INSTALLATION INSTRUCTION MANUAL

WOOD CLAD VINYL OPERABLE CASEMENT WINDOW WITHOUT NAIL FIN (AERIS™)



**** Find QR Codes inside for additional information, helpful installation tips, and videos.***

Contact the local recycling waste management center for waste disposal in the area. Always check local waste requirements and carefully dispose of waste in accordance with Federal and other regulations.

Homes built before 1978 may contain lead paint. All replacement installations must comply with the U.S. EPA's Lead-Based Paint Renovation, Repair, and Painting Program (RRP Rule). Read more about the RRP Rule and lead-safe work practices, on the U.S. EPA's website at: www.epa.gov/lead

ProVia®
THE PROFESSIONAL WAY

GETTING STARTED

TOOLS & MATERIALS YOU WILL NEED

- Tape Measure
- Pencil
- Shims
- Drill & Drill Bits
- Utility Knife
- Putty Knife
- Square
- Level
- Hammer or Mallet
- High Quality Silicone Caulking in accordance with ASTM C920, Class 25 & Caulking Gun
- AAMA approved Low-Expanding Window Insulation Foam in accordance with ASTM C1620

REMEMBER: ALWAYS USE THE APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT.

Read these instructions carefully before starting installation. Product warranty does not cover damages resulting from improper installation.

IMPORTANT NOTES BEFORE YOU BEGIN

- Inspect your package(s) for any visible damage to the product. In addition, double check your paperwork with label on product(s) and verify all information is a match. Open packaging to confirm style, color and that order was shipped complete. Double check size of new unit by comparing it for fit to opening.
- If damage or irregularities are found, please scan the product's packaging QR Code label using your phone's QR Code Scanner to access ProVia's After Sale Product Support to enter a request and post pictures/videos to the order, or you can call the Customer Support Team at 1-800-669-4711.
- If you have ordered optional items, verify that they are included in packaging contents. This includes checking for multiple packages (For example, 1 of 2 and 2 of 2).
- For a helpful video on "Critical Steps: Casement Window Installation", please SCAN or TAP the QR Code shown.

AERIS™ OPERABLE CASEMENT WINDOW CONTENTS

NOTE: Please refer to information below for assembly and installation contents.

Assembly Contents

Vinyl Window Unit (3¼" Main Frame Depth)

OPTIONS:
- Flush Fin (All 4 sides) (Refer to Section 'D' for installation)
- Brickmold

MULLION KIT (Only included when field mulling is necessary): *(Refer to Section 'F')*
- (6) 8 x 1" Phillips Pan Head Screws, Part #: S-HS-052-00
- (6) ⅜" Low Profile Hole Plug, Part #: S-HG-698-CC
- Mullion Cover (Exterior), Part #: S-VW-AM75-CC
- Mullion Trim (Interior), Part #: S-WO-1007XX-CC
- Stacking Plate Pack, Part #: S-HG-604P-00

Installation Pack
S-HS-515S-CC

(6) ⅜" Low Profile Hole Plug, (Color Matched), Part #: S-HG-698-CC



(6) #8 x 2" Phillips Pan Head Screws, Part #: S-HS-046-00



WINDOW INSTALLATION GUIDELINES

- Windows achieve maximum performance from proper installation methods. It is critical to maintain consistent margins between sash and master frame.
- A window gains strength from the surrounding wall structure. This is obtained with proper sizing, support and installation methods.
- Use a high quality grade of silicone with a neutral base.
- Approved sealants for this use must meet the requirements of ASTM C920, Class 25.
- The plastic applied to UV resistant paint finish windows is for the protection of the paint finish and should remain on the window until the installation is complete.
- **DO NOT OBSTRUCT WEEP HOLES** with flashing or sealant. The weep holes located at the bottom sill area of window are necessary to prevent water accumulation. Covering or applying trim to the product will need to allow for proper drainage. Failure to do so will create a risk of water infiltration.
- Windows should be stored in a cool location. **DO NOT** store in direct sunlight or in non-vented hot containers.
- **IMPORTANT!** Allow for expansion and contraction of the window unit when contacting exterior finish material. For installation of the exterior finish material surrounding the window, scan or tap the QR code shown for all gap recommendations per exterior material type.
  THIS INFORMATION MUST BE PASSED TO THE EXTERIOR FINISH INSTALLER.

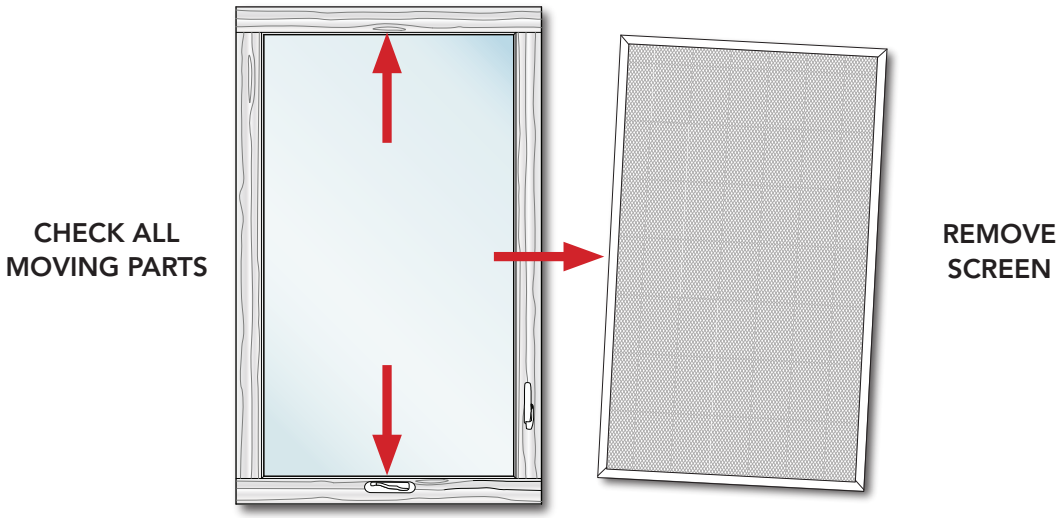
⚠ IMPORTANT INFORMATION!

