

MAINTENANCE ADVICE

MANUAL | ISSUE 4





Having selected Ironmongery products from Acorn Architectural Ironmongery Ltd, it is important for them to function correctly throughout the length of their working life and a number of areas should therefore be considered:

- **Storage of Products On Site**
- **Fixings and Fixing Instructions**
- **Installation**
- **Maintenance**
- **Care of Finishes**

Acorn Architectural Ironmongery Ltd has taken every care to deliver the best quality products. However, as these fittings will be functioning every single working day of a buildings life span, many ironmongery items are subject to wear and tear. As such, they need to be correctly installed and maintained. It is imperative that the contractor reads the contents of this brochure prior to the installation. On the following pages, guidelines are offered on the most significant items, which will require regular attention, especially cleaning and maintenance:

- **Hinges**
- **Overhead Door Controls**
- **Floor Springs**
- **Electro Magnetic Devices**
- **Locks and Latches**
- **Cylinders**
- **Lever Handles**
- **Pull Handles**
- **Emergency and Panic Exit Hardware**
- **Ancillary Products**

At some stage in the future, it may be decided to alter the functional use of a building. In the eventuality, we can offer assistance in specific areas: fire safety, security and product innovation. Please contact us on 01223 423 773 for assistance or visit our website www.acornironmongery.com.

STORAGE

Hardware is carefully packed before delivery to avoid damage. It is important that all ironmongery received on site is stored in secure, clean and dry conditions prior to fixing. Abrasives, acids and other corrosive materials should be stored well away from the ironmongery.

FIXINGS

When products are supplied with the appropriate fixings and supplier fixing instructions, these must be used. In particular, bolt through fixing packs for lever handles must be fitted. Fixings should never be substituted as this may affect product performance and guarantee. All fixing instructions and maintenance advice should be retained and handed over to building maintenance department for future reference.

INSTALLATION

To operate correctly, products should be installed in accordance with manufacturers fixing instructions, templates and current Doc M Regulations and BS8300. We strongly recommend that ironmongery is protected from dusty environments and foreign matter such as sawdust and paint during the construction and installation programme.

MAINTENANCE

Detailed maintenance advice is offered on the opposite page. Whilst every effort has been made to cover the common concerns, you may well require further information on some of our products or on the general areas of preventative maintenance. In this instance please contact Acorn for further assistance.

CARE OF FINISHES

More door furniture is damaged by incorrect cleaning than by any other means. It is vitally important to ensure proper care in keeping the finish clean. Dust, which is chemically active and moisture, which is frequently acid, are the main natural hazards affecting door furniture and lock mechanisms. Regular cleaning is therefore more successful than more severe sporadic treatment. Irreparable damage can be caused to the surface by using proprietary metal polishes, harsh abrasive cleaners or emery cloths. A list of the correct cleaning procedures for the most common finishes, can be found on pages 6 and 7.

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HINGES

The correct hinges must be specified and installed based on Door sizes and door weights and must be fitted accurately to ensure efficient operation and performance and all hinge pins should be in vertical alignment.

Hinges should be inspected periodically for wear that may inhibit the free movement of the door and also that may cause the door to drop. All screws should be checked for tightness.

Loosening of hinges is usually caused by poor alignment or incorrect screws. Loose screws should be tightened and if possible, the problem should be eliminated by realigning the hinges or by replacing the screws with a more suitable type/length.

Hinges should be lubricated periodically with a light machine oil. Whilst squeaking is a sign of lack of lubrication, if it occurs frequently, then pin misalignment should be investigated.

In all instances, hinges for fire rated doors, should conform to BS EN1935 and be CE marked.

Intumescent hinge pads should be used with hinges on all fire rated doors (Code AB10-HP).

Acorn Architectural Ironmongery Ltd cannot be held responsible for the failure, or fire rating, of any hinges that may have already been installed or supplied by the door set manufacturer, or third-party supplier.

OVERHEAD DOOR CLOSERS AND FLOOR SPRINGS

Since all internal parts are completely immersed in oil, there is little routine maintenance to be carried out. However, each closer should be inspected for oil leakage, tightness of fixings and correct operation. Light oil lubrication should be applied to exposed pivot points.

Ensure the door closes smoothly and firmly into the frame, overcoming the latch and/or seals if fitted. If it does not, make sure the lock and hinges are correctly fitted and operating correctly before adjusting the closer.

Check that any door seals, weather stripping, automatic door bottoms and air pressures do not inhibit the correct operation of the door closer especially the opening and closing forces.

