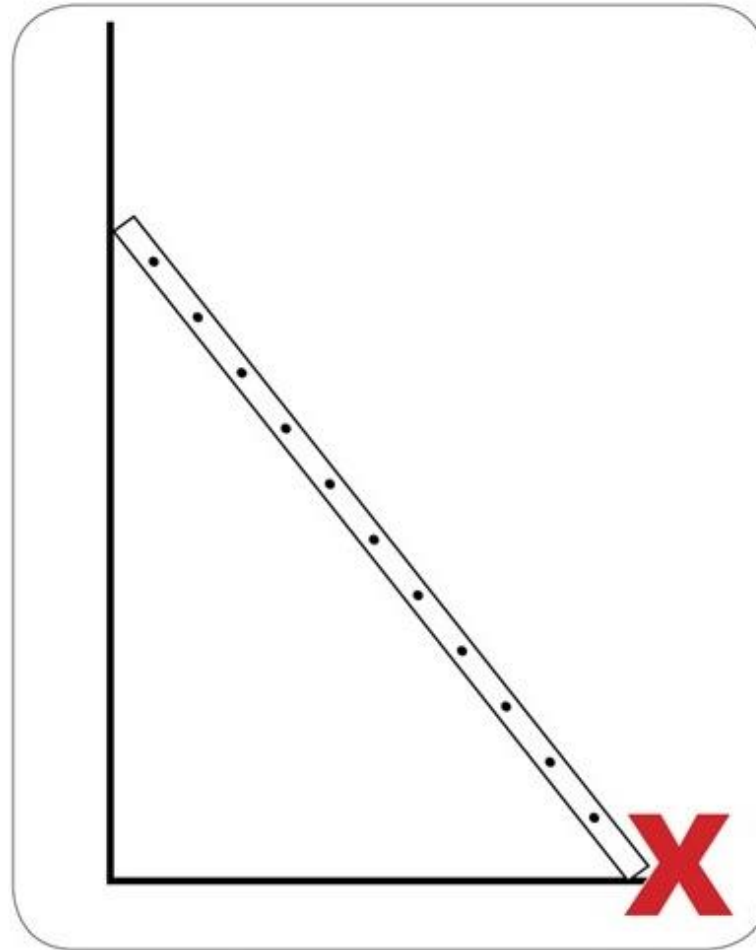
Setting up of ladders

- ✓ Ensure ladder is on flat and firm level ground
- ✓ Do not place ladder on unstable surfaces such as pallets, drums or cement bags to gain more height
- ✓ Do not set up a ladder in front of a door
- ✓ Do not lean ladders against surfaces that is not strong enough to take your weight i.e., glass windows
- ✓ Never fasten 2 ladders together
- ✓ Ensure spreaders on stepladders are fully extended and locked in place



