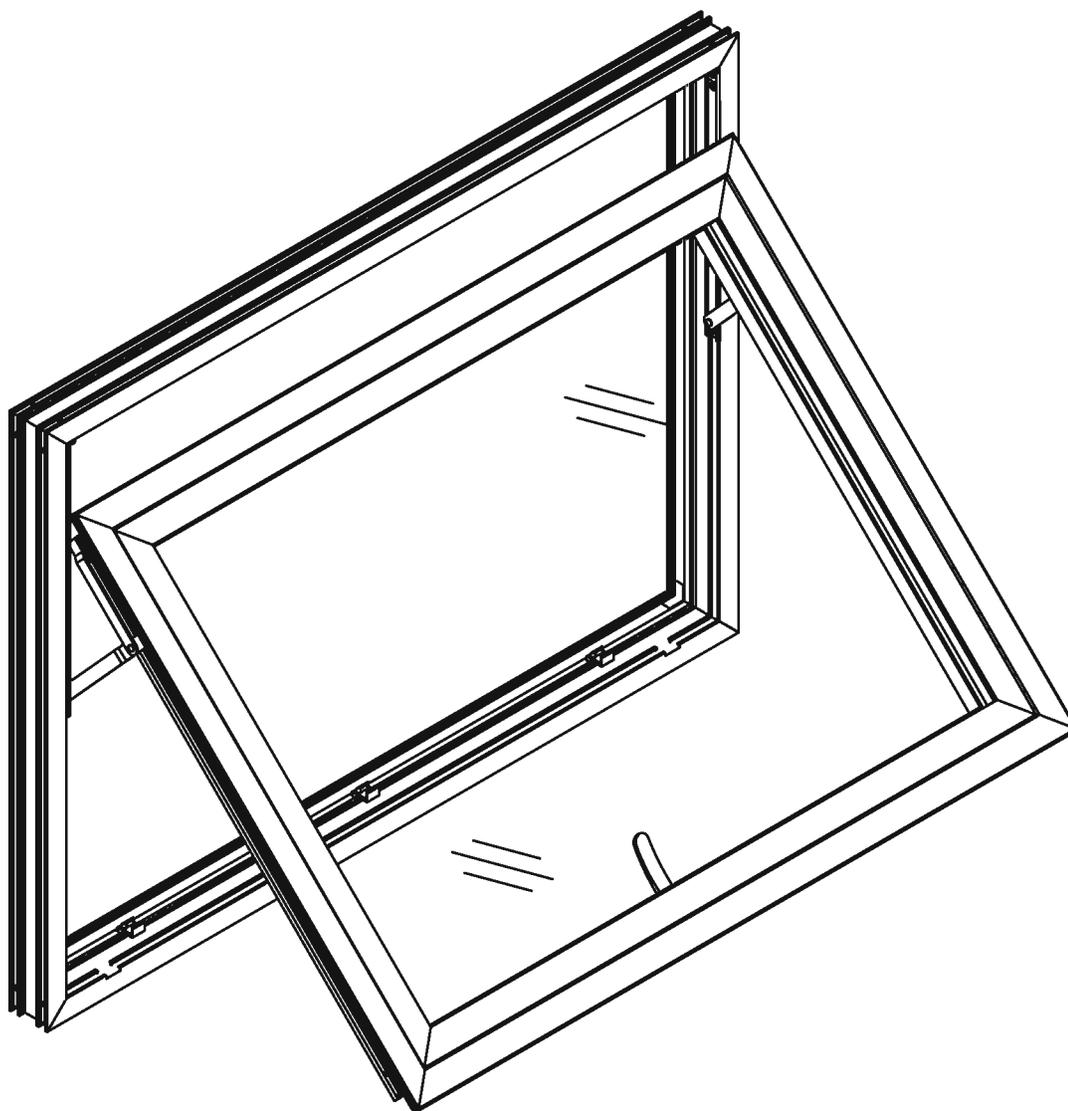


ASSEMBLY & GLAZING

AA[®] 900 IsoWeb[®] WINDOW



INSTRUCTIONS

Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

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**These instructions show the general assembly and glazing sequence.
They supplement the shop detail and notations on fabrication and installation.**

SECTION	PAGE	
I	3-4	GENERAL NOTES
II	5-13	FIXED WINDOW ASSEMBLY & GLAZING
III	14-41	PROJECT-IN/INSWING CASEMENT ASSEMBLY & GLAZING
IV	42-73	PROJECT-OUT/OUTSWING CASEMENT ASSEMBLY & GLAZING

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HANDLING, STORING AND PROTECTION OF ALUMINUM

The material must be protected against damage. The following precautions are recommended to assure early acceptance of your products and workmanship.

A. HANDLE CAREFULLY - Do not drop or drag from the truck. Stack with adequate separation so windows will not rub together. Store off the ground. Protect against the elements and other construction trades. Wear hand protection to prevent injury due to sharp edges of windows.

B. KEEP MATERIAL AWAY FROM WATER, MUD AND SPRAY - Prevent cement, plaster, or other materials from damaging finish.

C. PROTECT MATERIALS AFTER ERECTION - Protect by wrapping with Kraft paper or by erecting Visqueen or canvas splatter screen. Cement, plaster, terrazzo, other alkaline solutions and acid based materials used to clean masonry are very harmful to the finish and should be removed with water and mild soap IMMEDIATELY.

GENERAL INSTALLATION NOTES

The following practices are recommended for all installations.

A. CHECK SHOP DRAWINGS, FABRICATION INSTRUCTIONS, ASSEMBLY & GLAZING INSTRUCTIONS, and INSTALLATION INSTRUCTIONS to become thoroughly familiar with the project. THE SHOP DRAWINGS take precedence and include specific details for the project. THE INSTALLATION INSTRUCTIONS are of a general nature and cover most common conditions.

B. All materials must be INSTALLED PLUMB, LEVEL, AND TRUE.

C. All work should start from bench marks and/or column lines as established by the ARCHITECTURAL DRAWINGS and the GENERAL CONTRACTOR.

D. Isolate all aluminum to be placed directly in contact with uncured masonry or incompatible materials with a heavy coat of zinc chromate or bituminous paint.

E. Check all materials on arrival for quantity and be sure you have everything required to begin installation.

F. Sealants must be compatible with all materials with which they have contact, including other sealant surfaces. Consult with sealant manufacturer for recommendations relative to joint size, shelf life, compatibility, priming, tooling, adhesion, etc.

G. ISOWEB® THERMALLY BROKEN SECTIONS - Do not drill, punch, penetrate or alter the polyamide thermal break in any way.

H. PERIMETER FASTENING - "Fastening" means any method of securing one part to another or to adjacent materials. These instructions specify only those fasteners used within the system. Due to varying perimeter conditions and job performance requirements, anchor fasteners are not specified in these instructions. Refer to the Shop Drawings or consult a structural engineer for fastener type, sizing, and location.

I. CHECK OPENINGS - Make certain that the opening which will receive your materials is in accordance with the contract documents. If not, notify the General Contractor in writing and resolve differences before proceeding with your work.

J. BUILDING CODES - Glass and glazing codes governing the design and use of products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility for these design considerations. It is the responsibility of the owner, specifier, architect, general contractor and the installer to make these selections in strict conformance with all applicable codes.

WINDOW INSTALLATION

- A.** The rough opening should be checked for correct size as determined by tolerances listed in the architectural specifications and the shop drawings.
- B.** Establish the window reference line (inside surface of the window frame) on the masonry sill using ARCHITECTURAL DRAWINGS, GENERAL CONTRACTOR'S reference lines and SHOP DRAWINGS to establish the sill line. Then, transfer line to the head and jamb.
- C.** Do not fasten drapery tracks, ceiling supports or convector covers to windows or mullions. The window must be free to contract and expand.
- D.** Anchors used will depend on job conditions and installer's preference. Refer to fastener manufacturers recommendations for proper sizing and edge distance requirements for all applications.
- E. MINIMUM ANCHOR SPACING:**
1. No more than 3" each side of frame joints.
 2. No more than 3" from locking and hinging point.
 3. No more than 18" O.C. between corners and locking points.
 4. Unless otherwise specified on approved shop drawings or structural calculations.
- F.** Seal all anchor heads along the head, sill and jambs.
- G.** Seal all exposed perimeter joints (between structure and window perimeters) with silicone sealant. Refer to approved shop drawings for joint design.

VENT INSTALLATION

Upon completion of the window installation, all operating vents must be checked for proper alignment and operation. It may be necessary to adjust the hinges, keepers, and snubbers (deflection stops) to ensure proper sealing and locking. All hardware must be cleaned and lubricated as necessary to provide smooth operation.

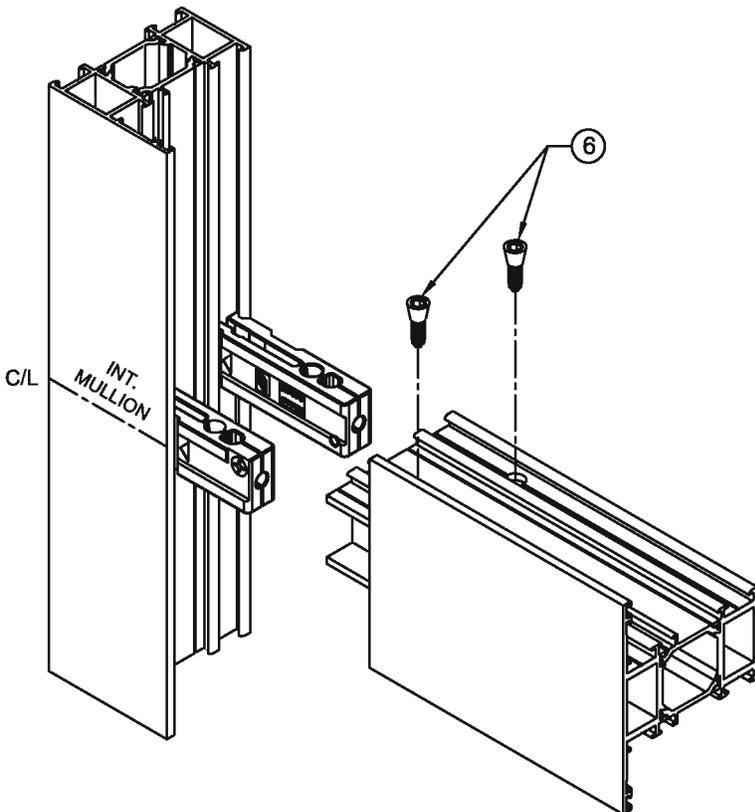
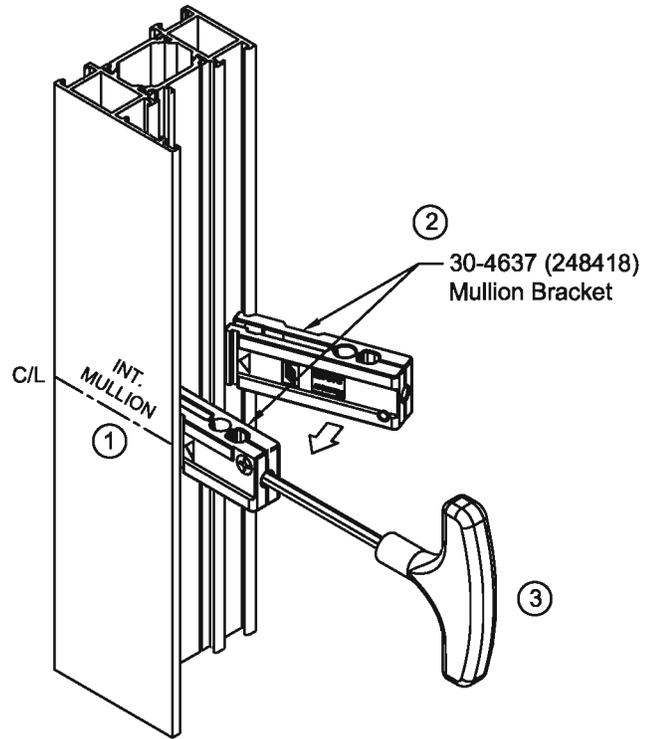
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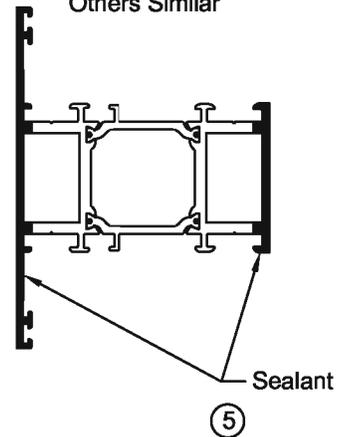
Intermediate mullions must be attached to frame prior to joining frame corners.

- ① Using a pencil, mark the center line of intermediate mullion along both exterior and interior face of frame.
- ② Engage one end of intermediate mullion bracket 30-4637 (248418) at feet and rock into Euro-groove. Align indicator arrow on bracket with center line of mullion.
- ③ Insert 4mm hex key into access hole at end of bracket and tighten bracket set screw.
- ④ Before applying any sealant ensure that all surfaces are free from dust, grease, and burrs. Clean all mating surfaces with isopropyl alcohol on clean cloth.
- ⑤ Apply sealant (Dow Corning 1199 or equal) to each coped end of intermediate mullion as shown.
- ⑥ Slide intermediate mullion over brackets and fasten with bracket fasteners 15-0820 (248444). Tighten fasteners using 4mm hex key. Ensure that mullion joint is flush.

Repeat Steps 1 through 6 on opposite end of mullion.



IF-1210 (248202PI)
Shown
Others Similar

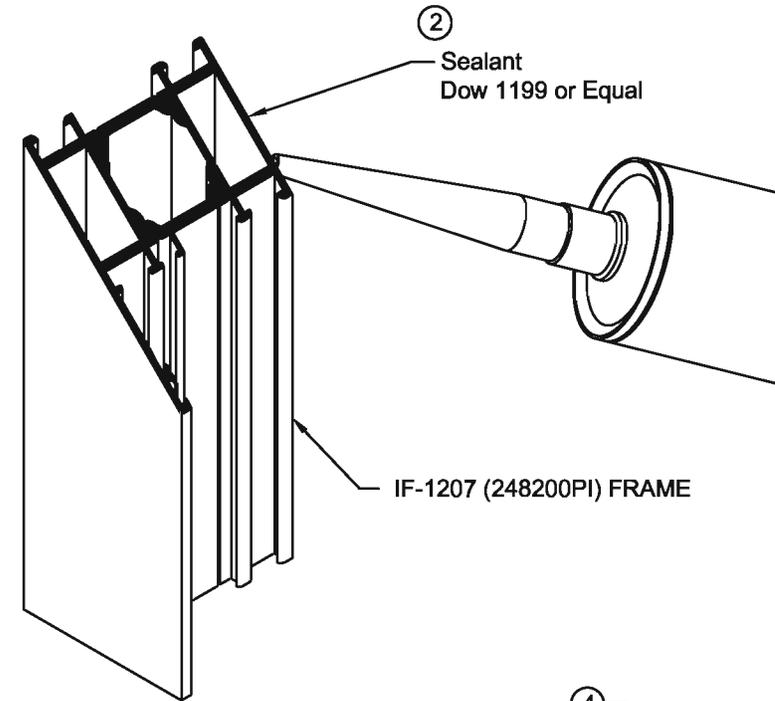


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SECTION II FIXED WINDOW ASSEMBLY & GLAZING
ASSEMBLE FRAME - SCREW APPLIED CORNER BRACKET

E.C. 95506-024



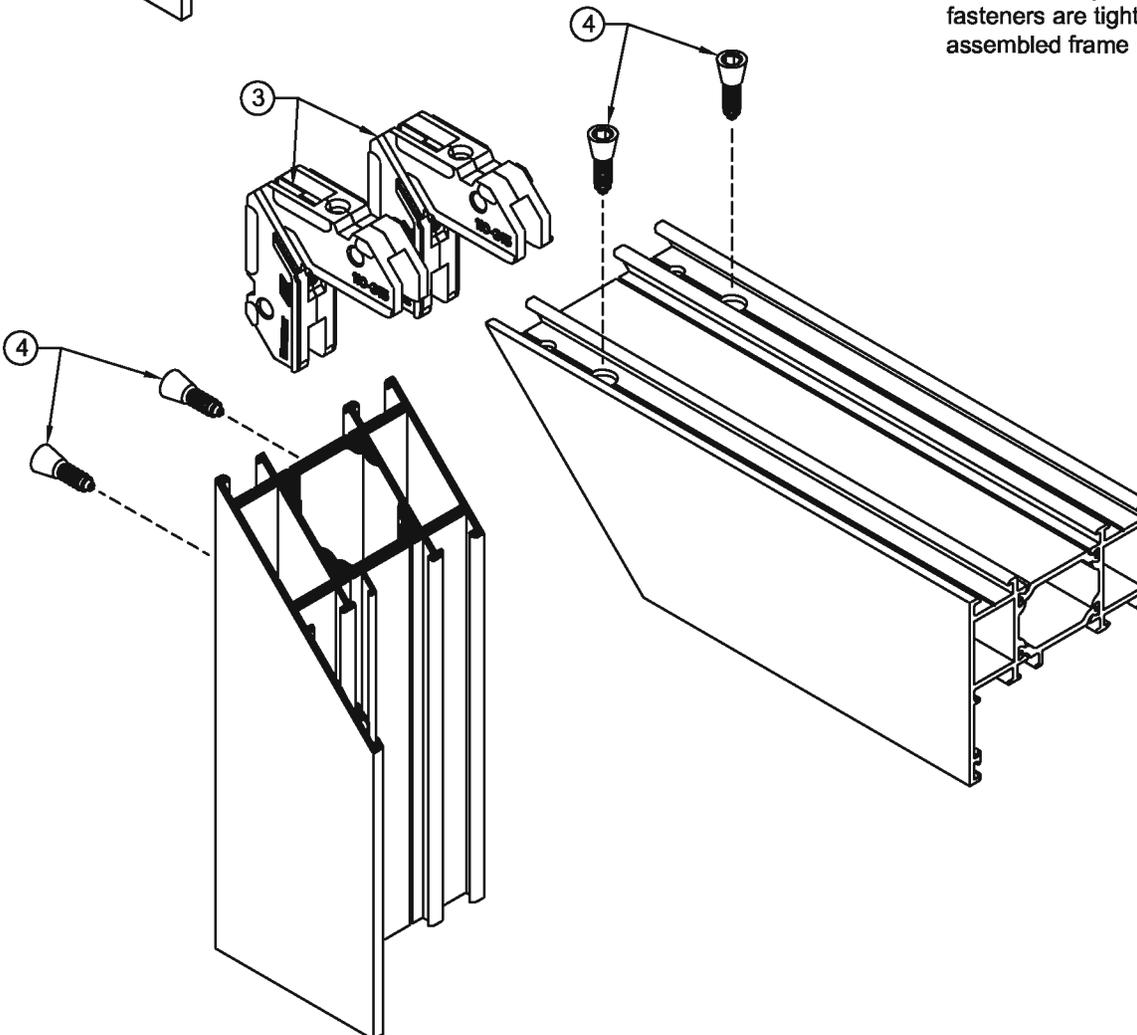
① Before applying any sealant ensure that all surfaces of mitered ends and brackets are free from dust, grease, and burrs. Clean all mating surfaces with isopropyl alcohol on a clean cloth.

② Apply sealant (Dow Corning 1199 or equal) to each mitered end of frame member IF-1207 (248200PI) as shown.

③ Insert corner brackets 30-4635 (248415) into each hollow of same member at each end. Guide corner bracket ends into the hollows of both adjacent members and slide the members together tight.

Repeat Steps 2 & 3 for opposite member.

