OPERATION AND MAINTENANCE MANUAL

CARE by Marshalls

Creating Better Space

This manual is designed to give a generic overview of the cleaning regimes, solutions, methods and techniques to keep your Woodhouse street furniture, signage and lighting products aesthetically flawless.

The manual also discusses minor repairs of common materials and finishes used in the manufacture of Woodhouse products.

It is recommended that a trial repair be carried out on an unimportant surface first. No corrosive cleaners or other abrasives should be used. Any contamination to stainless steel or aluminium items, particularly carbon steel scuffs from vehicles, should be quickly removed to avoid corrosion or the appearance of such caused by cross-contamination.

Large dents in metal surfaces cannot be easily repaired and might compromise structural integrity (usually caused by vehicular impact). In such cases the product should be immediately isolated to ensure safety of the general public.

In the event of serious damage to any main component, replacements can be ordered from Woodhouse.

In the event of major damage or any need to disassemble the structure, please contact Woodhouse directly for detailed technical advice.

This document is not designed to be exhaustive and extensive in the exacting requirements of every case. If you consider your cleaning or repair circumstance to be outside of the scope of this document, then please do not hesitate to contact our office and we will be happy to help you keep our products looking as new.

Regular cleaning of the installed product should be completed in line with the overall maintenance regime as specified by the client but Woodhouse advise that a maintenance regime is adopted with recurrent frequency of 3 months to guarantee a high level of product appearance and performance.

The duty of care to both operatives and surrounding pedestrians using the direct working area should be observed at all times. An initial risk assessment and associated hazards should be identified as a part of the overall maintenance regime and a safe system of work should subsequently be prepared and adhered to.

Regular Cleaning Instructions

Hose down and wipe with mild detergent and/or warm soapy water. No abrasives should be used at this stage, subject to environmental conditions and specific areas of heavy soiling or damage.

Products should also be checked to ensure that all parts and fixings are seated correctly and any signs of damage should be reported to ensure the on-going safe and efficient performance of installed products.

The use of stainless steel for today's urban architecture provides sustainable, safe and elegant products.

Stainless steel is an ideal material for these applications for the following reasons:

- Ø Tensile and impact strength
  This enables the use of lightweight posts, without compromising the safety of pedestrians or buildings that the bollards are designed to protect.
- Ø Corrosion Resistive
  A range of smooth finishes can be applied that optimise the corrosion resistance, minimise the adherence of dirt and promote.

CLEANING

Stainless Steel

Stainless steel finishes should be cleaned as required, but we recommend a frequency of at least every three months, using Stainless Steel Cleaner applied with a lint free cloth. Woodhouse use the stainless steel cleaner from Bunzl Cleaning and Hygiene (see appendix for contact details).

To remove ground in dirt, a light abrasive block may be required. We recommend a 240 Grit grade or similar.

Abrasive blocks are supplied by Buck & Hickman (see appendix for contact details), however care should be taken when using these on shot peened areas as they may leave bright spots, thus requiring the entire component to be treated.

These should be used alongside Stainless Steel cleaner for best results.

Brushed (Satin) Finish

There is no accepted definition of an abrasive grain or grit size that differentiates grinding from polishing.

The Woodhouse approved finish gives a fine, clean cut with minimal microcrevices which prevent the possibility of harbouring corrosive atmospheric elements.

In the event of damage, surface scratches can be removed using an emery pad (240 grit) and freeing oil such as 'WD40'. Care must be taken to follow the direction of the brushing grain.

Shot Peened / Bead Blasted Finish

Bead and shot-blasted finishes are produced by the impact of a hard, inert medium onto the steel surface that results in non-directional, uniform matt surface with low reflectivity.

To remove scratches and light carbon contamination, a very fine abrasive paste as used for car body re-finishing, such as 'T-cut' should be applied with a clean, dry cloth and rinsed with clean, warm water to remove all residues then dried. This may brighten the finish locally, and the whole surface may need to be treated.

Bright (Mirror) Polished Finish

Electro polishing is electro-plating in reverse. Instead of depositing a coating of another material on a surface, the action of electro polishing is to remove a surface layer, typically 20-40 micro-metres in depth.

In the majority of cases, electro polished stainless steel surfaces are bright and highly reflective.

Due to the highly polished surface finish, no abrasives should be used. Metal polish and polishing equipment might be required; in such occurrences, please contact Woodhouse for specific information.

Aluminium comes from the most common of metallic ores, bauxite. It is energy expensive to extract but once extracted can be easily re-cycled; generally 60% of all aluminium used is actually from recycled material.

Anodising is the electrochemical method of finishing aluminium to offer a hard robust finish to high quality new extruded aluminium. Anodising for longer produces 'hard anodising' giving a thicker hard sealed surface more resistant to damage and scratching.

Anodised Aluminium

Painted Aluminium

CLEANING

Anodised Aluminium

For general cleaning of anodised aluminium, warm water with a mild soap solution should be used. The solution should be free from fluorides, chlorides and sulphates. It should also be non-toxic and should have a pH within 5-8.

