



## **OPERATING, MAINTENANCE AND CLEANING INSTRUCTIONS** **Model 4120 Single Hung Window)**

***Caution: Only A Qualified Window Installer or Building Custodian with Extensive Window Experience should perform Window Maintenance.***

### **Description:**

The Model 4120 window is a single hung unit, meaning the lower sash can be operated and it can be tilted in for cleaning. The glass above the lower sash is non-operable. It is fixed and glazed directly into the master frame of the window.

### **Operation:**

Unlock the window's meeting rail lock(s) by deactivating the sash lock(s) from the keeper. This enables the lower sash to operate. To re-lock, first close the sash completely and ensure that the meeting rail is fully interlocked. Then turn the cam type sash lock mechanism(s).

Some single hung windows may have optional auto-sill locks. Auto-sill locks are often used in place of meeting rail locks, but sometimes both are used. Auto-Sill locks are located on the bottom rail of the lower sash. These locks are spring loaded and catch on an extruded full width "keeper" at the top of the water leg on the sill of the window's master frame. Squeezing the automatic sill lock against the sash's lift rail and lifting slightly will enable you to unlock the window.

### **Maintenance:**

The Model 4120 is basically a maintenance free product with only a few mechanical mechanisms. A periodic cleaning and lubrication schedule as well as annual maintenance should help provide years of trouble free service from your windows.

### **Tilting the Window for Cleaning:**

1. Our HC rated single hung windows have "hurricane locks". Disengage the "hurricane locks" or "anti-bow guides" by turning the screws found at the mid-point of the sash stiles counter-clockwise.

2. Raise the sash about three inches. Use a Torx or Phillips head screwdriver to loosen each screw located on the top rail of the lower sash (two per sash, approximately three inches in from the edge). Do not unscrew the full distance, only approximately 3/8”.
3. The exposed screw now enables you to tilt the lower sash insert inward. Gently pull the screws toward each other; this will allow the top of the sash to drop toward the interior by pivoting on the stainless steel pivot bars located at each side of the bottom rail of the sash.
4. Now the exterior surface of the glass in the lower sash can be cleaned. The glass in the upper part of the window does not tilt in for cleaning. This is a true single hung window and as such, the glass that is not in the operating sash is glazed directly into the master frame of the window. It is still possible to clean this glass from inside the room.
5. To clean the upper glass area with the lower sash tilted in, remove the window’s insect screen by pulling the screen plungers toward the center of the window. The outside of the upper glass is then cleaned using a long handled squeegee.
6. After cleaning, replace the screen.
7. Return the lower sash to its “normal” non-tilted position. Use a Torx or Phillips head screwdriver to re-tighten the two screws located on the top rail of the sash. Make certain that the screw heads are fully seated into the keyhole-shaped pockets. **This is very important.** This ensures that the tilt triggers are fully extended, giving you the proper engagement into the jamb of the master frame.
8. Re-engage the “hurricane locks” on “anti-bow guides” by turning them clockwise.

#### **Sash Removal/Pivot Bar Replacement:**

1. Unlock the window and raise the lower sash to its fully open position. (The sash will travel up to the bottom of the sash stop.)
2. Loosen, but **do not remove** the screw from one of the pivot bars located on the bottom of the lower horizontal sash rail.
3. Following the instruction in “Tilting the Window for Cleaning”, tilt the sash slightly inward just enough so that raising the sash further will just clear the sash stops. Raising the sash fully in this manner releases all of the tension on the balances.
4. While holding firmly the side of the sash with the loosened pivot bar screw, slide this pivot bar toward the center of the sash.

5. Holding firmly to each side of the sash, pull it into the room.
6. To re-install the sash, reverse the above procedure.

### **Glass Replacement (Sash or Master Frame):**

1. Remove the interior vinyl or aluminum glazing bead around the perimeter of the sash or upper glass area. A putty knife or flat screwdriver can be used for this purpose. These beads will be re-used.
2. On the exterior of the sash or upper glass area, use a utility knife and cut between the glass the aluminum frame member. This cuts away the architectural glazing tape that holds the glass to the aluminum.
3. Remove the glass to the interior.
4. Clean the aluminum frame where the glazing tape had been applied. Toluene or other approved material can be used.
5. Install new glazing tape first across the vertical legs of the frame members.
6. Install the glazing tape on the horizontal frame members. The horizontal tape should overlap the vertical tape and must be pushed firmly against the vertical strip to get a good seal.
7. Apply a small seam of butyl sealant to all aluminum-to-aluminum joints.
8. Install the setting blocks as originally located prior to the de-glazing operation. (Usually setting blocks are located at the quarter points from each edge.)
9. Clean the edges of the glass with toluene or other approved material, then install the glass, making sure that it is located properly on the setting blocks and glazing tape. Caution should be exercised during this procedure. You often have only one chance to “set the glass” in the proper position, since the architectural glazing tape adheres tenaciously to it.
10. If this window has aluminum glazing beads, check them for nicks or dents that might interfere with their installation.
11. Carefully press the vinyl or aluminum glazing beads back into place. Vertical beads are to be installed first, then the horizontal ones.