• ProVia® understands there are various methods and conditions affecting the installation of a replacement window. We feel the most critical steps to follow are securing and shimming as instructed in this document.

FIELD MULLED WINDOW UNITS:
• Refer to Section F, Field Mulling, page 12.
Units must be mulled together before window unit is set into the opening.

A. INSPECT AND PREPARE VINYL WINDOW UNIT

INSPECT WINDOW AND SCREEN



(Figure A.1)

⚠ ***IMPORTANT!*** ***For window units with painted exterior, DO NOT remove the protective plastic cover until after installation is completed.***

For units to be field mulled, complete Section A, then proceed to Section F - 'Field Mulling Window Units'. After mulling is complete, resume instruction to complete Sections B - E.

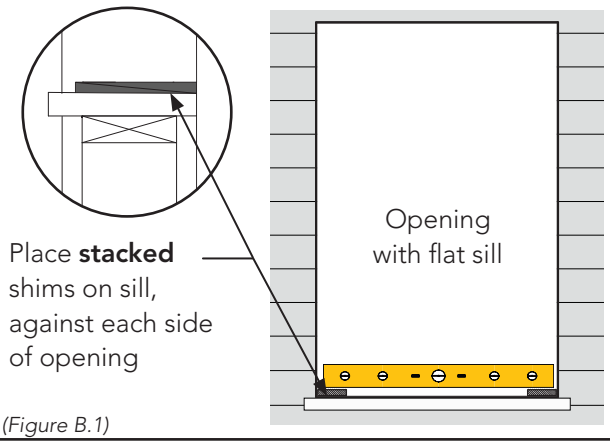
1. Inspect new window unit and screen for any material damages. Check all moving parts: locks, all operational hardware, glass, etc. **NOTE:** Moving parts can be repaired AFTER window is installed. Scan the product packaging QR Code label to access ProVia's **After Sale Product Support** to enter a request and post pictures to order, or call the Customer Support Team. *(Figure A.1)*

2. Remove screen and carefully set aside. *Screen frame has top and bottom legs that insert into interior head and sill wood trim. To remove, push frame further upward in slot then pull inward and down.* Screen will be re-installed after completion of installation.

3. After inspection, close and lock window unit to engage seals, locks, interlocks, and weatherstripping.

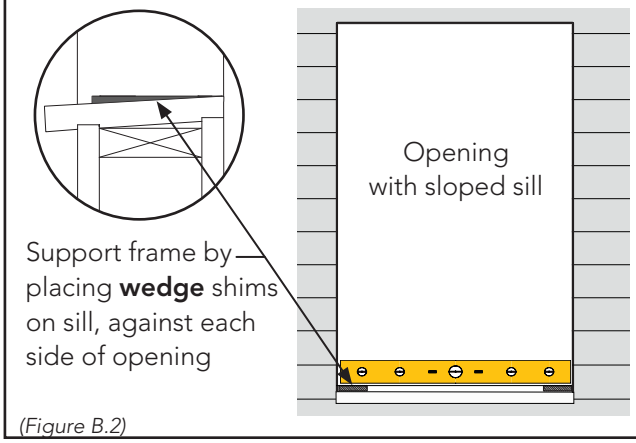
B. PREP OPENING

FLAT SILL WITH STACKED SHIMS



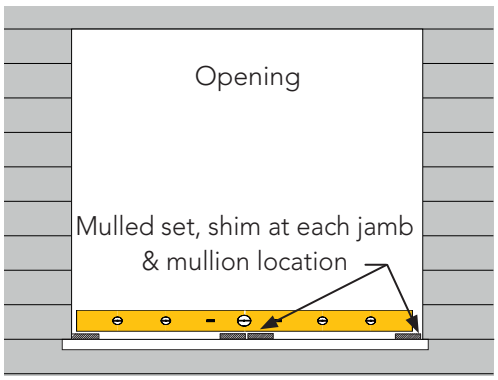
(Figure B.1)

SLOPED SILL WITH WEDGE SHIMS



(Figure B.2)

MULLED SET WITH LEVEL STACKED SHIMS



(Figure B.3)

1. Clean opening of all dirt, debris and obstructions.

2. Fill all voids or open cavities, found after removal of old window, with AAMA approved low-expanding window insulation foam that complies with ASTM C1620.

3. Check sill for level, flat, and for proper structural support of opening to ensure a proper installation and seal of window unit. For flat sill plate, refer to Step 4. For sloped sill plate, refer to Step 5.

   NOTE: Consider the ⅞" distance from bottom of operator to bottom of window. Be sure unit clears any existing window sill when setting.