To avoid slamming, the latch action should be adjusted. Where backcheck or delayed action functions are incorporated, these should also be checked and adjusted. Similarly, with adjustable power units, the valve should be adjusted to take account of the size of door, variable air pressures and the ability of the user to operate the door. It is recommended that door stops are fitted to all non backcheck applications to prevent the door opening beyond the limit of the closer.

Door closers conforming to BS8300 and Doc M are tested without intumescent fire and smoke seals. Opening forces may vary depending on air pressure conditions, type of hinges fitted and positioning of smoke seals and auto-door bottoms. Door closers must be installed using the correct manufacturer's templates and fixings, and must be adjusted using a manual screw driver or Allen key. Failure to do so will result in the failure of the product and the guarantee would become void. Do NOT use power drivers, as these will damage the door closer adjustment valves.

The efficiency and durability of any overhead door closer is greatly improved by accurate installation. The door closers we supply have many features aimed at simplifying the installation process, such as self-adhesive door fixing templates and mounting brackets.

When using track arm door closers (as installation images), please ensure the channel is fitted accurately in accordance with the templates provided and fitted on the correct side of the door. Track arm closers are non-reversible. Please also check architrave and frame dimensions before installation begins.



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Fire doors must not be wedged open under any circumstances as this may also affect the performance of the door closer and fire regulations.

Fire alarm operated Hold-Open Door Holders are available (Product Code: DoorSense). Angle brackets and drop plates are also available to order.

ELECTRO MAGNETIC DEVICES

Any Electrical hold-open and free-swing devices and its associated sensors or alarm, should be checked once a week in accordance with current workplace/building fire regulations.

Check the door operation by releasing the door from the fully open position and ensure it closes fully into the frame.

Check that the electric cable from the door closer is securely fastened and that it is not damaged or snagging on the closer and door frame.

Please ensure that no obstacles are hindering the closing of the door.

LOCKS AND LATCHES

The correct operation of any lock, assuming correctly fitted using the templates provided, is often affected by movement of the door/frame caused by climatic conditions or wear on hinges. The usual result is the inability of the latch/deadbolts to easily engage in the strike plate, requiring an adjustment to their position on the frame. The mortise should also be checked to ensure that no debris has entered the lock case.

It is also important that the holes in the frame behind striking plates are deep enough and free from foreign matter, to ensure unrestricted movement of the latch and deadbolts.

Lubricant should be occasionally applied to the side and striking face of latch bolts. Grease should NOT be applied to the internal lock mechanism, as this will attract dust.

It is imperative that the lock case/latch is removed from the door prior to the drilling of any holes for bolt fixings/spindles/cylinders. Failure to comply, could result in the failure of the lock/latch and the manufacturer's warranty would become void.

Intumescent lock packs should be used on fire rated doors (Code AB30-INT).

CYLINDERS

Cylinders should NOT be lubricated with oil or WD40 as this will attract dust which can affect their smooth operation. They should be maintained with a periodic application of lock lubricant spray (Ref AP88) into the keyway.

Lock lubricant spray is designed to lubricate and clean many types of locks and helps to protect against corrosion. This spray should be used on a regular basis in dusty areas, coastal and hard-wearing environments. Cylinders should not be fitted in a dusty environment.

Classroom Function Cylinders – Allows a member of staff to leave the room and lock the door from the outside to prevent unauthorised access, whilst being reassured the door can always be opened from the inside even though locked. The cylinder can never be locked internally making it ideal function for classroom applications. Classroom function cylinders are handed. Anti-barricade cylinders also available.

Cylinders must be fitted centrally within the lock and door to guarantee the correct operation.

Keys should not be used as a means of pulling the door open.

Master key charts must be handed to the client on the completion of the project to ensure they are fully aware of what keys operate which cylinders/doors. Unauthorised key cutting or incorrect key blanks may affect the long term performance of the cylinder and keys.

For additional cylinders and keys, send your requirements and authorisation to sales@acornironmongery.com

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LEVER HANDLES

Backplate and rose fixings should be periodically checked for tightness and adjusted if found loose. Badly fitted and maintained furniture can prevent the lock from operating correctly. Spindle grub screw fixings should also be checked and tightened and bolt-through fixing must always be used.



Please ensure lever handles are fitted in accordance with the installation instructions provided. Not all makes are the same.

Lever Handle Protection Sleeves are available to order and help protect door handles on site from paint and dusty environments prior to handover (Code LHP2).

Under BS8300 and Doc M guidelines, all lever handles should be fitted using bolt-through fixings which are supplied with all door furniture by Acorn Architectural Ironmongery Ltd.

