

USE AND CARE GUIDE

Thank You For Choosing Crestline

We design, engineer and manufacture all Crestline windows and doors to provide years of excellent performance. This Use and Care Guide explains the routine recommended maintenance the homeowner should perform, as well as certain service and repair functions that should be completed by professionals from your installing contractor or dealer.

Unit Installation

As stated in your Warranty, Crestline products must be installed in accordance with Crestline instructions, which are supplied with the products when they are delivered. We recommend that you verify with your contractor or installer that this requirement has been met, and that you obtain from the contractor, installer or Crestline dealer, a copy of the Crestline installation instructions to keep on file for future reference.

⚠ IMPORTANT: Crestline recommends that Crestline products be installed by a professional.

Know Your Crestline Dealer

Be sure to obtain the name and telephone number of your Crestline dealer from your contractor or installer, and keep the information on file for future reference.

When You Believe You Have a Warranty-Covered Problem

- First, get your contractor or installer to check it out.
- If necessary, request an evaluation by service personnel from the Crestline dealer where your product was purchased.
- If service personnel conclude that the problem may be covered by your Warranty, the dealer will contact his Crestline distributor to act on your problem.

Don't Put Off Correcting Problems

Crestline wants you to be pleased and satisfied with all the Crestline products used in your home. We recommend that you consult your contractor or Crestline dealer as soon as you suspect any problems. They will probably be easily corrected, and it may be that immediate attention can prevent a much more serious future problem. You'll find the personnel at your Crestline dealer helpful and always eager to meet your needs.

Contact Crestline at 1-800-826-5509 or visit us on the world wide web at www.crestlinewindows.com



CAUTION

Do not use reflective or tint film on glass. The application of film to insulated glass in any Crestline window or door will void your Warranty.

Such film can cause increased thermal loading of the glass, which can result in higher edge stresses that will cause breakage that would not normally occur. In addition, application of reflective or tinted film creates conditions that adversely affect the glass seal and can ultimately bring about seal failure.

Condensation

Although window surfaces may be the first place you notice condensation forming, it's really not the fault of the windows. Condensation is caused by excess humidity trapped inside a home; moisture that can cause problems if allowed to remain.

There are several steps you can take to reduce or eliminate excess humidity and condensation inside your home.

- As a temporary solution, open a window in each room for just a few minutes. This is especially helpful after a shower, or after running the washing machine or other moisture creating appliances.
- Keep attic louvers open. This will allow moisture that travels upward through the house and into the attic to be released to the outside. Some people close or block attic louvers during the winter in hopes of saving fuel. While energy savings are minimal, the moisture that is trapped in the attic can eventually do a great deal of damage to the roof, to attic insulation, and to the ceilings below. Besides louvers, other types of attic ventilation to consider are continuous eaves vents and ridge venting. If you are considering adding attic ventilation, it's best to consult with a knowledgeable contractor on the best types for your home.
- Check the crawl space or basement. The crawl space should have foundation vents so that moisture from the soil can travel to the outside instead of upward into your house. A vapor barrier (such as polyethylene film) over the ground is also helpful. If you have a basement, watch walls and floor for moisture seepage. Again, for advice on eliminating moisture in crawl spaces and basements, it's best to consult an expert.
- If you have exhaust fans in your kitchen, bathrooms and utility rooms, run them longer than usual in winter. If you don't have them, consider having them installed.
- Keep draperies and shades open so that air can circulate around the inside glass. Condensation is more apt to occur when drapes are closed and shades are pulled down.
- Eliminate any other controllable sources of moisture in your house. Properly ventilate clothes dryers and all gas appliances. Control excessive use of room humidifiers.
- Use dehumidifiers. Check with your local heating and cooling contractor on the size you need.

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Day-to-Day Guidelines

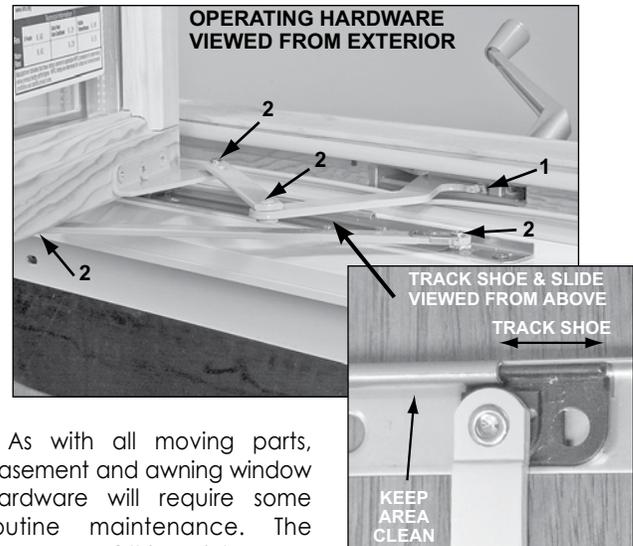
- Don't use extreme force to open or close any Crestline Window. It should not be necessary. If operation seems overly difficult, the window should be checked carefully for a source of interference.
- Always be sure any Crestline window is fully closed before attempting to lock or latch it.
- Don't allow children or anyone else to pull, swing or lean on open sashes and stabilizer arms.
- Open and close awning and casement windows only from inside using the operator handle designed for these purposes.
- Always apply even pressure to both sides to open or close double hung sash, or apply pressure directly in the center if need be. Pushing or pulling at double hung sash from one side only is inviting problems.