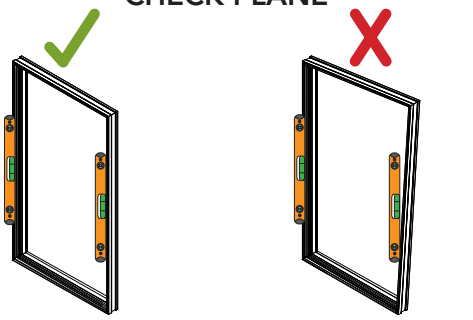
4. For flat sill plate, place **stacked** shims on sill, against each side of opening. Be careful shims **DO NOT** tilt sill toward inside of home. For mulled sets, place stacked shims under all side jamb locations. *(Figure B.1 & B.3)*

   NOTE: If foam wrap is used under sill, shim thickness **MUST** be increased to prevent foam wrap from crowning the sill. Be careful to not push frame into head of opening.

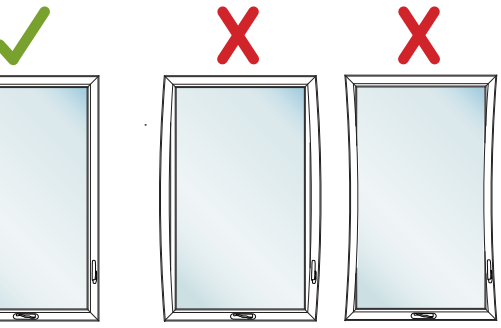
5. For sloped sill plate, place **wedge** shims on sill, against each side of opening. Wedge shims are critical to provide full support of frame bottom. Be careful shims **DO NOT** tilt sill toward inside of home. For mulled sets, place stacked shims under all side jamb locations. *(Figure B.2 & B.3)*

   NOTE: If foam wrap is used under sill, shim thickness **MUST** be increased to prevent foam wrap from crowning the sill. Be careful to not push frame into head of opening.

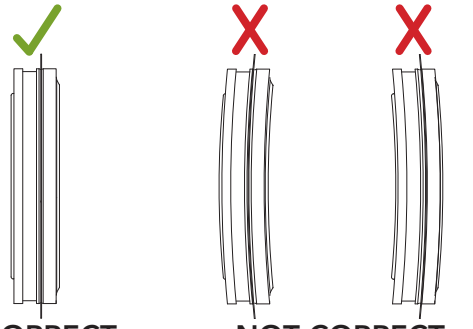
C. INSTALLATION



(Figure C.1)



(Figure C.2)



(Figure C.3)

Frame alignment is critical for the success of the installation and sash operation. Steps 1-3 provide critical frame alignment reference checks to identify and correct if needed through the full installation procedure.

1. Check the plane of the window unit. Each vertical jamb side frame should be equal and parallel to the other. See illustration for equal and unequal plane. *(Figure C.1)*

2. Check to be sure frame jambs do NOT bow inward or outward of the sash, resulting in sash and hardware interference. *Note, window hardware should not be visible between exterior sash weather strip and frame. (Figure C.2)*

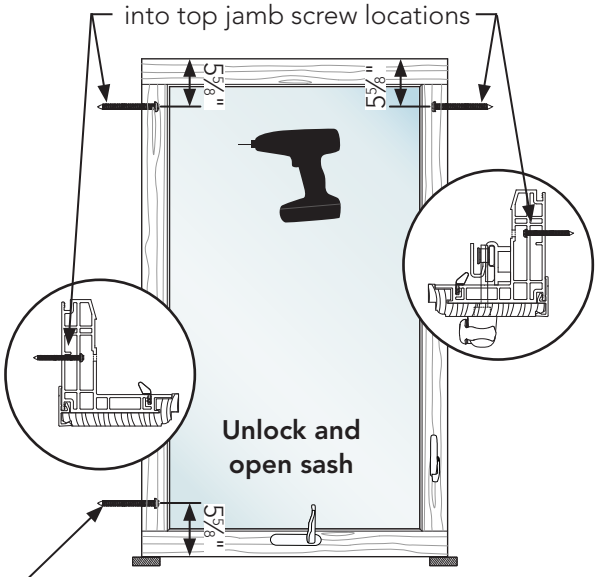
3. Check to be sure the vertical face of the window unit is flat, the vertical face can **NOT** bow towards the interior or exterior. A bowed vertical face will cause the frame to be out of alignment, resulting in sash to frame hardware interference. *(Figure C.3)*

IMPORTANT! The frame alignment will need to be CONTINUOUSLY monitored throughout full installation.

C. INSTALLATION *(CONTINUED)*

SECURE - INTERIOR VIEW

Pre-drill and install #8 x 2" Phillips pan head screw into top jamb screw locations

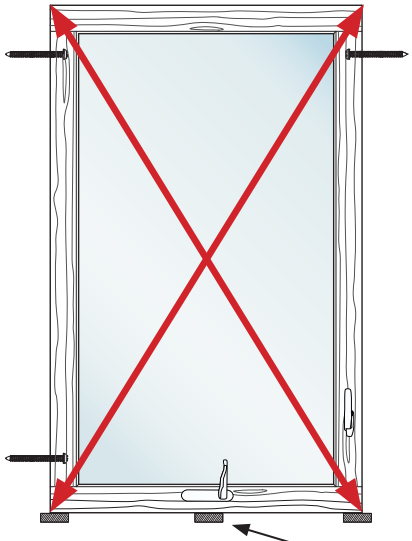


Pre-drill and install a #8 x 2" Phillips pan head screw into bottom hinge side jamb screw location

(Figure C.4)

INTERIOR VIEW

Adjust jamb screws as needed for square



Install shims directly below operator
Adjust shims under each side jamb for level

(Figure C.5)

4. Set window unit directly onto shimmed sill. Center unit in the opening. *If top of window is against top of opening, reduce height of bottom shims. Shims are still required below sill as specified*

