

# Maintenance manual for wooden doors and windows



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## Wooden Doors and Windows

Wooden fittings have a fundamental characteristic: they are made of a natural and living material which is in a class of its own, with very particular chemical, physical and aesthetic features. Before going into maintenance methods, we advise clients to get to know the true character of these products.

Wood possesses good qualities of mechanical resistance (compression, flexion etc.) and physical resistance depending on the type of wood used. Pines for example are known for their discharge of resin. An obvious feature is the grain of the wood which varies in regularity, and is always present but different according to the cut. The knots, typical dark patches on the linear surface, are often seen as a problem, but with the application of suitable fillers they can be restored.

To underline how wood is adaptable to atmospheric conditions, above all humidity. This can cause swelling of the wood, at times unwanted especially if variations in temperature of surroundings are very high. The application of steel fittings at various points can limit this eventual problem; nevertheless this has to be tolerated as normal if the extent of the swelling is slight.

### Rules

The following rules will guarantee long life to wooden fittings:

1. Get to know the chemical and physical characteristics of the material used in constructing your fittings
2. Carry out the normal periodic cleaning operations with non-aggressive products
3. Programme maintenance of your fittings
4. Follow all indications and specifications supplied by the producer
5. Ensure cleaning is carried out on the water drainage system
6. Check condition of washers
7. Check greasing and regulation of metalwork
8. Carry out preventive maintenance such as freshening-up
9. Carry out repair maintenance such as retouching in good time
10. Carry out repair maintenance such as repainting in good time

### Notes on Rules

In the rules we have mentioned words of a technical nature that may create some doubt or confusion. This manual has the aim of explaining in the simplest way possible actions to be carried out to keep your fittings clean and efficient.

Maintenance can be divided into two parts:

- Preventive maintenance: prevents defects and problems arising in fittings; this is based on two steps: cleaning and freshening-up.

- Corrective maintenance: repairing defects and problems arising through lack of maintenance or for out of the normal events; this is based on two steps: retouching and repainting.

Let's now see the application of the above rules to all parts that make up doors and windows.

## **Frames**

### **Surface cleaning (every two months)**

Although this is not considered to be a true maintenance operation, surface cleaning represents in many ways the first step to increase the life of the window paint.

In fact, acid rain or other aggressive elements on the external surface causes a reduction in paint life. It is therefore preferable to avoid allowing smog and dirt to remain on the surface by carrying out extensive cleaning operations every two months.

This operation should be carried out using neutral water deterging solutions, avoiding the use of aggressive detergents that can damage the surface.

In the event that painting was effected with water-based products, it is particularly advisable to avoid the use of ammonium or spirit-based products that can permanently damage the finishing coat.

The maintenance described is recommended to be carried out every two months, preferably in summer or before winter. In particular conditions (city areas with high-level pollution, coastal areas etc.) it is advisable to shorten the time between cleaning, or at least carry out more frequent checks.

The aim of maintenance is to preserve the finishing coat from aggression of chemical agents (smog, acid rain etc.), that affect the duration of the paint itself.

### **Retouching (every two months)**

Retouching the painted surface of windows is an extremely simple operation, that nevertheless gives increased durability and protection of the paint.

Retouching is to be carried out every two months by located application of paint on the appearance of cracks, dents or irregularities in general in paintwork: these can in fact be caused by penetration of water or damp in the wooden fibre resulting in peeling of paint and risk of darkening of wood.

In practical terms, it is first of all necessary to carry out a careful check of the surface paint on the window, identifying any eventual cracks or irregularities in the finishing coat. Once identified, cracks and peeling can be restored by brush application of local paintwork, to restore topcoat continuity.

When paint has dried, another coat can be applied if necessary, to be carried out in the same way.

The above-mentioned maintenance is recommended every two months, preferably in summer or before winter. Under special weather conditions or when there is damage is caused by knocks or various mechanical reasons, it is advisable to take action as necessary, that is at the onset of deterioration. The aim of good maintenance is to preserve the finishing coat, preventing damage by general weathering (water, ultra-violet rays etc.) directly affecting the wooden joinery, and causing various forms of deterioration (darkening of wood, peeling of finishing coat etc.).