④ Fasten frame members to corner brackets with bracket fasteners 15-0820 (248444). Tighten each fastener one side at a time using 4mm hex key until all fasteners are tight. Ensure that assembled frame is flat and square.



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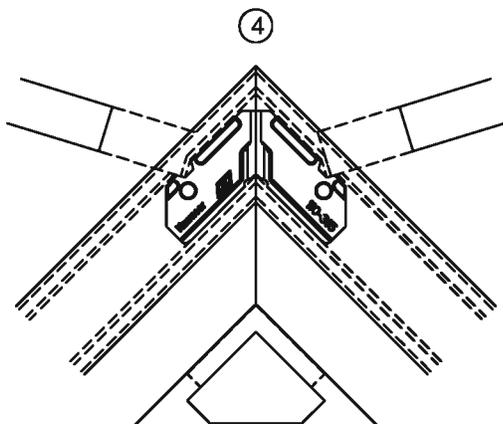
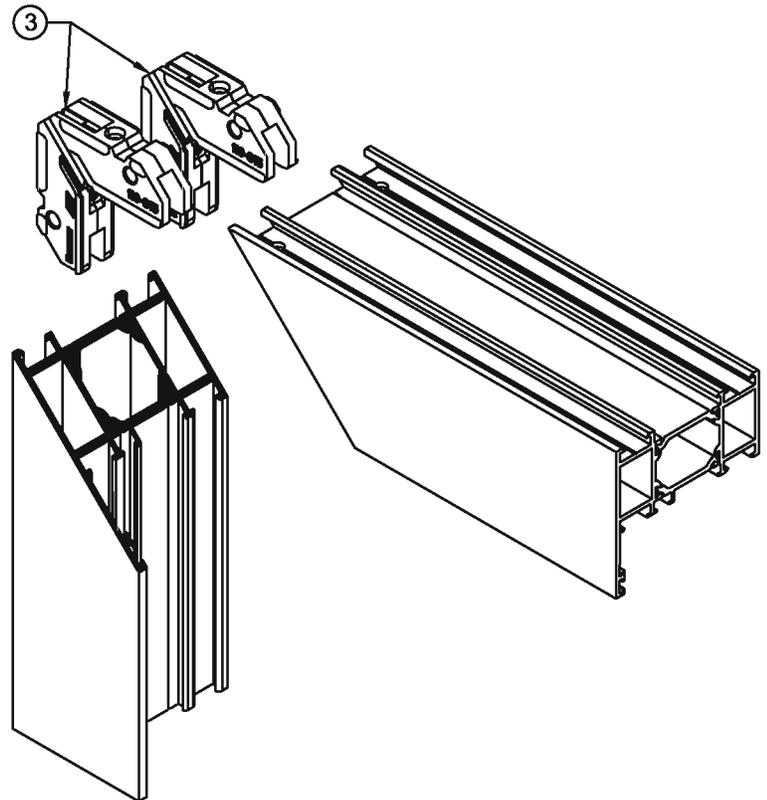
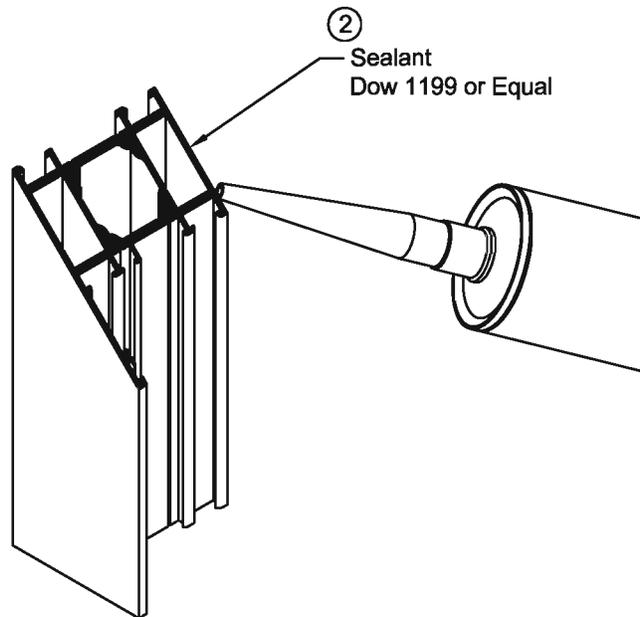
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- ① Before applying any sealant ensure that all surfaces of mitered ends and brackets are free from dust, grease, and burrs. Clean all mating surfaces with isopropyl alcohol on a clean cloth.
- ② Apply sealant (Dow Corning 1199 or equal) to each mitered end of frame member as shown.
- ③ Insert corner brackets 30-4635 (248415) into each hollow of same member at each end. Guide corner bracket ends into the hollows of both adjacent members and slide the members together tight.

Repeat Steps 2 & 3 for opposite member.

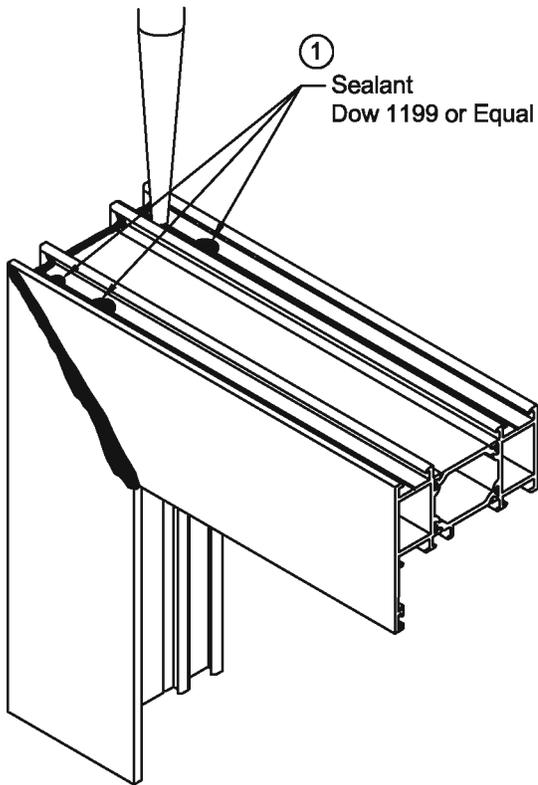
- ④ Place frame corner into the staking machine and operate the machine according to manufacturer's instructions. Ensure that assembled frame is flat and square.

For general setup of staking knives,
See Fab Drawing IF-1207-02 (D248004).



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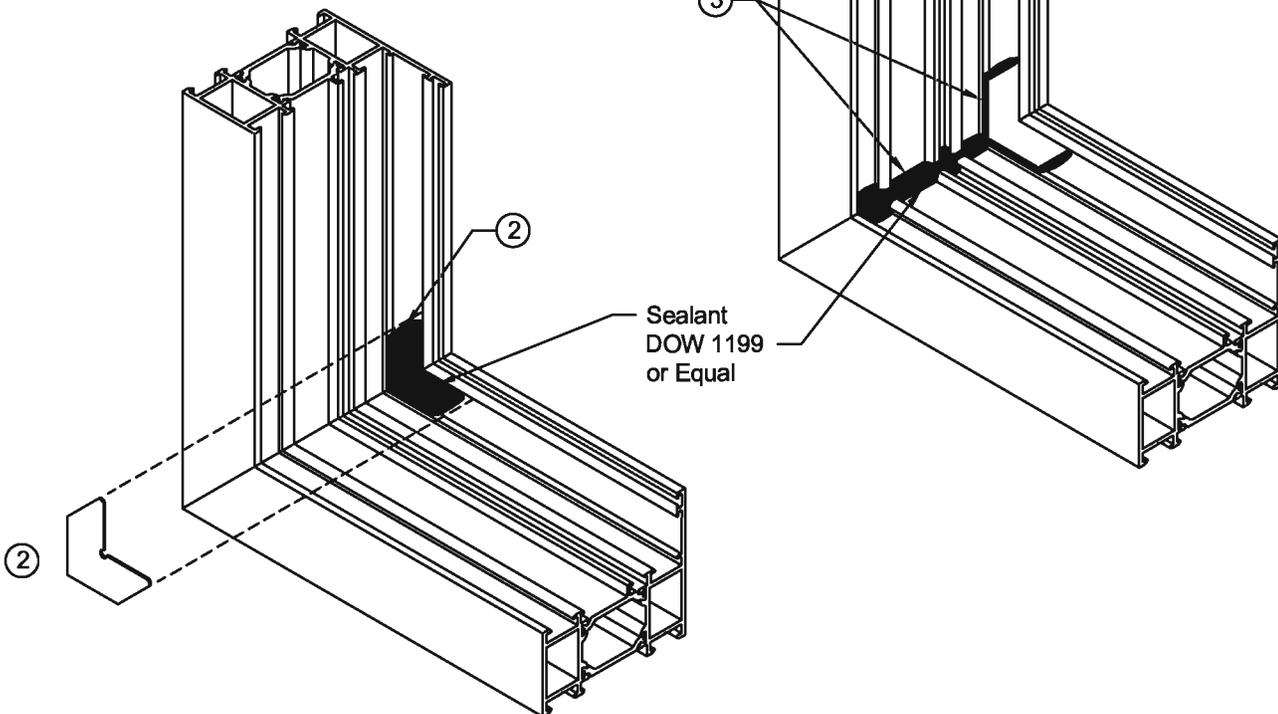
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① Using the pre-drilled 3/16" holes, inject sealant until it oozes out of frame joints. Wipe away any excess sealant IMMEDIATELY from all exterior surfaces, taking care to clean away from glazing bead and gasket grooves. Also, apply sealant over all fastener heads or stake recesses.

② Back seal glazing leg with sealant as shown for corner brace 30-4633 (248413). Set corner brace into sealant and push it towards the gasket reglet corner.

③ Back seal entire interior mitered joint with sealant, again taking care not to fill glazing bead and gasket reglets.

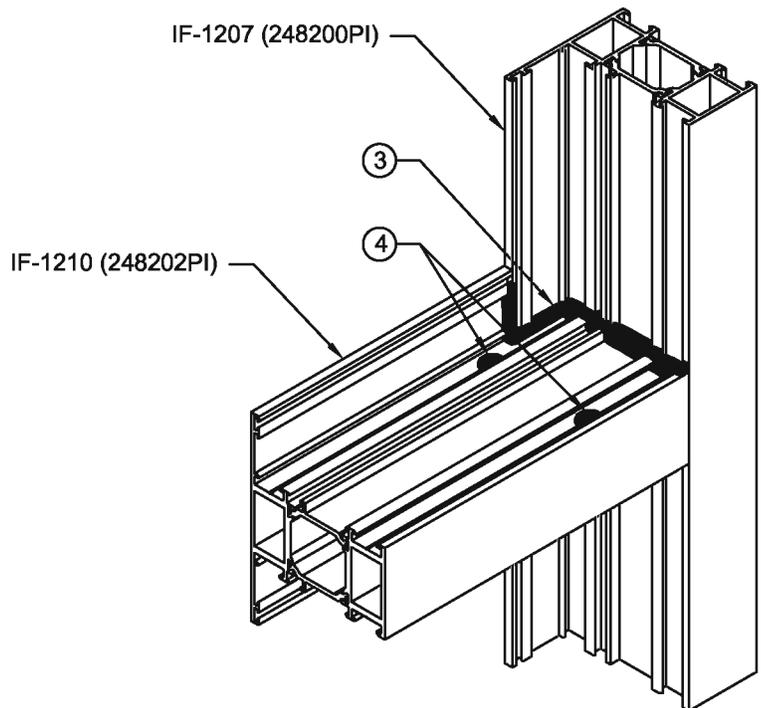
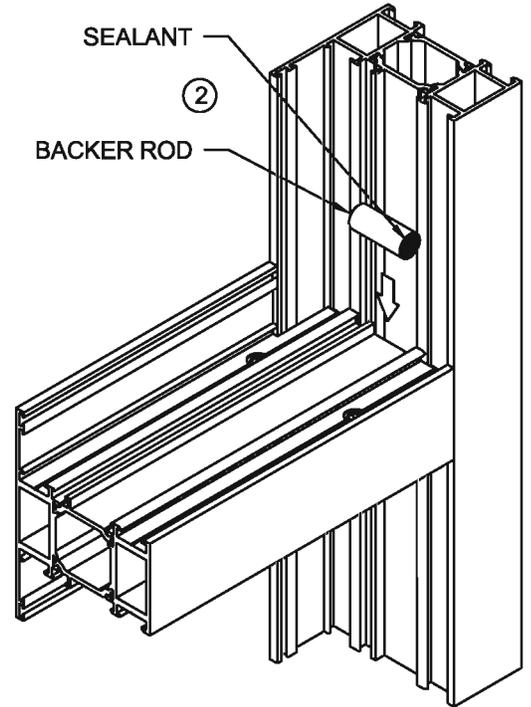


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- ① Before applying any sealant ensure that all surfaces are free from dust, grease, and burrs. Clean all mating surfaces with isopropyl alcohol on a clean cloth.
- ② Cut about a 1" piece of 3/8" diameter backer rod, apply sealant to each end, and insert it into the gap between the vertical and horizontal polyamide.
- ③ Apply and tool sealant to ALL intermediate mullion joints as shown.
- ④ Seal over exposed fastener heads as shown.

Standard Intermediate mullion IF-1210 (248202PI) with frame IF-1207 (248200PI) shown; others similar.

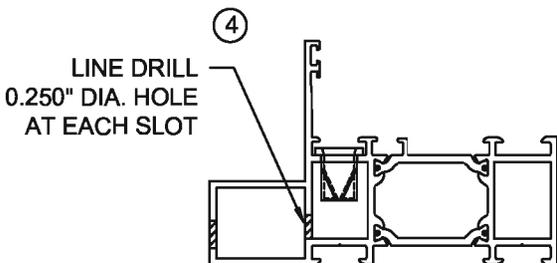
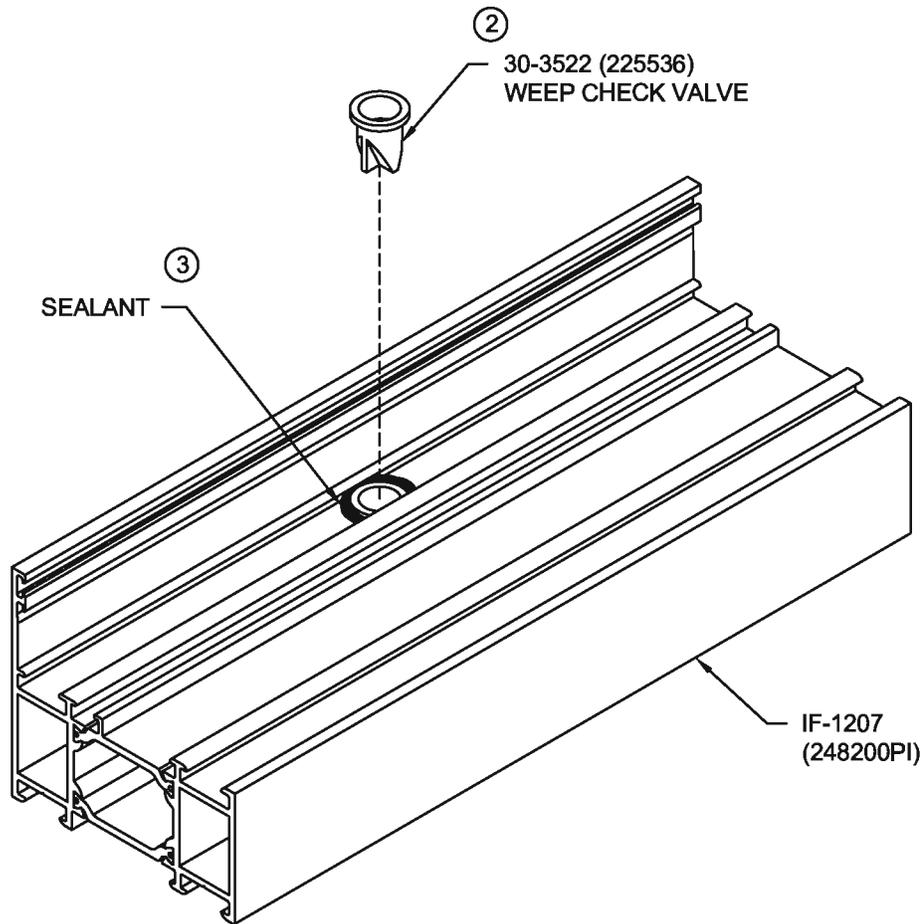
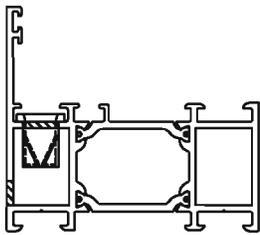
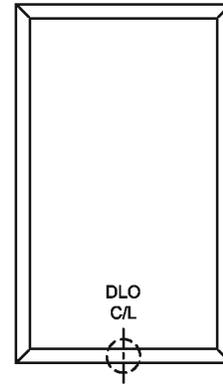


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Each fixed unit must have a weep check valve 30-3522 (225536) inserted at the sill in order to weep properly.

- ① Before applying any sealant ensure that all contact surfaces are free from dust, grease, and burrs. Clean all surfaces with isopropyl alcohol on a clean cloth.
- ② Carefully insert valve into pre-drilled hole at exterior chamber of sill.
- ③ Apply sealant where valve meets sill member as shown.



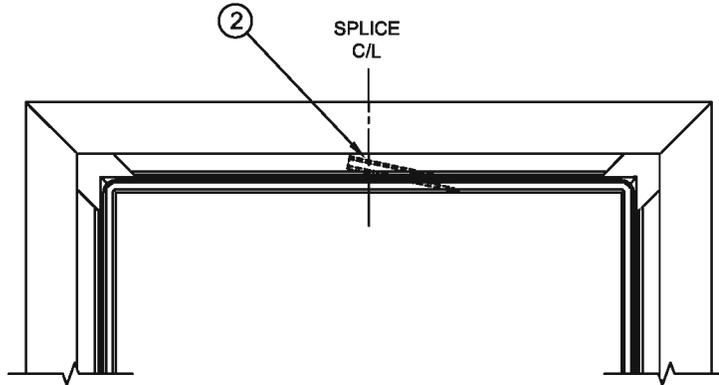
- ④ **NOTE:** When using frame members IF-1229 (248215) & IF-1231 (248217), 0.250" dia. holes must be line drilled into the frame at the center line of each slot as shown.

BE CAREFUL NOT TO BREACH THE FRAME CAVITY!

