
Wood Hinged Patio Door

Installation Instructions

#1029970 / 1029971 / 1182557
(12/05) Rev 4

IMPORTANT: Please read before you begin installation.



Legacy Series[®]

Premium Aluminum Clad Windows & Doors

Weather Shield[®]

Premium Wood & Aluminum Clad Windows & Doors



ProShield[®]

Premium Vinyl Clad Windows & Doors



Wood Hinged Patio Door Door Installation Instructions

IMPORTANT:

Thoroughly read and follow these instructions, failure to install as recommended will void any warranty, expressed or implied. **Check building codes for the area in which the doors or windows are being installed before installation to ensure proper compliance.** The following instructions are based on typical frame construction. Specific applications may differ. Weather Shield Mfg., Inc. recommends that you consult a qualified installation professional. Weather Shield Mfg., Inc. is not responsible for installation.

Tools Required:

- *Phillips Screwdriver
- *Hammer
- *Caulk Gun
- *6' or longer Level / Plumb Line
- *Putty Knife
- *Utility Knife
- *Electric Drill and 1/8" Drill Bit
- *Flat Bar
- *Rubber Roller

Materials Required:

- *Weather Barrier Self-Adhering Tape (Ice Storm Shield)
 - *Gloves
 - *Safety Glasses
 - *2-3" Galvanized Roofing Nails (To penetrate framing material by at least 1-1/2")
 - *High Quality Exterior Neutral Cure Silicone Caulk
 - *1-1/2" x 4-1/2" Shims
 - *Shop Towels
 - *Insulation
 - *3" (Inswing) or 3-1/2" (Outswing) Stainless Steel Screws to fasten Sill to Sub-Floor.
- For ADA sill use 1-1/2" (Inswing and Outswing) Stainless Steel Screws to fasten Sill to Sub-Floor.



Recognize this symbol. This is the Safety-Alert symbol. When you see this symbol be alert to the potential for personal injury or product damage.



! DANGER

Falling from window opening may result in serious injury or death. **DO NOT** leave openings unattended when children are present.



! DANGER

CUT HAZARD



- *Non-safety Glass.
- *May cause serious injuries if broken.
- *Do not install where tempered safety glass is required.



! WARNING

Weight of window and door unit(s) and accessories will vary. Use a reasonable number of people with sufficient strength to lift, carry and install window or door unit(s) and accessories. Always consider site conditions and use appropriate techniques when installing.



! DANGER



Screen will not stop children, any one or anything from falling out window.

Keep children and objects away from open window.

Rough Opening Preparation

FIGURE 1

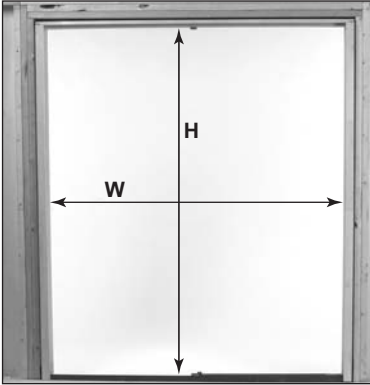


FIGURE 2

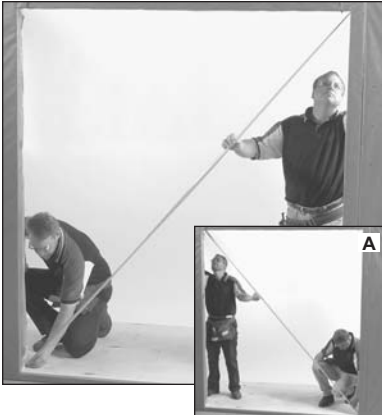


FIGURE 3



SAFETY INSTRUCTIONS

Read installation instructions completely before beginning a procedure.

! CAUTION

Wear gloves, safety glasses, goggles, or eye shields appropriate to procedure.

Before you begin, check the following:

! IMPORTANT:

High-quality, exterior, neutral cure silicone caulk is to be used for all procedures in the following instructions which call for caulking.

! IMPORTANT:

Check to make sure you have the correct door type and the correct size door (Width and Height) for your rough opening (FIGURE 1).

1. Measure the rough opening to ensure that it is not more than 3/4" wider in overall Width or 1/2" taller in overall Height than the outside width or height of your entire door frame assembly (FIGURE 1).
2. Measure the rough opening diagonally from corner-to-corner in both directions. There should be no more than 1/2" difference between the two measurements (FIGURE 2 & 2A).