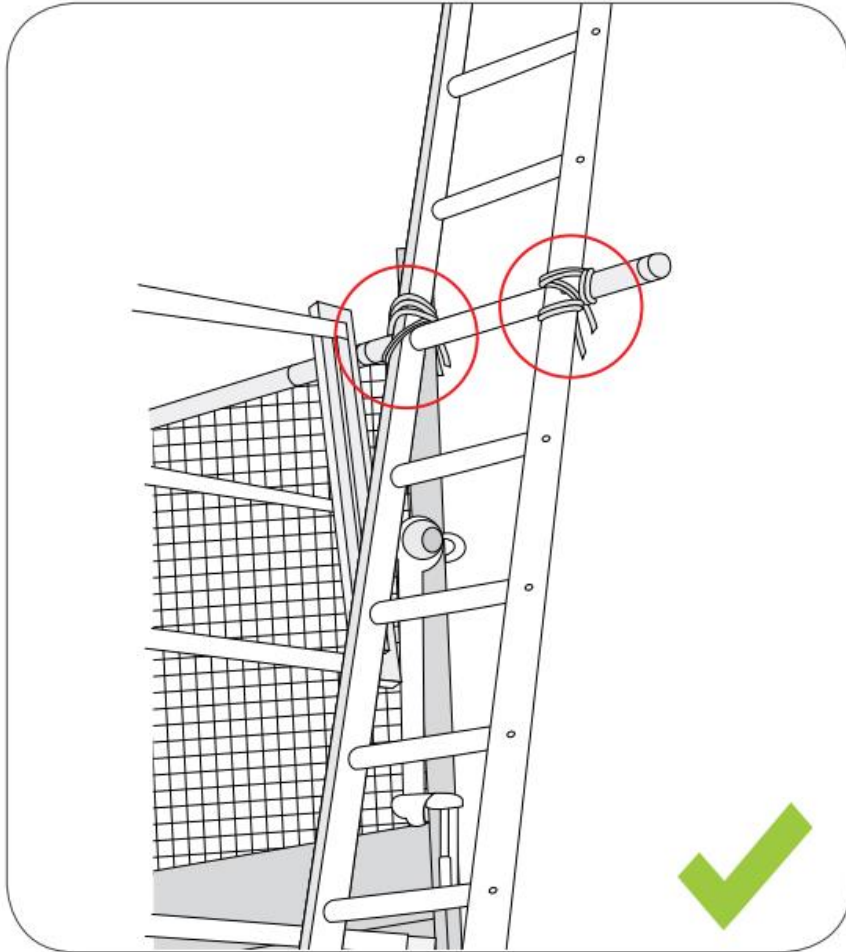
Setting up of ladders

- ✓ Ladders leaning against a structure must be placed on level ground
- ✓ The distance of the base should be placed approximately a quarter of the height away from the structure