General Recommended Homeowner Care

Double Hung & Slider Windows

- Keep the tracks on which sash operates and the liner at the bottom of the window clean. They should be free of trash, dirt, dust and cobwebs. Clean regularly with the dusting attachment on a vacuum cleaner.
- If tracks require lubrication, use only silicone spray, which does not attract dirt and dust.

Casement and Awning Windows



As with all moving parts, casement and awning window hardware will require some routine maintenance. The frequency of this maintenance will depend upon the severity of the conditions to which the window and hardware is exposed. Windows in homes located near or around salt water will require more maintenance than those located inland. Clean window frames and sash. Dirt should be wiped clean and brushed away.

Operating Hardware

Clean operating parts of any salt deposits or debris before lightly spraying a good quality penetrating lubricant (silicone spray, lithium spray, etc.) over the interconnecting points of the components, such as:

- Crank gears and pocket (Item 1 above)
- Pivot pins (Items 2 above)
- Clean and lubricate the sash locks as needed
- Spray weather stripping with silicone spray only
- Tighten any loose screws.

Latch Mechanism

Occasionally spray a light coat of a good quality penetrating lubricant (silicone spray, lithium spray, etc.) over the internally moving components to ensure smooth, easy operation.

Note: In all instances, avoid applying lithium spray unto the weather stripping. It may diminish the effectiveness of the weather stripping by making it difficult to achieve a tight seal.

USE AND CARE GUIDE – CLEANING**Glass – Cleaning and Care**

⚠ IMPORTANT: Application of reflective or tinted film to glass in Crestline windows or doors will void your Warranty.

⚠ CAUTION Do not use abrasive cleaners, abrasive materials, or harsh chemicals to clean glass.

⚠ IMPORTANT: If your glass is dirty with solid material like soil or mud, wash it off with clear water before cleaning the glass so glass will not be scratched by the solids.

Clean glass as needed with any good glass cleaner from your supermarket or hardware store or make your own with 10% vinegar and 90% water. If you use brand-name glass cleaners, be advised that ammonia or alcohol-based cleaners can leave a film that is more likely to attract moisture or dust, and is more likely to streak when cleaned.

To clean the exterior or interior glass, put your premixed solution in a spray bottle. Spray area to be cleaned with a generous amount of cleaner and then wipe dry with either a squeegee or clean, dry, lint-free, soft, cloth. If streaks appear after cleaning, rinse the glass surface with clear water and dry thoroughly.

Removing Solids From Glass

⚠ CAUTION When using solvents, cleaners, and tools always use safe working practices and follow the manufacturers' instructions.

⚠ CAUTION When used properly, new razor blades or metal scrapers that are not gouged may be used for removing excess sealant or other unwanted materials from glass. Note however, glass scratched by a razor blade or scraper is not covered by the Crestline Mfg., Inc. Warranty.

To remove caulking, dried paint, or sealant on glass, use a small amount of denatured alcohol applied to a clean, dry, cloth first, then wash the glass surface with your cleaning solution. Remove remaining excess sealant or other unwanted surface materials by using a new single-edge razor blade. Hold the blade flat on the glass to avoid scratching the surface while removing the material.

To remove markings on the glass from adhesives, crayons, paint, or other materials, apply a small amount of a mild abrasive cleaner (such as that used for glass cook tops on kitchen stoves) to a wet cloth. Apply to the spot, rub gently, and then wipe off with clear water on a clean rag. Solvents such as acetone, denatured alcohol or mineral spirits may also be tried. Apply solvents to a clean, dry cloth. Next, lightly rub the area that needs spot cleaning. Wipe with a clean, dry, cloth. Then wash the entire glass surface with your cleaning solution.

Defining Dirt

Dirt on glass can best be defined as any unwanted material on the glass surface. This dirt can be grouped into four (4) categories.

- Particulates
- Surface Residues
- Reactive Contaminant's
- Surface Corrosion

Particulates

Particulates are solid materials loosely deposited on the glass surface that can be removed by wetting the glass surface, gently sponging, and rinsing thoroughly.

NOTE: Machine pressure washing should be avoided because of the potential for damage to glass, decorative elements, siding, and trim. A garden hose, connected to a standard (un-boosted) household water supply can be used to remove heavy accumulations.

Surface Residues

Surface residues are Contaminant's, (like fingerprints, oils, etc.) that may be removed using a cleaning solution.

Thoroughly wet the surface of the glass, then apply the cleaning solution with a sponge or soft cloth until the surface residue is loosened. Rinse thoroughly with clean water.

If contaminant remains on the glass after using a cleaning solution, the contaminant should be identified. Adhesives from labels or tapes may, for example, not be removed by a detergent-based or vinegar-based cleaning solution. In this case, it may be necessary to use an alcohol-based cleaner or an organic solvent such as paint thinner, mineral spirits or toluene. **If using these materials, follow all appropriate safety precautions.**

Reactive Contaminants

Reactive Contaminant's are more tenacious than surface residues and may physically or chemically bond with the glass. Hard-water salts are a commonly encountered reactive contaminant.