3. Make sure walls are plumb and not twisted. Make necessary corrections where possible to ensure walls are plumb and straight (FIGURE 3).



Straighten & Level Sub-floor

FIGURE 1

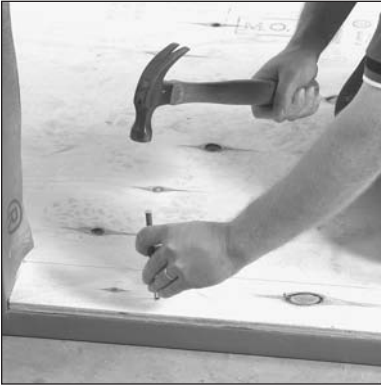


FIGURE 2



FIGURE 3



1. In masonry installations, Weather Shield recommends a wood sill plate the width of the door sill, be present for anchoring the new unit's sill.

2. To straighten and level the sub-floor, countersink nails in the floor area that will be under the door (FIGURE 1).

!ATTENTION!

BRICK MASON Provide a minimum clearance of 1/2" from top of brick or masonry veneer to the bottom of the door unit. Failure to provide adequate clearance could result in sill bowing and improper unit performance.

WARNING! *Acid based cleaners used to clean the brick or masonry veneer may damage glass, fastener, window frame and hardware. Avoid the window unit when using a cleaner to prevent damage to the unit.

WARNING! *Always follow chemical manufacturers' safety instructions when using chemicals, to avoid injury or illness.

BRICK MASON / SIDING CONTRACTOR

All exterior finishes must have a minimum clearance of 1/4" around the entire perimeter of the unit, except sill in masonry installations which requires a minimum of 1/2".

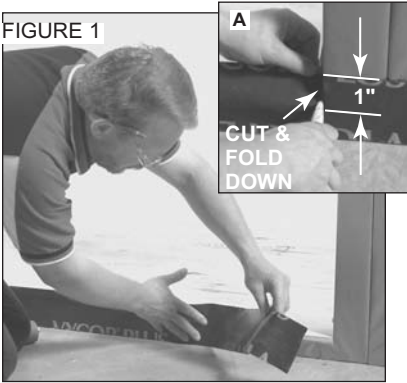
! WARNING

Improper use of hand and power tools could result in personal injury and/or product damage. Follow equipment manufacturers' instructions for safe operation. Always wear safety glasses.

2. Check for level as in (FIGURE 2). Plane area that will be under the door until it is straight and level (FIGURE 3).

Sill Preparation

FIGURE 1

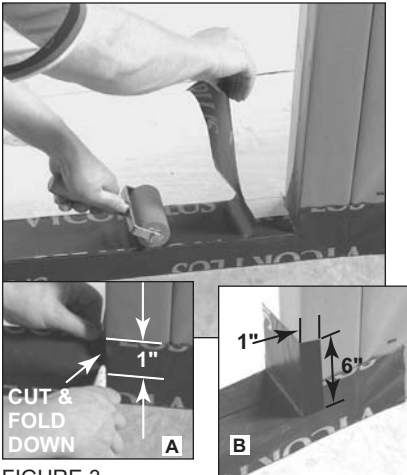


1. Cut a piece of weather barrier self-adhering tape (ice storm shield) 4" wide and as long as the opening width plus 8" (**FIGURE 1**). Apply to face of exterior wall so 1" extends above the opening and 4" extends beyond each side of the opening. Cut along the corners of rough opening and fold down onto the sill (**FIGURE 1A**).

WARNING

Improper use of hand and power tools could result in personal injury and/or product damage. Follow equipment manufacturers' instructions for safe operation. Always wear safety glasses.

FIGURE 2

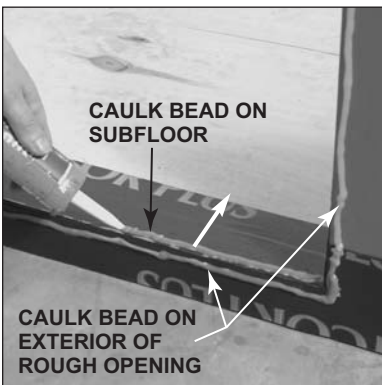


2. Apply a second continuous piece of weather barrier self-adhering tape on the top surface of the rough opening sill (**FIGURE 2**).

Cut barrier tape the thickness of the wall and 12" longer than the width of the opening. Extend the edge of the tape 1" past the exterior wall surface (**FIGURE 2B**). Start the piece (approximately 6") up the side of the rough opening and run it to the bottom of the opening, to the other side of the opening, and up 6" the other side (**FIGURE 2**).