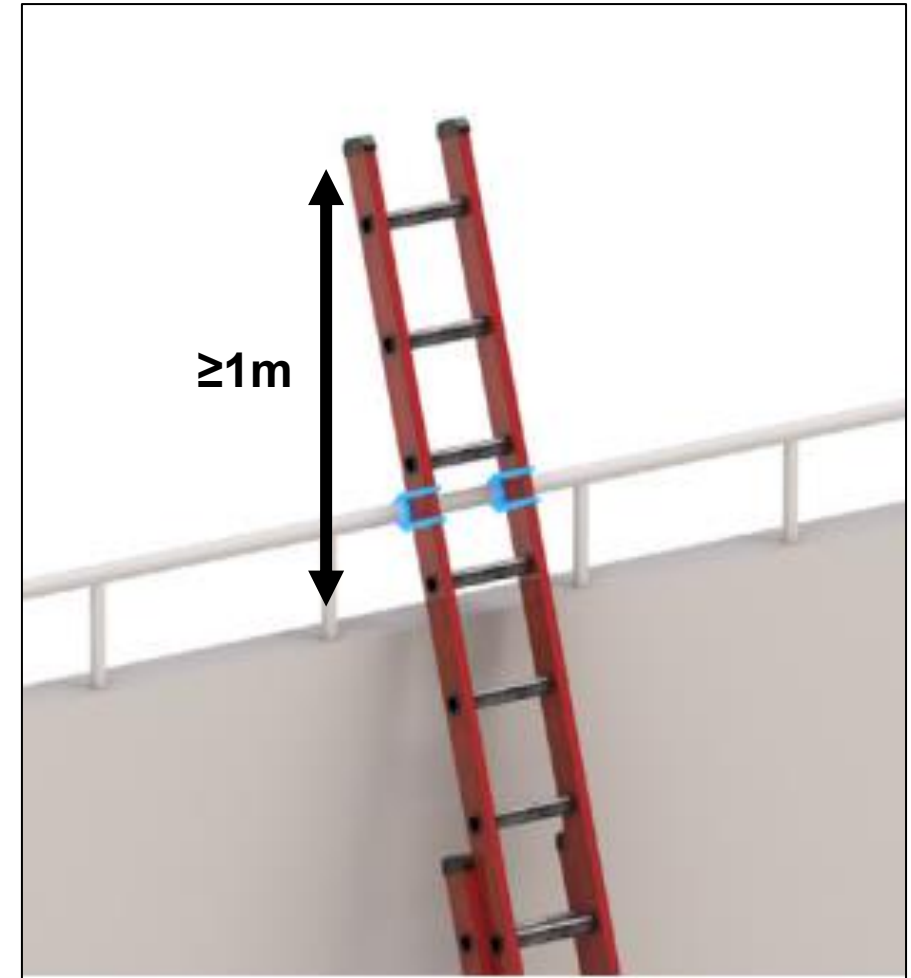


The ratio of the height to the base for a correctly positioned ladder is 4:1.