### **Freshening-up (every three years)**

As opposed to retouching which only involves a local application of paint, freshening-up means applying a coat of paint to the whole surface of the window. This work is recommended every three years, but can vary considerably according to different factors, such as the following:

- Type of paint used
- Exposure
- Wooden joinery
- Preventive maintenance (cleaning and retouching) carried out

It is nevertheless important to intervene with freshening-up to prevent cracking or peeling of finishing coat due to wear and tear and general weathering.

Clear signs of the need to intervene are thinning and roughness upon touching paint, absence of initial gloss. In practical terms, freshening-up must always be preceded by a thorough cleaning of the fitting's surface. In order to eliminate any traces of sediment or caking, it is advisable to go over surface with fine sanding paper, paying attention not to remove colour from door or window; on completion of this operation the surface should appear uniformly matt.

It is now necessary to remove dust created by sanding, using a clean damp cloth on the surface. After having protected the parts not to be painted (double glazing for example) with masking tape, you can proceed to application of paint, preferably using a soft brush. After a period of about 12 hours, the paint will be dry and the windows can be closed without any risk of sticking.

It is preferable to carry out all operations in the shade, and avoid painting any fixtures or sealing material (silicone etc.).

Maintenance as described is recommended every three years, but as stated before, this can vary considerably depending on different factors. It is therefore advisable to freshen up paintwork in the case of wrinkling, lack of gloss, or thinning of finishing coat. The aim of maintenance is to restore the original external coat of paint, and to consolidate the effect on protecting the wooden joinery.

## Repainting (according to wear and tear)

Repainting is a maintenance operation that is necessary in cases of well-worn surfaces, with visible peeling of finishing coat together with cracks and darkening of wood.

Such wear and tear is largely caused by lack of preventive maintenance (retouching, freshening-up); as such, it is not possible to give exact frequency but repainting is to be done as and when necessary according to obvious deterioration in surface.

In cases where the wood surface is highly deteriorated and filling of any cracks is necessary, it is advisable to opt for a more concealing paint (varnishing, coloured paint) which will better cover aesthetical imperfections in the wooden parts.

The first step is to remove all paint from the window, down to the wood.

For paint removal, which means complete removal of coats of paint, sandpaper with aluminium oxide resin is to be used, which has the mineral evenly distributed without clogging, depending on product conditions.

The use of coarser grains facilitates the initial operations, but can render the surface rough.

The use of sandpaper can be manual or with the use of electric or pneumatic tools, preferably connected to dust-absorbing systems.

You then proceed to filling holes, cracks and other wood damage; this can then be sanded again, but using a finer grain, thus preparing the wooden fibre for repainting stage.

Having finished the preliminary work, you can now proceed to repainting, referring to the stages recommended by the paint manufacturer.

Now you can proceed with the first covering of BASE COAT, to be left to dry for 12-24 hours.

Then sand again with a fine sandpaper and wipe away remaining sanding powder with a clean damp cloth.

Finally, apply two coats of finishing coat and leave to dry for about 12-24 hours (according to type of paint used).

Repainting cannot be considered as periodic maintenance, and has to be carried out when the effects of wear and tear such as splitting, cracking, darkening of wood, flaking and breaking away of paint become apparent on the window surface.

Such wear and tear is often caused by inappropriate regular preventive maintenance (retouching, freshening-up).

The aim of maintenance is to restore paintwork to its original condition, rebuilding the finishing coat.

This procedure guarantees good protection for the wood and the aesthetic standard will be recuperated.

## Metalwork

### Cleaning of Metalwork (every two months)

Metalwork is one of the main components of the window: correct maintenance guarantees not only efficient use of window, but also security for the user.

Above all, it is important to carry out simple but regular cleaning every two months, being careful to use non-aggressive products that will not damage the surface protection of metalwork against corrosion (eg. Water and neutral detergent).

It will then be possible to remove, particularly from external metal fittings, any eventual acid deposited (deriving from smog, acid rain etc.), thus preventing oxidation and corrosion in hanging fittings and moving parts of the windows.

The maintenance described above is recommended every two months, or even more frequently in the case of metalwork being exposed to particular weather conditions. The aim of maintenance is to prevent oxidation and surface corrosion of the metal fittings.

#### Oiling/GREASING of Metalwork (annually)

Checking the state of wear on moving parts together with suitable OILING/GREASING is of prime importance for good maintenance and security of the window.

In general, it is important to carry out annually a complete visual check of opening and closing mechanisms of windows, including hanging systems (hinges).

In the case of severe wear and tear it is important to contact a specialist in windows who will replace worn parts, or the entire metalwork.