5. Unlock sash and carefully open. From the top of frame, measure down 5⅝" to locate top installation screw hole. From the sash side, pre-drill a ⅛" pilot hole, centered on jamb width, through both walls of frame. Pre-drill a ⅜" hole to further open first wall for hole plugs (install in a later step). Install a #8 x 2" Phillips pan head screw into top jamb screw location. Repeat opposite top frame side. **DO NOT OVER TIGHTEN screw causing frame to pull!** *Be sure to check for proper operation of the sash throughout the full installation process. (Figure C.4)*

6. From bottom **hinge-side** of frame, measure up 5⅝" to locate bottom installation screw hole. From the sash side, pre-drill as noted above then install a #8 x 2" Phillips pan head screw. *(Figure C.4)*

7. Install shims directly below operator. **DO NOT install screws through sill!** *(Figure C.5)*

   NOTE: DO NOT OVER SHIM below side jambs. Over-shimming will press unit head tight against opening head, resulting in vinyl expansion issues.

   NOTE: For egress units, operator will not be centered below window.

8. Check for overall square of window unit by measuring diagonally from corner to corner, each side. Adjust top jamb screws as needed. *Recommended tolerance for the diagonal measurement is ⅛". (Figure C.5)*

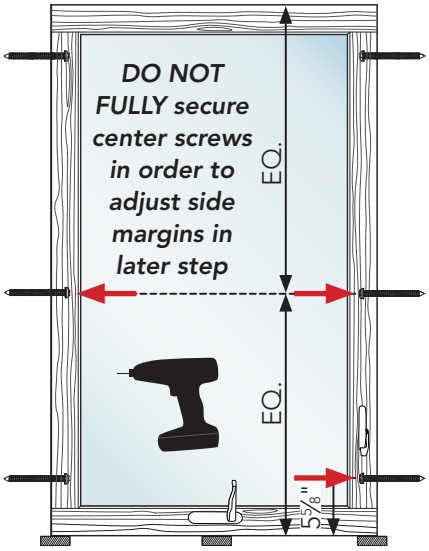
9. Use sill shims to adjust/re-adjust sill to level as needed. For mulled units, be sure shims are placed directly under mull location for support. *(Figure C.5)*

   REMINDER: If foam wrap is used under sill, shim thickness **MUST** be increased to prevent sill from crowning.

C. INSTALLATION *(CONTINUED)*

SECURE - INTERIOR VIEW

Pre-drill and install (3) #8 x 2" Phillips pan head screws into jamb locations shown

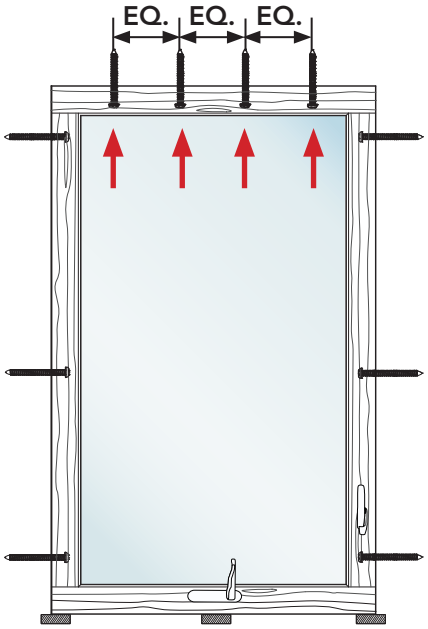


***Continuously monitor margins**

(Figure C.6)

SECURE - INTERIOR VIEW

Frame header may need secured on units 28" wide or greater with (4) #8 x 2"screws



(Figure C.7)

⚠ ***IMPORTANT! Shims can be installed prior to installation of screws. It is critical to monitor margins throughout this installation method.***

10 From bottom **latch-side** of frame, measure up 5⅝" to locate bottom installation screw hole. From the sash side, pre-drill as previously noted then install a #8 x 2" Phillips pan head screw. **DO NOT OVER TIGHTEN screw causing frame to pull!** *(Figure C.6)*

11 Measure to find center location of each jamb side. Pre-drill as noted and install a #8 x 2" Phillips pan head screw each side until screws are close but NOT seated to the vinyl *(this will allow for side margin adjustment in a later step).* Inspect all margins. . *(Figure C.6)*

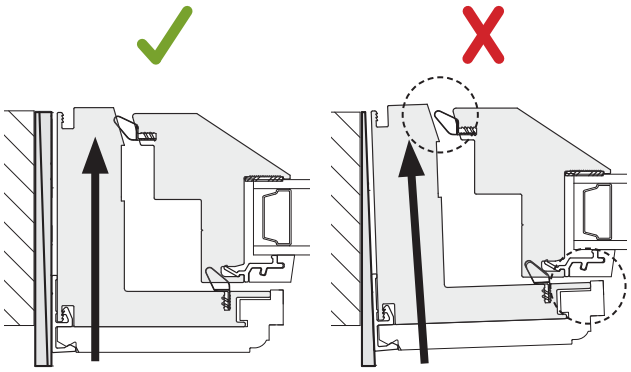
NOTE: If spacing between jamb screws is greater than 24", additional jamb screws may need added to stabilize frame.

NOTE: Additional jamb screws may need added if foam wrap is used on jambs, causing over-tight margins and difficult sash operation.