To thoroughly clean these Contaminant's from the glass surface, a commercially available acid-base cleaner should be utilized. **Follow the manufacturer's directions.**

Surface Corrosion

Surface corrosion is physical damage to the glass surface. Acid rain may be one cause.

If the surface damage is not too deep, a polishing/cleaning compound such as Cerium Oxide may be used to polish out the affected spots. **Be sure to follow the manufacturer's directions.**

Removing Suction Cup Rings on Glass Surfaces

Suction cups are frequently used to safely move glass or hold it in place during the window and door manufacturing process.

USE AND CARE GUIDE – CLEANING

These operations may leave "rings" on the glass. They can be easily removed by following these simple steps:

Materials Required:

- Powder detergent ("ZUD" or "Bon Ami" recommended)
- Clean sponge
- Spray bottle & water
- Clean, lint-free, cloth

Steps:

1. Wet sponge and ring out excess water.
2. Apply dry powder detergent to sponge.
3. Clean affected area with straight vertical or horizontal strokes. Do not use a circular motion.
4. Wipe glass clean and dry with cloth.
5. Spray glass with clear water mist from spray bottle to ensure ring is gone.

Screen Care



Screens are not designed to support a child's weight, and they are not security devices. Always take appropriate precautions when any window or door is left open.

Crestline window and door screens are made of strong, non-glare fiberglass.

Light dirt can be removed by gentle vacuum cleaning with the soft furniture brush attachment.

For heavier soiling, remove screens and take outside for washing. Use a solution of mild detergent and water to clean screens, then rinse thoroughly with clean water. Reinstall screens as soon as they are dry.

Cleaning Factory Finished Exteriors

Crestline doors and windows can be made with a variety of materials including wood, vinyl, aluminum, and composites. Optional factory-applied finishes, either exterior only or exterior and interior, can provide distinct personality to your windows and doors. These finish options require a certain level of care to provide maximum longevity and continued beauty.

The factory-finish of Crestline windows and doors can be cleaned with a solution of mild detergent and water applied with a soft cloth or sponge. Start at the top and work down, cleaning first horizontally, then vertically, using uniform pressure. Rinse immediately with clean water and then wipe dry with a clean, soft, cloth. If some of your cleaning solution has dried, you may need to sponge as you rinse.

For Vinyl and Aluminum Surfaces

Vinyl and aluminum surfaces may be cleaned with mild soap and water. Hard to remove stains and mineral deposits may be removed with mineral spirits.

- Do NOT clean with gasoline, diesel fuel, solvent based, or petroleum based products.
- Do NOT use abrasive materials against vinyl, aluminum, or glass surfaces.
- Do NOT scrape or use tools that might damage the surface.
- Do NOT paint vinyl or aluminum surfaces.



Too-frequent cleaning and hard rubbing can do more harm than good. Do not use abrasive cleaners, abrasive materials, harsh chemicals or solvents on factory applied-finishes.

Removing Non-Water Soluble Deposits

There are a number of cleaning agents available for the removal of surface deposits such as: detergent solutions, solvents, and chemical solutions. The following is provided as general information regarding the broad classification of these products.



Most organic solvents are flammable and/or toxic, and must be handled accordingly. Keep away from open flames, sparks and electrical motors. Use adequate ventilation, wear protective clothing and goggles. Follow all manufacturer's instructions and safety guidelines.

Detergent Solutions Can Be

- Hot or Cold
- A five percent solution in water of any commonly used commercial or industrial detergent should not have any damaging effect on the surface.

Application should be with cloth, sponge or soft bristled brush. Apply on a mild cloudy day or on the shaded side of a building. After applying the solution, thoroughly rinse with fresh water.

Solvents Include

Alcohol:

- Denatured alcohol (ethanol)
- Isopropyl alcohol (rubbing)
- Wood alcohol (methanol – Toxic!)

Petroleum:

- VM&P naphtha
- Mineral spirits
- Turpentine

Aromatic & Chlorinated:

- Xylol
- Toluol



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Ketones, Esters, Lacquer Thinner:

- Methyl ethyl ketone (MEK)
- Methyl isobutyl ketone
- Ethyl acetate (nail polish remover)
- Butyl acetate



CAUTION Do not use acetone or paint remover on any finished surface whether wood, aluminum or vinyl.

Note: Aromatic and chlorinated solvents should be used with caution. Limit contact with finished surface to one minute. Test before using.

Chemical Solutions:

- Sodium Hypochlorite (laundry bleach, Chlorox)
- Oxalic Acid
- Acetic Acid (vinegar)



CAUTION Acid solutions are corrosive and toxic. Flush all surfaces with water after use. Oxalic acid solution or vinegar may be used for the same purpose, but must also be flushed with water after use.

When cleaning any surface, do not use wire brushes, steel wool, sandpaper, abrasives or any other cleaning tool which can damage the surface.

General Cleaning Procedures

1. Apply a strong water rinse from top to bottom to dislodge any accumulated soil. Low water volume with moderate pressure is much better than higher volume with little pressure. Do not use a pressure washer.
2. If soil is not removed following a water rinse, gently sponge the surface while applying a water rinse.
3. If soil remains on the surface, repeat Step 2 using a mild detergent. Sponge the surface from top to bottom with a uniform pressure, cleaning first horizontally then vertically. Thoroughly rinse the surface again with clean water. It may be necessary to sponge the surface while rinsing, particularly if the cleaner has been permitted to dry on the surface.