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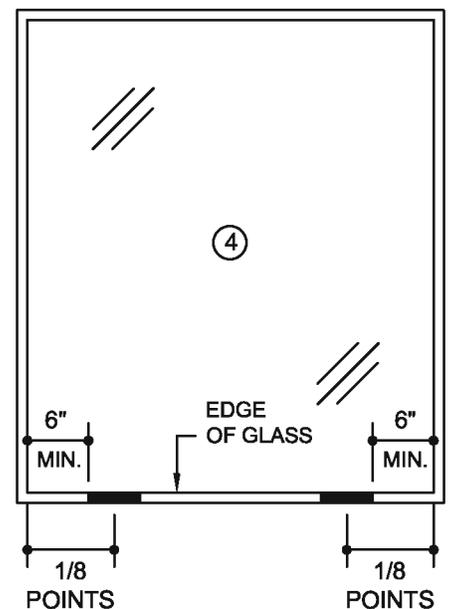
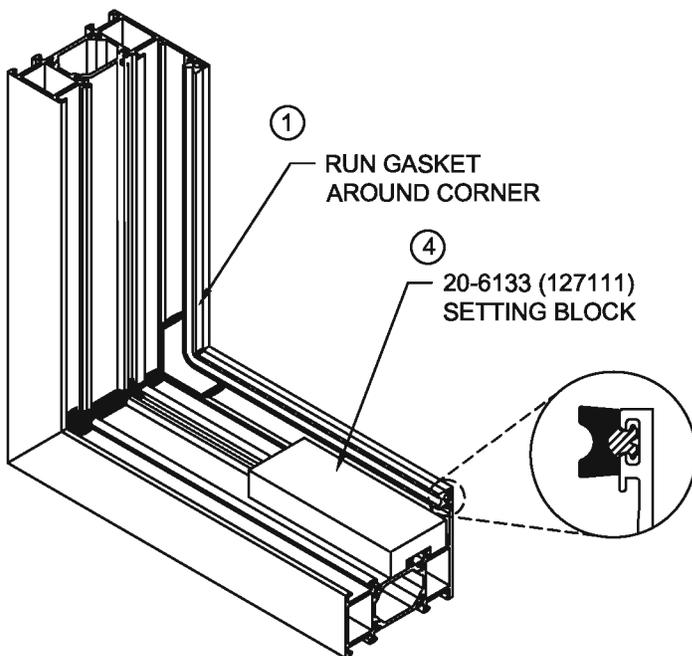
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- ① Push in exterior glazing gasket 20-4278 (127115) into glazing leg reglet starting at centerline of DLO at top of vent/window. Be careful NOT TO STRETCH gasket. Wrap gasket around corner making sure gasket is crowded and firmly seated in reglet. Continue pushing in gasket around window in same manner.
- ② Leave gasket end about 1/2" long and cut it squarely. Butt remaining gasket end tight against start end and push in remaining gasket.



FRAME MUST BE ALIGNED AND SQUARE BEFORE GLAZING

- ③ Glazing surfaces (window and glass) must be free from dust, grease, and burrs. Clean all surfaces with isopropyl alcohol on a clean cloth.
- ④ **SETTING BLOCKS**
Position glass setting blocks at 1/8 points for D.L.O.'s up to 48" wide. For D.L.O.'s equal to or wider than 48", place setting blocks 6" from the glass edge. Set blocks in sealant.



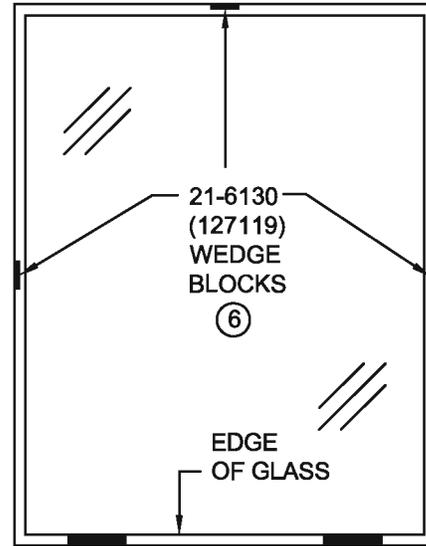
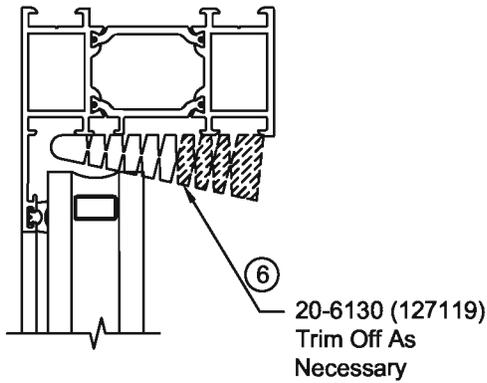
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⑤ Gently set glass into window while keeping glass against setting blocks. Center glass in the opening.

⑥ **GLAZING WEDGES**

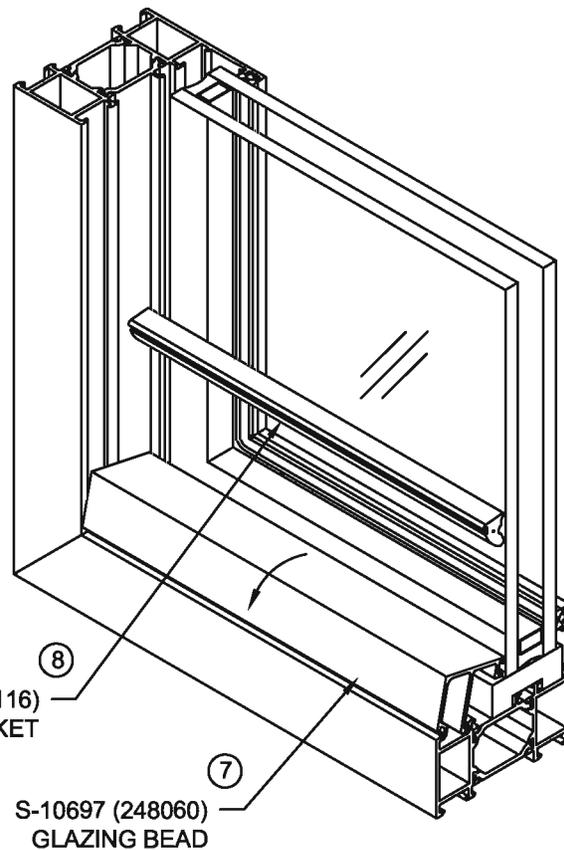
Press 20-6130 (127119) wedge blocks into jamb and head until glass is snug. Trim off excess wedge as necessary. For windows with DLO 24" or less, use one wedge block. For windows with DLO over 24", use 2 wedge blocks.



⑦ Snap in horizontal glazing beads and then vertical beads (248060) by engaging bead hook and applying downward pressure toward frame as shown.

⑧ Cut interior wedge gasket 20-4279 (127116) to DLO plus 1/4" per foot of length. Push in gasket at each end first. Insert remaining gasket starting at the middle of gasket length and work towards each end.

NOTE: For proper compression thicker wedge gasket 20-4280 (127117) may be required.



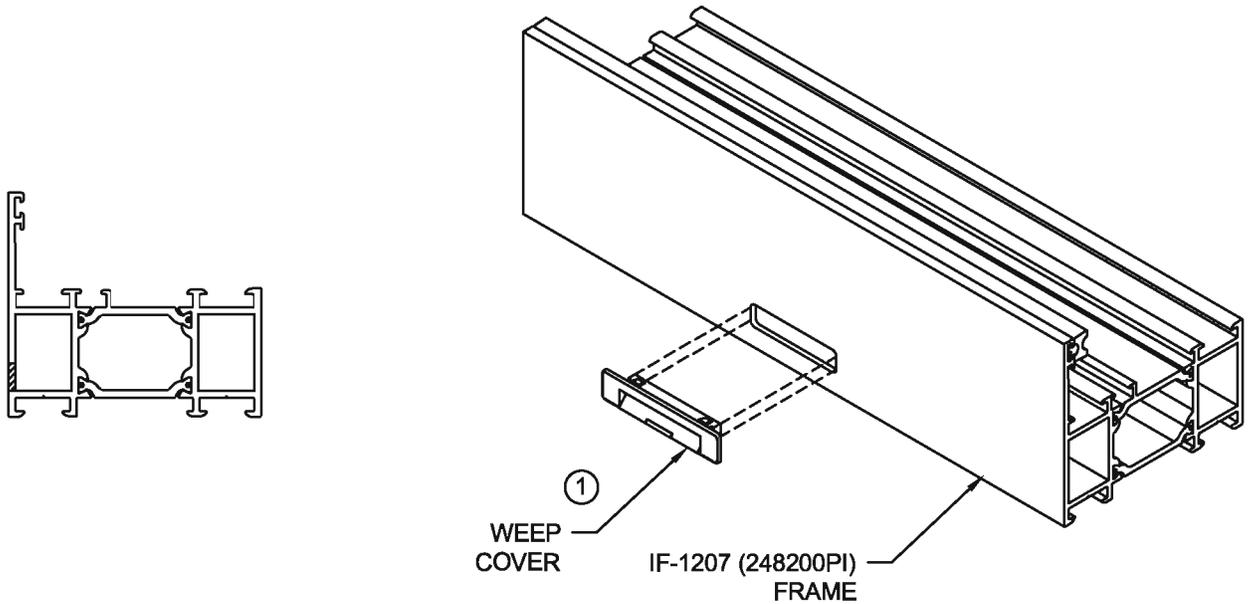
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Optional weep covers are available for fixed windows.

To avoid damage or loss weep covers should be installed just prior to window installation.

- ① Attach weep cover 30-4658 (248445 thru 248447) to weep slots on frame as shown.



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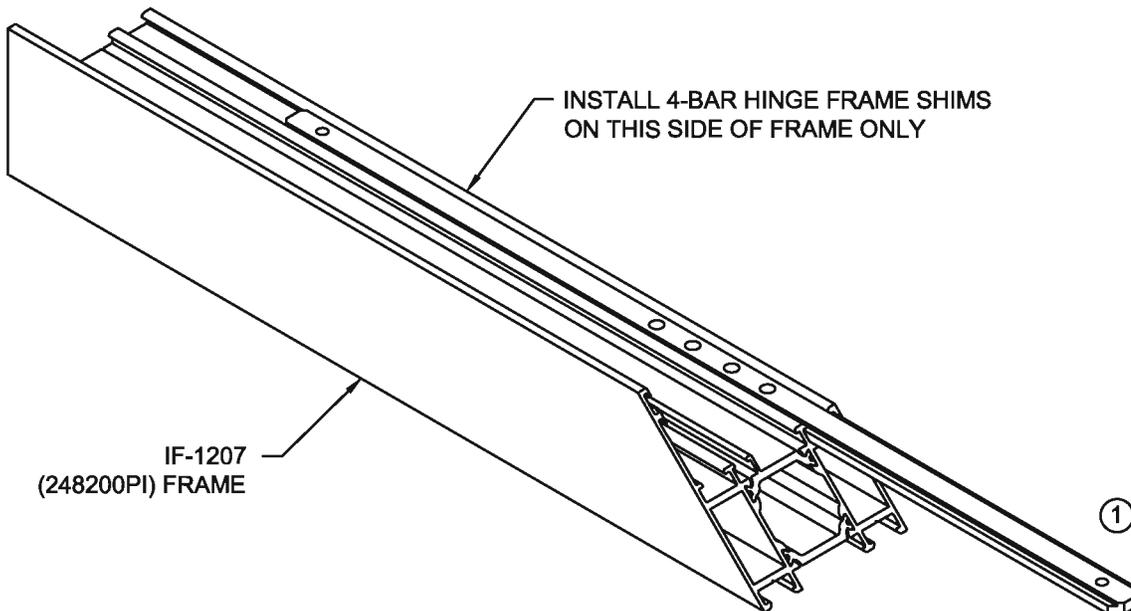
- ① Identify which frame members are to receive 4-bar hinges. Insert shim into frame member Euro-Groove track opposite glazing leg as shown.

Frame 4-bar hinge shims are non-handed and may be inserted from either end.

NOTE:

FRAME 4-BAR HINGE SHIMS MUST BE INSTALLED BEFORE WINDOW FRAMES ARE COMPLETELY ASSEMBLED. FAILURE TO DO SO WILL PREVENT INSTALLATION OF 4-BAR HINGES.

4-BAR HINGE FRAME SHIM	
PART #	DESCRIPTION
30-4736 (248524)	10" PROJECT IN
30-4738 (248538)	12" CASEMENT INSWING
30-4741 (248526)	16" PROJECT IN
30-4743 (248529)	24" PROJECT IN

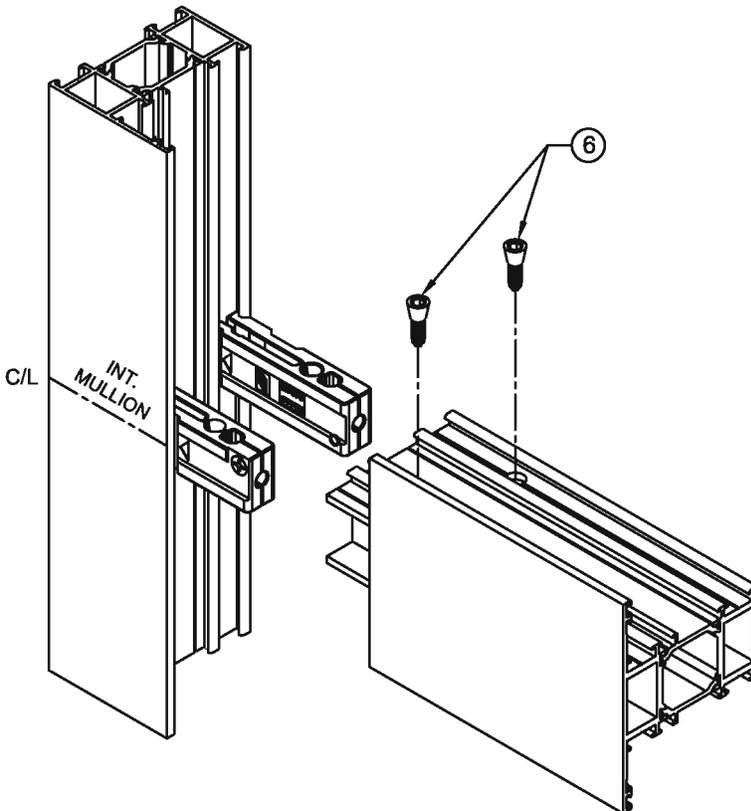
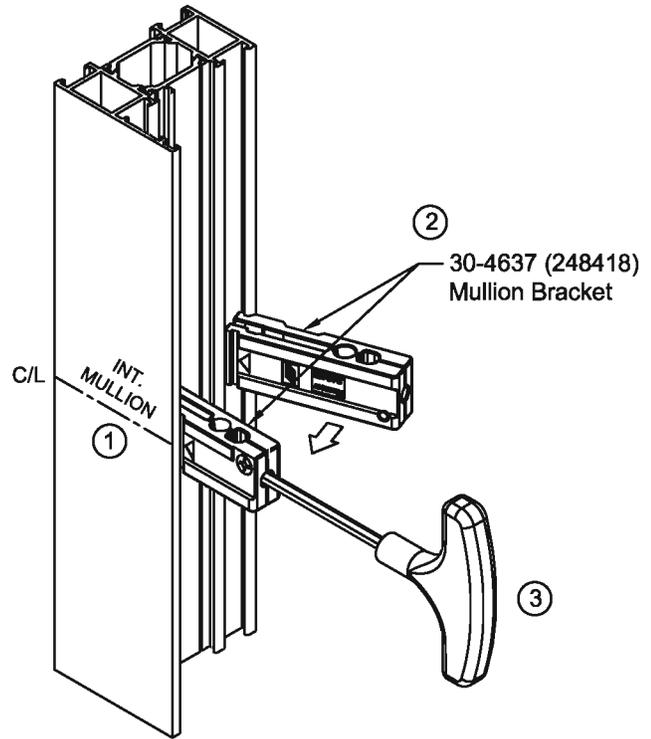


NOTE: 4 Bar Hinge Shim Installation Shown; Friction Adjuster Installation Similar.

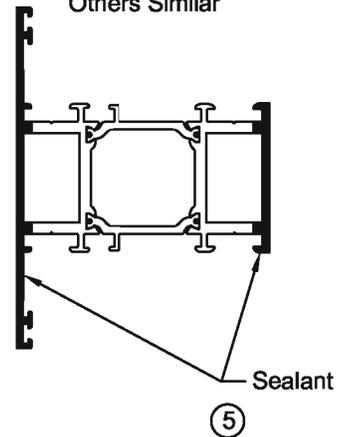
Intermediate mullions must be attached to frame prior to joining frame corners.

- ① Using a pencil, mark the center line of intermediate mullion along both exterior and interior face of frame.
- ② Engage one end of intermediate mullion bracket 30-4637 (248418) at feet and rock into Euro-groove. Align indicator arrow on bracket with center line of mullion.
- ③ Insert 4mm hex key into access hole at end of bracket and tighten bracket set screw.
- ④ Before applying any sealant ensure that all surfaces are free from dust, grease, and burrs. Clean all mating surfaces with isopropyl alcohol on clean cloth.
- ⑤ Apply sealant (Dow Corning 1199 or equal) to each coped end of intermediate mullion as shown.
- ⑥ Slide intermediate mullion over brackets and fasten with bracket fasteners 15-0820 (248444). Tighten fasteners using 4mm hex key. Ensure that mullion joint is flush.

Repeat Steps 1 through 6 on opposite end of mullion.



IF-1210 (248202PI)
Shown
Others Similar

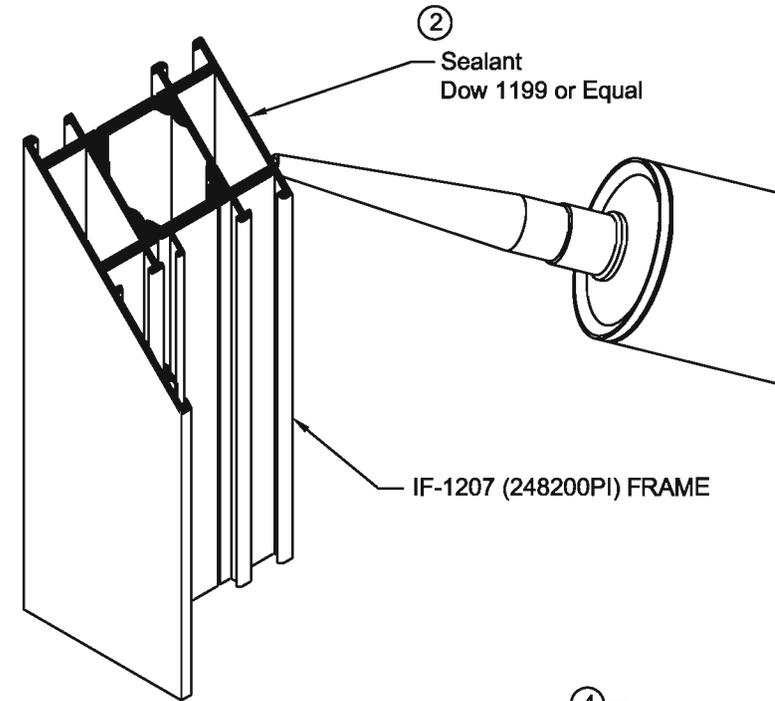


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SECTION III PI/ISC WINDOW ASSEMBLY & GLAZING
ASSEMBLE FRAME - SCREW APPLIED CORNER BRACKET

E.C. 95506-024



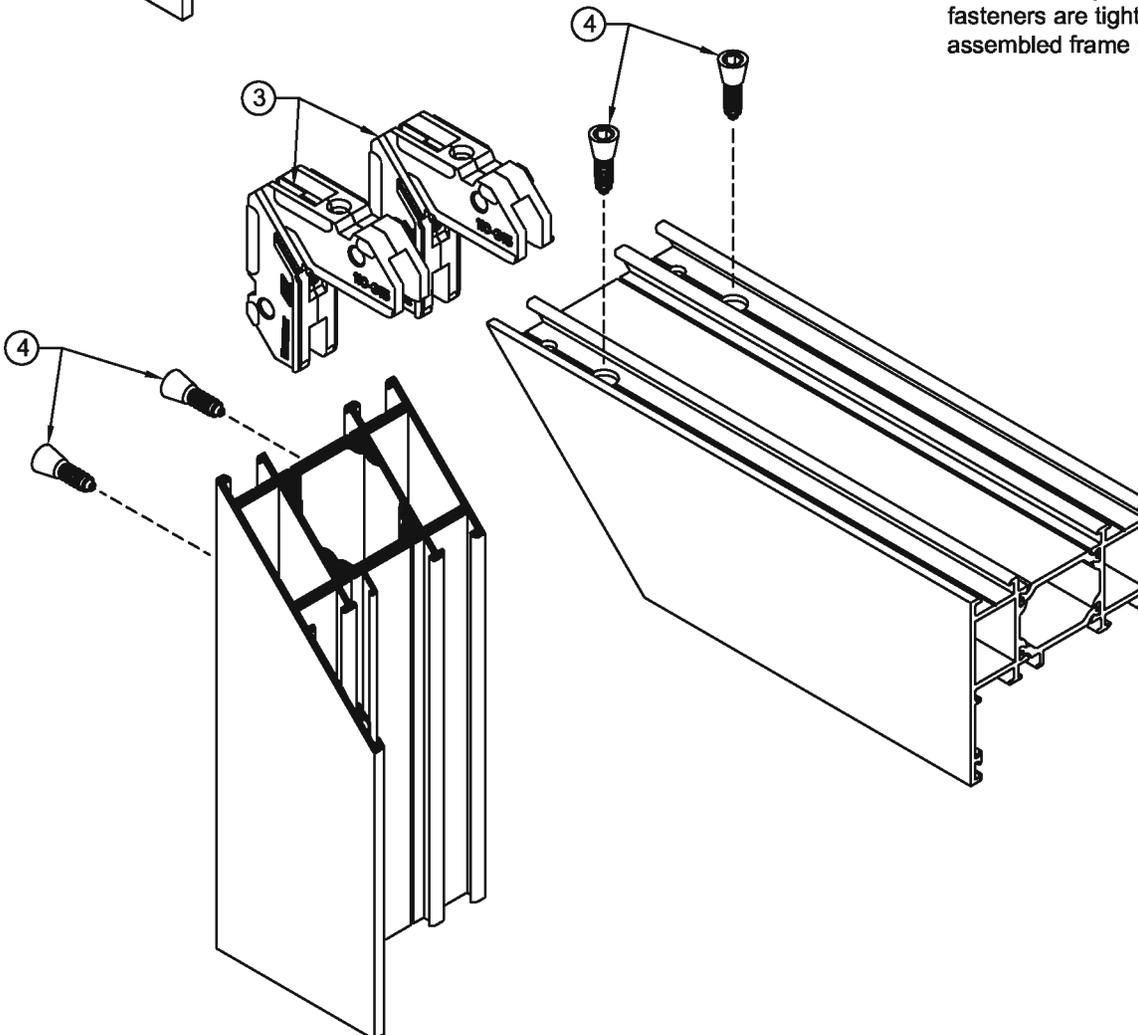
① Before applying any sealant ensure that all surfaces of mitered ends and brackets are free from dust, grease, and burrs. Clean all mating surfaces with isopropyl alcohol on a clean cloth.