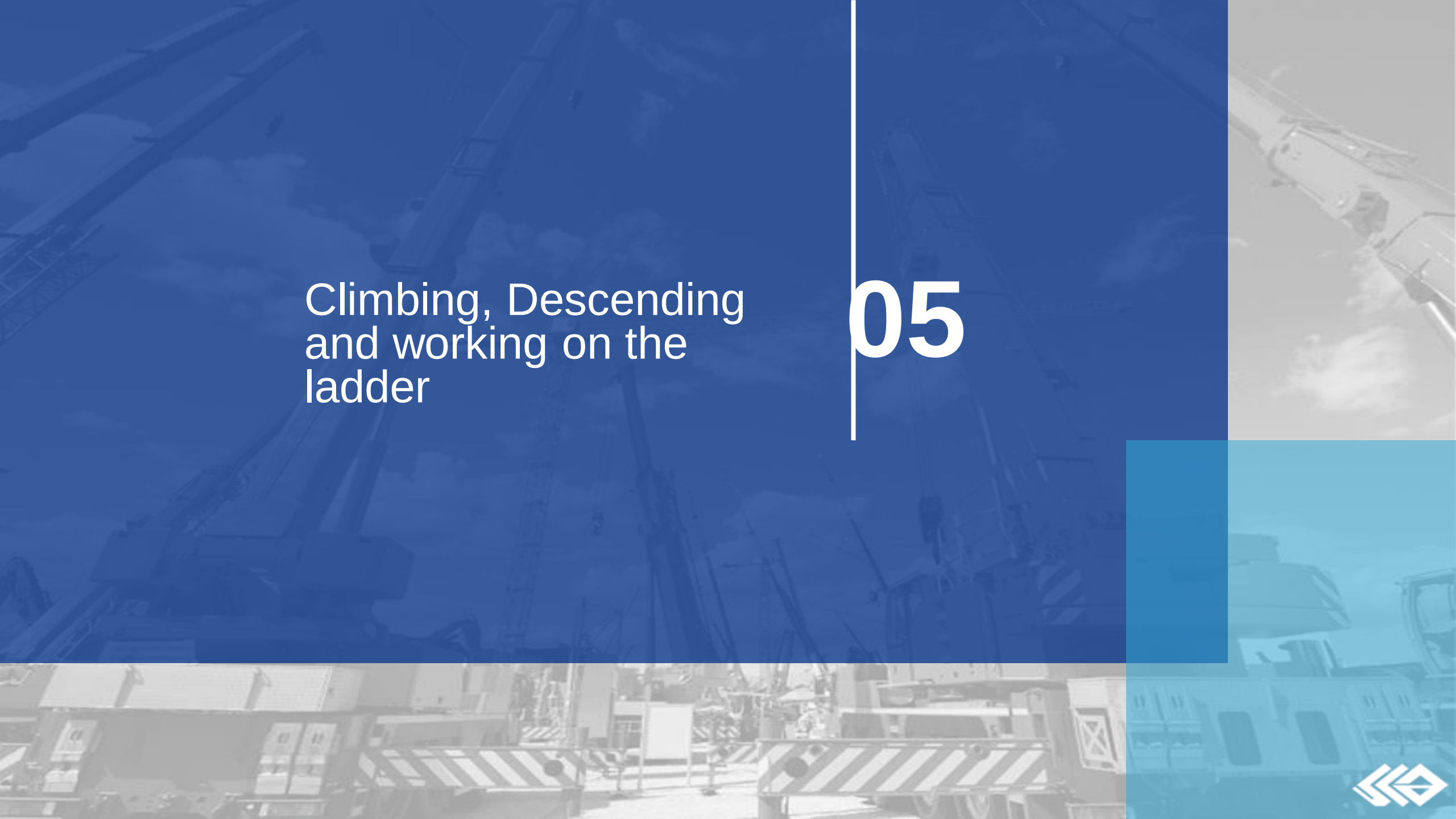
Setting up of ladders



Access ladders with secure handhold and both stiles tied



Ladder must exceed the landing by more than 1m



Climbing, Descending and working on the ladder

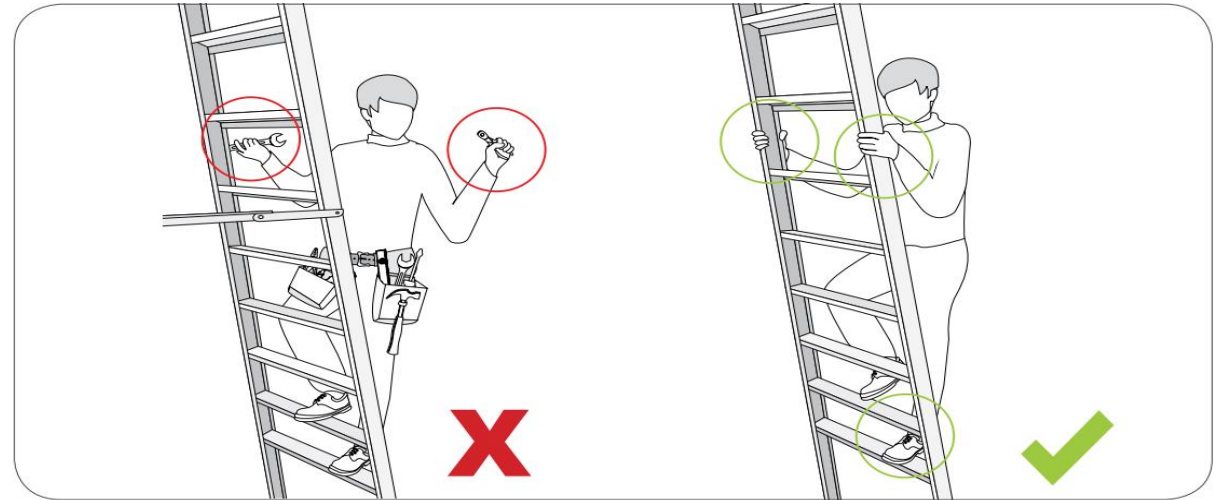
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Climbing, Descending and working on the ladder

- Climbing/Descending the ladder

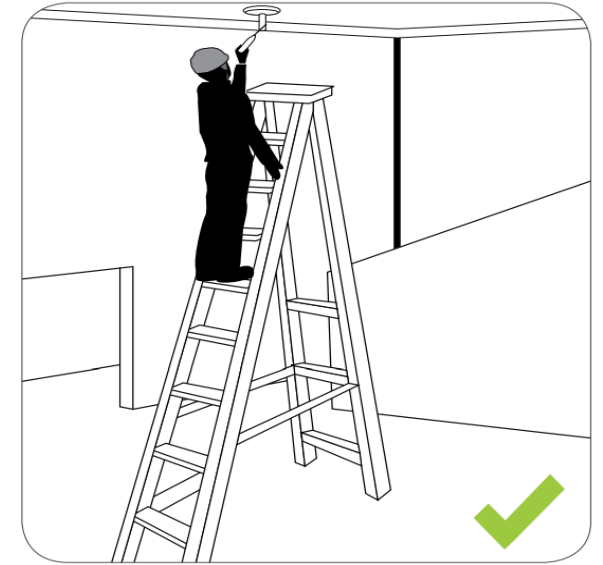
- ✓ Check your shoes before climbing the ladder
- ✓ Do not carry any tools with your hands while climbing the ladder
- ✓ Always maintain 3-point contact with ladder
- ✓ Face the ladder while climbing or descending the ladder
- ✓ Only allow one person on a ladder at a time
- ✓ Do not climb above the top 3 rungs of a stepladder
- ✓ **DO NOT** climb a ladder if you are very tired, feeling ill, on medication that affects alertness or balance, or if you are impaired by alcohol or drugs.