Note: Mild soaps and detergents ruled safe for bare hands should be safe for coated and vinyl surfaces. Stronger detergents such as some dishwasher detergents should be carefully spot tested before use.

General Tips

- Over cleaning or excessive rubbing can do more harm than good.
- Strong solvents or strong solutions can cause damage to painted surfaces. Test them on a small area before using.

- Avoid all abrasive cleaners.
- Avoid abrasive tools (steel wool, stiff brushes, etc.) that can scour finished surfaces.
- Never mix different cleaners together.
- Never use paint removers, aggressive alkaline, or acid.

If you wash the exterior of your home to maintain appearance, you can include Crestline windows and doors that are protected by high-quality exterior paint. Rinse the painted surfaces with clear water and wipe them down with a soft cloth. Periodic washing is particularly recommended in coastal environments.

If you pressure-wash your siding, we recommend you avoid your windows and doors and avoid spraying directly into weatherstripped seams and/or edges.

- Pressure washing is not recommended for windows and doors as it can damage weather stripping and finishes.
- Brick cleaning fluids such as muriatic acid can damage the surface of your windows or doors.
- To clean the exterior of textured entry doors that are stained and clear-coated, wipe gently with a mild, non-abrasive glass cleaner. This will give you the best cleaning results and the least risk of damage to your door's finish.

Removing Rust or Alkali Mortar Stains

Rust and alkali mortar stains can be removed from finished surfaces with hydrochloric or 10% muriatic acid, diluted with 10 parts water. Limit contact to five minutes.



CAUTION Follow safe practices when working with acid solutions. Wear eye protection, rubber gloves and protective clothing. Thoroughly rinse affected areas with clear water when done with the acid solution

Removing Mildew

Mildew may occur in areas subject to high humidity, appearing on surfaces as black spots. Remove using a basic solution of:

- 1/3 cup detergent (Tide, etc.)
- 2/3 cup trisodium phosphate
- 1 quart sodium hypochlorite 5% solution (Chlorox)
- 3 quarts water

Apply to mildew spots with a soft brush or sponge. Allow solution to sit and "work" on mildew for a few minutes. Keep area wet. Rinse with clear water to remove all solution from treated and surrounding area. If spots remain make a second application followed by a second rinse.



CAUTION Rinse well with clean, clear water after cleaning. Stronger concentrations of cleaners can prove harmful to surfaces.

USE AND CARE GUIDE – PAINTING, STAINING & SEALING

Painting, Staining, and Sealing Bare Wood Surfaces:

Successfully staining and finishing your wood windows or doors involves two key challenges: keeping stain off the glass and avoiding runs and drips.

Because glass can absorb wood stain, protect it by masking off the glass edges with painter's tape before you begin staining. In addition, it's important to immediately remove the tape from the glass once you've finished. If tape is removed after the finish dries, it may pull the newly applied finish with it.

Remove labels and hardware such as locks, latches, pulls and handles from the window or door before you begin.

Wood naturally changes color as it ages. If you elect to retain the natural wood look of interiors we recommend that you protect them with a top coat of high-quality, exterior-grade, UV stabilized, clear polyurethane to keep color change to a minimum. All wood surfaces should be covered.

For best results, wood should be sealed immediately upon installation or upon receipt, especially if unit is being stored for ANY length of time.

For Bare Wood:

1. Remove all construction and adhesive label residue with mineral spirits before finishing.
2. Lightly sand surfaces being finished with 180 grit or finer sandpaper. Be careful not to scratch the glass.
3. After sanding, clean-off sanding dust using lacquer thinner applied to a cloth so the cloth is slightly damp. Let surface dry completely.



Do not get paint, varnish, lacquer thinner, or mineral spirits on any weather stripping.

If a painted surface is desired:

- If a wood unit is delivered with factory-applied primer paint, it may be painted without repriming, providing the finish paint coat is applied within six (6) months of unit installation.
 - If a factory-primed wood unit requires repriming contact your customer service representative for help in selecting a primer compatible with the factory-applied material.
 - Factory-applied Accentuals™ color system finishes in standard, designer or custom colors do not require additional painting. For "touch up" paint specifications contact your customer service representative.
1. An unprimed wood unit requires priming. Use only oil-based primer. Use compatible oil or water-based finish coats. Refer to the primer and paint manufacturers' instructions.
 2. When priming bare wood or repriming, cover all exposed wood surfaces. Priming all exposed surfaces helps prevent end splitting, warping and/or checking.

3. Once primed, apply two (2) coats of paint (again on all exposed sides) to each item.

If a stained surface is desired:



If no sealer is applied over stain, the wood will weather very rapidly and defects will occur. Apply at least two (2) coats of sealer.

1. Use only oil-based stain. A gel stain is easier to apply as it does not easily run or drip. The clear top coats may be oil or water-based. Apply at least two top coats of sealer or varnish.
2. A pre-stain wood conditioner, applied before staining, will help softer woods like pine absorb stain more evenly. Apply both wood conditioner and desired stain according to the manufacturers' instructions.
3. Apply one (1) coat of sealer to the stained surface and let dry. Using a spar (marine) varnish as a sealer provides extra protection against sunlight and moisture. Let sealer dry completely.
4. Before applying the next finish coat, make sure the previous coat is completely dry. Then lightly sand previous finish coat with 180 grit or finer sandpaper. Clean off all sanding dust and wipe surfaces with a tack cloth.
5. Apply next coat of desired finish to surface and let dry. Apply only one coat at a time.
6. For any additional coats of finish, repeat steps 3 and 4.