② Apply sealant (Dow Corning 1199 or equal) to each mitered end of frame member IF-1207 (248200PI) as shown.

③ Insert corner brackets 30-4635 (248415) into each hollow of same member at each end. Guide corner bracket ends into the hollows of both adjacent members and slide the members together tight.

Repeat Steps 2 & 3 for opposite member.

④ Fasten frame members to corner brackets with bracket fasteners 15-0820 (248444). Tighten each fastener one side at a time using 4mm hex key until all fasteners are tight. Ensure that assembled frame is flat and square.



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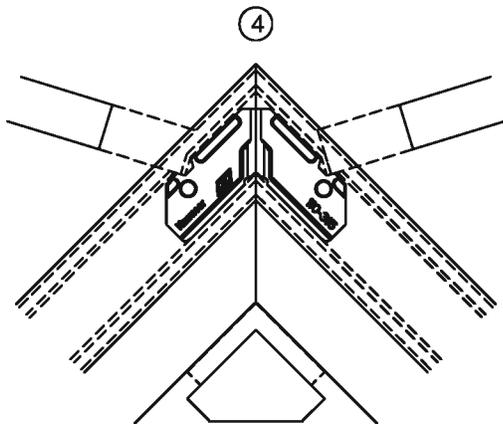
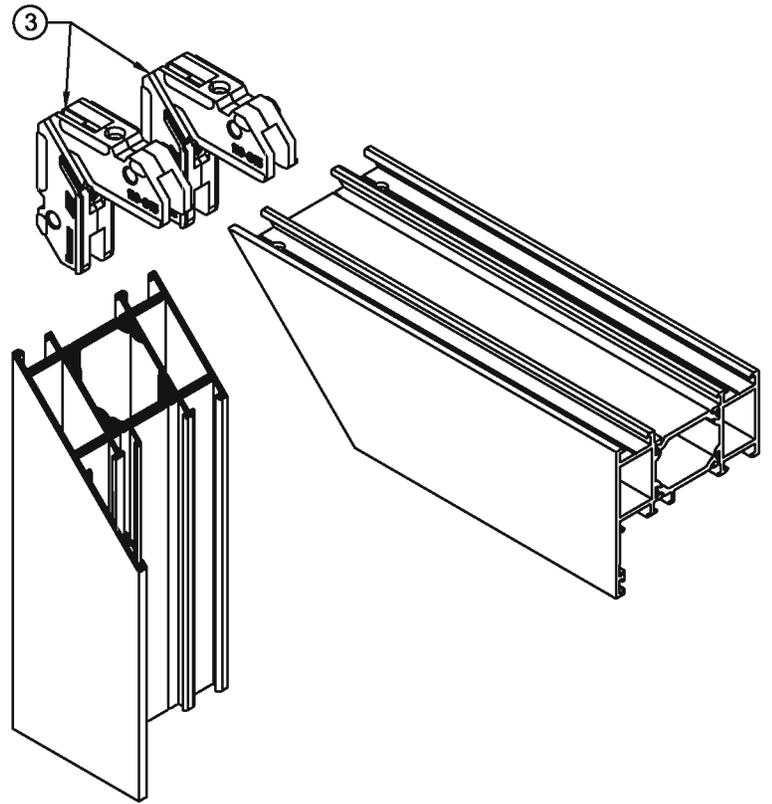
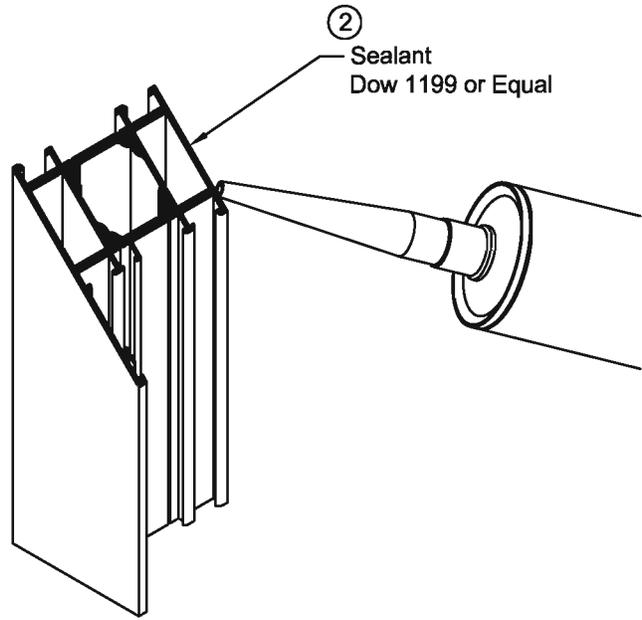
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- ① Before applying any sealant ensure that all surfaces of mitered ends and brackets are free from dust, grease, and burrs. Clean all mating surfaces with isopropyl alcohol on a clean cloth.
- ② Apply sealant (Dow Corning 1199 or equal) to each mitered end of frame member as shown.
- ③ Insert corner brackets 30-4635 (248415) into each hollow of same member at each end. Guide corner bracket ends into the hollows of both adjacent members and slide the members together tight.

Repeat Steps 2 & 3 for opposite member.

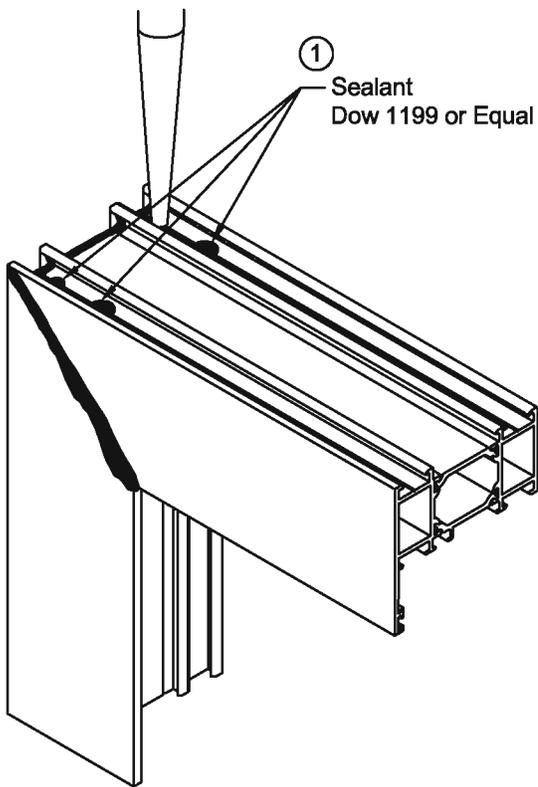
- ④ Place frame corner into the staking machine and operate the machine according to manufacturer's instructions. Ensure that assembled frame is flat and square.

For general setup of staking knives,
See Fab Drawing IF-1207-02 (D248004).

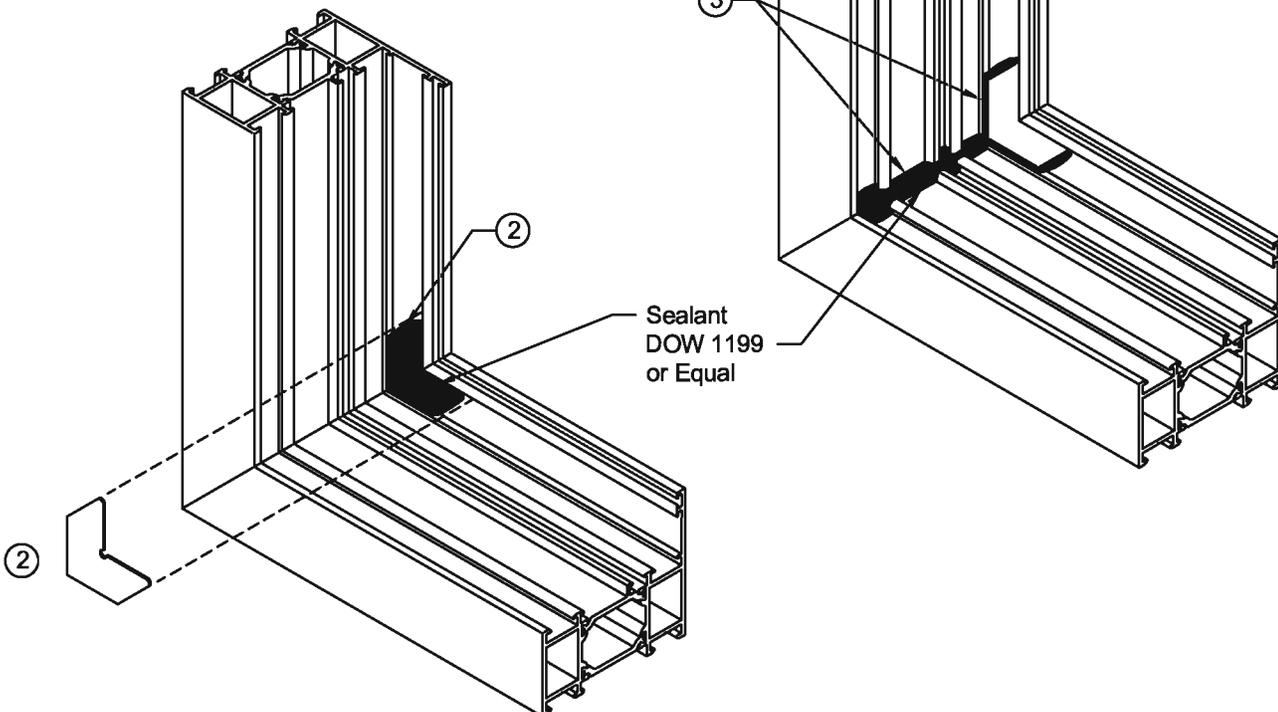


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- ① Using the pre-drilled 3/16" holes, inject sealant until it oozes out of frame joints. Wipe away any excess sealant IMMEDIATELY from all exterior surfaces, taking care to clean away from glazing bead and gasket grooves. Also, apply sealant over all fastener heads or stake recesses.
- ② Back seal glazing leg with sealant as shown for corner brace 30-4633 (248413). Set corner brace into sealant and push it towards the gasket reglet corner.
- ③ Back seal entire interior mitered joint with sealant, again taking care not to fill glazing bead and gasket reglets.

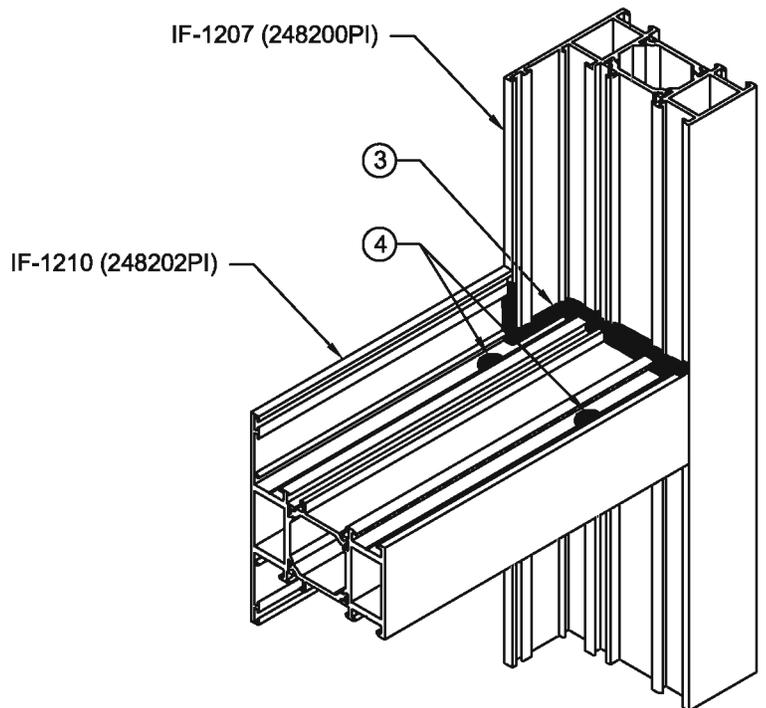
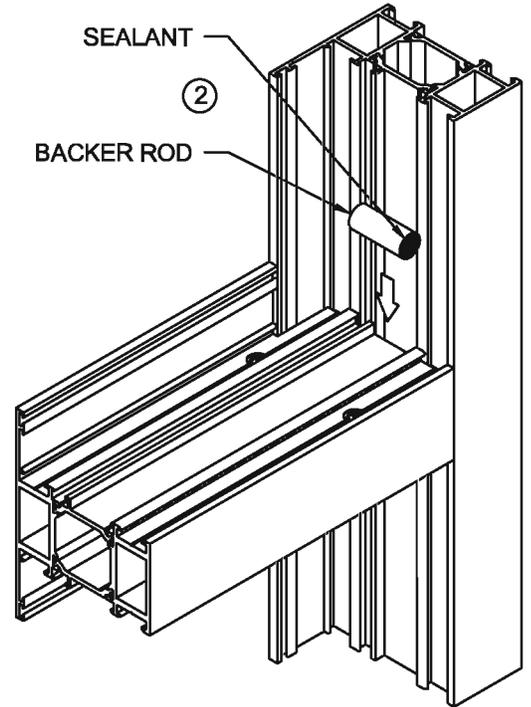


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- ① Before applying any sealant ensure that all surfaces are free from dust, grease, and burrs. Clean all mating surfaces with isopropyl alcohol on a clean cloth.
- ② Cut about a 1" piece of 3/8" diameter backer rod, apply sealant to each end, and insert it into the gap between the vertical and horizontal polyamide.
- ③ Apply and tool sealant to ALL intermediate mullion joints as shown.
- ④ Seal over exposed fastener heads as shown.

Standard Intermediate mullion IF-1210 (248202PI) with frame IF-1207 (248200PI) shown; others similar.



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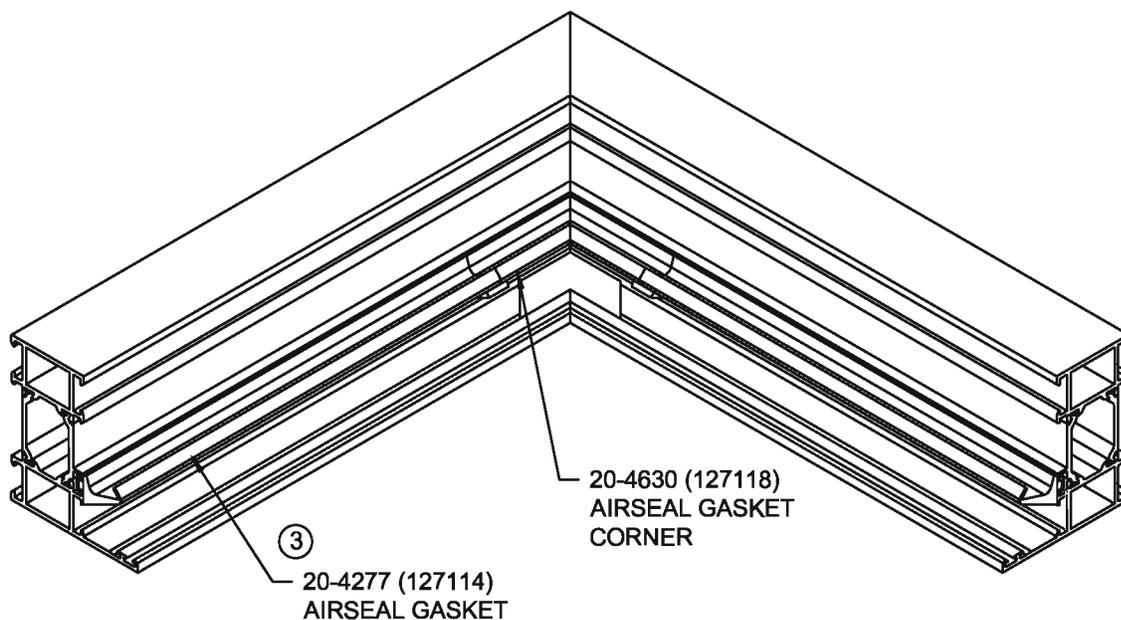
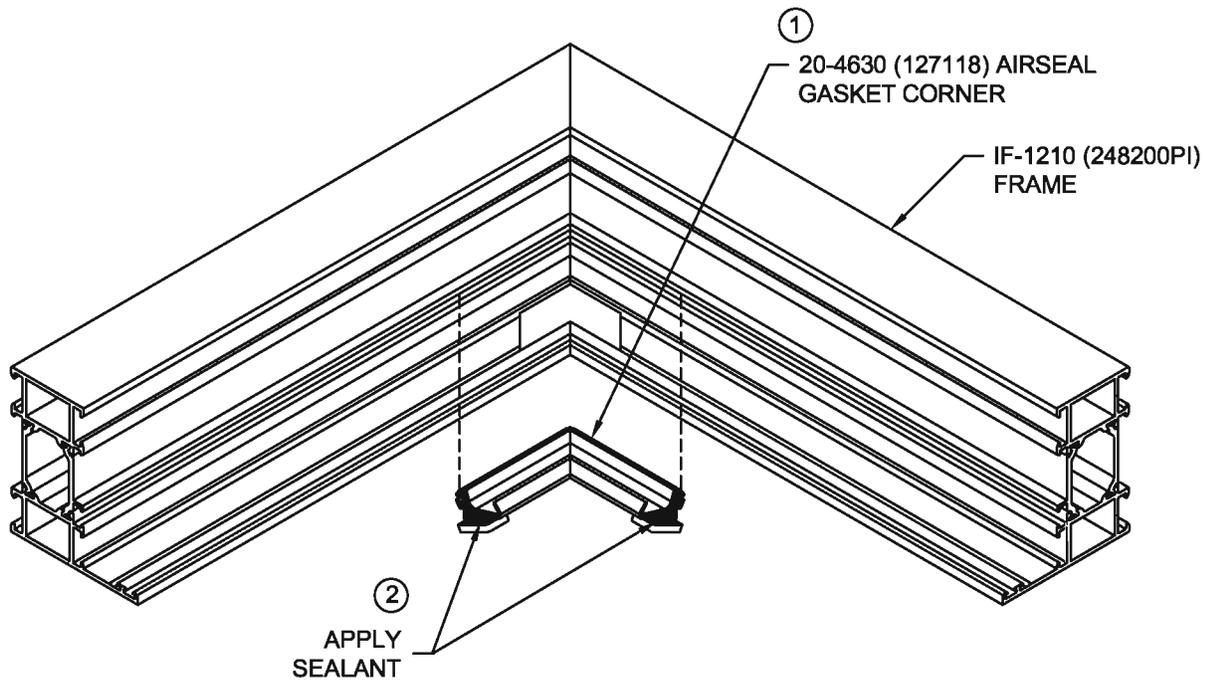
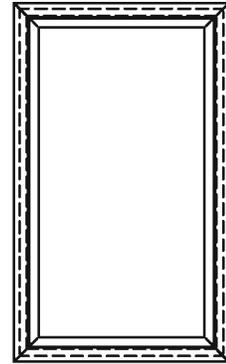
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Project in/inswing casement windows require airseal gasket to be installed on the frame.

