

Isle of Man Government

Safe Working Practice - Ladders

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Scope

Any ladders or step ladders that are provided for work tasks must be both suitable for the task and in a safe condition before use, it should also be of industrial standard. The user must be trained and competent to use the ladder. If you are being trained, you should be working under the supervision of a competent person and have been briefed on this document.

Instruction



Ladders can be used for work at height when an assessment of the risk for carrying out a task has shown that using equipment that offers a higher level of fall protection is not justified.

This is because of low risk and short duration of use, or there are existing workplace features which cannot be altered. Short duration is not the deciding factor in establishing whether use of a ladder is acceptable – you must have first considered risk.

As a guide, if your task would require staying up a leaning ladder or stepladder for more than 30 minutes at a time, it is recommended you use alternative equipment. Ladders are not suitable where they are in one position for 30 minutes or more.

You should only use ladders in situations where they can be used safely, e.g. where the ladder will be level and stable, and can be secured (where it is reasonably practicable to do so).

When planning your work careful consideration should be given to the selection of the work equipment and take account of:

Any supervision that may be necessary any weather conditions that you may be exposed to Any emergency rescue procedures that may be required



A pre use check of the ladder should be carried out:

- By the user
- At the beginning of the working day
- After something has changed e.g. a ladder has been dropped or moved from a dirty area to a clean area (check the state or the condition of the feet)
- Ladders must be of industrial standard and NOT domestic use

The Pre use check should include:

the stiles – make sure they are not bent or damaged, as the ladder could buckle or collapse;
the feet – if they are missing, worn or damaged the ladder could slip. Also check the ladder feet when moving from soft/dirty ground (e.g. dug soil, loose sand/stone, a dirty workshop) to a smooth, solid surface (e.g. paving slabs), to make sure the actual feet and not the dirt (e.g. soil, chippings or embedded stones) are making contact with the ground;
the rungs – if they are bent, worn, missing or loose, the ladder could fail;
the locking mechanism – does the mechanism work properly? Are components or fixings bent, worn or damaged? If so, the ladder could collapse. Ensure any locking bars are fully engaged;
the stepladder platform – if it is split or buckled, the ladder could become unstable or collapse; the steps or treads on stepladders – if they are contaminated, they could be slippery; if the fixings are loose on the steps, they could collapse



If you spot any of the above defects, do not use the ladder. This must be removed from service and reported to your line manager immediately.

Safe use of Ladders

Many falls from ladders occur due to incorrect use of ladders such as:

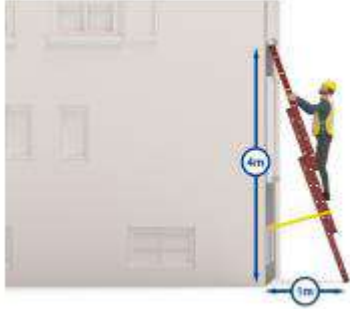
- Overreaching
- Overloading
- Not maintaining three points of contact
- Poor positioning of ladder
- Not securing the ladder



Correct – User maintaining 3 points of contact



Incorrect – Overreaching and not maintaining three points of contact

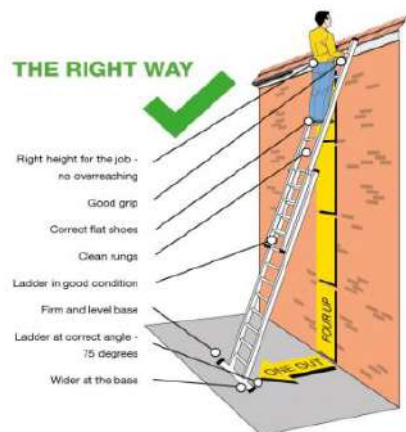


Ladder showing the correct 1 in 4 angle



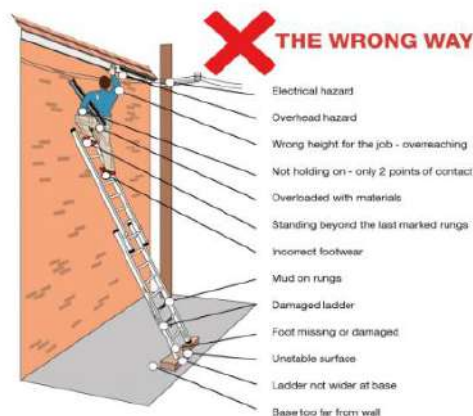
Secure the ladder and have a good strong upper resting point – Do not lean a ladder against weak upper surfaces. Consider using a stability device such as the stand-off device above

Working the safe way on leaning ladders



DO'S

- ☺ Only carry light materials
- ☺ Make sure your ladder is long enough for the task
- ☺ Make sure the ladder is at angle 75 degree – Use the 1 in 4 rule as above
- ☺ Always grip the ladder and face the ladder while climbing or descending – **DON'T SLIDE DOWN THE STILES**
- ☺ Maintain three points of contact when climbing and wherever possible at the works position
- ☺ Secure the ladder