Replacement bolt through fixing packs are available to order code ABT1000.

PULL HANDLES

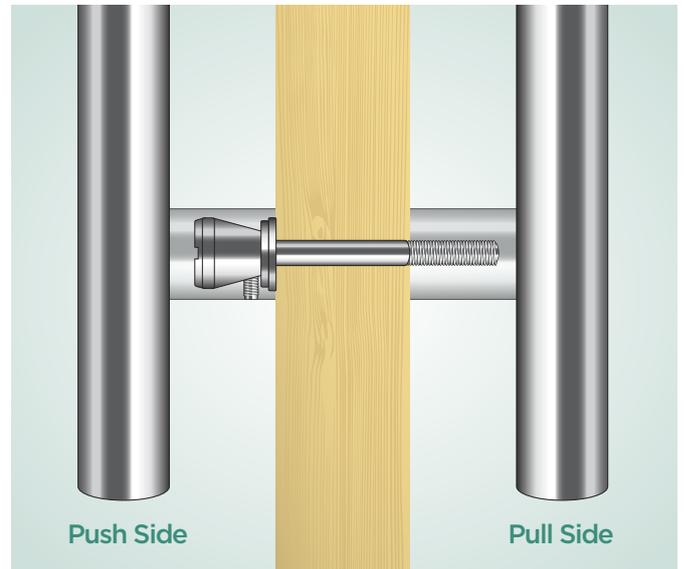
Pull handles should be inspected to ensure that the bolt-through fixings and/or screw fixings are tight. Loose pull handles can damage the door face and become unstable.

Under BS8300 and Doc M guidelines, it is recommended that all pull handles are fitted using bolt-through fixings.



Doors with bolt through and back to back fixings must be drilled with the correct size diameter hole and the bolt should be tight within the drilled hole. Oversized holes will cause the pull handle to become loose.

Pull handle nylon washers, sleeve packers and grub screws are available to order (Code AB316-Pack).



When fitting back-to-back fixing pull handles, please ensure the grub screws are evenly tightened with the allen key provided and the grub screw side is fitted to the push side of the door as instructions provided.

EMERGENCY AND PANIC EXIT HARDWARE

Weekly inspection and maintenance are essential in the interest of fire safety and emergency escape.

Attention must be given to the ease of opening and closing with adjustments as necessary to compensate for any door or frame movement. Floor sockets should be cleaned out to prevent foreign matter impeding bolt movement. Lubrication will be limited to the application of a little light machine oil to the pivots of the top tripper mechanism of panic bolts, to the saddles of panic bolts and the bolt head of panic latches.

Please ensure that no internal or external obstacles will hinder the full operation of the door.

Correct Signage must be displayed.

All panic hardware must conform to EN1125 or EN179.

ANCILLARY PRODUCTS

These items should be checked to ensure that they have been correctly fitted and they do not interfere with the correct operation of other ironmongery or the function of the door leaf.

CARE OF FINISHES

Surface deposits such as dirt and dust are the main cause of corrosion in metal door furniture particularly when combined with moisture in a damp atmosphere. In hard wearing environmental conditions near the coast or industrial areas acidic or alkaline deposits may build up and attack the surface finish. It is very important that care is taken to maintain door furniture finishes since many finishes especially anodised, electro-plated, polished and lacquered surfaces are damaged by incorrect cleaning.

Frequent dusting using a soft dry cloth and occasional washing with warm soapy water, followed by a light application of good quality wax polish will provide a good foundation for preserving the appearance of most finishes. Chemical sprays, cellulose based thinners and silicone based polishes should be avoided. Ironmongery fitted externally or in damp conditions will require greater attention due to increased exposure to atmospheric conditions.

It is strongly advised that solvents, metal polishes or cleaners containing abrasive powders or abrasive cloths and pads should not be used for cleaning any ironmongery products.



MAINTAINING STAINLESS STEEL IN COASTAL AREAS, SWIMMING POOL AND LEISURE CENTRES

Please remember, even 316 marine grade stainless steel with a polished finish is still 'stain less' and not 'stain free' and a regular cleaning regime needs to be implemented.

Corrosive Action

Coastal areas and swimming pools are very demanding environments for any construction material including stainless steel. Chlorides from the pool water, salt water and sea air are deposited on the stainless steel and become concentrated by continual wetting from splashing and subsequent evaporation from the surfaces of the metal.