For a clear (natural) finish:

Follow Steps 1, 2, and 3 under "Bare Wood" and Steps 2, 3, 4, and 5 under "stained surface".

Finish Protection For Fiberglass Products

Crestline stainable fiberglass doors stand up to the elements far better than any wood door but if they are stained and varnished they will require maintenance and attention.

Your Warranty does not cover applied finishes. We recommend protecting against the fading action of sunlight for fiberglass doors that have been finished with stain. If your contractor or installer followed Crestline finishing instructions supplied with the product, this protection should already have been applied. Inquire about it. If it was not applied, you can do it yourself.

Staining Textured Fiberglass

Do not apply paint, stain, or a topcoat in direct sunlight or extreme temperatures. Stain will dry too quickly if applied in direct sunlight or high temperatures and you will not be able to obtain an even, smooth stain appearance.

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Preparation

Do not sand with sandpaper! If required, use #000 steel wool with very light pressure (weight of hand) to smooth surfaces. Clean up after the steel wool with a tack cloth. Then clean panels and sidelites by wiping with mild detergent and water. Rinse thoroughly, and allow to dry completely before painting or staining.

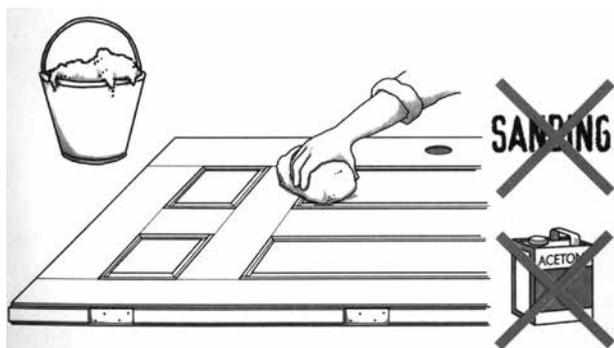
Use only high-quality stain. Gelled stains work best. Artist oils or highly pigmented non-penetrating oil-base stains can also be used. Gelled stains and artist oils have better application and working time when mixed with mineral spirits. Follow stain manufacturer's instructions for best results.

Materials Needed

- Mineral Spirits
- China Bristle Brushes (several)
- Clean, Lint-Free, Cloths
- Spar- Marine Varnish
- Protective Gloves
- Stir Sticks
- Gel Stain



CAUTION Read and follow all warnings, cautions and manufacturer's instructions on the products you will be using.


IMPORTANT!

Do not sand door or sidelite surfaces.
 Do not use acetone or lacquer thinner.
 Do not apply stain in direct sunlight.

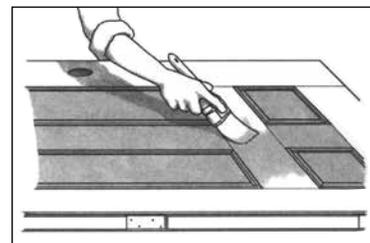
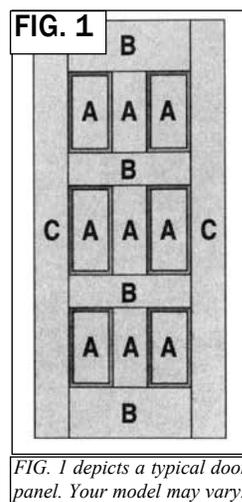
Proceed as follows:

1. Remove door panel and place it on a padded sawhorse or other padded surface, being careful not to mar the back side.
2. Remove all hardware from areas that will be finished.
3. Apply a liberal coat of stain with a cloth. Work the stain across and into the grain. While stain is still wet, use a brush and long light strokes (with the grain) to feather-out stain for a uniform appearance. As you work remove excess

stain from the brush with a clean cloth. Apply stain until the desired color is achieved.



4. Start staining with the raised panels labeled A in FIG. 1. Next stain and feather the rails, item B. Then do the stiles, item (C).



5. Lastly, stain the door panel edges feathering with long brush strokes for best appearance.
 6. Use this same technique and sequence to complete sidelite(s) and transom options.
 7. Allow stain to dry completely before handling panel.
- Hint** - Color can be intensified by applying a second coat of stain after the first coat has completely dried and before applying the spar-marine varnish. To check suitability, perform a test application where it won't be noticed.
8. Top Coating: For best results, use 2 or 3 coats of Spar-Marine varnish. Be sure to seal the top, bottom, and edges of the door panel. Follow the manufacturer's instructions for drying time and finishing procedures.

Reapplying Top Coating

For best results, apply annual coats of spar varnish following manufacturer's instructions. Reapplication may be required every year. Direct sunlight and moisture will cause the finish to degrade faster than in an unexposed environment.

USE AND CARE GUIDE – PAINTING, STAINING & SEALING

Reminder

The finish on fiberglass sits on top of the fiberglass. It does not penetrate into the fiberglass. Therefore, the stain can be removed at a future date to restrain a different shade. Also, avoid applications of tape or other adhesive materials on the finish, as the finish could be lifted off the surface.