3. Use a utility knife to cut the sill piece on both corners of the rough opening, and fold 1" flap along the outside wall (**FIGURE 2A**).

FIGURE 3



4. Apply a continuous 1/4" bead of high quality caulk (compatible with aluminum extrusion and exterior face of wall) to the exterior face of the wall located 1/2" from the rough opening edge. The caulk bead must contact the nailing fin continuously on sides and top when the unit is placed into the opening (**FIGURE 3**).

4. Apply a second bead of caulk on top of the sub-floor membrane 1/2" from the walls exterior surface (**FIGURE 3**).



Door Preparation

FIGURE 1



FIGURE 2



FIGURE 3



IMPORTANT:

1A. Remove the metal handles, wood and cardboard used for shipping. **Do Not** remove the plastic shipping blocks or open the door.

1B. High-quality, exterior, neutral cure, silicone caulk is to be used for all procedures in the following instructions which call for caulking.

WARNING

Improper use of hand and power tools could result in personal injury and/or product damage. Follow equipment manufacturers' instructions for safe operation. Always wear safety glasses.

WARNING

Weight of window and door unit(s) and accessories will vary. Use a reasonable number of people with sufficient strength to lift, carry and install window or door unit(s) and accessories. Always consider site conditions and use appropriate techniques when installing.

Door Installation

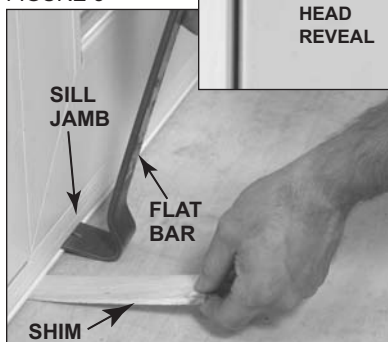
1. Set the door in the rough opening (FIGURE 1). Center unit in the opening. Open the door and remove the plastic shipping blocks and wood shipping block at the sill. Close door and start installation.
2. On the exterior, fasten unit by nailing fin in one of the upper corners with a galvanized roofing nail long enough to penetrate the framing material by 1-1/2" (FIGURE 2).
3. Level unit on the interior or exterior across the sill and head (FIGURE 3B).
4. If necessary to level the unit, place shims directly underneath the side jambs only, see page 5 "REVEAL" section.
5. While holding the unit in place, square and plumb jamb. This can be done from the interior or exterior of the door. Check both side-to-side and inside-to-outside plumb. Measure unit from corner-to-corner to check square. To plumb, level and square, use a pry bar to shift unit and shim as needed (FIGURE 3A, 3B, 3C, 3D).
6. Finish securing unit in opening by nailing through all the pre-punched holes in the nailing fin making sure the fasteners penetrate the framing material by at least 1-1/2".

IMPORTANT: If unit is mullied it must be supported with shims under each sill mull jamb for proper support.

6a. If door is a wood brickmould unit, fasten with #10 galvanized casing nails; 6" from each corner and every 12-16" between.

Reveal

FIGURE 3



1. To get the head level (FIGURE 3A), place a flat bar underneath the jamb, lift slightly, slide shim underneath door (FIGURE 3). Check head for level as in (FIGURE 3B page 4), adjust & add shim(s) until head is level.

For **Center Hinged Doors**, place a shim under the astragal and adjust until the head jamb reveal is the same from the side to the lock side of the door.

IMPORTANT:

If unit is mullied it must be supported with shims under each sill mull jamb for proper support.

Fasten Sill

FIGURE 1



1. Remove one of the center screws that are fastened through the threshold.
2. Apply a generous amount of clear, silicone sealant into the screw hole.
3. Refasten threshold with a 3" long (Inswing), 3-1/2" long (Outswing) stainless flat head screw, provided by others. Drive it down into the sub-floor to anchor (FIGURE 1).

For ADA sill: Follow Steps 1 & 2 above and then use (2) 1-1/2" long screws through the sill strike plate. Drive them down into the sub-floor to anchor.

IMPORTANT:

Do not over pack insulation.
Do not use expandable foam.

Unit is ready for interior wall finish and trim.

Note: Add exterior support block under the sill if exterior aluminum sill is not supported completely.