12 Frame header may need secured to inside stop on units 28" wide or greater. Clamp the frame header to inside stop. Install (4) #8 x 2" Phillips pan head screws. Position in same frame channel as jamb screws. Space equally. *Additional header screws and hole plugs are not provided. (Figure C.7)*

C. INSTALLATION *(CONTINUED)*

SHIMMING APPLICATION



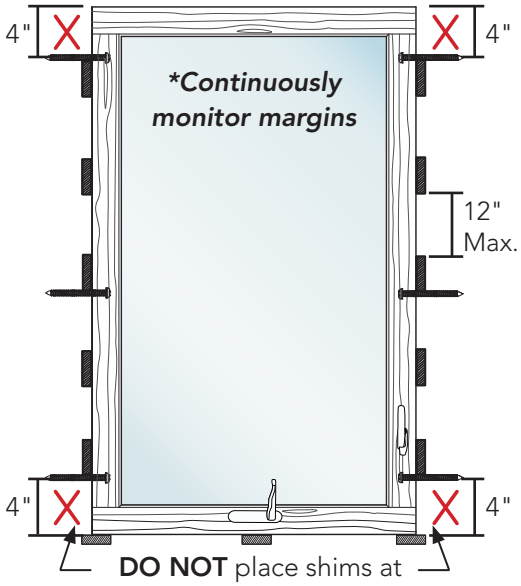
CORRECT
Flat shims or wedge shims stacked to create a flat plane will result in equal margins

NOT CORRECT
A wedge shim will cause frame to roll resulting in unequal margins

(Figure C.8)

SHIMMING - INTERIOR VIEW

Place stacked shims next to each screw location

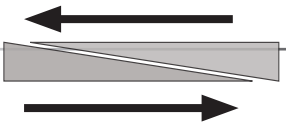


DO NOT place shims at header and sill locations of jamb, each side

(Figure C.9)

IMPORTANT! ***Shims are needed to achieve required margins. All margins need to be CONTINUOUSLY monitored throughout installation. Shimming as instructed in Step 13 is critical to maintain stability of the frame.***

IMPORTANT! ***CORRECT*** *shimming application; stack wedge shaped shims contrasting and plane to plane. See diagram below.* ***DO NOT*** *use a single wedge shim. This will cause the frame to roll, resulting in unequal margins. (Figure C.8)*



13. Place shims next to all screw locations. **DO NOT PLACE SHIMS WITHIN 4" OF TOP OR BOTTOM CORNERS.** This will cause frame distortion. If spacing between side jamb shims is greater than 12", additional shims may be needed to maintain margins and stabilize frame. **CONTINUOUSLY CHECK SASH TO FRAME MARGINS WHILE SHIMMING.** *Note, window hardware should not be visible between exterior sash weather strip and frame. (Figure C.9)*

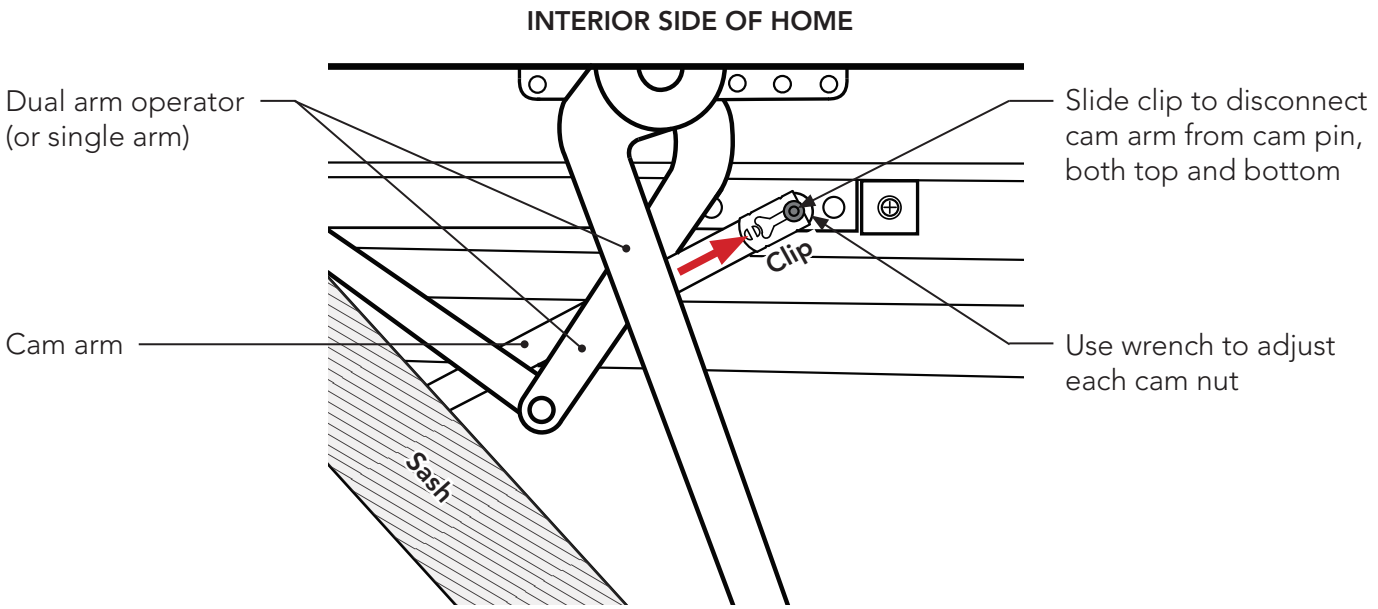
14. Final check on frame alignment. Adjust shims and screws as needed to achieve and maintain equal and straight alignment, all sides. ***Refer back to Figures C.1, C.2 and C.3.***

15. **Check for proper operation of sash.** For sash operation issues, refer to Troubleshooting Section.