Swimming pool and public leisure centres have changed significantly in recent years, especially swimming pool environments. Higher water temperatures combined with an increase in the number of users, has led to higher levels of chemical disinfection. Chlorine-based disinfectants are the norm, which together with contaminants introduced by bathers, produce chloramines.

The temperature of the air in swimming pools and leisure centres is generally held about 1°C above water temperature. High air

temperatures significantly accelerates corrosion. Atmospheric moisture in pool buildings comes from evaporation of pool water and the droplets from the turbulent water features that have become increasingly common in leisure pools. Higher levels of humidity can lead to condensation in cooler parts of the building and during the cool of the night. Re-circulation of pool air (a common method of reducing energy cost) can increase humidity, as well as adding to the build-up of contaminants in the atmosphere.

Consequently, the atmosphere of indoor swimming pools and leisure centres is one of the most aggressive to be found in a building environment and the effects on the material are therefore more significant in the atmosphere than in areas where the stainless steel is continually being washed by pool water. Corrosion can develop in many different forms but usually manifests itself in tea staining or localised brown stains on the surface which are unsightly and if left untreated can damage the surface of the metal permanently.

Grade 316 stainless steel contains a certain percentage of molybdenum which enhances the corrosion resistant properties of the material and this grade is recommended for these corrosive environments.

Material Finish

Just as critical as the material, is the surface finish. Satin finishes may be aesthetically pleasing but present a micro rough surface with many areas that can be sites for corrosion. The brighter and smoother the surface of stainless steel the less the likelihood of it holding contamination and the greater its corrosion resistance. A smoother surface such as a mirror mechanical polish is therefore the most appropriate finish to use.

Conclusion and Cleaning Regime

Grade 316 Polished Stainless Steel is the most appropriate for these corrosive environments but a number of factors need to be considered of which the cleaning and maintenance regime is most important.

All Stainless-Steel material should be washed on a regular basis with clean fresh water to remove the condensed chlorinated moisture droplets. Conventional abrasive cleaners or strong acidic cleaners should never be used on stainless steel as this can cause permanent damage to the finish and the metal itself.

It is important to bear this in mind when cleaning brick or Floor surfaces adjacent to any balustrades and ironmongery items. Most industrial cleaners contain hydrochloric acid which will cause permanent discoloration of any metal.

To remove heavier soil and salt deposits a mild acidic water-based detergent should be used, diluted with warm water and then rinsed off with clean cold water. If possible, the surfaces should be dried off to prevent any water droplet scale forming and to maintain the surface in pristine condition.

By maintaining and ensuring a regular cleaning program of all the vulnerable surfaces, the quality of the metal finish can be maintained for many years.

CARE OF FINISHES

ANODISED AND ALUMINIUM

Satin and polished finishes should be dusted regularly. They should be washed periodically with weak detergent solutions occasionally wiped with wax polish.

NICKEL AND CHROME

Door furniture with nickel and chrome finishes should be dusted regularly. They should be washed periodically with weak detergent solutions and rubbed occasionally with a cloth dampened in paraffin or light oil.

NYLON

Nylon is a non-porous material and the smooth surfaces of nylon products do not attract dust. Appearance can be maintained by wiping with a damp cloth, which will restore the product to a pristine condition. Nylon Ironmongery is also highly recommended for use in health and education sectors and swimming pool environments due to its long lasting durable finish and where minimal cleaning is required. Also nylon is ideal for use in area where people who may be partially sighted as it give the opportunity to maximise colour contrast with surrounding surfaces/areas. Nylon ironmongery can also help with protection against the spread of infection if cleaned and maintained correctly.

STAINLESS STEEL GRADE 304 & 430

Whether supplied in satin or polished finish, stainless steel should be dusted regularly, occasionally washed with warm soapy water and dried with a soft clean cloth. Avoid acid or chloride based cleaning products and abrasive materials. These grades of stainless steel should not be used within swimming pool and external environments.

POWDER COATED

Epoxy, polyester or polyurethane powder coated finishes should be cleaned with a soft cloth and household furniture polish. Do NOT use industrial solvents.

ELECTRO PLATED FINISHES

Electrophoretic and plated finishes should be wiped clean with soapy water and a soft cloth and wiped dry.

BRONZE

All bronze finishes should be dusted regularly and periodically washed in warm soapy water. They should also be treated occasionally with a sparing rub of wax or furniture polish.

BRASS

Lacquered finishes should be cleaned by the occasional application of a light coating of wax polish. Eventually it is likely that the lacquer will become damaged and break down. When this occurs, all traces of the lacquer should be removed using acetate lacquer remover. This product may then be re-lacquered or cleaned as un-lacquered brass on a regular basis.