DONTS

- ☹ Overreach – Make sure your belt buckle (or navel) stays within the stiles
- ☹ Overload the ladders
- ☹ Move or extend the ladder while standing on the rungs
- ☹ Work off top three rungs and try to make sure that the ladder extends at least 1M (3 rungs above where you are working)
- ☹ Stand on ladders on movable objects such as pallets, bricks, lift trucks, tower scaffolds, excavator buckets, vans or MEWPS
- ☹ Hold items when climbing (use a tool belt)
- ☹ Work within 6m horizontally of any overhead power lines unless it's been made dead or it is protected with insulation

Working the safe way on telescopic ladders

Telescopic ladders are a variation of leaning ladders – but remember that they don't all work in the same way and some may be more prone to twisting and flexing.

They should always be used, stored and transported with care and kept clean. In addition to following this guidance, it's important you read and follow the user instructions provided by the manufacturer.

Before every use – in addition to the normal ladder checks – make sure they are operating correctly and that the mechanisms that lock each section are working properly.

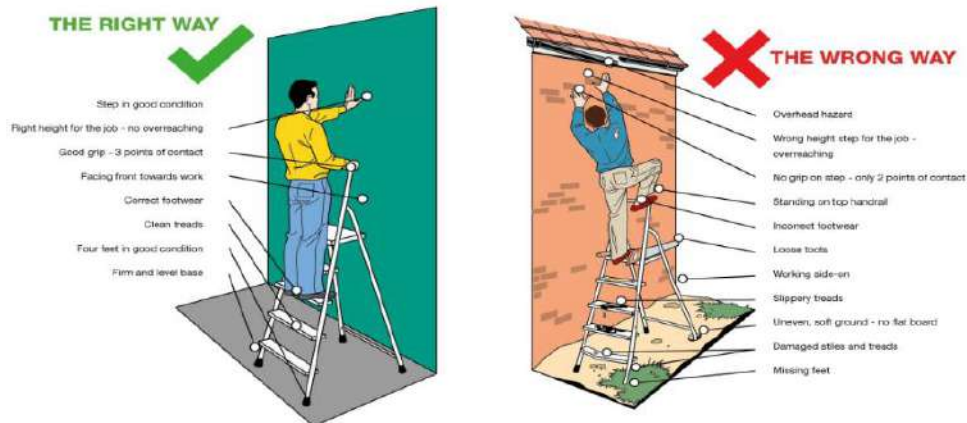


Check all sections are locked before using the ladder



Take care when closing telescopic ladders not to trap your fingers

Working the safe way on step ladders



DO'S

- ☺ Check all four stepladder feet are in contact with the ground and the steps are level;
- ☺ Only carry light materials and tools;
- ☺ Ensure any locking devices are engaged;
- ☺ Try to position the stepladder to face the work activity and not side on. However, there are occasions when a risk assessment may show it is safer to work side on, e.g. in a retail stock room when you can't engage the stepladder locks to work face on because of space restraints in narrow aisles, but you can fully lock it to work side on;
- ☺ Try to avoid work that imposes a side loading, such as side-on drilling through solid materials (e.g. bricks or concrete);
- ☺ Where side loadings cannot be avoided, you should prevent the steps from tipping over, e.g. by tying the steps. Otherwise, use a more suitable type of access equipment;
- ☺ Maintain three points of contact at the working position. This means two feet and one hand, or when both hands need to be free for a brief period, two feet and the body supported by the stepladder.

DON'T'S

- ☹ Overreach;
- ☹ Stand and work on the top two steps (including a step forming the very top of the stepladder) unless there is a suitable handhold;
- ☹ Straddle an A frame ladder
- ☹ Slide down the stiles
- ☹ Extend a ladder whilst standing on the rungs

Where two hands need to be free for a brief period for light work. Keep two feet on the same step and the body (knees or chest) supported by the stepladder to maintain three points of contact. Make sure a safe handhold is available. Ensure the step ladders are fully open when in use, ensuring any stay bars are locked in place

When deciding whether it is safe to carry out a particular task on a stepladder where you cannot maintain a handhold (e.g. to put a box on a shelf, hang wallpaper, or install a smoke detector on a ceiling), the decision needs to be justified, taking into account:

- the height of the task;
- whether a handhold is still available to steady yourself before and after the task;
- whether it is light work;
- whether it avoids side loading;
- whether it avoids overreaching;
- whether the stepladder can be tied (e.g. when side-on working).

Working safe on combination or multi purpose ladders

Combination and multi-purpose ladders can be used as stepladders, a variation of stepladders or leaning ladders. Combination ladders are sometimes referred to as 'A' frame ladders.