- 1 Press airseal gasket corner 20-4630 (127118) into frame reglet at each corner as shown.

Airseal gaskets run between each gasket corner end. Cut airseal gasket 20-4277 (127114) to dimension between gasket corner ends plus 1/4" per foot of length.

- 2 Apply sealant to the gasket corner ends and tabs as shown.
- 3 Insert airseal gasket into reglet at each end first. Insert rest of gasket starting at the middle of gasket length and work towards each end. Tool excess sealant at corner ends.



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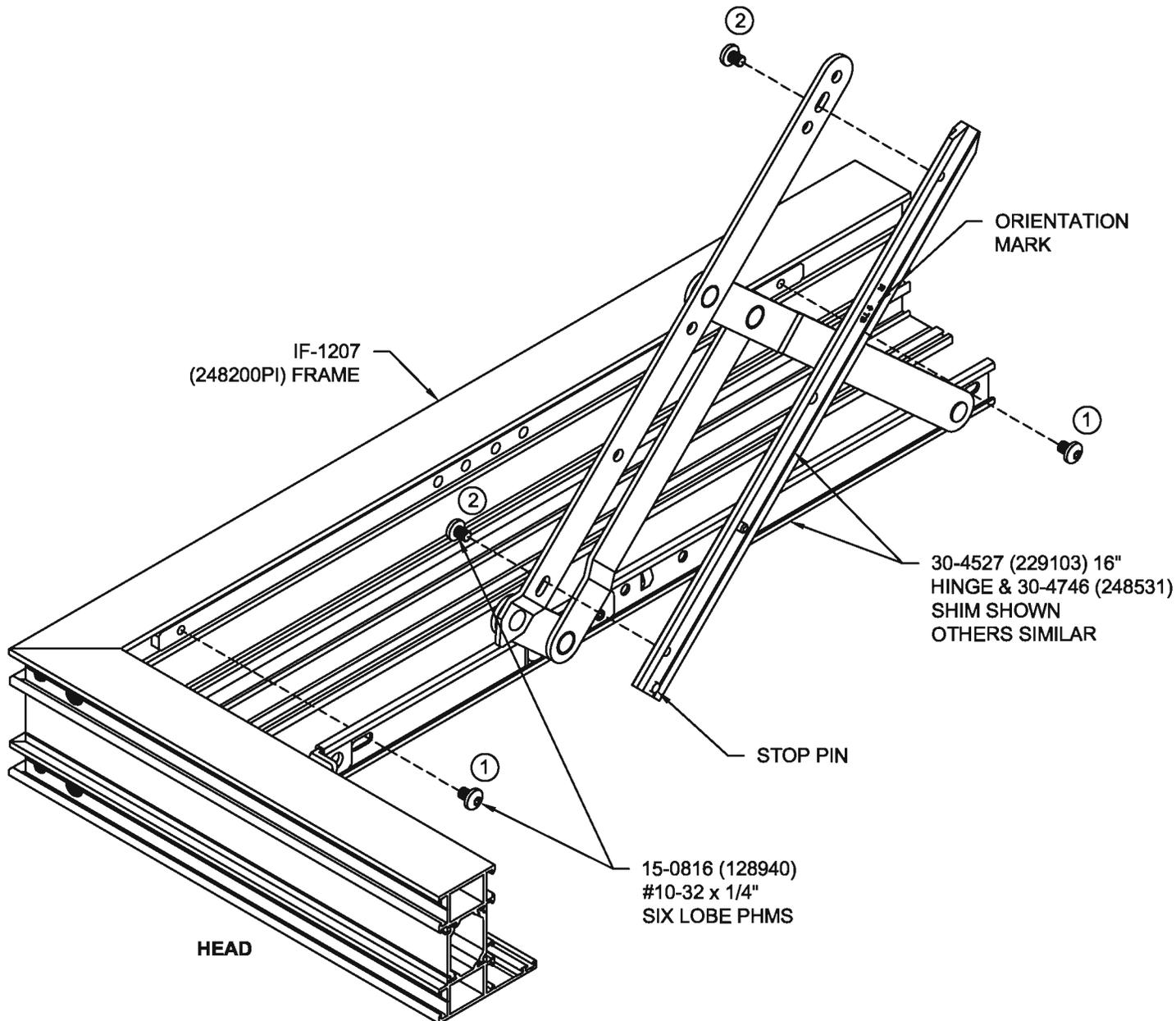
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Fully extend 4-bar hinges and orient them in proper position.

- ① Loosely attach 4-bar hinges to frame shims previously installed with #10-32 x 1/4" SIX LOBE PHMS 15-0816 (128940) fasteners as shown. Slide the 4-bar hinges and shims towards the frame corner until it bottoms out and tighten fasteners.
- ② Vent portion of 4-bar hinge shims are handed and stamped R or L as viewed from the exterior along with an orientation arrow. The arrow should always point towards the frame. Loosely attach vent portion of 4-bar hinge shims with #10-32 x 1/4" SIX LOBE PHMS 15-0816 (128940) fasteners as shown.

NOTE: Hinges for inswing windows are installed with frame exterior facing down as shown here.

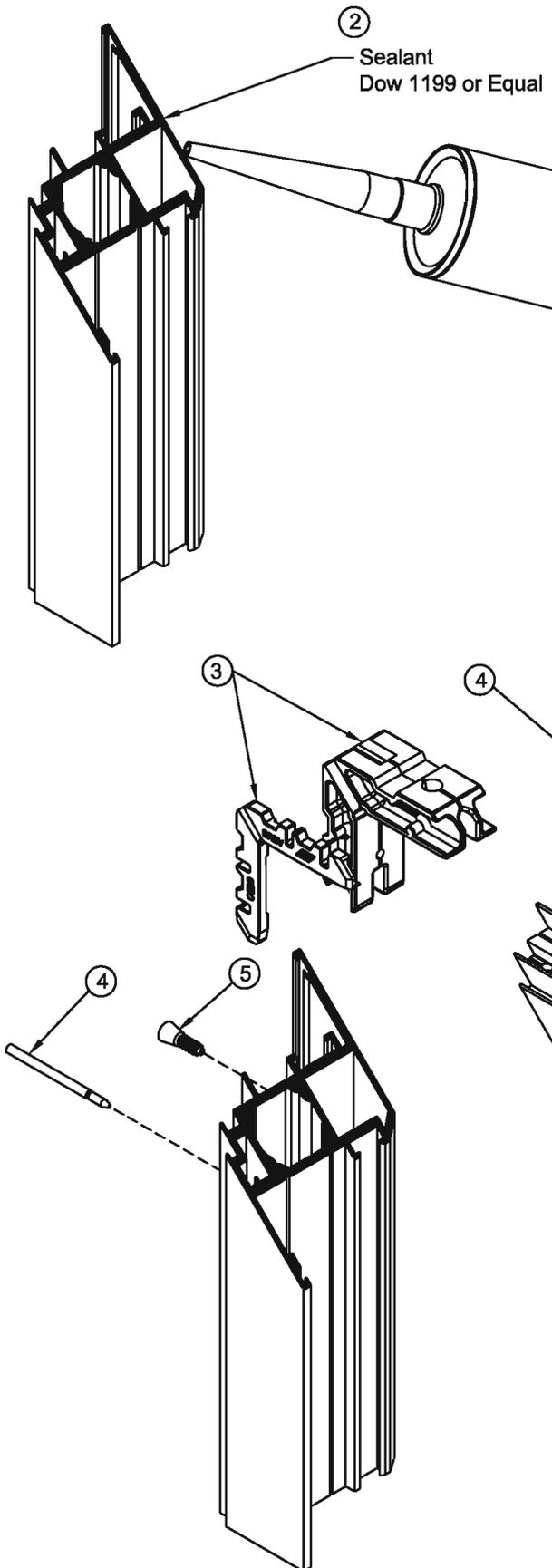


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SECTION III PI/ISC WINDOW ASSEMBLY & GLAZING
ASSEMBLE VENT - PINNED & SCREW APPLIED CORNER BRACKET

E.C. 95506-024



① Before applying any sealant ensure that all surfaces of mitered ends and brackets are free from dust, grease, and burrs. Clean all mating surfaces with isopropyl alcohol on a clean cloth.

② Apply sealant (Dow Corning 1199 or equal) to each mitered end of vent member IF-1219 (248207) as shown.

③ Insert corner bracket 30-4636 (248416) into exterior hollow and corner bracket 30-4656 (248440) into interior hollow of same member at each end. Guide corner bracket ends into the hollows of both adjacent members and slide the members together tight.

Repeat Steps 2 & 3 for opposite member.

④ To attach vent member to corner bracket at exterior, hammer in bracket pin 30-4657 (248442) until it bottoms out and break away remaining stem.

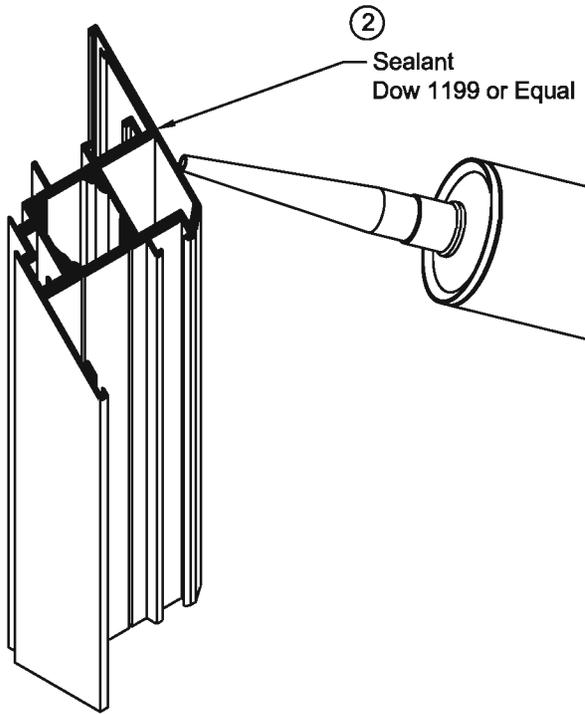
⑤ At interior fasten vent to corner bracket with bracket fastener 15-0820 (248444). Tighten each fastener one side at a time using 4mm hex key until all fasteners are tight.

Ensure that assembled vent is flat and square.

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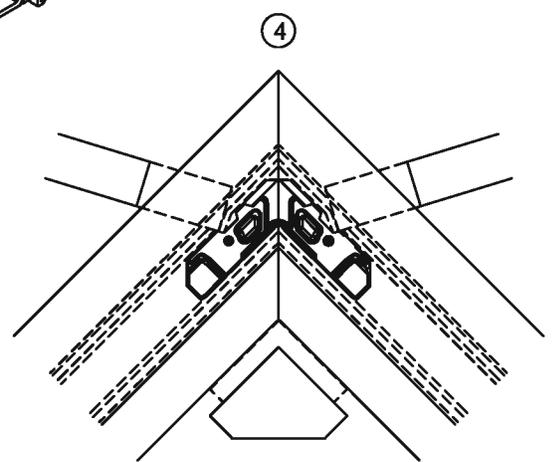
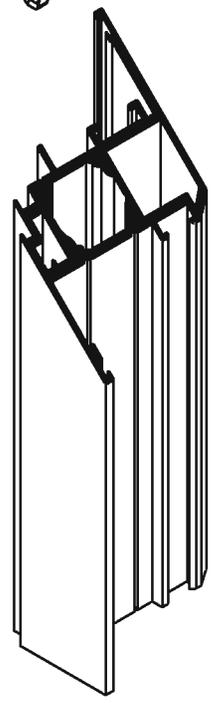
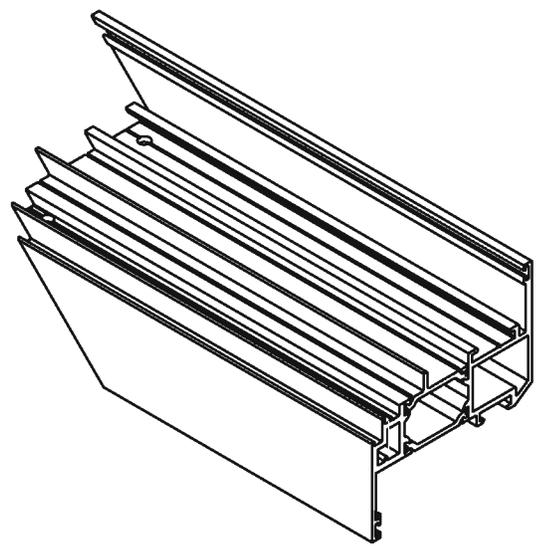
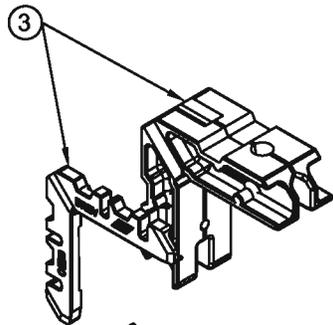


- ① Before applying any sealant ensure that all surfaces of mitered ends and brackets are free from dust, grease, and burrs. Clean all mating surfaces with isopropyl alcohol on a clean cloth.
- ② Apply sealant (Dow Corning 1199 or equal) to each mitered end of vent member IF-1219 (248207) as shown.
- ③ Insert corner bracket 30-4636 (248416) into exterior hollow and corner bracket 30-4656 (248440) into interior hollow of same member at each end. Guide corner bracket ends into the hollows of both adjacent members and slide the members together tight.

Repeat Steps 2 & 3 for opposite member.

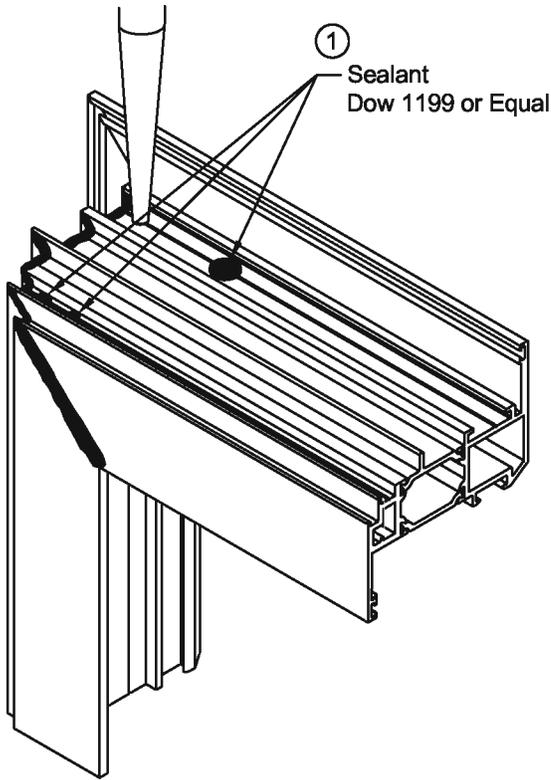
- ④ Place vent corner into the staking machine and operate the machine according to manufacturer's instructions. Ensure assembled vent is flat and square.

For general setup of staking knives, See Fab Drawing IF-1219-02 (D248006).



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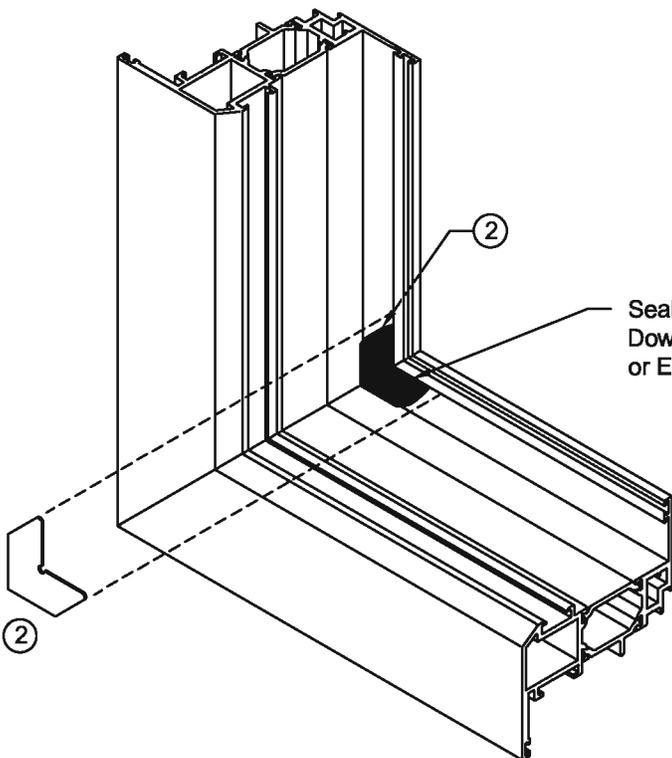
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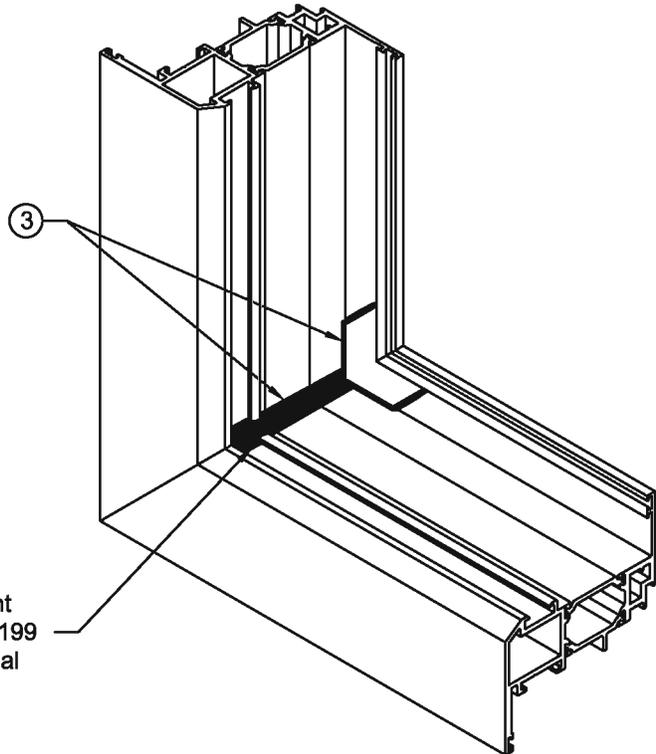
① Using the pre-drilled 3/16" holes, inject sealant until it oozes out of frame joints. Wipe away any excess sealant IMMEDIATELY from all exterior surfaces, taking care to clean away from glazing bead and gasket grooves. Also, apply sealant over ends of pins or stake recesses.