More difficult grime deposits may require the use of a mild abrasive such as pumice powder and water. Where greasy deposits are concerned, cleaning may require a soft cloth dipped in white spirits. A Sandflex 240 grit rubbing block can also be used in movements along the grain for ground in dirt.

It is necessary to thoroughly rinse with water after cleaning especially where crevices are present to ensure removal of all residues.

Painted Aluminium

Use a clean, damp cloth with warm soapy water only. Scourers and abrasive cleaners are not suitable for this type of finish and will damage the paint.

Before using cleaning agents to remove graffiti, consult Woodhouse for detailed information. Try only a small or inconspicuous area first to avoid causing more unsightly damage.

REPAIRING

Anodised Aluminium

Analok anodised surfaces are harder than a painted surface. In the event that the product becomes damaged (e.g. scratched), the anodising cannot be repaired but the scratch will eventually oxidise, mostly blending in with the surrounding finish.

Light scratches on Analok and standard anodised surfaces can be removed using Sandflex rubbing blocks, though this may brighten the finish locally – as with all attempted repairs, we advise that repairs are trialed on an inconspicuous area first.

Painted Aluminium

Paint application to follow approved methods as detailed by paint supplier. For handling and storage instructions, please refer to paint manufacturer or supplier. Detail specifications may change over a period of time and is therefore advisable to consult the relevant paint supplier before commencing any work. Please note that it is advisable to use professional painters to achieve the best results when touching up large areas.

1. Abrade area of damage using 240 Brush Grit grade sandpaper ensuring even abrasion around the edges of the damaged areas.
2. Apply brush on primer available from local wholesaler. Allow primer to dry thoroughly before applying topcoat.
3. Apply aerosol topcoat while following manufacturers instructions for even application.

For areas of large damage or dents, fill the area with suitable polyester filler such as Supatex (or similar), abrade to a level equivalent to the surrounding area and follow the method statement as detailed above.

CLEANING

Galvanised Steel Cleaning

Use a clean, damp cloth with warm soapy water only. Scourers and abrasive cleaners are not suitable for use on painted surfaces as they will damage the paint.

Where the item is galvanized only (i.e. not painted), mild abrasives such as Scotchbrite pads can be used to remove localised areas of ground in or stubborn dirt, but do not use wire wool or similar as this will contaminate the surface finish and give the appearance of rusting.

Before using cleaning agents to remove graffiti, consult Woodhouse for detailed information. Try only a small or inconspicuous area first to avoid causing more unsightly damage.

SURFACE PREPARATION AND REPAIRING

Galvanised Steel Repairs and Surface Preparation for Painted Steel

Mild steel used on these products has been galvanized to BS EN ISO 1461.

These protective coatings will give many years protection to mild steel articles in normal conditions. However, impact damage can compromise the coating. In these circumstances, a zinc paste for heavy damage or zinc spray for lighter damage can be used to repair the coating.

1. Ensure that the damaged area is free from dirt and grit.
2. Lightly abrade the damaged area using 240 Brush Grit grade sand paper.
3. Apply paste/spray, using manufacturers instructions to give a uniform coat.
4. Clear away any excess paste/spray.
5. Allow time to dry (according to manufacturer instruction).
6. Prepare area for paint using primer as detailed below.

Painted Steel Repairs

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Galvanised Steel

This process uses a glass slurry silk screen printed onto a high carbon steel panel and fired between each colour. Artwork needs to be produced specifically for this process because the printing followed by the firing has to be follow a pattern dictated by the colours used. Certain colours must be printed first and certain colours need to overlay other colour to provide clear crisp images.

Photographs, maps and complicated graphics are possible using this method. The signs offer unparalleled colour stability, resistance to graffiti and vandal damage.

CLEANING

The surface finish is vitreous enamel and can therefore be treated similarly to glass.

For cleaning purposes, it will withstand the action of any organic solvent; the abrasive action of V.E.A approved domestic scouring powders (full list available on request) permits regular and frequent use without scratching. The use of acidic materials should not be permitted for cleaning purposes but otherwise the enamel may be treated as window glass.

REPAIRING

If the enamel has been slightly chipped, it is likely that the groundcoat (black or dark blue in colour) will still be intact and affording metal protection.

The repair procedure is as follows:

1. Thoroughly clean and degrease the damaged area ensuring all slivers of loose enamel and traces of silicone are completely removed.
2. Lightly etch the area immediately surrounding the damage to create a good key prior to the application of Marfix resin*.
3. If damage is down to bare steel, apply a proprietary rust inhibitor in accordance with manufacturers instructions.
4. Apply Marfix epoxy resin to the damaged area and ensure coverage of etched area. On completion of this operation, resin should be slightly proud of the surface of the surrounding panel.