Fiberglass Painting Instructions

Follow the same preparation procedures and precautions listed for staining fiberglass panels. Remove hardware, clean with #000 or finer steel wool, clean with tack cloth, wash with mild detergent, rinse with clear water, and let dry completely.

1. Place the door panel on a padded sawhorse or other padded surface, being careful not to mar the back side.
2. Using a quality brush, apply a high-quality exterior (for outside surfaces) interior (for inside surfaces) oil base enamel (best) or acrylic latex semigloss enamel paint. Apply paint with high-quality brush or roller, making sure contours of panel receive paint.

NOTE: It is better to apply several lighter paint coats than trying to avoid drips and runs caused by coats that are too thick and heavy.

3. Make sure top and edges of door panel receive paint.



CAUTION Do not get paint, varnish, or chemicals on the weather strip. Do not use industrial type fast dry solvent-based chemicals to clean or as a paint thinner. Protect door from contact with acidic brick cleaning solutions.

For The Door Frame

Follow the instructions in the "Painting, Staining, and Sealing Bare Wood Surfaces" for painting or staining the wooden door frame and trim.

Finishing Steel Panels and Sidelites

Steel doors must be painted within 30 days of installation.

Preparation

- Do not apply paint in direct sunlight and/or extreme temperatures.
- Clean panel sidelite(s) by wiping with a mild detergent, rinse thoroughly, and allow to dry before painting.
- Do not paint in direct sunlight or extremely hot conditions. Paint will dry too fast and be difficult to feather-out.

Painting Instructions

1. Remove door panel and place it on a padded sawhorse or other padded surface exterior side up, being careful not to mar the backside.

2. Using a quality brush, foam pad, or roller apply a high-quality exterior (for outside surfaces) interior (for inside surfaces) oil base enamel (best) or acrylic latex gloss or semigloss enamel paint. Make sure contours of panel receive paint. Apply light to medium coat to reduce chances for drips and runs.
3. Make sure top and edges of door panel receive paint.
4. Allow first coat of paint to dry completely. Sand painted steel panels lightly with 400 to 600 grit silicone carbide sandpaper (usually found in automotive paint sections at larger hardware and home centers) to smooth out any brush marks, drips or runs. Use a padded sanding block and rinse sandpaper and block in water as you work.
5. Rinse sanded surface with clear water and wipe dry with a clean, soft cloth. Allow to dry completely.
6. Apply a second coat of finish paint. If you are not applying a third coat of paint, STOP NOW.
7. For best protection apply a third coat of finish paint by repeating steps 4, 5, and 6. Do not sand after the third coat is applied. Allow door to dry completely before handling.
8. The interior can be finished the same as the exterior or stained and varnished, following the instructions above for fiberglass doors.

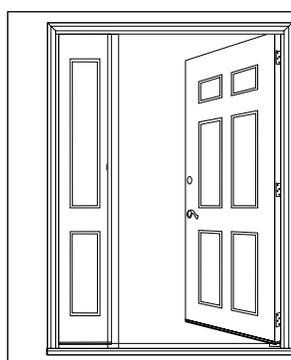
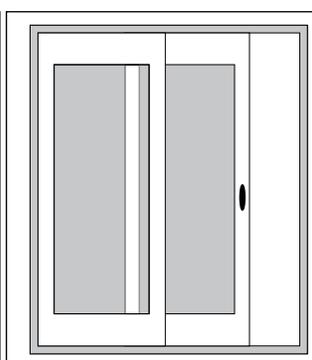
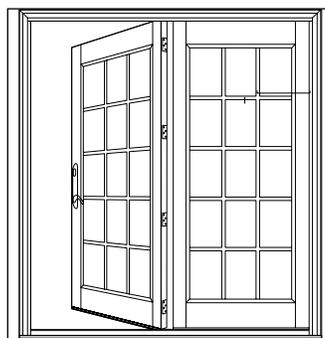
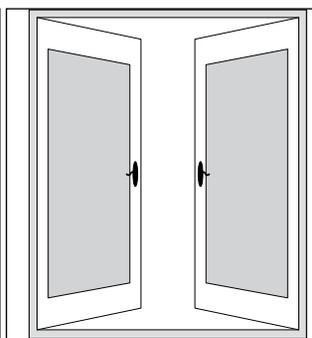
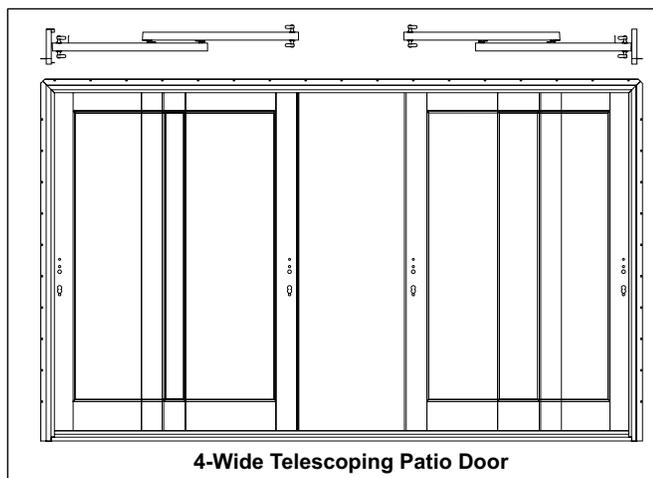
The recommendations provided in these paint, stain, and finishing instructions are based on our experience with normal applications and finishing techniques. Due to the many variables in finishing materials and techniques, as well as application conditions, Wether Shield Mfg., Inc. cannot be responsible for the performance of field-applied finishes, individual application techniques, or the performance of any finishes thus applied or their resistance to exposure to the elements.