These types of ladders can be used in a variety of different configurations.



NEVER use without engaging the locking mechanism



Check locking mechanism is engaged everytime before use



On three-part combination ladders, never extend the top section (the section extending above the A frame) beyond the limit marked on the ladder and specified in the user manual. On three-part combination ladders in stepladder mode, do not stand on the top 4 rungs. Always follow the user manual.

Where to use a ladder

As a guide, only use a ladder:

- ☺ on firm ground;
- ☺ on level ground – refer to the manufacturer’s pictograms on the side of the ladder.
- ☺ Use proprietary levelling devices, not ad-hoc packing such as bricks, blocks, timbers etc;
- ☺ on clean, solid surfaces (paving slabs, floors etc.). These need to be clean (no oil, moss or leaf litter) and free of loose material (sand, packaging materials etc.) so the feet can grip.
- ☺ Shiny floor surfaces can be slippery even without contamination;
- ☺ where it will not be struck by vehicles (protect the area using suitable barriers or cones);
- ☺ where it will not be pushed over by other hazards such as doors or windows, i.e. secure
- ☺ the doors (not fire exits) and windows where possible;
- ☺ where the general public are prevented from using it, walking underneath it or being at risk because they are too near (use barriers, cones or, as a last resort, a person standing guard at the base);
- ☺ where it has been secured

How do I secure a ladder?

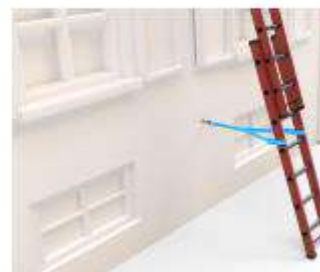
The options are as follows:

- ☺ Tie the ladder to a suitable point, making sure both stiles are tied (see Figures 10 and 11);
- ☺ Where this is not practical, secure the ladder with an effective ladder stability device;
- ☺ If this is not possible, securely wedge the ladder (e.g. wedge the stiles against a wall);
- ☺ If you cannot achieve any of these options, foot the ladder. Footing is the last resort.

Figure 10
Correct – ladder tied at top stiles



Figure 11
Correct - tying near the base

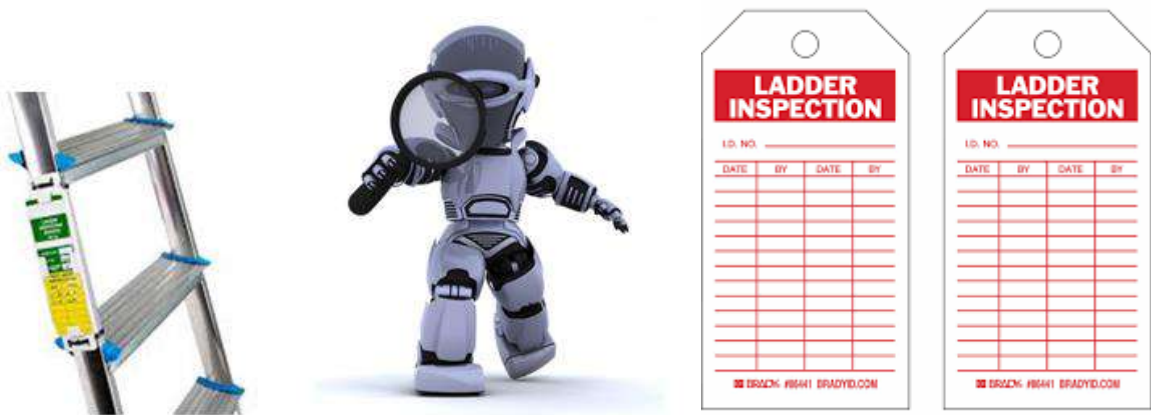


When should a ladder be checked and inspected?

A ladder should be inspected prior to each use and if something has changed, such as if the ladder has been dropped/damaged etc. This should be documented on the pre use inspection and guide that can be seen at Appendix 1.

A ladder should also be checked and inspected every 6 months, using the document at Appendix 2 Ladder/Step Ladder Inspection Report.

All completed documents should be held on file and readily accessible for inspection if requested.



Safety points to remember

- ☺ Wear the correct suitable flat shoes
- ☺ Only one person should ascend the ladder at any one time
- ☺ Conduct a visual check of the floor area to ensure it is flat and clear from debris that may hinder the footing or cause the ladder to slip
- ☺ Ladders must be of industrial standard
- ☺ Perform a pre use inspection of the ladder
- ☺ Defective ladders must not be used, removed from service and reported
- ☺ Only use a ladder if you are trained to do so
- ☺ A ladder is only suitable for light 30 minute work
- ☺ Maintain 3 points of contact
- ☺ Ladder work should be supervised
- ☺ Conduct a pre work assessment, check the weather work environment and overhead cables
- ☺ Ladders should be inspected every 6 months - no check, no use
- ☺ **IF IN DOUBT ASK**
- ☺ **DO NOT USE DEFECTIVE EQUIPMENT**

How do I prevent injuries from materials falling from the ladder?

