

Recommended Procedures for Marking, Registration and Inspection of Ladders

MARKING, REGISTRATION AND INSPECTION

Every ladder and stepladder should be marked with an identification number, preferably a Ladder Safety Tag fitted to the inside of a stile. Branding of wooden ladders is not recommended.

A corresponding entry should be made in a card index or register to act as a store record and history sheet. Details of inspections, defects, repairs, who issued and returned it to store, should be noted.

Whenever a user is issued with a ladder or stepladder he should satisfy himself that it is serviceable and safe to use.

Ladders and stepladders should be destroyed when they are no longer capable of being effectively repaired or kept in a safe condition.

Inspection is intended to check the following:-

1. Defects – such as cracks, shakes, splits, gouges, splinters, cuts and decay.
2. Broken or inadequate repair.
3. Wear on rungs or treads.
4. Loose, broken, missing or decayed rungs or treads.
5. Stile-to-rung fastening, repairs carried out with spikes, nails or similar fastenings should be rejected.
6. Wear at head and feet of stiles.
7. Corrosion on fastenings e.g. bolts, nuts, screws and mild steel fittings.
8. Lack of rigidity, excessive “play” between stiles and rungs.
9. Warping and sagging.

MAINTENANCE AND REPAIR

Only skilled personnel should carry out repairs. If it is not possible to repair the ladder or stepladder properly it should be scrapped. “Lash-up” repairs such as nails to secure rungs or splints should not be contemplated. The efficiency and safety of a ladder depends largely on the stiffness of joints between stiles and rungs, and any repairs should ensure that this stiffness is maintained. Repair techniques differ widely and no ladder – wooden, glass fibre, aluminium or steel – should be repaired without first consulting the manufacturer. All metal parts should be checked for security and tightness. Bolts, nuts, screws and rivets should be checked and replaced if necessary.

With wooden ladders or steps it is dangerous to fill in cracks and faults with putty or fillers and then cover with paint, since potential weakness points are then hidden. Ladders and steps should never be painted but preservation can be obtained by applying clear varnish. Before this is done, sharp edges and splinters should be removed and if possible the wood sanded down.

Aluminium ladders, which are warped or distorted, should be scrapped or returned to the manufacturer for repairs. Heavy corrosion should be picked off or rubbed away and if the ladder has been significantly weakened it should be scrapped.

For glass fibre, timber and aluminium ladders and steps see Inspection Sheets attached.

ADVICE TO LADDER USERS (For guidance only).

1. Metal ladders or ladders with metal reinforcement shall not be used where any electrical hazard exists.
2. Ladder usage shall be restricted to the purpose for which the ladder is designed and only one person shall be on the ladder at any one time.
3. Always inspect the ladder carefully before use.
4. The ladder should be erected at an angle of 75° from the horizontal, i.e. 1 in 4. 1ft out from the wall to every 4ft up.
5. The ladder shall be placed on a firm level base. Do not use ladders on ice or slippery surfaces. Ladders shall not be placed on boxes, barrels, and roofs of vans or other unstable bases to obtain additional height.
6. The top rest of the ladder shall be reasonably rigid and have ample strength to support the applied load. The ladder shall be securely fixed near to its upper resting place with Clam cleat and rope or a Stand Off and at the lower end by an anti slip device such as the “Stopper.”
7. On extension ladders there shall be an overlap of at least 2 rungs for sections up to 18 rungs each, and three rungs for over 18. The ladder shall be raised and lowered by the user standing on the ground, so that it can be seen that the locks are properly engaged. Extension ladders shall always be erected so that the upper section is above and resting on the bottom section.
8. Where extension ladders have been used previously as single ladders, care shall be exercised to ensure that the re-assembly of the ladder is properly carried out and that inter-locking brackets and guides are correctly engaged. Due to their design it is not recommended that extension ladders be separated to be used singly.

9. Ladders and stepladders are not designed for any degree of side loading and such abuse should be avoided. Keep ladder or steps close to the work and avoid overreaching. Climb or work on the middle of the rung or step.
10. Do not stand on the top tread of the stepladder, ladder, bucket, tool shelf or rear parts of step or platform ladder. Do not climb higher than the third rung from the top of a single or extension ladder.
11. When climbing or descending, the user shall face the ladder. Do not climb up the side.

STORAGE (These notes are for guidance only).

Ladders not in use are often dumped carelessly on the ground, sometimes exposed to the weather, and possible impact damage. It is in everyone's interest to store them carefully.

The essentials for good storage are:

1. Proper support.
2. Protection from weather or harsh environments.
3. Access.

Ladders should be supported horizontally and clear of the ground on an adequate number of supports. The preferred storage is to lay the ladder flat on its back in racks or on blocks to avoid twisting.

A ladder should not be hung from its rungs or one stile or be placed flat on the ground.

Where space is scarce, ladders may be stored vertically in suitable racks, provided the stiles are equally and firmly supported.

Storage racks should be under cover. Ladders deteriorate faster when exposed to the effects of weather, particularly extremes (cycles of hot and cold or wet and dry). Prolonged contact with fresh water can cause rot in all types of access equipment.