16. Fully secure each center/middle screw. **DO NOT OVER TIGHTEN.**

C. INSTALLATION *(CONTINUED)*

FRAME SILL VIEW (WITH OPEN SASH)



(Figure C.10)

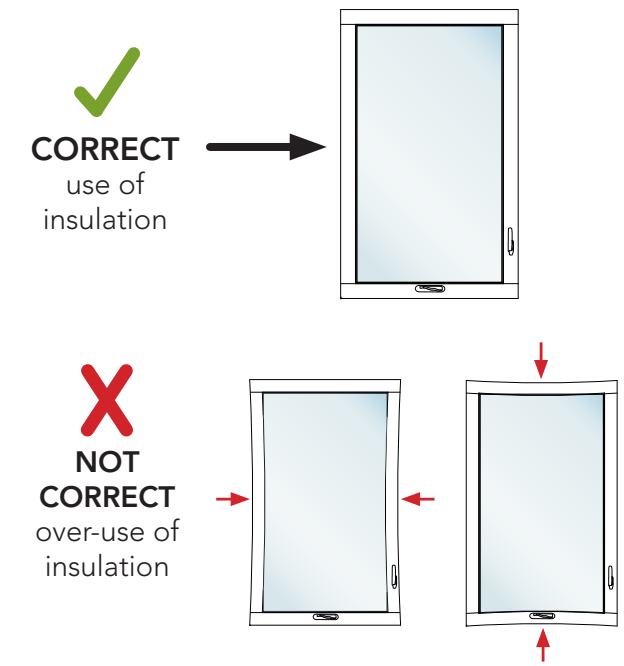
17 If sash requires adjustment side-to-side or if sash is slightly tipping into the frame opening, use the top and bottom cam nuts located under cam arms. Adjust one at a time as follows: *(Figure C.10)*

- Unlock and open sash. Slide metal clip toward cam pin to disconnect cam arm. Remove arm from pin.
- Use a wrench to slightly rotate each cam nut a 1/16" to the exterior or 1/32" to the interior.

NOTE: The ProVia Aeris hinge wrench can be ordered from our Customer Service Team for the adjustment of the cam nut without removal of the stabilizer bar. (Request part #: S-HG-0310-00)

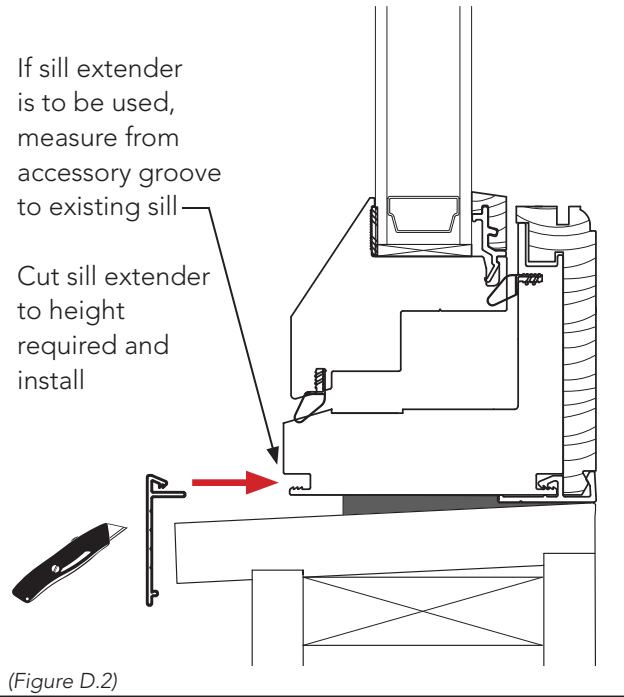
D. INSULATE AND FINAL ADJUSTMENTS

LOW-EXPANDING FOAM - MARGIN CHECK



(Figure D.1)

OPTIONAL FLUSH FIN - SILL SECTION



(Figure D.2)

1. Install hole plugs into all jamb screw locations.

2. Close and lock sash.

⚠ ***IMPORTANT!*** ***Sash must operate properly before and after application of foam insulation.***

3. Insulate by using an AAMA approved ASTM C1620 low-expanding foam to fill all cavities between frame and opening. Check and maintain all margins during insulating. ***Over use of low-expanding foam may cause frame to bow, jeopardizing operation of window. (Figure D.1)***

4. **Apply caulking to seal the EXTERIOR window frame to wall joint. Use backer rod if needed. DO NOT SKIP THIS STEP.**

⚠ ***IMPORTANT!*** ***This is a weeping sill. Maintain weep hole clearance when trimming exterior. DO NOT screw through sill! (Figure D.2)***

5. If the **optional exterior flush fin** cover is to be used, measure distance from the sill accessory groove to the existing sill. Cut fin to height required and install. **DO NOT** install until foam has fully cured. *(Figure D.2)*

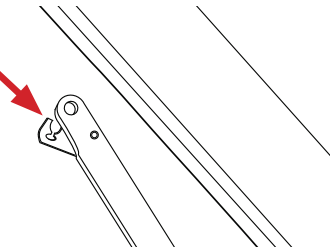
6. If the **optional brickmold accessor**y is to be used, snap all (4) sides into front accessory groove.

7. If **MasterFit™ Trim** is ordered, **DO NOT** nail trim to jamb extension. Refer to QR code on back for measuring assistance.