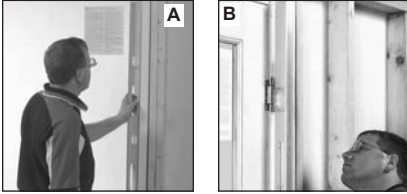
Install the handle set according to the manufacturers' instructions.

4. Loosely insulate between the door frame and rough opening.



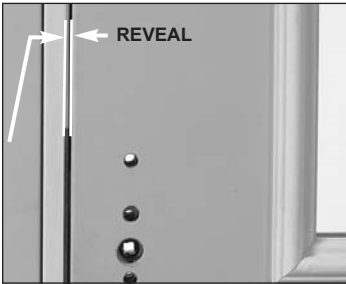
Square and Straighten the Interior

FIGURE 1



1. Straighten the side jambs by placing solid shims between the rough opening and the side jamb at each hinge. The gap (reveal) between the hinge jamb and door must be **exactly** the same at all points along the height (**FIGURE 2**).

FIGURE 2

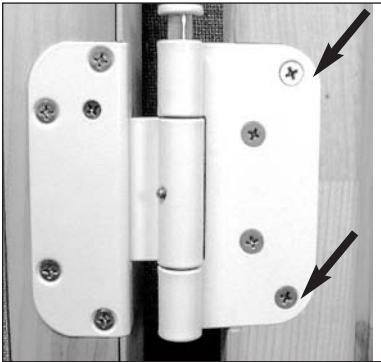


2. Using a level as a straightedge, place shims between the frame and the rough opening to straighten other side jambs (**FIGURE 1A & 1B**).

The gap (reveal) should be exactly the same at all points along the entire width and height of the door.

Shim between the (2) lock holes and above & below each multi-point strike (standard option).

FIGURE 3

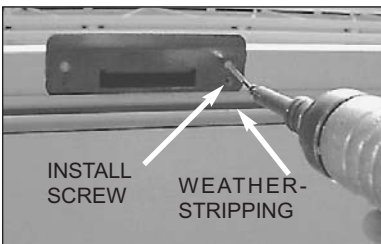


3. Remove the top and bottom hinge screw, quantity (2) from each hinge, and replace with (2) 2-1/2" screws (provided), in order to anchor the door frame to the structural member in the rough opening (**FIGURE 3**).

IMPORTANT:

If the top or bottom hinge screw **does not** penetrate the framing material by at least 1-1/2", remove the side jamb weatherstripping and add (3) 2-1/2" screws to anchor the door frame to the structural member in the rough opening. Place at head, middle and bottom of jamb.

FIGURE 4



Head Strike Plate

Standard: Install (2) - 2-1/2" long screws (supplied) nearest the weatherstripping, into the head jamb strike to anchor (**FIGURE 4**).

To maintain smooth operation of hinges, periodically lubricate with silicone lubricant.

Hinge Adjustment - Reveal

FIGURE 1 GUIDE HINGE

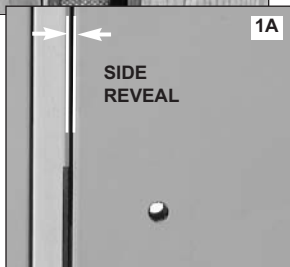
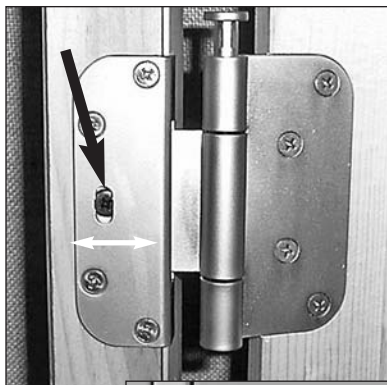
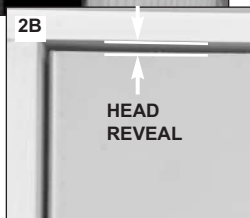


FIGURE 2 SET HINGE



*Each insert will have three (3) guide hinges (**FIGURE 1**) to allow horizontal adjustment for side reveal (**FIGURE 1A**).

*The other one (1) is a set hinge (**FIGURE 2**) to allow vertical adjustment for head reveal (**FIGURE 2B**) which will always be the second hinge down from the top.

After the unit has been installed in the opening, the reveal around the head and sides of the door insert (and in between the active and inactive inserts on 2-wide doors) needs to be equal for proper door operation. Hinge side gap will be approximately 1/16" to 1/8" and latch side gap will be approximately 1/8" to 3/16".

Use a Phillips head screwdriver to adjust the hinges.