USE AND CARE GUIDE – ENTRY DOORS AND PATIO DOORS
Entry Doors and Patio Doors

Crestline provides a complete line of doors including entry doors and patio doors in many styles, sizes and configurations. Our offerings include:

- All wood designs
- Aluminum and vinyl clad wood
- All vinyl products
- Fiberglass

These various materials are available in entry doors, sliding patio doors, center and side hinged patio doors, and telescoping patio doors.


Entry Door With Sidelite

Sliding Patio Door

Center Hinged Patio Door

Side Hinged Patio Door

4-Wide Telescoping Patio Door
Recommended Professional Care For Doors

The following should be performed by your contractor or service personnel from your Crestline dealer. Some of the procedures listed may be subject to a service and or a labor charge. This type of expense is not covered by your Warranty.

**Diagnosis and correction of improper installation.
 Symptoms include:**

- Water leakage anywhere in the entry door system.
- Door does not evenly contact frame.
- Weatherstrip does not seal evenly (air leaks).
- Unit out of plumb.
- Bottom sweep replacement.
- Door does not close properly, gaps.
- Difficult latch and or lock operation.
- Lock adjustment or replacement; all hardware problems.
- Door will not close without hitting strike jamb.
- Difficult door operation.
- Light visible between astragal and adjoining panel of double doors.
- Light visible anywhere around frame or door panel of any Crestline entry door.
- Air leak diagnosis and correction.
- Glass replacement.

Crestline Patio Doors

IMPORTANT: Never force Crestline doors open or closed. It should not be necessary. If operation seems to be difficult, first make sure that the operating panel is properly unlocked and unlatched. Then carefully check for obstructions on the tracks bottom, top and sides.

General Recommended Homeowner Care
Sliding Patio Doors

- Keep bottom and top tracks free of dirt and debris by cleaning regularly with the dusting or crevice tool on a vacuum cleaner.
- Adjust Operating Panel Rollers – See Operation Section for instructions.

1. FIGURE 1


Crestline sliding patio doors feature adjustable rollers to maintain smooth operation (FIGURE 1). Simply remove plugs and use a screwdriver to adjust rollers up or down.

- Lubricate rollers and ball bearings as needed. You may also lightly lubricate tracks as needed.

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⚠ IMPORTANT: Use a good silicone spray lubricant that does not attract dirt. A light coating works best.

- Don't let debris accumulate, in any season, against the exterior bottom rail of patio doors. Accumulated debris attracts and holds water and moisture and can create problems no matter what type of exterior material is involved.
- Make sure that doors are fully closed before attempting to lock/latch them.

Side and Center Hinged Patio Doors

- Lubricate hinges as needed with a light coat of silicone spray.
- Some thresholds may be easily moved up and down to achieve a snug, weathertight fit with door panel bottom sweep. Simply turn adjustment screws with a flat-bladed screwdriver; be sure to adjust all the adjustment screws. You may need to re-adjust them as your house "settles" or when seasons change if you notice a draft or water leakage at the bottom of the door.
- Adjusting the sill too tight can damage or tear the bottom sweep. Proper adjustment allows the door to open and close effortlessly, with no air or water leakage at the bottom. If you notice a fine black powder-like substance accumulating on the sill, or actual tears in the bottom sweep, your sill adjustment is too tight.

⚠ CAUTION Adjusting the sill too tight can damage or tear the bottom sweep. Proper adjustment allows the door to open and close effortlessly, with no air or water leakage at the bottom. If you notice tears on the bottom sweep, your sill adjustment is too tight.

- Make sure that Crestline hinged doors are fully closed before attempting to lock and/or bolt them.

Screen Care

Screens available for all Crestline patio doors (except outswing French doors) are made of strong, non-glare fiberglass mesh. Use a solution of mild detergent and water to clean screens, then rinse thoroughly with clean water.

⚠ CAUTION Crestline patio door screens are not designed to support a child's weight, and they are not security devices. Always take appropriate precautions when a patio door is left partially or fully open.

Door Roller Maintenance – Sliding Patio Doors

Sliding patio door panel assemblies will require some routine maintenance. The frequency will depend upon the severity of the conditions to which the unit is exposed. Units located in

homes near or around salt water will require more maintenance than those located away from the seashore.

At least monthly clean the panel tracks of all debris that may hamper proper door operation and lubricate the roller bearings with a good quality penetrating lubricant (silicone spray, lithium spray, etc.). For seashore locations, make sure the roller bearings are clear of any salt deposits prior to applying lubrication. Also, for coastal areas, clean panel tracks of sand accumulations. Even small amounts of sand can shorten the life and prohibit smooth operation of rollers.

Note: In order to properly clean and lubricate operating panel rollers, it is best to remove the panels from the doorway. See instructions for panel removal in the following sections of this guide.

Note: Avoid applying or spraying lithium spray unto the weather stripping. This lubricant may diminish the effectiveness of the weather stripping by making it difficult to achieve a tight seal.