② Back seal glazing leg with sealant as shown for corner brace 30-4633 (248413). Set corner brace into sealant and push it towards the gasket reglet corner.

③ Back seal entire interior mitered joint with sealant, again taking care not to fill glazing bead and gasket reglets.



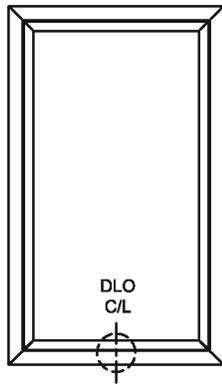
Sealant Dow 1199 or Equal



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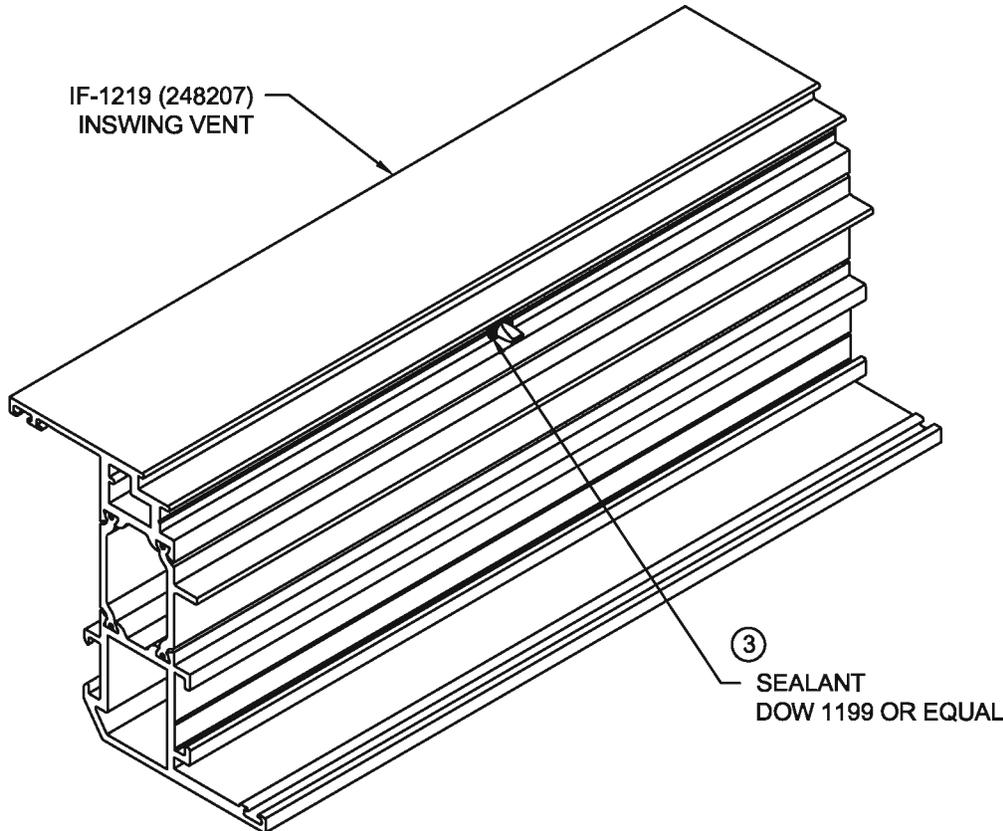
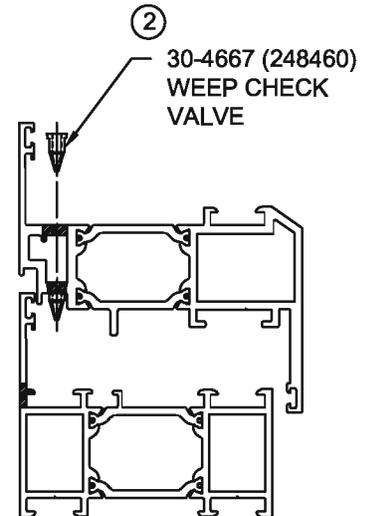
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Each project in/inswing casement vent must have a weep check valve 30-4667 (248460) inserted at the sill in order to weep properly.

- ① Before applying any sealant ensure that all contact surfaces are free from dust, grease, and burrs. Clean all surfaces with isopropyl alcohol on a clean cloth.
- ② Attach weep check valve to end of small screwdriver. Insert valve through clear hole at top of vent sill and into smaller hole at bottom as shown.
- ③ Apply sealant where valve meets sill member as shown to ensure a water tight seal.



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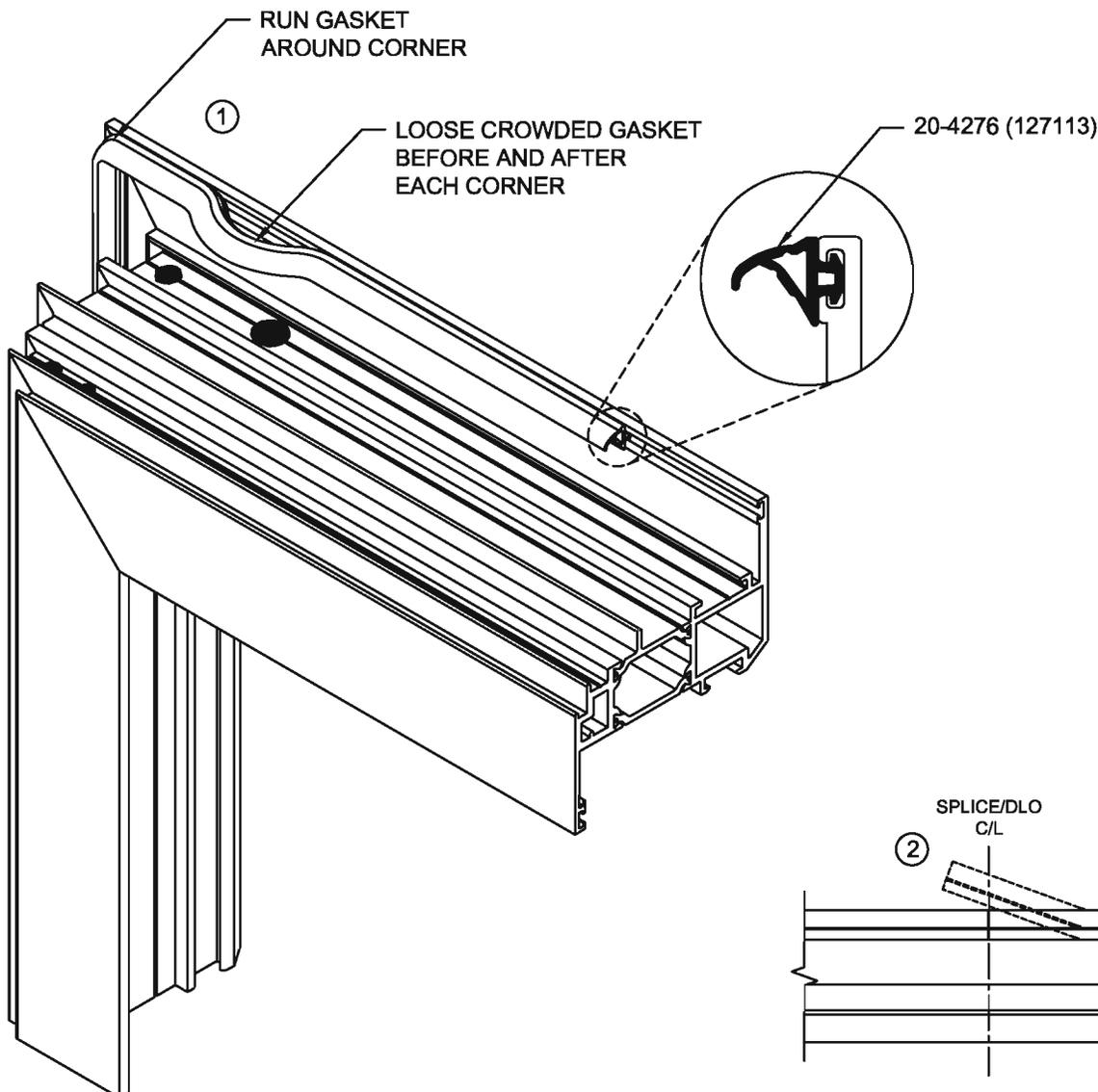
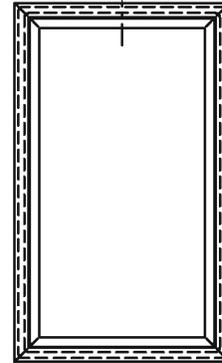
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SECTION III PI/ISC WINDOW ASSEMBLY & GLAZING
INSERT VENT WEATHERING

E.C. 95506-024

Project in/inswing casement windows require weathering to be installed on the vent only.

- ① Push in weathering gasket 20-4276 (127113) into inswing vent IF-1219 (248207) interior leg reglet starting at the centerline of DLO at top of vent as shown. Be careful NOT TO STRETCH gasket. Leave about 2" of gasket loose and crowded before corner. Wrap gasket around corner making sure gasket dart is fully engaged in reglet. Again, leave about 2" of gasket loose and crowded after corner. Continue pushing in gasket around vent in same manner.
- ② Square cut gasket about 1/2" long, butt against start end and complete installation.

SPLICE/DLO
C/L

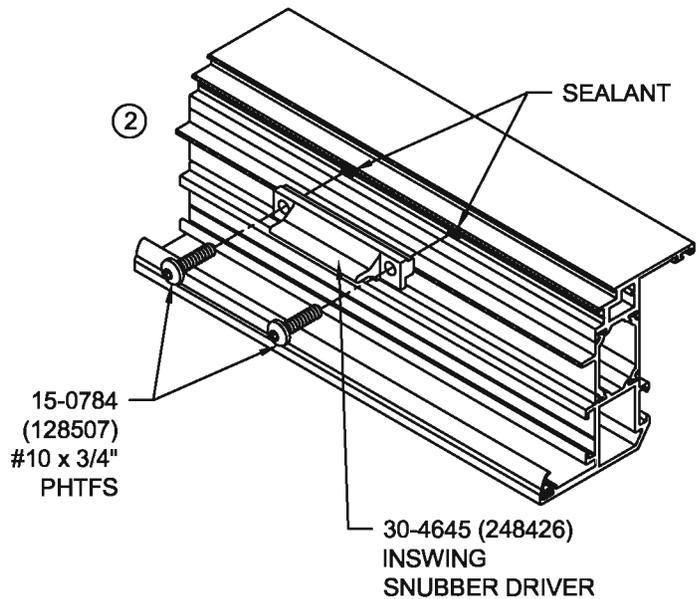
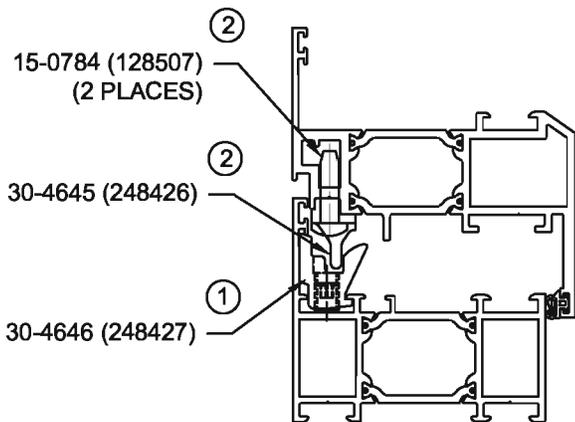
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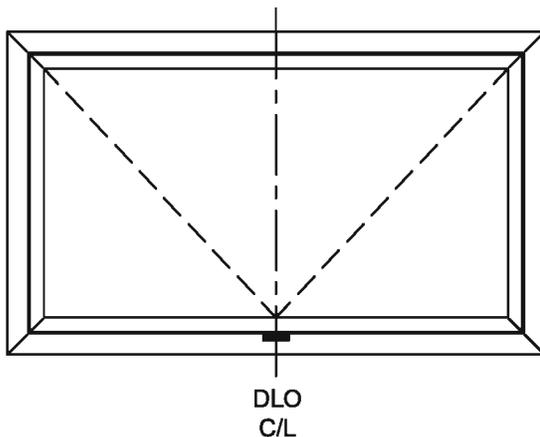
Operable windows hung with 4-bar hinges must have snubbers installed opposite lock side to operate correctly. Install snubber receivers on frame and snubber drivers on vents as shown prior to assembly.

- ① Loosen set screws for inswing snubber receiver 30-4646 (248427) and rock them into frame Euro-Groove. Slide them into place and loosely tighten set screws with 1/8" allen key. Adjust snubber receiver location after vent is attached to frame.
- ② Fill pre-drilled holes on vent with sealant and attach inswing snubber driver 30-4645 (248426) with two #10 x 3/4" PHTF 15-0784 (128507) fasteners.

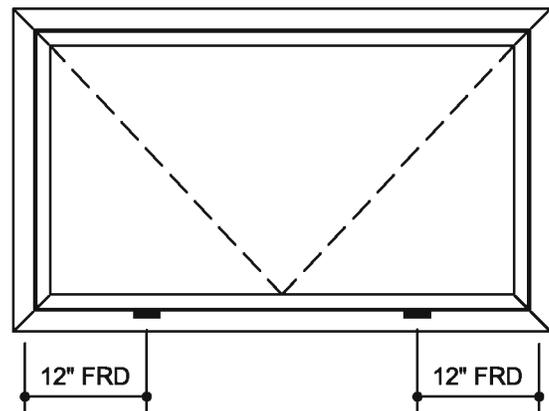


SNUBBER LOCATIONS

PROJECT-IN SHOWN, INSWING CASEMENT SIMILAR



WINDOWS WITH 2 LOCK LOCATIONS



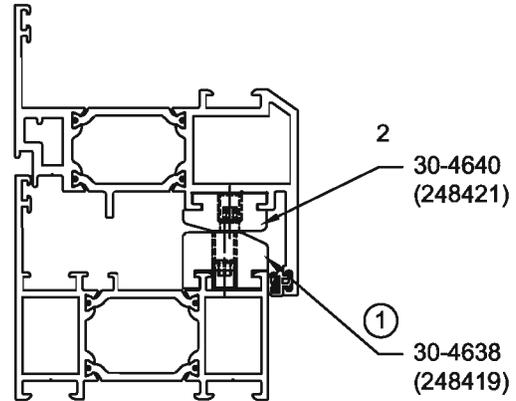
WINDOWS WITH 3 LOCK LOCATIONS
FRD = FRAME REFERENCE DIMENSION

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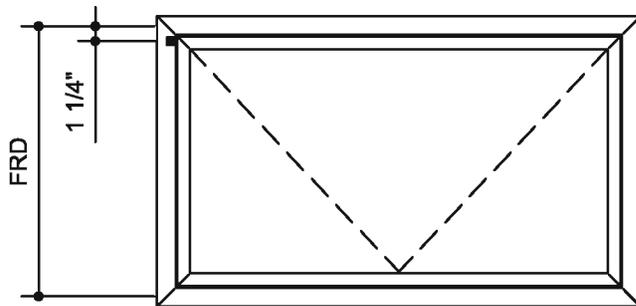
All casement windows must have riser blocks installed at sill, and projected windows with multi-point locks must have side blocks installed at jambs. Attach riser/side blocks as shown prior to assembly.

- ① Loosen set screw for frame riser/side block (248419) and rock into frame Euro-Groove. Slide into place and tighten set screw with 1/8" allen key.
- ② Slide inswing vent riser/side block 30-4640 (248421) in from Euro-Groove end. Slide into place and tighten set screw with 1/8" allen key.

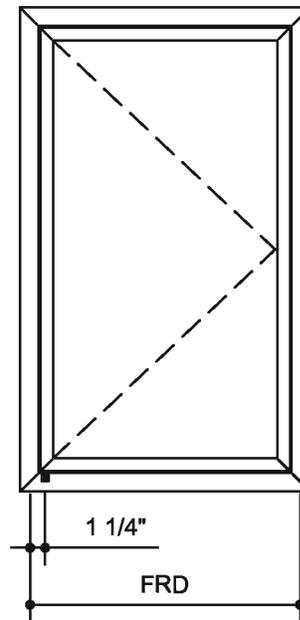


RISER/SIDE BLOCK LOCATIONS

FRD = FRAME REFERENCE DIMENSION



PROJECT-IN WITH
MULTI-POINT LOCK ONLY



INSWING CASEMENT
WITH ALL LOCK TYPES

NOTE:

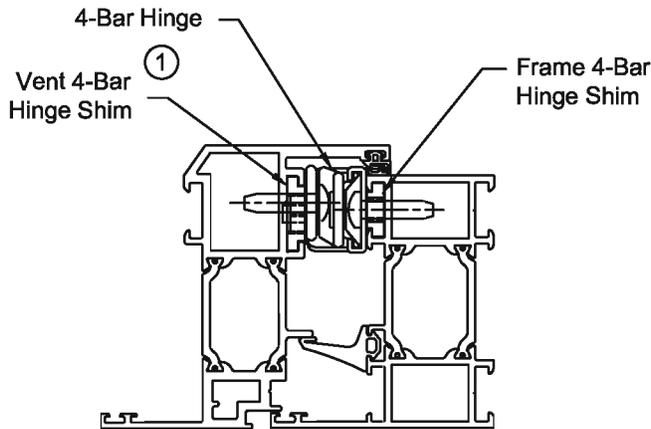
ADDITIONAL RISER BLOCK REQUIRED FOR CASEMENT FRD'S OVER 24" WIDE WHEN WIDTH/HEIGHT RATIOS > 2:1 OR ON ANY CASEMENT FRD'S OVER 30". LOCATE ADDITIONAL RISER BLOCK 2" FROM THE END OF THE 4-BAR HINGE. FOR UNITS WITH BUTT HINGES AND FRICTION ADJUSTERS, LOCATE THE ADDITIONAL RISER BLOCK 2" FROM THE HINGE SIDE OF THE FRICTION ADJUSTER TRACK SCREW.