IMPORTANT:

DO NOT use powered screwdrivers to adjust hinges.

1. To adjust the guide hinge (horizontal adjustment) (**FIGURE 1**), turn the adjustment screw clockwise to make the insert move towards the hinge side. Turn the adjustment screw counter clockwise to move the insert towards the latch side. Adjust each of the three guide hinges so that the side reveal is equal (**FIGURE 1A**).

To adjust the set hinge (vertical adjustment) (**FIGURE 2**), turn the adjustment screw in the direction of the arrow shown on the hinge to make the insert move in the direction of the arrow on the hinge.

Note: Adjustment upward is easier if the weight of the insert is taken off the hinges. This can be done with blocks and/or a pry bar under the insert to temporarily take the weight off the hinges (see page 5 "Reveal" section).

Turn opposite of the arrow direction to make the insert move in the opposite direction of the arrow. Adjust the height of the insert so the reveal between the insert and head jamb is equal across the top. This will be approximately 1/8". Check operation of the door to verify smooth operation of the door. Make minor adjustments if necessary by repeating the above steps.



Weather Barrier Self-Adhering Tape Application for Units with Nailing Fins

FIGURE 1



1. On the exterior, apply a high-quality weather barrier self-adhering tape or equivalent (ice storm shield). Apply to the sides, starting at the top of the head nailing fin and run it down so that it extends 6" past the bottom nailing fin. Tape **must** cover the entire nailing fin, including the installation holes and the joint between the fin and the building's sheathing. Use a rubber roller to apply (FIGURE 1).



WARNING

Improper use of hand and power tools could result in personal injury and/or product damage. Follow equipment manufacturers' instructions for safe operation. Always wear safety glasses.

FIGURE 2



2. Use a utility knife to cut a slit in the building wrap above the head nailing fin, the entire length of the door unit **PLUS** the width of the vertical tape on the sides of the door (FIGURE 2).

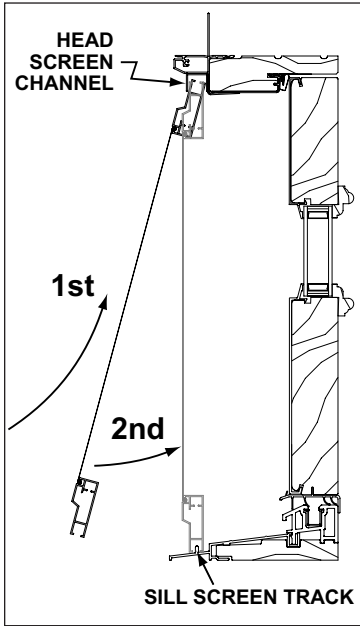
FIGURE 3



3. After cutting the slit in the building wrap, slide the high-quality weather barrier self-adhering tape or equivalent under the building paper making sure the tape covers the nailing fin (FIGURE 3).

Screen Installation

FIGURE 1



1. If screen has been shipped separate from your door unit, remove the screen from the packaging.
2. Standing outside of the building hold screen with latch handle toward operating side jamb and facing interior. Grasp mid-way up on each side of the screen. Insert top of screen into head screen channel. Swing bottom of screen in until bottom rollers hit sill screen track (**FIGURE 1**).
3. Lift wheels one at a time up onto sill screen track. Roll the screen back and forth to see that rollers are operating properly. Lifting wheels onto track is easier if you turn bottom adjustment screws counter-clockwise several times.

Screen Adjust

FIGURE 1



1. To adjust screen for smoother operation, insert a Phillips screwdriver into the screen adjustment hole on the of the inside of the screen (**FIGURE 1**) and turn clockwise to extend the rollers and raise the screen. Turn counter-clockwise to retract the rollers and lower the screen. There is a set of rollers at each corner, both top and bottom. Repeat the procedure with the top screen rollers if necessary.



Screen Keeper

FIGURE 1



1. Open screen door approximately 12-18 inches. On the screen door, flip the locking latch so it is in the up position.

2. Place a tape measure on the sill track and measure up to the top of the silver lock tab located on the side jamb of the screen door (FIGURE 1).

Transfer that number to the inside side jamb (FIGURE 2).

FIGURE 2



FIGURE 3



2. Place the top of the keeper 1/8" below the transfer mark on the side jamb (FIGURE 3). Fasten with screws (FIGURE 4).

FIGURE 4



Recommended Finishing Instructions



WARNING

Always follow chemical manufacturers' safety instructions when using chemicals to avoid injury or illness.

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.