Aluminium alloy ladders should be kept away from wet lime or cement, which can cause corrosion. If such occurs, clean them after use.

Aluminium and mild steel fittings are more susceptible to corrosion in salt laden atmospheres, at coastal areas for example.

Access to ladders in store should be easy, so that they may readily be inspected, removed and replaced.

Ladders carried on vehicles shall be adequately supported to avoid sagging and with a minimum overhang beyond supporting points, which should be padded with softer material.

Ladders should be tied to each support point to minimise roof rack chaffing and the effects of road shock.

INSPECTION OF LADDERS AND STEPLADDERS

TIMBER LADDERS AND STEPLADDERS

(These notes are for guidance only).

1. At each end of the ladder in turn, try to pull the stiles further apart and push them closer together. Movement will indicate defective tie-rods (or reinforcing wires) and insecurely fixed rungs.
2. With one end of the ladder resting on the ground raise the other end (each hand grasping a stile end) and try to displace the stiles by pushing on one or pulling on the other. Relative parallel movement will indicate insecurely fixed rungs.
3. In the case of a ladder with circular rungs, grasp and attempt to rotate each in turn. None should rotate.
4. Tap any wooden rungs lightly with a hammer; a cracked, decayed, loose or short grained rung will not ring true compared with the other rungs.
5. In addition to the above tests, particular attention must be paid to the following points :-
 - ✓ All hardware, wire and fittings, including (pole) bows must be of the approved type and in good condition.
 - ✓ The stiles or sides must not be warped, cracked or splintered.
 - ✓ The ends of the stiles should be in good condition.
 - ✓ Check the condition of the rungs or treads where they enter the stiles. Look particularly for rot, which may also be apparent in the end grain of the rung.
 - ✓ Rungs, treads, wedges or tie rods should not show excessive wear or looseness – worn rungs should be replaced. Loose metal tie rods should be carefully tightened.
 - ✓ Ropes must not be frayed or be in any way unsound.

- ✓ All dirt, oil or grease must be cleaned from the ladder, particularly from the rungs.
- ✓ Any corrosive chemical contamination must be removed.

We would suggest a visual check every three months and a manual check every twelve months backed up by your own company's risk assessment. This annual check should include lightly sanding the stiles of the ladder or stepladder (not the rungs or fittings) and applying two good coats of top quality exterior acrylic lacquer (polyurethane varnish), irrespective of the amount of usage. This will help prevent ingress of weather, particularly damp and UV light.

GLASS FIBRE LADDERS AND STEPLADDERS

(These notes are for guidance only).

The same checks for timber ladders and steps will apply to glass fibre. In addition, if the visual checks of glass fibre reveal the following defects, the ladder or stepladder should be regarded as defective and withdrawn for repair or scrapped:-

- ✓ Surface cracks exceeding 150mm in length in any glass fibre component.
- ✓ Any hole that penetrates both surfaces of any glass fibre component.

- ✓ Any groove that exceeds 50mm in length and is more than 3mm wide and 2mm deep in any glass fibre component.
- ✓ Any chip broken off from any glass fibre component that is greater than 25mm in any direction and is more than 1mm in depth.
- ✓ Any crack which extends through the entire thickness of any glass fibre component that is longer than 20mm when it occurs in the flange or 40mm in the web of the material.
- ✓ Any deep crack which does not show through on the opposite surface that is longer than 60mm when it occurs in the flange or 75mm in the web of any glass fibre component.
- ✓ Any protruding fibres from any glass fibre component.

We would suggest a visual check every three months and a manual check every twelve months backed up by your own company's risk assessment. This annual check should include a thorough cleaning and the stiles (not rungs or fittings) should be coated with one good application of top quality acrylic lacquer (polyurethane varnish), irrespective of the amount of usage. This will help prevent ingress of weather, particularly damp and UV light.

ALUMINIUM LADDERS AND STEPLADDERS

(These notes are for guidance only).

1. At each end of the ladder in turn, try to pull stiles further apart and push them closer together. Movement will indicate defective rung joints.
2. With one end of the ladder resting on the ground raise the other end (each hand grasping a stile end) and try to displace the stile by pushing on one or pulling the other. Relative parallel movement will indicate insecurely fixed rungs.
3. Ladders with circular rungs – grasp each rung in turn and try to rotate them. None should turn.
4. In addition to the above tests, particular attention must be paid to the following points:-
 - ✓ Check for dents in both stiles and rungs that may adversely affect the safe use of the ladder.
 - ✓ Check the ends of stiles for wear. Replace top end plugs and feet if necessary.
 - ✓ Check ropes – they should not be frayed or unsound.
 - ✓ All dirt, oil or grease must be cleaned from the ladder particularly from the rungs.
 - ✓ Any corrosive chemical contamination must be removed and areas of contamination thoroughly checked for ingress into the stiles or rungs.
 - ✓ All hardware must be in good condition and be of the approved type.

We would suggest a visual check every three months and a manual check every twelve months backed up by your own company's risk assessment.