In other cases, carry out oiling of all mobile parts (hinges, brackets, bars and latches for locking, sliding bars, automatic locks).

For GREASING use bearing oil, machine Vaseline, oil.

The success of efficiency and security of the window depends on programmed maintenance.

The maintenance described above is recommended annually, but more frequently in the case of heavy use of product (public buildings, etc.).

The aim of maintenance is to verify the state of usage of metalwork, in order to prevent security problems for the owner, and to carry out greasing of all mobile parts to ensure smooth working of window.

#### Adjusting metalwork/ METAL FURNISHINGS (annually)

Suspension mechanisms and moving parts normally sold are fitted with devices that allow precise adjustment, that provide correct and smooth use of window.

Metalwork adjustment is to be carried out annually and in many cases corrects movement and slight deformities in the wood product itself.

Registration is to be done when (some typical examples):

- Windows knock against fixed frame
- Windows knock against each other at point of central support
- There is an incorrect or no meeting of fixed window-frame
- Windows are not in line with fixed frame
- Closing of windows is impossible
- Closing of windows is abnormally difficult

By following a correct adjustment of hinges and closure points, you will obtain smooth working of metalwork, thereby gaining an airtight window.

The maintenance described above is recommended annually, or more often in the case of difficult manoeuvring and closing of windows.

Adjustment is normally a simple operation; for more complex door and window systems we advise you to contact the supplier.

The aim of maintenance is to preserve an efficient use of the window, avoiding eventual problems in manoeuvring, limit use of force in opening and closing of mechanical parts and moving of window to consent smooth working of fittings.

## Sealing

### Verification of water drainage (annually)

A particularly important characteristic of the window is its water-proofness: this is subject to various accessories, especially the water drainage outlets (also called drips).

To work properly, drips have to be checked annually; above all to check:

- Thorough cleaning of drip, including internal
- Holes and slots for drainage are free of dirt, deposits or insects

When carrying out a thorough cleaning, it is necessary to use (also for internal cleaning) neutral products (water solutions with neutral detergents such as soap etc.), that will not damage the surfaces.

Regarding checking of holes and slots for drainage, a visual check is necessary in order to verify eventual blocking by dirt, insects or various kinds of sediment; then remove the obstructing deposits using normal tools, controlling result of work done.

It is also advisable to be careful not to damage the finishing coat by denting or scratching in any way, in order to guarantee durability of wood.

The maintenance described above is recommended annually, or exceptionally in the case of internal water infiltration.

The aim of maintenance is to ensure efficient working of water drainage from window, avoiding any eventual overflow from drip due to blockage of rainwater holes or slots.

### Sealing of WATER OUTLET PLUGS (annually)

Water outlets (drips) made in aluminium are normally fitted with plastic water outlet plugs, these being joined to the wooden uprights of the window.

It is advisable to check annually the sealing of the plastic plug to the wooden uprights in order to prevent any water infiltration to the house interior.

Sealing which is normally done with silicone must be checked, and in the event of partial or complete detachment of silicone, it is advisable to proceed as follows:

- Eliminate excess sealing material
- Clean surfaces of plug join to upright as necessary
- Seal with suitable material above-mentioned join, checking continuity (when using silicone, which is normally used, it is advisable to choose one with low elasticity, more easily adaptable to the dimensional variations of the material).

The operation of sealing is not considered necessary when soft plastic plugs are used (capable of elastic absorption of dimensional variations of wood when specific sealing material is not used).

The maintenance described above is recommended annually, or exceptionally when inside water infiltration appears in window.

The aim of maintenance is to prevent eventual internal water infiltration, due to lack of rainwater drainage from uprights to water outlets.

## Sealing Check (annually)

One of the main characteristics of a window is without doubt air penetration, and this especially affects thermal and acoustic well-being in the home, as well as saving on heating fuel.

The fundamental accessory that gives the window these advantages is the seal, which creates a barrier between the exterior atmosphere and climate and that of the interior rooms.

It is therefore necessary to check condition annually, and when necessary (worn, cut or hardened seals) to replace them.

Replacement is done by simply taking out the old seal and inserting a new one.

In identifying type required, apply to window supplier.

The maintenance described above is recommended annually, or exceptionally when existing seals appear worn.

The aim of maintenance is to guarantee the window's characteristics of air penetration, preventing infiltration that adversely affect thermal and acoustic well-being in the rooms, in addition to the resulting saving on fuel.