For Bare Wood Surfaces [See Next Page For Additional Information About Doors]

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

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.

-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 Accentials™ 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:



CAUTION

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.
- 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.
2. 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.
3. 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.
4. Apply next coat of desired finish to surface and let dry. Apply only one coat at a time.
5. 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".



Recommended Finishing Instructions (cont.)

Door Inserts

All active and removable door inserts, whether sliding or hinged, must be removed from the door frame after installation so they can be properly sealed (**FIGURE 1**).

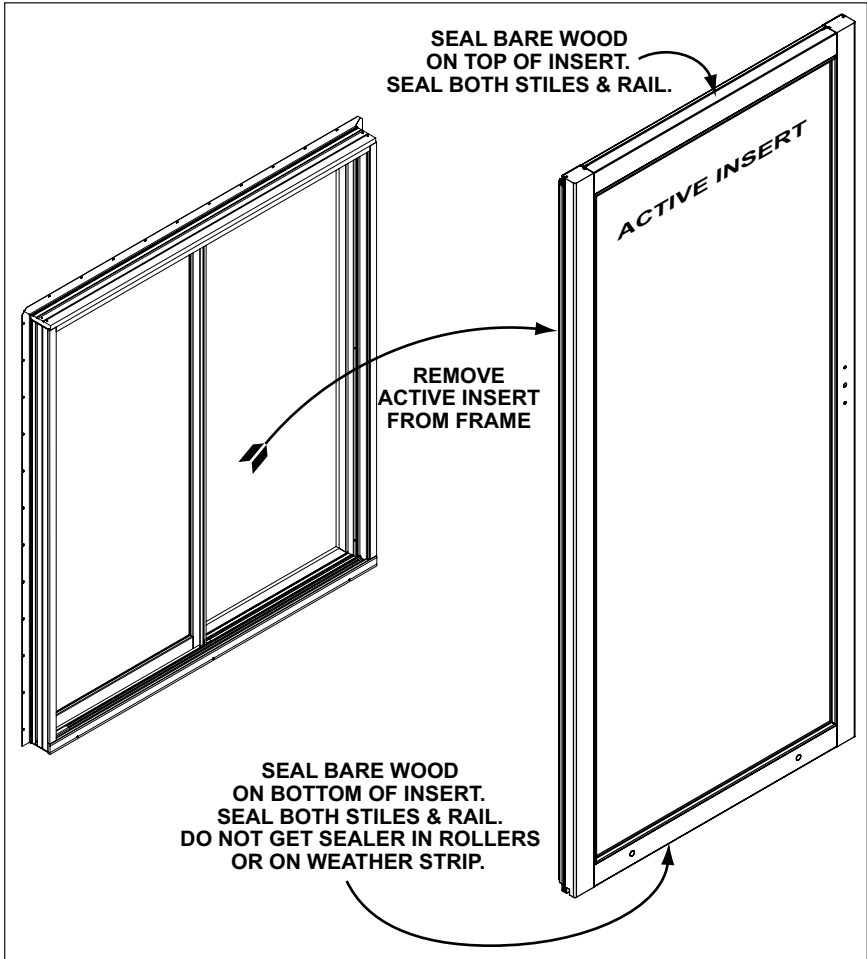
Both clad and wood door units have bare wood on the top and bottom of the inserts. Paint or varnish these areas as you would all of the other exposed exterior wood. Follow procedures

outlined in "Recommended Finishing Instructions" on previous page.

CAUTION Do not get paint, varnish, or sealer in the rollers on the bottom of sliding inserts. Rollers must be kept clean so they will rotate freely.

CAUTION Keep all sealers off weatherstrip or bottom sweeps.

FIGURE 1







Weather Shield Products With Synthetic Stucco

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

Many experts agree that a certain amount of water or moisture can be expected to enter almost any building exterior system. The building system should allow such water and moisture to escape or “weep” to the exterior, so no damage occurs. However, some EIFS systems may not allow water or moisture that penetrates the wall system to “weep” to the exterior. This can cause excessive moisture to accumulate within the wall system, which 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 by proper design and construction with appropriate moisture control considerations, taking into account prevailing climate conditions. Examples moisture control considerations include flashing and/or sealing of all building exterior penetration points, use of appropriate materials and construction techniques, adherence to applicable building codes, and general attention to proper design and workmanship of the entire building system, including allowances for management of moisture within the wall system.

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. Weather Shield 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.

Weather Shield[®]

Premium Windows & Doors