### **Screen Replacement:**

1. To remove the screen insert, open the sash about three inches so that it just clears the inside leg of the sill of the window's master frame.
2. Unscrew the tilt releases as explained in the "Tilting the Window" section. Pull the tilt releases located on the top frame member of the sash toward each other.
3. Pull the sash toward the interior until it is in a horizontal position. (This is referred to as "tilting in" the sash.) The lower sash should be resting on the top of the "water leg" of the window.
4. Remove the screen by pulling on the screen plungers located on each jamb of the screen's frame.
5. Pull the screen inward by pulling inward on the plungers as you pull them toward each other.
6. Return the sash to its usual position by pushing it back into the jamb track of the master frame of the window. To secure the sash in place, push the sash tilt release mechanism away from each other toward the closest jamb. Make certain the sash is securely seated into position by slightly tugging on the top of the sash.
7. Re-tighten the tilt release screws. Make certain that the screw heads are fully seated into the keyhole-shaped pockets. This is very important. This ensures that the tilt triggers are properly extended, and gives you the correct engagement into the jamb of the master frame.

### **Balance Replacement:**

1. Windows with heavy sash weights will often have dual or "Tandem" balances. A total of four balances (two pair) will be used to counter balance the sash. If these balances are 25 inches (tube length) or longer, they will in all probability be counter-rotating types. (One will tension by turning clockwise and one by turning counter-clockwise.) A "right hand" or clockwise balance is identified by black paint on the lower end of the balance tube, and it is also easy to determine a balance's tensioning when it is released from the balance shoe. The procedure explained below is also illustrated on the attached two sheets marked, "Caldwell".
2. Tilt the window as explained in steps "1" through "3" of the Screen Replacement procedure. Tilting the window activates an internal lock in the balance shoe and it will hold it in a locked position.

3. Hook the curved part of a balance-tensioning tool around the small pin at the end of the balance.
4. Remove the end of the spiral balance from the balance shoe, which rides up and down in the jamb of the master frame. **Use caution**, the spiral balance has tension on it and it must be unwound slowly.
5. Remove the three-inch long black vinyl sash stop from the top of each jamb.
6. Unscrew the balances and remove them from the jamb track.
7. To install the new balances, repeat the above steps in reverse. As an initial rough adjustment, wind the new balance approximately nine turns clockwise.
8. It is important to further adjust the balances so the sash operates properly. Refer to the following steps for additional guidance.

**Balance Adjustment:** If, for example, the window sash is dropping or hopping up from the sill, adjustment is simple.

1. Make certain the lower sash is raised at least three inches off the sill. Tilt the sash inward and down to expose the balance tilt shoe. Tilting the sash locks the cam inside the balance shoe and holds it in position. Using a balance-tensioning tool disengage the balance rod from the tilt shoe. **Be careful not to allow the rod to “spin off” or disconnect from the balance-tensioning tool.**
2. If the sash is dropping, add some tension by rotating the balance rod clockwise. Apply tension to both sides equally. Do not exceed more than two full turns at a time. Reconnect the balance rod to the tilt shoe. Reposition the sash and check the operation of the window. If additional tension is required, repeat the above process until the sash holds in any position.
3. If the sash is hopping upward, less tension is required. Release tension equally on both sides by allowing the tensioning tool to rotate counter-clockwise for one to two full turns. Reconnect the balance rod to the pivot shoe. Re-position the sash and check the operation of the window. Repeat this process if necessary.

**Cleaning and Lubricating:**

1. The glass may be cleaned using commercially available cleaning solutions intended for this purpose.

2. The aluminum portion of the window should be cleaned in accordance with AAMA publication #610 “Voluntary Guide Specification for Cleaning and Maintenance of Painted Aluminum Extrusions and Curtain Wall Panels” or AAMA #609 “Voluntary Guide Specification for Cleaning and Maintenance of Architectural Anodized Aluminum”. Current versions of these publications can be ordered by contacting the Architectural Aluminum Manufacturers Association at 1827 Walden Office Square, Suite 104, Schaumburg, IL 60173-4268. Phone: (847) 303-5664. Fax: (847) 303-5774. Or contact AAMA at [www.aamanet.org](http://www.aamanet.org).
3. The jamb’s balance tracks of the window should be cleaned and lubricated at least once per year and more often if local conditions dictate.
4. To clean the jambs, use a mild non-abrasive cleaner and wipe down the interior pockets of the jamb balance track from top to bottom. Clean the jamb surfaces of the master frame and sash, which are in contact with each other when the sash is opened or closed.
5. A clean, soft cloth should be used to dry the jambs and balance tracks.
6. Lightly spray the entire length of the jamb and balance track with a silicone spray. This will lubricate the window and help it operate more easily and more smoothly.

**Annual Maintenance/Record Keeping:**

1. Peerless recommends an annual inspection of your windows and installation by a qualified window installer.
2. Check the general appearance of the windows and installation; specifically noting the seal integrity of the insulating glass, proper locking and operation of the window, and all caulking surrounding the window. Check all fin seal weather stripping and Santoprene bulbs for condition and continuity
3. Clean the window frame and glass as recommended in the “Cleaning” section.
4. Maintain a window log indicating the date of the annual inspection or any other service work performed on the windows. Note the person(s) who did the work, the condition of each window, the specific location of each window, and what service work or cleaning was performed.
5. Submit a photostatic copy of this log when requesting any warranty service work.

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