   NB: Marfix epoxy resin is a two part mixture and must be mixed in accordance with manufacturers instructions.
5. Allow to cure for 24 hours
6. Sand down Marfix using fine grade 'wet and dry' paper to give the panel a smooth and continuous surface.
7. Using an airbrush or aerosol, apply 3 coats of cellulose paint. Paint is then left to harden for 4 hours, then buffed and polished by the use of a soft cloth and very fine rubbing paste.

* Marfix resin available from Maresco Ltd (see section 3 for contact details).

CLEANING

Glass/polycarbonate cleaning should be undertaken preferably by a competent professional cleaner using a mild detergent with warm water.

No chemical agents, abrasive or sharp implements should be used when cleaning the glass/polycarbonate.

REPLACEMENTS

In the event that panels become damaged or broken, please contact Woodhouse for replacement.

Wood is most often used in seats or kiosk type structures in the street furniture market although wooden poles are available that offer the same strengths and lifetime of steel and aluminium poles.

CLEANING

Slats should be cleaned with a stiff brush once per year, especially in more exposed locations, in order to prevent a verdigris type build up on the timber surface. Ideally, this should be completed in early spring following the winter months.

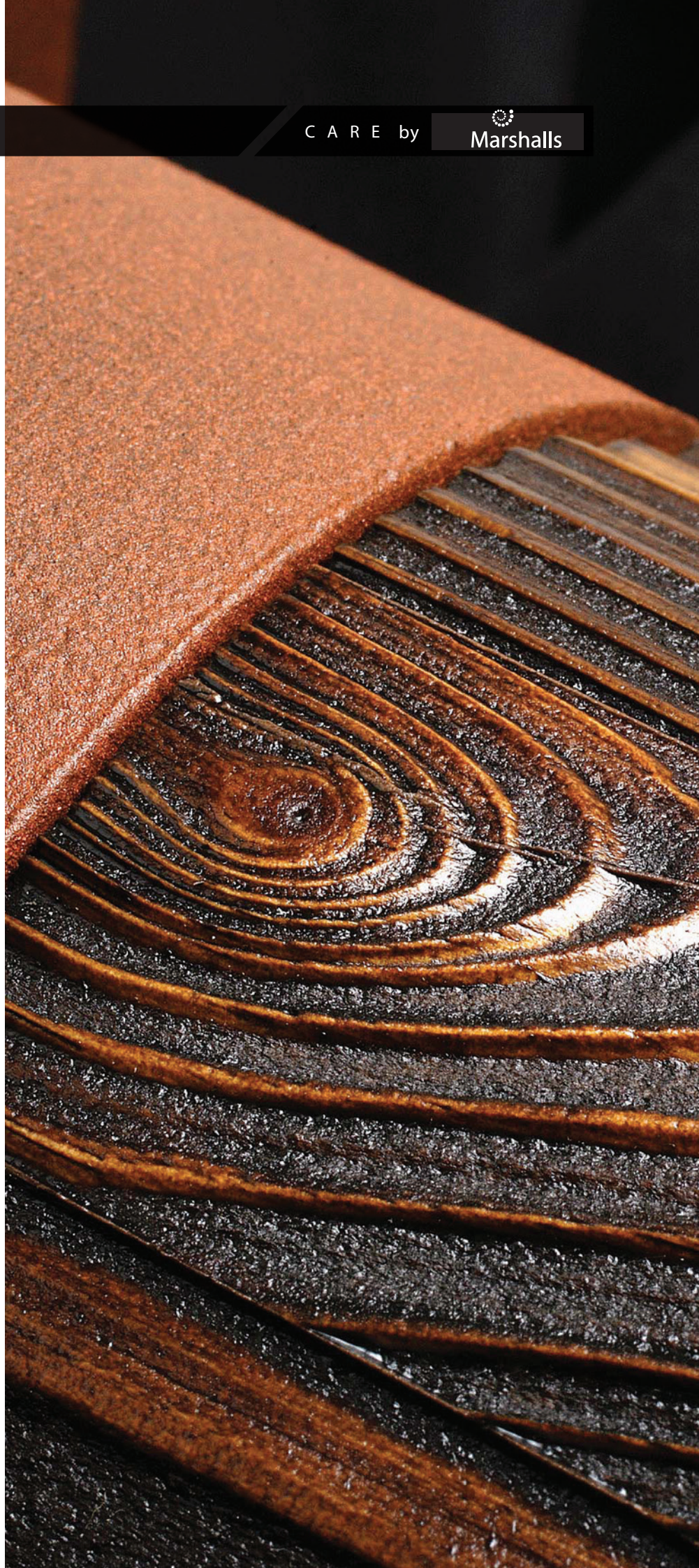
At the cleaning stage, all slats should be checked for splits and splinters. Any splinters should be removed and the surface sanded with 100 grit sandpaper in order to remove any uneven/sharp edges or surfaces.

After cleaning and removal of splinters as described above, if the slats have been protected then they should be re-coated as required

REPAIRS

For light damage, please see section on general maintenance above.

In instances of heavy damage, the timber slat should be replaced. Please order against the part number reference provided with this manual. A method statement for this operation can be provided on request.



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