A safety zone should be established around the base of the ladder and cordoned off with barriers, to restrict access to any area where materials or equipment may fall. The safety zone should restrict access to any area onto which materials or equipment may fall.

Tools should be carried on a tool belt or secured to staff whilst climbing the ladder,

Equipment must not be carried whilst climbing the ladder and is raised to height by pulling up with rope.

When carrying out any work at height using tools effective supervision should be in place.

Where do I store a ladder?

Ladders must be removed to storage at the end of each working day to ensure unauthorised access by others is prevented. The environment where the ladders are stored hold be suitable to ensure the ladders are protected and not subjects to deteriorations e.g. rusting.

When storing a ladders ensure it is secured in place to prevent it fallings.

Any grease, mud, oil or any contamination must be removed from the rungs before and after use.

Ladder storage areas must be inspected on a regular basis, checking any chains or straps that secure then ladders.

They must be able to be locked and secure and have the correct signage in place to warn others of the risks associated with ladders. They should also be well lit and free from obstructions so that ladders can be transported to and from the storage area without risk.

Appendix 1 – Ladder Pre-use check

Pre use checklist

Item	Checks	Yes	No	Comments
Stiles	Bent			
	Split			
	Damaged			
Feet	Missing			
	Worn			
	Damaged			
Rungs	Bent			
	Missing			
	Loose			
Locking Bars	Bent			
	Worn			
	Damaged			
Step Platform	Split			
	Buckled			
	Damaged			
Steps/Treads	Contaminated			
	Worn			
	Loose fittings			
	Slippery			
Ancillary Equipment	Missing			
	Worn			
	Damaged			
	Bent			
	Split			
	Buckled			
	Contaminated			

Appendix 2 – Six Monthly Ladder/Step Ladder Inspection Record



Ladder/Step Ladder Inspection Record

To be completed every six months to support the pre-use checks by equipment users

Inspected by:	Type of Equipment:			Date of Inspection:			
	Signature:			Date of next check:			
Checks	Yes	No	N/A	Checks	Yes	No	N/A
For all types of ladder				For extension ladders only			
Good general condition				No Loose, broken or missing extension locks			
Ladder of suitable standard (suitable maximum static load for application)				Bulays, hinges and ropes in good condition			
Clean and dry free from wet paint, oil, mud, grease etc				For step ladders only			
Not painted (except where designed so)				Stable when on level ground			
No missing or loose steps or rungs				No loose or bent hinges			
No loose or missing nails, screws, bolts, tie rods or rivets				Hand rails and where present, top rails intact			
No twisted, cracked, split, distorted or worn steps or rungs				For aluminum ladders and steps only			
In the case of round rungs, rungs will not rotate when twisted				No defects in stiles and rungs which could adversely affect the safe use of the ladder			
No damaged or worn non slip bases				End plugs and feet present and ends of stiles not worn excessively			
No twisted, cracked, split or distorted stiles				Glass fibre ladders and step ladders only			
No corrosion to ladder materials or fittings				No hole that penetrates both surfaces of the component			
No sharp edges				No groove that exceeds 50mm in length and is more than 3mm wide and 2mm deep			
Feet present and in good condition				No chip that is greater than 25mm in any direction and is more than 1mm in depth			
No distortion (ladder stands correctly)				No surface cracks exceeding 150mm in length			
No evidence of unofficial repairs				No crack which extends through the entire thickness of any component that is longer than 25mm when it occurs in the flange or 40mm in the web of the material			
All fittings appear to be of the approved type				Where there are cracks which do not show through on the opposite surface – that these are less than 60mm long in the flange or 75mm in the web of any glass fibre component			
Identification number visible				No protruding chips			
Wooden ladders and step ladders only				Ladder thoroughly cleaned and stiles (only) freshly painted with one coat of polyurethane varnish			
When tapped lightly with a hammer, rungs all ring true (no sign of decay or other damage)				Aluminum and wooden ladders and step ladders, additional check:			
End of stiles in good condition				Working at each end of the ladder in turn, try to pull stiles further apart and push them closer together. Then with one end of the ladder resting on the ground and with one hand on the end of each stile, push and pull on the stiles to check for parallel instability. No movement confirms that rung tie-rods or wires are in good condition. Is there a lack of movement?			
Rungs/treads in good condition where they enter the stiles							
Ladder thoroughly cleaned and stiles (only) lightly sanded and freshly painted with two coats of polyurethane varnish							
Comments/Actions:							



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