## ROLLER BLINDS AND ROLLER SHUTTER BOXES

### Replacement of roller blinds or single slats

On appearance of signs of wear it is advisable to replace the roller blind or part of it (single slats). This operation must be carried out by a specialist who can intervene on replacing entire product or part of it.

### How to replace the roller cord

Before starting ensure that the blind is completely unwound and purchase a cord of the same length as the one that needs replacing.

Tip: to calculate the length of your cord, measure height of window (from shutter box to window-sill) and multiply by 2. If your blind is fitted with a ROLLER REDUCTION (pulley) in the shutter box, multiply window height by 3.

Procedure:

- Open cover of roller shutter box and block the blind at top when wound up (for example with a chisel)
- Cut the cord on the pulley side and pull out cord from the box
- Tie a knot in the cord to prevent it winding completely inside the wall plaque
- Take the new cord and insert one end in the roll of the shutter box and thread it through the slit situated next to the roll and tie a firm knot
- With the blind still blocked, pass cord through the slit in the shutter box
- Unscrew the wall-plaque and remove
- Keep roll firmly attached to plaque and unroll old cord

**WARNING.** Whilst unrolling the cord, the spring in the roll is charged so keep the cord very firm as it can cut.

- Unroll cord completely, unscrew the screw which keeps the end of cord attached to roll

**WARNING:** hold roll firmly as in this position it can easily cut.

- Screw the end of new cord hanging from the shutter box to the roll of the external placque being careful of the sharp spring
- Insert the placque in the wall and screw tightly with the existing screw
- Loosen the roller blind and try to roll and unroll to test it
- Close cover of shutter box

### **Maintenance of shutter box**

It is necessary to carry out thorough maintenance of the shutter box as for the other items. It is also necessary to carry out normal cleaning operations externally and internally, opening the flap for access to roll.

It is also advisable to periodically check the fastening of flap to the surrounding parts from the inside of the shutter box.

### **FAQ**

During cleaning of varnished door or window some colour is rubbed off onto cloth. The heat generated by rubbing the cloth softens the paint which releases coloured pigment. This will not spoil the covering coat unless done too vigorously. To avoid this problem use a soft cloth with water and neutral detergent. It is important not to rub the surface vigorously or aggressively.

#### **White transparent patches appear when rain falls on finishing coat that has not completely dried.**

This occurs when the paint used is water-based and these are more sensitive to rain and steam. Since the paint is not yet completely dry, particles of resin emulsion can appear and create patches that will disappear on complete drying of paint.

#### **The transparent finish (through which you can see natural wood) has changed colour in varying degrees when exposed externally.**

Wood is made up of various chemical components that can be damaged by the ultraviolet component in sunlight, resulting in alteration in colour depending on exposure, type of wood, colour of varnish.

Exposure to sunlight. The following are subject to marked changes:

- Doors and windows flush to wall
- Doors and windows without external covering
- Doors and windows exposed to south-west

Types of wood. How they react to sunlight:

- Light woods (pine) turn yellow or darker
- Dark woods (oaks) lose colour

Colour of varnish:

In the case of external coloured paints (walnut, cherry etc.) there are filters that absorb ultraviolet rays while in natural varnishes these are not present. These filters however expire in time and should be renewed with retoning oil.

**Yellowish patches appear on painted doors and windows (white or light-colour)**

When white or light-coloured paints are used on Chestnut Oak or Framirè, yellowish patches that follow the wood grain can appear after 2-3 months after installation, particularly in conditions of high humidity. This phenomenon is due to the presence of highly coloured substances that rise to the surface when solubilized by water. These patches tend to disappear in time (from one to three months).

**Brownish patches appear on window-sills**

In the event of heavy rain, fittings in Oak, Chestnut or Framirè, that is, woods containing considerable tannin extract, may release a dark liquid which deposits on the sill. These tannins are extracted by the water from the head of the timber. To clean window-sills use AMUCHINA (bleach) at 5% strength and rinse thoroughly. Apply re-toning oil to improve insulation on external shutters.

**The fittings have swollen during high humidity**

Wood absorbs and gives off humidity according to external conditions. This phenomenon is natural and cannot be eliminate. Your doors and windows fitted by specialized Apar technicians already have been treated to reduce the effects of this occurrence. In exceptional cases regulating metal closing fittings could be necessary.