Care & Maintenance – General Pointers

- Crestline does not recommend the use of storm doors with Crestline entry doors. Because Crestline entry doors are so thermally efficient by themselves, extremely high temperatures can build up between the storm door and the Crestline panel. Such high temperatures are often damaging to the finish or inserts.
- Even though your Warranty does not cover applied finishes, we want to advise you of factors that can cause avoidable problems. Darker colors on doors exposed to intense direct sunlight can also produce destructive temperatures. Should a storm door be used, allow for ventilation of the space between it and your Crestline entrance door.
- Never paint weather stripping in any Crestline door or window. Do not expose weather stripping to solvents or other harsh chemicals. Weather stripping must remain soft and flexible to do its job properly.
- If you decide that your weather stripping needs to be replaced in the future, you will find it an easy do-it-yourself job. You can buy the correct weather stripping from your Crestline dealer.

Thermal Bow

Crestline doors are engineered to prevent heat passing from one side of the panel to the other. As a result, the outside surface exposed to direct sun can become much hotter than the inside surface. The thermal expansion of the exterior surface can produce a bow in the panel. In all but the most extreme circumstances, the resilience of Crestline's compression weatherstripping will maintain a weather-tight seal. You can minimize thermal bow by avoiding dark paint colors on the external surface.

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- Do not expose weather stripping or bottom sweep to polyurethane or mineral spirits.
- We recommend that protective top coats be renewed at least every two years or as needed when fading or flaking is evident. To renew, first lightly scuff surfaces with #0000 steel wool and gently wipe clean using isopropyl alcohol. Allow to dry, then apply fresh top coats as directed in the painting and finishing section.

Glass Cleaning

- Clean lites, sidelites and transoms in Crestline doors as needed with any good glass cleaner.
- Do not use abrasive cleaners, abrasive materials, solvents, or harsh chemicals.

⚠ IMPORTANT: Remember that application of reflective or tinted film to glass in Crestline doors will void your Warranty.

Brass Hardware

When an architect, contractor, or homeowner chooses brass hardware for windows or doors, it is usually because of the attractiveness and brilliant luster of the polished metal. In order to maintain the hardware's beauty, a certain amount of care is necessary.

In the majority of cases, solid brass hardware will feature a protective lacquer coating. Brass hardware, whether applied in exterior or interior applications, will eventually show signs of finish breakdown or tarnishing. Small dark spots appearing in high contact or wear areas are usually the first indication of deterioration of the protective lacquer coating.

Over time, all brass hardware will eventually develop tarnishing. The rate at which tarnishing occurs will depend upon the surrounding environmental conditions. Areas with high levels of automotive and industrial pollutants, ultra-violet rays, and coastal areas will see accelerated levels of tarnishing with salt water environments and coastal applications being the most severe.

Brass hardware should not be installed on any surface that has recently been painted, varnished or otherwise finished for at least two days after the final coat has been applied. This step will avoid any interaction of the curing process with the lacquer finish, which can also cause tarnishing.

Care of Tarnished Brass Hardware

When tarnishing of the hardware reaches an undesirable level, the solid brass hardware components should be refinished. When refinishing is necessary, the following procedure is recommended:

1. The hardware must be thoroughly cleaned to remove all remaining lacquer and any other foreign materials. When cleaning the hardware, it should first be removed from the window or door to avoid any unnecessary damage to the

unit during the refinishing process. Fine steel wool, #00000, soaked in a light oil or soapy water to keep metal abrasion to a minimum is recommended. For tough to clean hardware, try soaking the hardware in lacquer thinner or paint thinner overnight.

2. Once the hardware is thoroughly cleaned, you can restore the hardware's brilliant luster with any commercially available brass polish.
3. Protect the refurbished brass surfaces by applying several coats of high-quality automotive wax. The finish can be prolonged with follow-up wax applications. This method is recommended because it is impractical to reapply a lacquer coating unless the proper tools and experience are available.

Synthetic Stucco

Serious concerns have been raised about excessive moisture problems in homes and other buildings that have Exterior Insulation Finishing Systems, commonly referred to as EIFS or Synthetic Stucco.

Many construction experts agree that a certain amount of water or moisture can be expected to enter almost any building exterior system. The building's system should allow such water and moisture to escape or "weep" to the exterior, so that no damage occurs. However, some EIFS systems may not allow the water or moisture that penetrates the wall systems to "weep" to the exterior. This can cause excessive moisture to accumulate within the wall system, which in turn can cause serious damage to wall and other building components. It has been reported that so-called "barrier" EIFS systems are particularly prone to this problem.

Moisture problems in any type of building structure can be reduced through proper design and construction with appropriate moisture control considerations, and also by accounting for prevailing climate conditions. Examples of moisture control considerations include flashing and/or sealing of all exterior penetration points, use of appropriate materials and construction techniques, and adherence to applicable building codes. General attention to proper design and workmanship of the entire building system, including allowances for management of moisture within the wall system must also be considered.

Determination of proper building design, components and construction, including moisture management, are the responsibility of the design architect, the contractors and the manufacturer of the exterior wall finish products. Questions and concerns about moisture management issues should be taken up with these professionals.

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Crestline Mfg., Inc. is not responsible for problems or damages caused by deficiencies in building design, construction or maintenance, failure to install our products properly, or use of our products in systems that do not allow for proper management of moisture within the wall system.