Climbing, Descending and working on the ladder

- **Working on ladder**

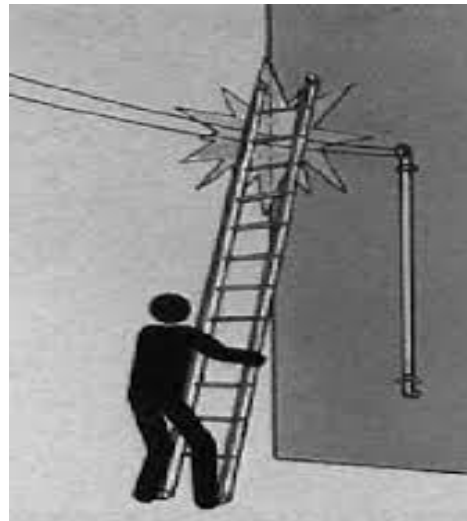
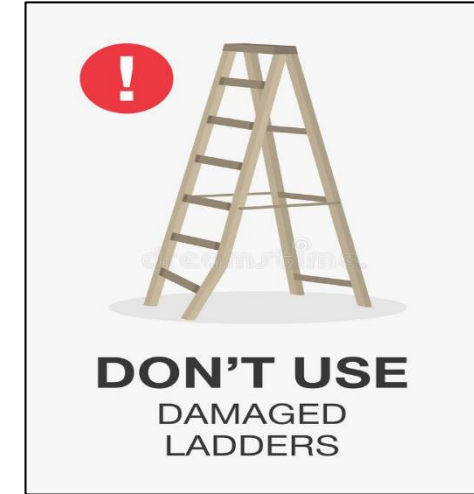
- ✓ Do not stand on the top 3 rungs of the ladder
- ✓ Do not overreach - ensure body stay within the stiles and feet stays on the same rung throughout the task
- ✓ Do not have more than one person on a ladder at a time
- ✓ Do not overload the ladder
- ✓ Cordon off area below the ladder



Climbing, Descending and working on the ladder

- **Working on ladder**

- ✓ Do not work on ladders for extended periods of time (maximum recommended 10-15 mins)
- ✓ Do not try and repair or use damaged ladders
- ✓ Do not work near electrical conductors with aluminum ladders
- ✓ Do not use ladders outdoors during adverse weather



Maintenance and Storage of Ladders

06



Maintenance and Storage of Ladders

- Maintenance of Ladders
 - ✓ Check joints
 - ✓ Test hardware and fittings
 - ✓ Lubricate moveable parts
 - ✓ Make sure safety feet are in good condition
 - ✓ Clean rungs and steps after use



Maintenance and Storage of Ladders

- Storage of Ladders
 - ✓ Store securely, out of the way
 - ✓ Store short stepladders vertically
 - ✓ Store straight ladders flat or hang horizontally
 - ✓ Never store materials on top of a ladder
 - ✓ Keep in a well-ventilated area



Key Points to Remember

KEY POINTS



Key Points to Remember

- ☑ Ladder accidents can cause serious injuries or death.
- ☑ Conduct risk assessment to identify hazards of using the ladder for the work activity
- ☑ Always choose the right ladder for the job and inspect before use.
- ☑ Set up ladders correctly and climb safely.
- ☑ Be careful when working on ladders and avoid overreaching.

WE HAVE THE POWER TO PREVENT ACCIDENTS



Thank you