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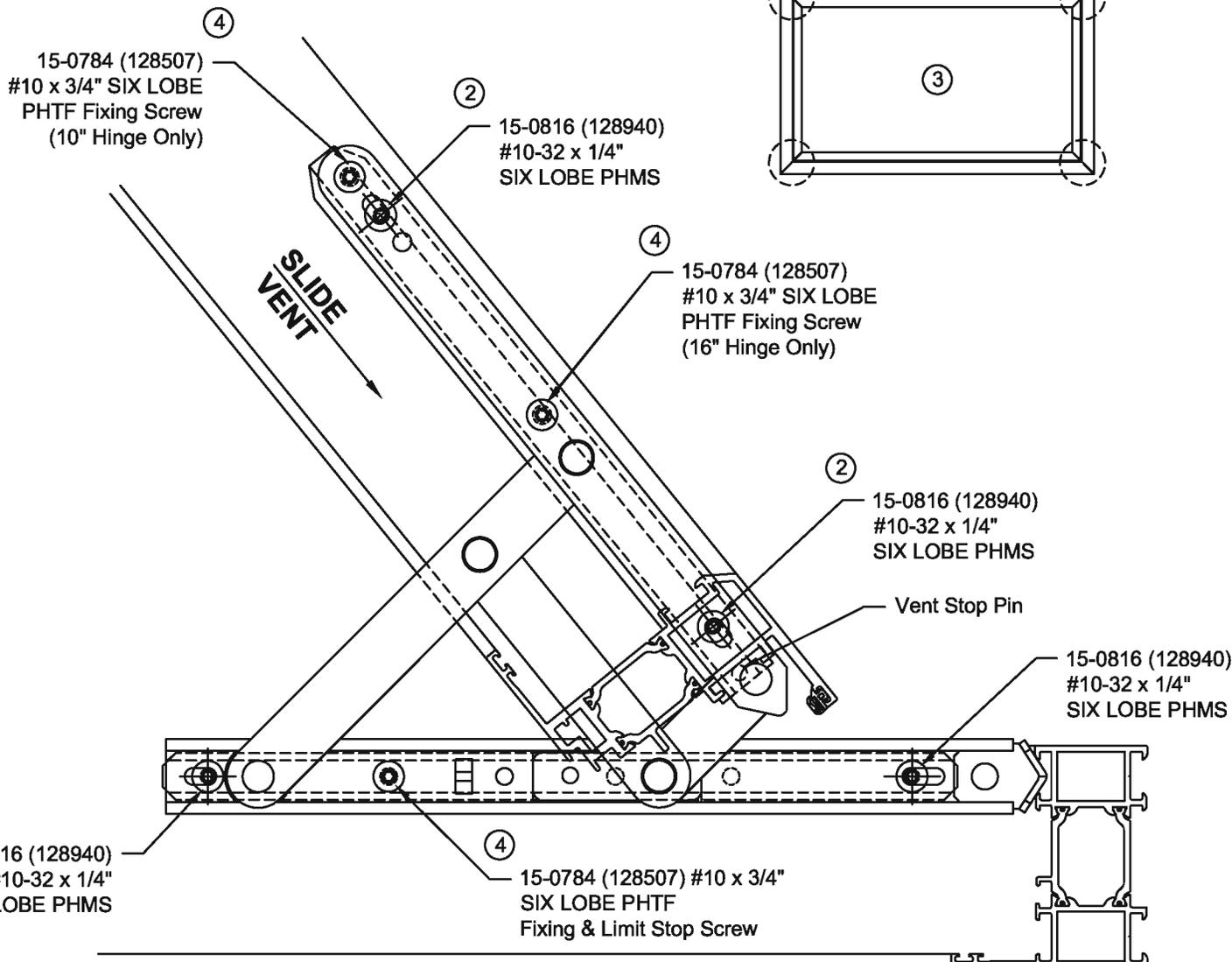
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SECTION III P/I/SC WINDOW ASSEMBLY & GLAZING
ATTACH VENT TO FRAME - PROJECT IN WITH 4-BAR HINGES



- ① Align vent Euro-Groove ends with ends of vent 4-bar hinge shims and slide vent down until it bottoms out on vent stop pins.
- ② Tighten 4-bar hinge to vent shim using #10-32 x 1/4" SIX LOBE PHMS 15-0816 (128940) fasteners on each side of vent as shown.
- ③ Close vent and make sure the vent and frame miters line up. If required, loosen vent shim fasteners, adjust vent and repeat Steps 2 & 3.
- ④ Line drill using #26 bit (0.147" dia.) thru one wall only and install #10 x 3/4" SIX LOBE PHTFS 15-0784 (128507) fasteners where indicated.



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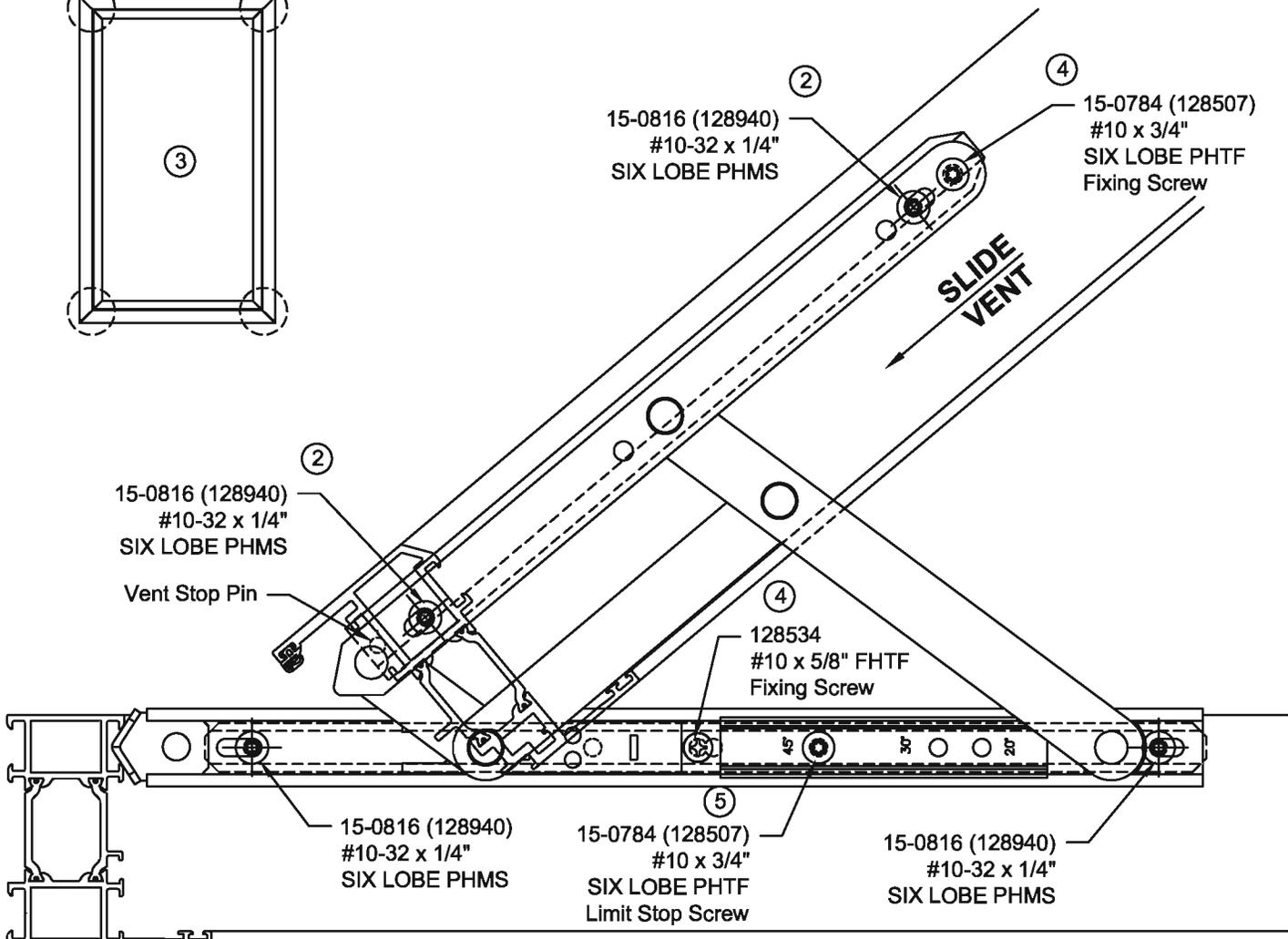
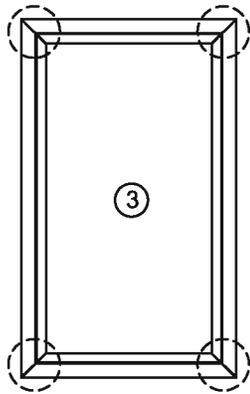
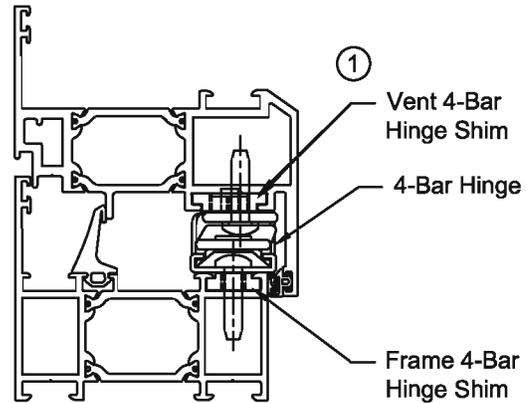
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SECTION III P/I/ISC WINDOW ASSEMBLY & GLAZING

E.C. 95506-024

ATTACH VENT TO FRAME - INSWING CASEMENT W/ 4-BAR HINGES

- ① Align vent Euro-Groove ends with ends of vent 4-bar hinge shims and slide vent down until it bottoms out on vent stop pins.
- ② Tighten 4-bar hinge to vent shim using #10-32 x 1/4" SIX LOBE PHMS 15-0816 (128940) fasteners on each side of vent as shown.
- ③ Close vent and make sure the vent and frame miters line up. If required, loosen vent shim fasteners, adjust vent and repeat Steps 2 & 3.
- ④ Line drill using #26 bit (0.147" dia.) thru one wall only and install #10 x 3/4" SIX LOBE PHTF 15-0784 (128507) and #10 x 5/8" FHTF 15-0787 (128534) fasteners where indicated.
- ⑤ Slide limit stop to align desired opening (45°, 30°, or 20°) hole with 4-bar hinge hole. Line drill using #26 bit (0.147" dia.) thru one wall only and install #10 x 3/4" SIX LOBE PHTF (128507) fastener.



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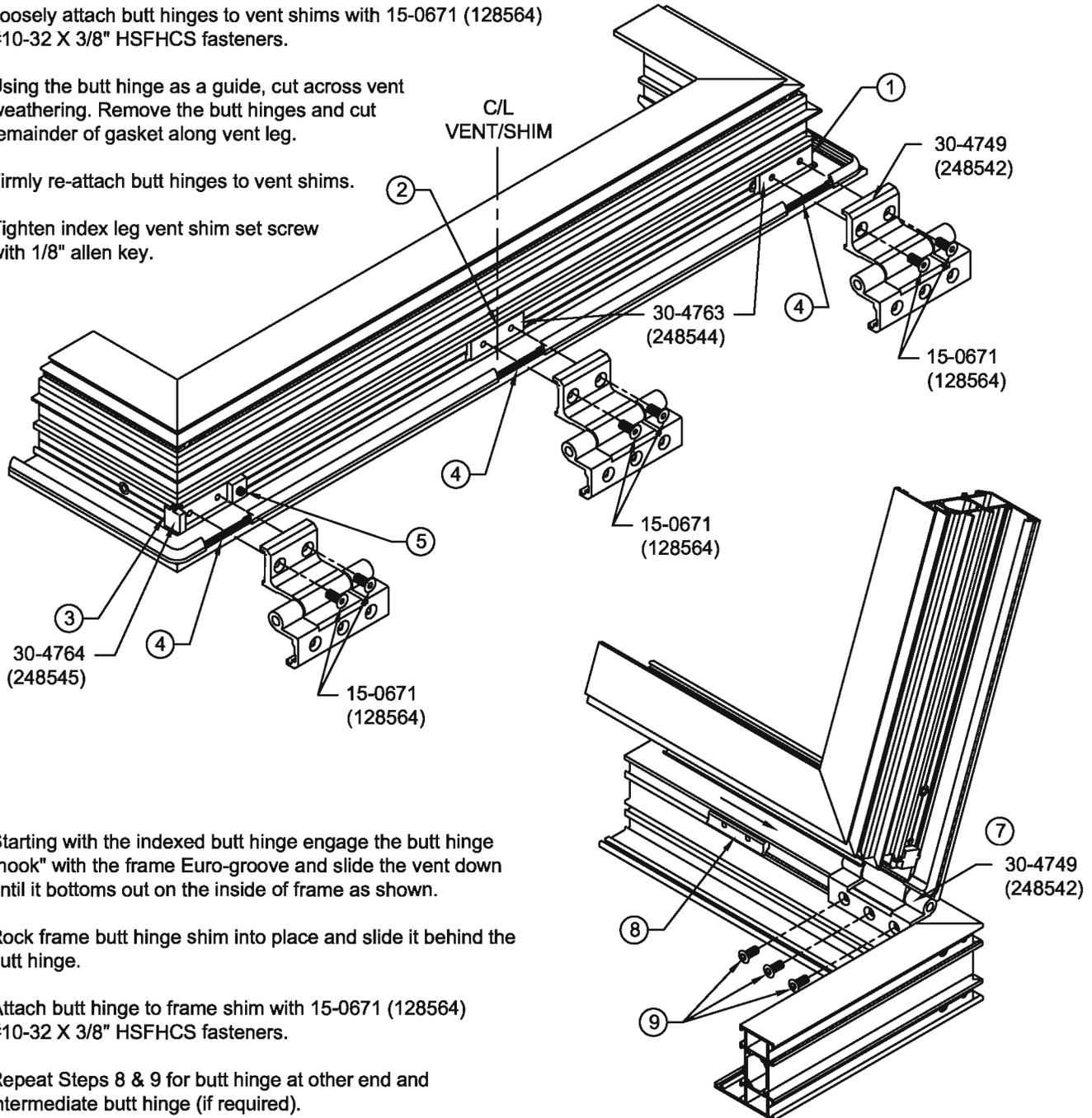
Insert butt hinge vent shims into Euro-groove as shown.

NOTE: For Casement Inswing windows indexed butt hinge shim must be installed at bottom.
Butt hinges ARE NOT TO BE USED with project-in windows.

- ① Top/End Hinge: Use butt hinge 30-4749 (248542) & 30-4765 (248546) vent shim.
The top of the vent shim should be aligned with top edge of vent Euro-groove pocket.
- ② Intermediate Hinge: Use butt hinge 30-4749 (248542) & 30-4765 (248546) vent shim
The center line of the vent shim should be aligned with the center line of the vent.
- ③ Bottom/End Hinge: Use indexed butt hinge 30-4749 (248542) & 30-4766 (248547) vent shim.
The vent shim has an index leg that bottoms out on vent Euro-groove pocket.

Loosely attach butt hinges to vent shims with 15-0671 (128564)
#10-32 X 3/8" HSFHCS fasteners.

- ④ Using the butt hinge as a guide, cut across vent weathering. Remove the butt hinges and cut remainder of gasket along vent leg.
- ⑤ Firmly re-attach butt hinges to vent shims.
- ⑥ Tighten index leg vent shim set screw with 1/8" allen key.

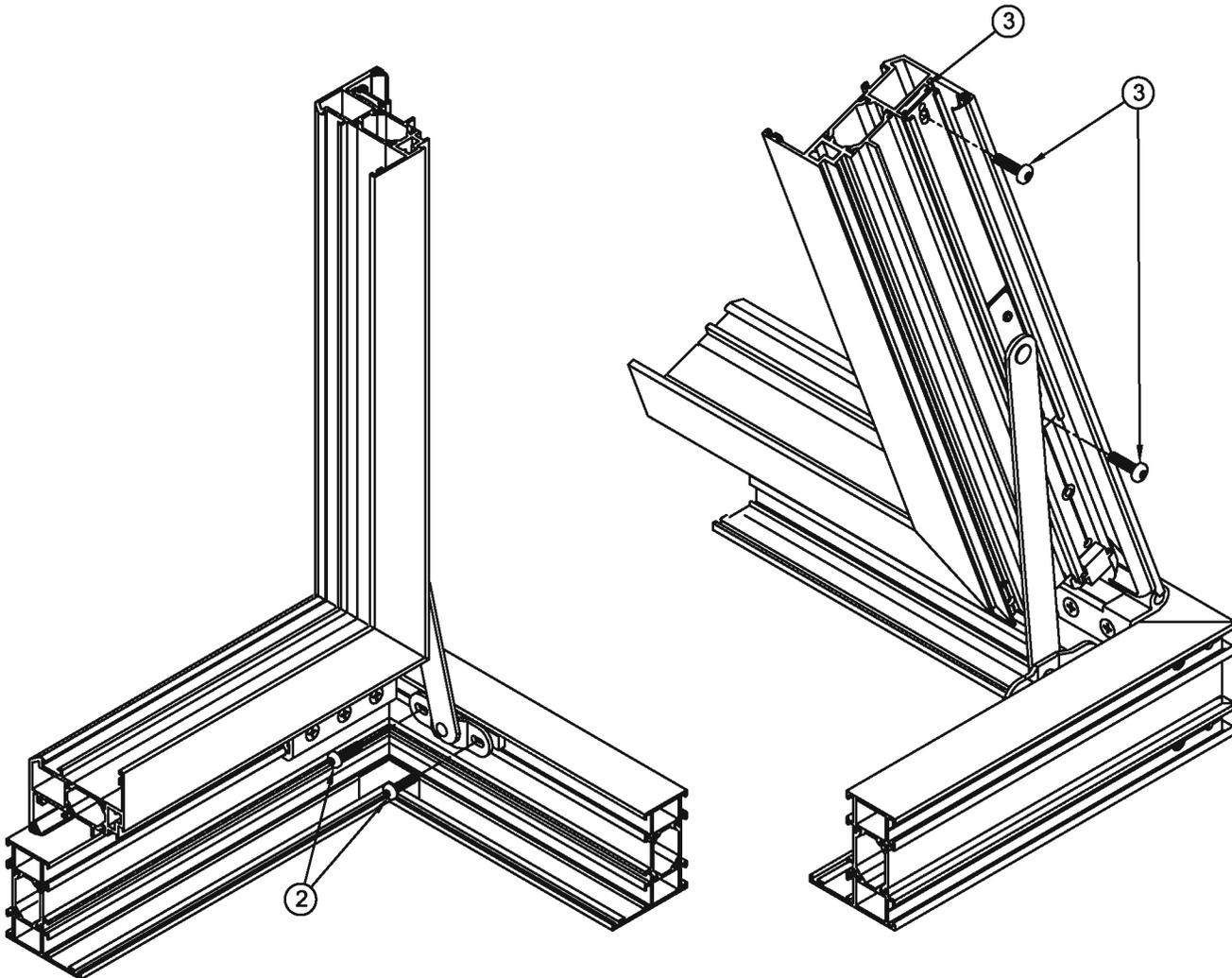


- ⑦ Starting with the indexed butt hinge engage the butt hinge "hook" with the frame Euro-groove and slide the vent down until it bottoms out on the inside of frame as shown.
- ⑧ Rock frame butt hinge shim into place and slide it behind the butt hinge.
- ⑨ Attach butt hinge to frame shim with 15-0671 (128564)
#10-32 X 3/8" HSFHCS fasteners.

Repeat Steps 8 & 9 for butt hinge at other end and intermediate butt hinge (if required).

Project-in windows with butt hinges require friction adjusters at both jambs.
 Inswing casement windows with butt hinges require friction adjusters at the head and sill.
 Inswing casement windows with butt hinges and roto operator require friction adjuster at the head only.

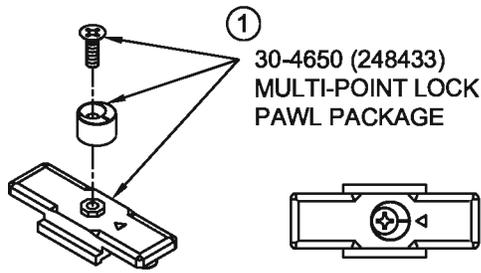
- ① Open the vent and locate the two pre-drilled holes on frame for friction adjuster attachment.
- ② Align friction adjuster frame shim with pre-drilled holes in frame and attach friction adjuster through the shim into the frame with two #10 x 3/4" SIX LOBE PHTF Type "B" fasteners 15-0784 (128507) as shown.
- ③ Insert friction adjuster vent shims into vent Euro-groove from the notched out end and align friction adjuster vent shim with pre-drilled holes in vent and attach friction adjuster through the shim into the vent with two #10 x 3/4" SIX LOBE PHTF Type "B" fasteners 15-0784 (128507) as shown.