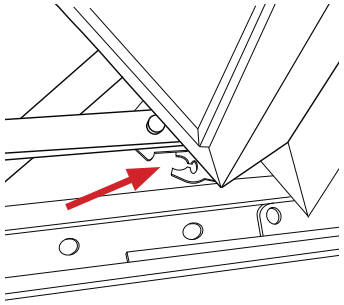
E. REMOVING SASH FROM FRAME

BOTTOM OF SASH/FRAME VIEW

Use a flat head screwdriver to open clip below long arm (clip shown in open position, strike side)



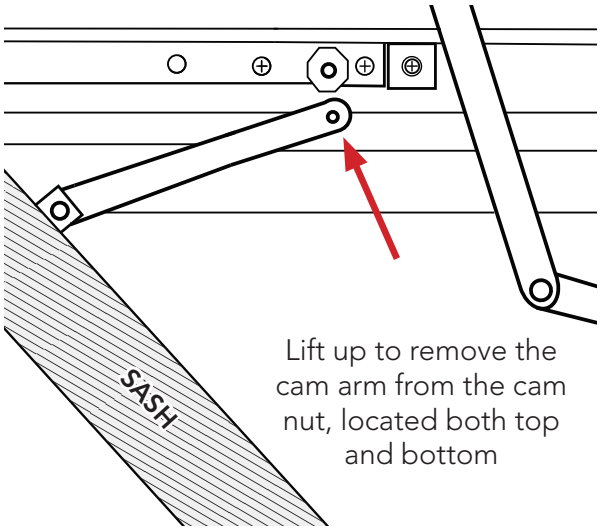
Use a flat screwdriver to open clip below short arm attached to sash (clip shown in open position, hinge side)



(Figure E.1)

TOP & BOTTOM OF SASH/FRAME VIEW

INTERIOR SIDE OF HOME



Lift up to remove the cam arm from the cam nut, located both top and bottom

(Figure E.2)

⚠ ***USE CAUTION WHEN REMOVING SASH!***
In the following steps, once arms are disconnected there will be NO support to hold sash in place, you MUST immediately maintain control of the sash.

** Smaller casement windows will use a single arm operator.*

** For a more complete and detailed instruction of sash removal, refer to the QR code 'Casement Sash Removal for Aspect & Endure'. For a helpful video, refer to the QR code 'How to Remove the Sash of ProVia Casement Windows'. Each QR Code is located at the end of this document.*

1. Unlock and open sash.

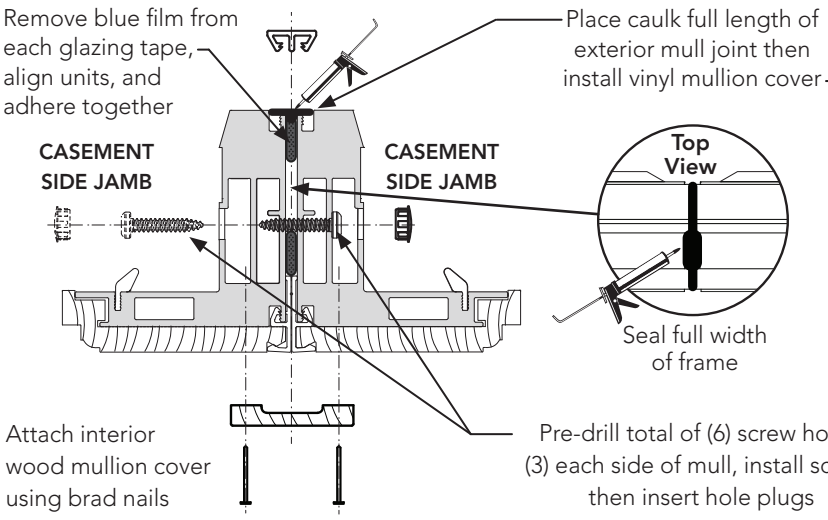
2. Use a flat head screwdriver to open the clip located below the attached long arm, near the strike side. Move arm away from sash. *(Figure E.1)*

3. Use a flat head screwdriver to open the clip located below the short arm, attached to the sash near the hinge side. Move arm away from sash. *(Figure E.1)*

4. Lift below cam arm to remove arm from cam nut, both top and bottom. Move each cam arm away from sill. Hold sash secure, slide the top and bottom sash shoes towards the open side of hinge track. Remove sash from frame. Reverse order for re-installation. *(Figure E.2)*

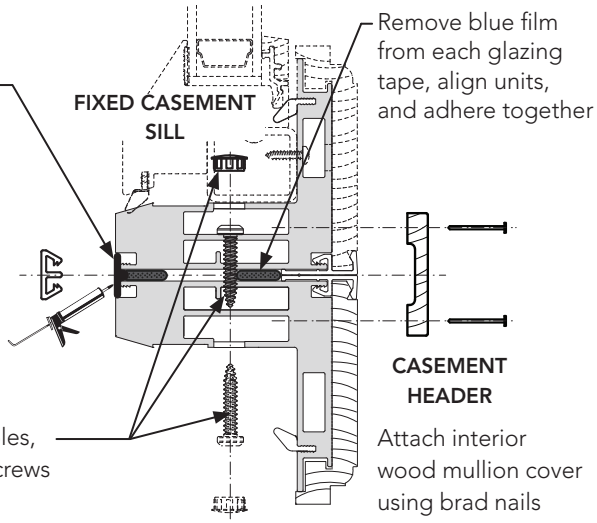
F. FIELD MULLING WINDOW UNITS

SIDE BY SIDE WINDOW MULL SECTION VIEW



(Figure F.1)

STACK WINDOW MULL SECTION VIEW



(Figure F.2)

Field mulling will be required if finished mulled unit size exceeds a specific shipping size parameter. A multiple window unit may ship partially mulled, requiring field mulling to complete the assembly. Units must be mulled together before setting into the opening.