STOVE ENAMELLED

These finishes should be wiped with a non-abrasive, soft cloth and a gentle cleaner.

MIRRORS & BATHROOM CABINETS

Mirrors and bathroom cabinets should be wiped clean with a damp cloth or kitchen roll and only use a very weak spray-on window cleaner if required.

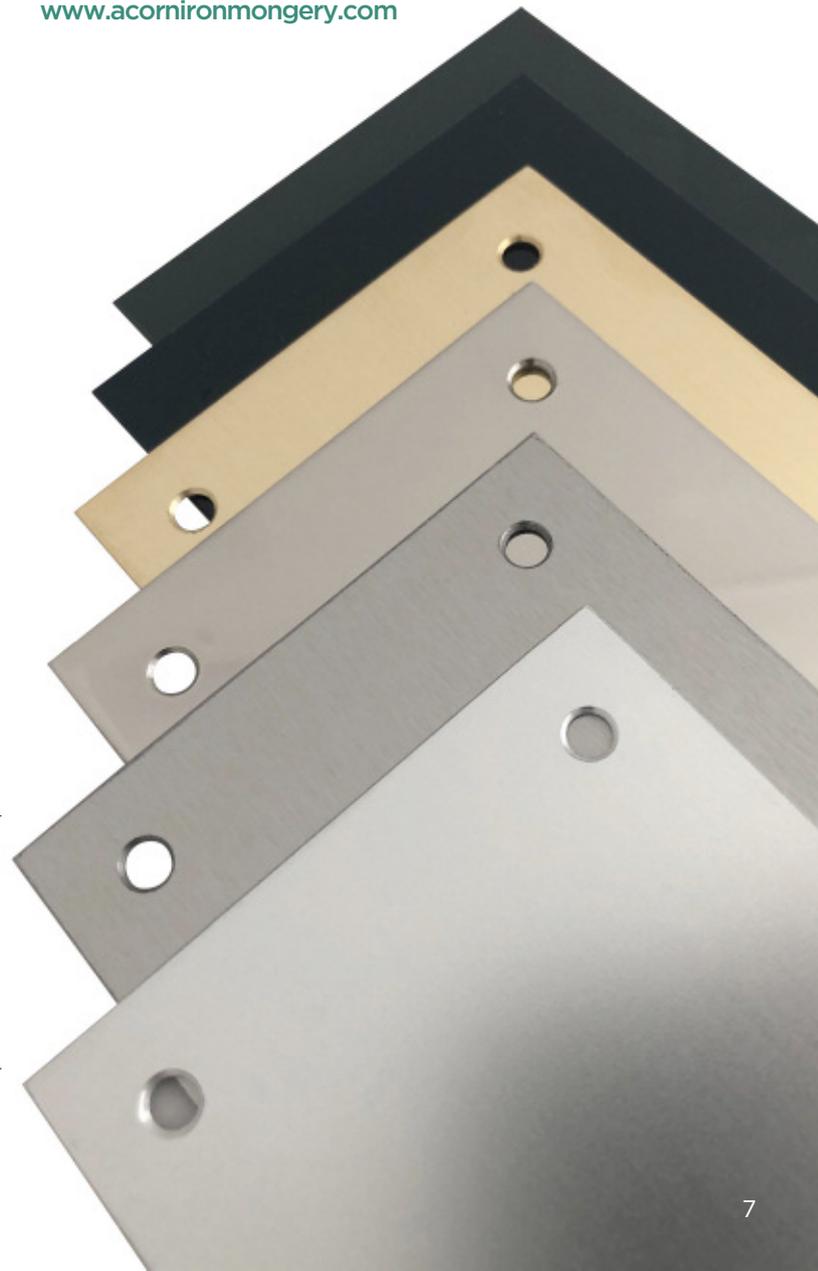
Wet marks and condensation should always be dried off as soon as possible to stop moisture penetration. Do NOT use industrial detergents or solvent based glass cleaners.

MANUFACTURER'S GUARANTEE

The manufacturer's guarantee will only be supported if the products specified are fitted in accordance with the manufacturer's fixing instructions, templates and the following European standards: EN1154, EN12209, EN179 and EN1125, Doc M and BS8300. The guarantee does not cover for normal wear and tear or physical abuse and will become void if the products are not cleaned or maintained in accordance with this brochure and manufactures recommendations.

A full maintenance Cleaning regime must be undertaken and documented accordingly.

For further information on maintenance or to request a site visit, please contact us or visit our website:
www.acornironmongery.com





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