1. If window units are ordered factory mulled with additional window units to be field mulled, factory installed stacking plates may need to be removed in order to install wood spacer. If there are no stacking plates to be removed, proceed to next step.

2. Factory will apply (2) strips of glazing tape to (1) unit of the set. Remove backing from tape, align units (side-by-side or stacked), and adhere together. Be sure glazing tape adheres to opposite frame. (*Figure F.1 & F.2)*

3. Pre-drill (6) ⅜" holes through first wall of vinyl, placing (3) each side of mull location. Be sure opposing screws are offset. Secure window units together using #8 x 1" Phillips pan head screws (included). Install ⅜" hole plugs at each screw location. The maximum spacing between screws is 24", additional screws may need added. *(Figure F.1 & F.2)*

4. For units with laminated exterior, use a utility knife, angle blade toward exterior, to score each side of the accessory channel to cut laminate and expose channel.

5. Protect the interior wood surface. Position mulled set with EXTERIOR side face up. Measure and trim the EXTERIOR zero mullion cover to length just below accessory groove.

6. On EXTERIOR side, place a bead of sealant in full length of horizontal or vertical exterior accessory groove along mull joint. Install the EXTERIOR zero mullion cover just below groove using a rubber mallet to tap into place.

7. For side-by-side mulled units, apply a bead of sealant along the top mull joint(s) for full width of the surface as shown in detail drawing above, to provide a full seal.

8. Install stacking plates at all exterior mulled joints. Please scan the QR code on back of instruction to view the "Vinyl Window Stacking Plate Installation Instruction". For Aeris™ casement units, stacking plate will need to be mounted on flush frame surface.

9. Install interior wood mullion cover over vinyl mullion cover using brad nails, as shown. *This step should be the FINAL step of installation, even after interior casing has been installed. (Figure F.1 & F.2)*

TROUBLESHOOTING & TIPS

PROBLEM	CAUSE	SOLUTION
Top of sash leans outward while closing	Normal/typical.	This is a normal occurrence as long as the top of the sash pulls in tight when closed. If sash does not pull tight, adjust keepers to engage tie rod post in succession, to achieve a zipper like effect from top to bottom. Lift block may be missing.
Lock lever becomes hard to operate halfway down	The keepers are not properly aligned with the tie rod post. Multiple keepers are engaging the tie rod post at the same time.	Adjust keepers to engage tie rod post in succession, to achieve a zipper like effect from top to bottom. Lift block may be missing.
Sill bows upward	1. No shims below jambs. Critical on mulled units. 2. Over insulating or over shimming below sill. 3. Installing sill extender before foam below sill has cured. 4. Insufficiently shimming under jambs when foam wrap is used under sill. 5. Exterior trim is tight against window, not allowing for vinyl expansion in the heat. 6. Jamb side shims placed too close to bottom sill locations, not allowing for vinyl expansion in heat.	1. Add shims to window sill per this instruction. 2. Remove foam. Re-square and level window unit. Refer to this instruction for proper insulation procedure. 3. Remove sill extender and foam below sill. Re-foam and let cure completely before re-installation of sill extender. 4. Re-shim window unit per this instruction. 5. Refer to "Installing Exterior Veneers to Windows" QR code at end of this instruction. 6. Remove shims at bottom jamb side sill locations. Shim per this instruction.
Header bows downward	1. Excessive foam or over insulating above header. 2. Jamb side shims placed too close to top header location, not allowing for vinyl expansion in heat.	1. Remove foam above header. Re-foam per this instruction. 2. Remove shims at top jamb side header. Shim per this instruction.
Frame racked or out of square	Improper or no shims below the jambs.	Re-shim window unit per this instruction.
Tall unit side jamb margins are not consistent in width	Under shimmed and under secured.	Add additional jamb screws. Place shims at additional jamb screw locations.
Sash alignment is restricted	Outside corners of sash have an excess weld build-up.	Remove the excess weld on corners and from both sides of the bulb seal until a square corner is achieved.
Sash is leaning downward and unable to pull in at the bottom	Lift block is missing.	Locate lift block next to sill slide track, with bevelled edge facing the exterior side.

TROUBLESHOOTING & TIPS

PROBLEM	CAUSE	SOLUTION
Window leaks water at accessory corners	1. Improper or no caulking on backside corners of accessory. 2. Improper or no caulking at accessory to frame joint.	1. Caulk accessory per this instruction. 2. Caulk accessory per this instruction.
Water leaks on multi-level mulled units	Missing or improper caulking behind exterior mull strip at T-joint or cross joint.	Caulk mull strips per this instruction.
Condensation is present on inside or outside glass of window	Various normal conditions/reasons.	Refer to "Condensation, Humidity and Dew Point Temperature" QR code below for a detailed explanation of normal condensation conditions.
Hardware is visible between exterior sash and frame	Frame is rolled due to lack of proper shimming.	Re-set side jambs per Section C.

Please call Customer Support for additional installation inquiries at 1-800-669-4711.

For additional information and helpful videos, visit our Homepage for Installers.
SCAN OR TAP the QR Code.

Installing Exterior Veneers to Windows

Install. Instruction Vinyl Window Stacking Plate #504

Measuring Instruction MasterFit™ Trim

Condensation, Humidity and Dew Point Temperature

Video: Removal and Installation of a Casement Window Sash

Video: How to Adjust ProVia Casement Window Sash

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