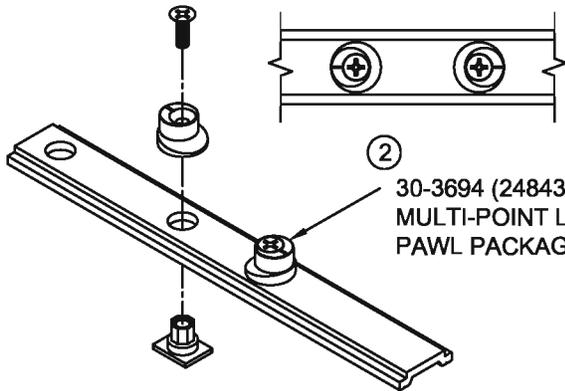
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① 30-4650 (248433)
MULTI-POINT LOCK
PAWL PACKAGE

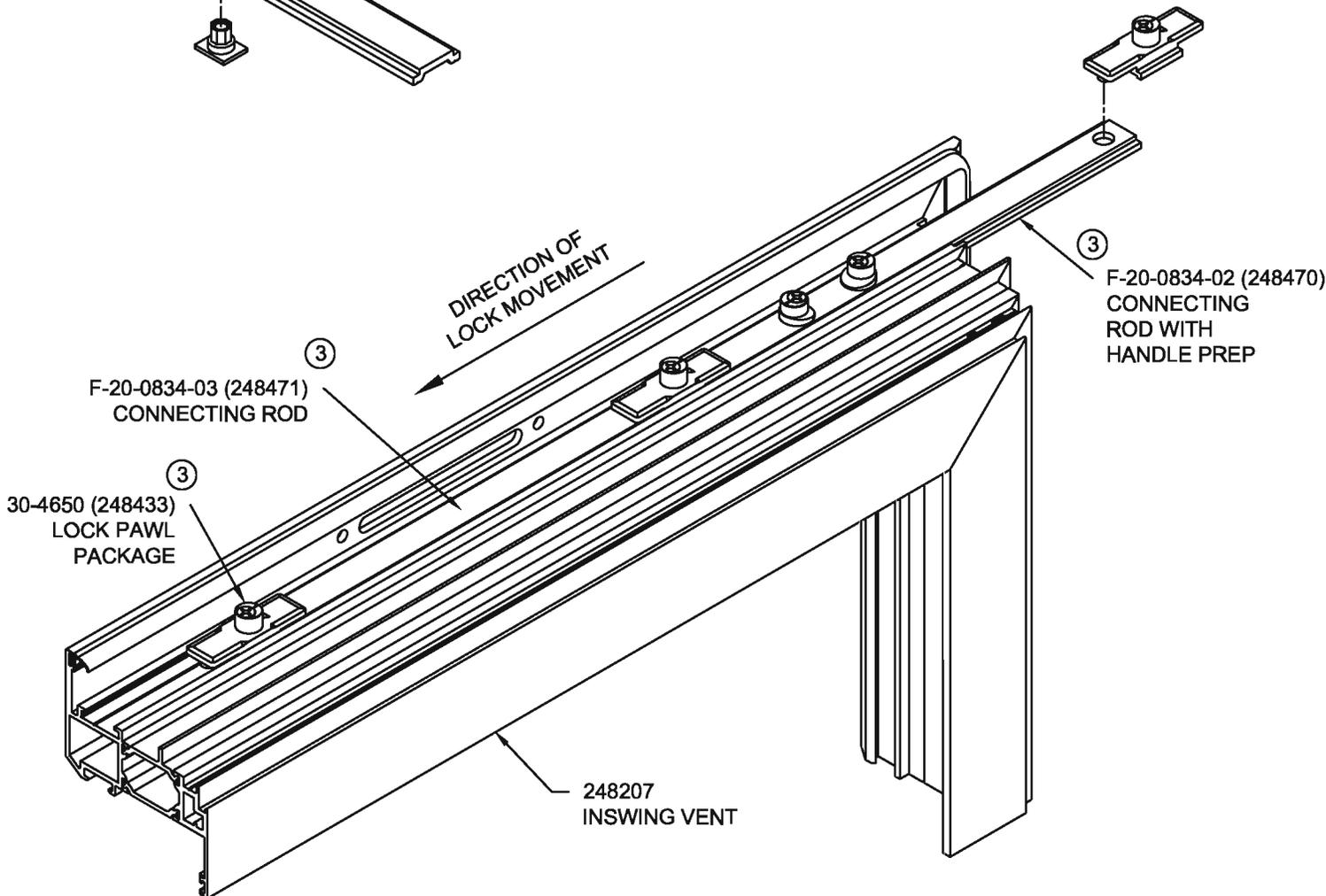


② 30-3694 (248438) INSWING
MULTI-POINT LOCK
PAWL PACKAGE

Partially open vent and place blocks underneath each side of vent to keep it open.

- ① Assemble multi-point lock pawl package 30-4650 (248433) as shown. Ensure alignment marks on lock pawl and lock pawl base plate line up.
- ② Assemble inswing multi-point lock drive pawl package 30-3694 (248438) at the two intermediate holes for link rod with handle prep F-20-0834-02 (248470) as shown. Ensure that both alignment marks point away from each other.
- ③ Connect lock pawls 30-4650 (248433) to link rods F-20-0834-02 (248470) & F-20-0834-03 (248471) and insert into Euro-Groove end as shown. Ensure all lock pawls are oriented so that alignment marks on base plates point in direction of lock movement.

NOTE: 3-point lock shown; others similar.



F-20-0834-03 (248471)
CONNECTING ROD

30-4650 (248433)
LOCK PAWL
PACKAGE

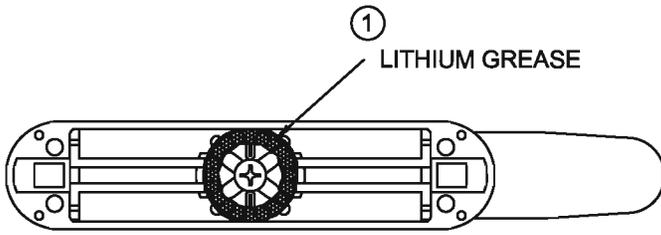
248207
INSWING VENT

F-20-0834-02 (248470)
CONNECTING
ROD WITH
HANDLE PREP

DIRECTION OF
LOCK MOVEMENT

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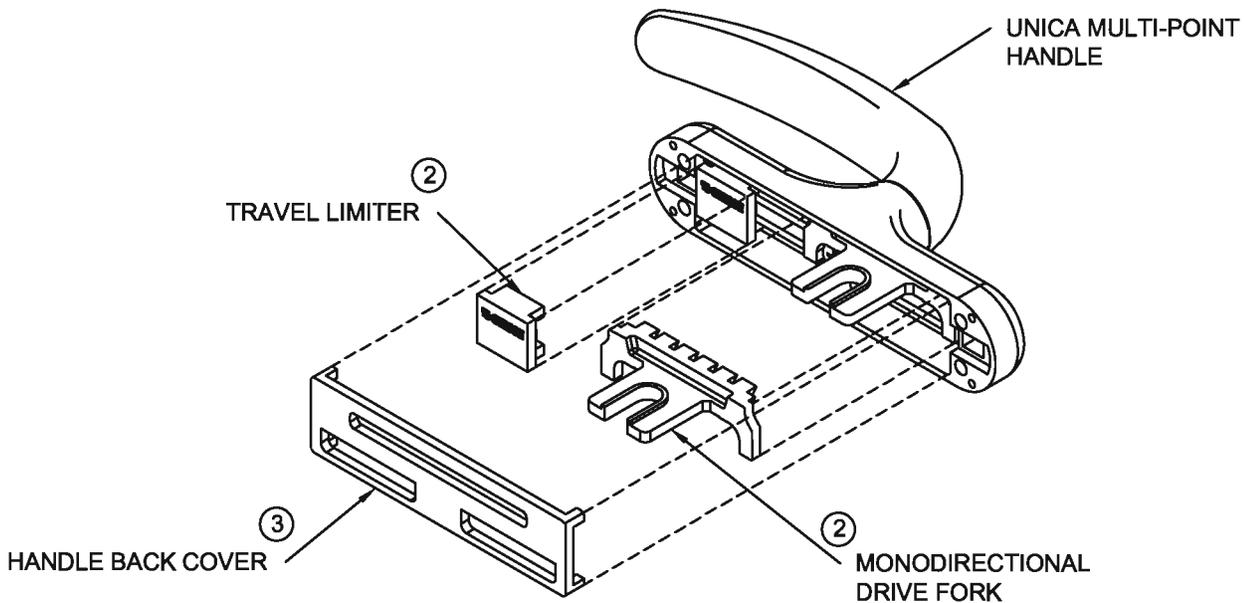
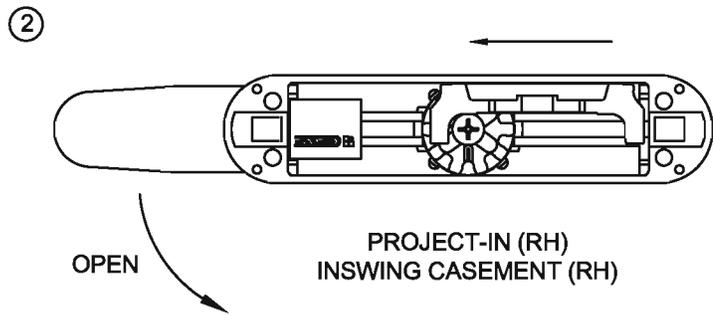
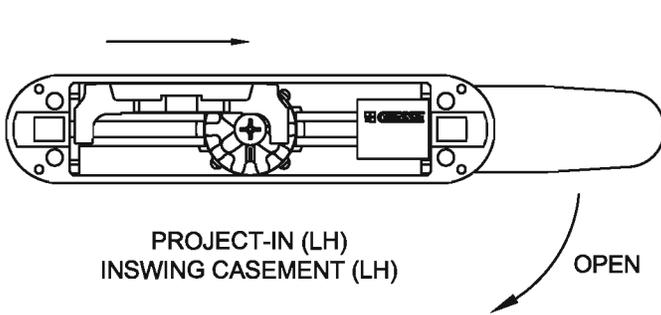
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① Apply a liberal amount of lithium grease to gear of standard Unica multi-point lock handle 30-4647 (248428-30).

② Insert monodirectional drive fork and travel limiter 30-4648 (248431) according to window handing and operation as shown.

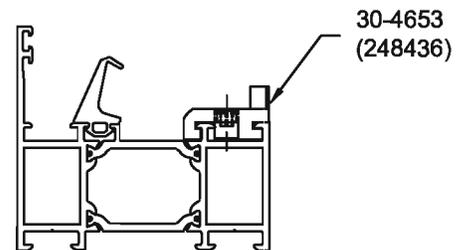
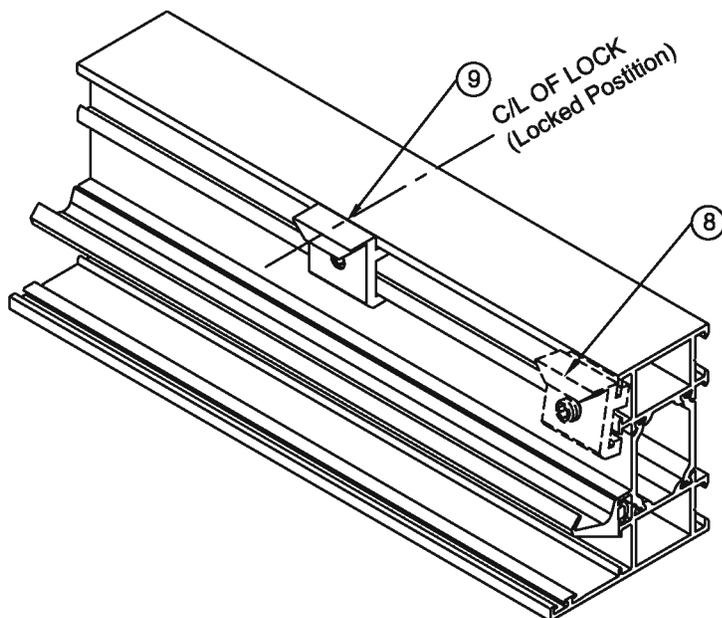
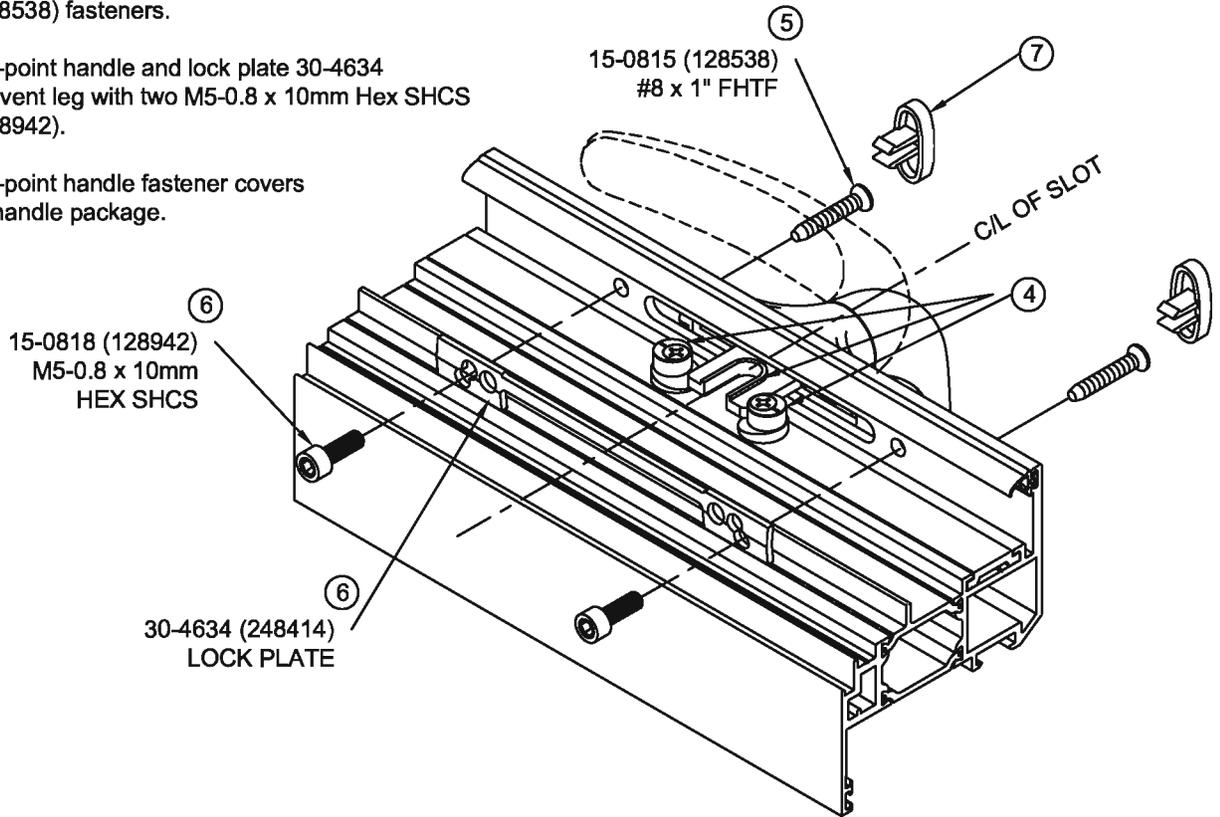
③ Snap in multi-point lock handle back cover 30-4648 (248431) as shown.



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- ④ Slide the two inswing drive pawls so that they are centered with slot. Turn multi-point lock handle to open position and insert handle into slot with drive fork between the two drive lock pawls.
- ⑤ Attach multi-point handle to vent with two #8 x 1" FHTF 15-0815 (128538) fasteners.
- ⑥ Attach multi-point handle and lock plate 30-4634 (248414) to vent leg with two M5-0.8 x 10mm Hex SHCS 15-0818 (128942).
- ⑦ Attach multi-point handle fastener covers included in handle package.



With a pencil mark the centerlines of lock locations on frame.

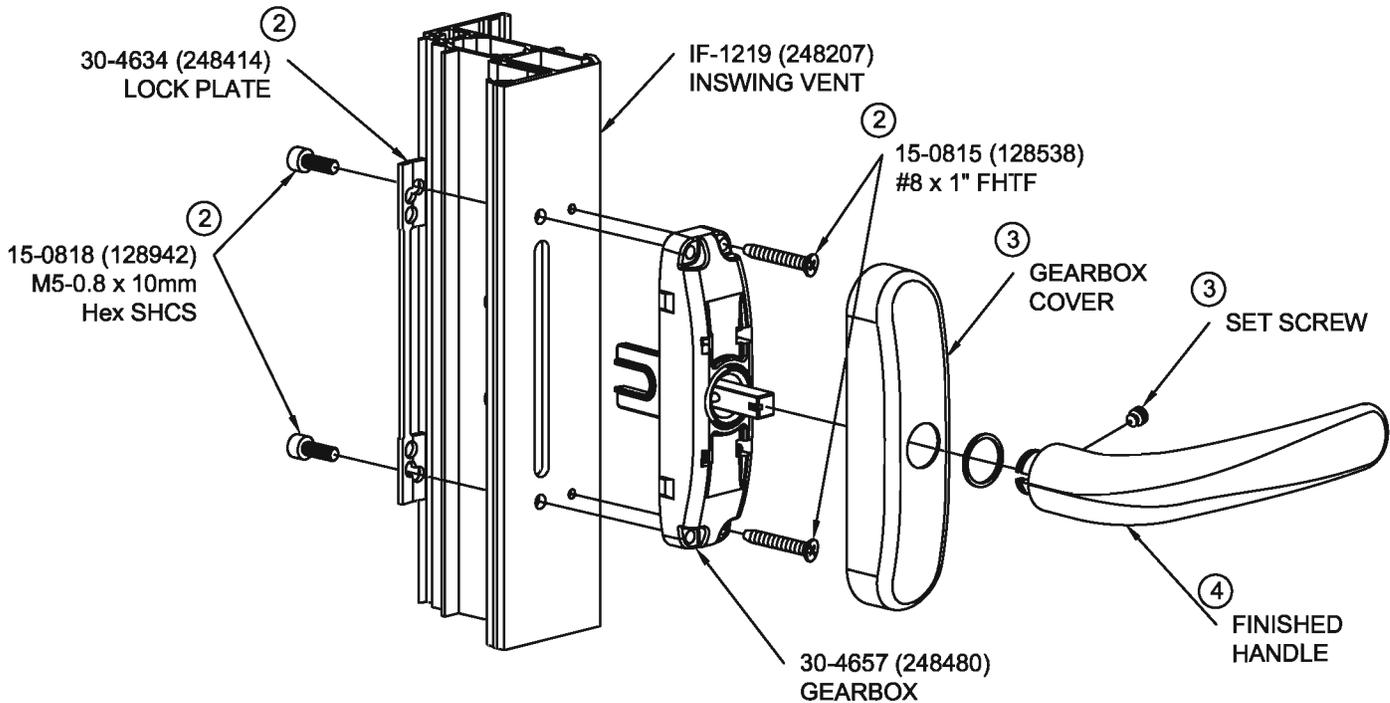
- ⑧ Loosen inswing multi-point lock keeper 30-4653 (248436) set screw and rock keeper into frame Euro-Groove as shown.
- ⑨ Slide keeper down Euro-Groove track and center keeper over previously marked centerline. Tighten keeper set screw with 1/8" allen key.

SECTION III PI/ISC WINDOW ASSEMBLY & GLAZING
ATTACH OPTIONAL PRIMA MULTI-POINT HANDLES

E.C. 95506-024

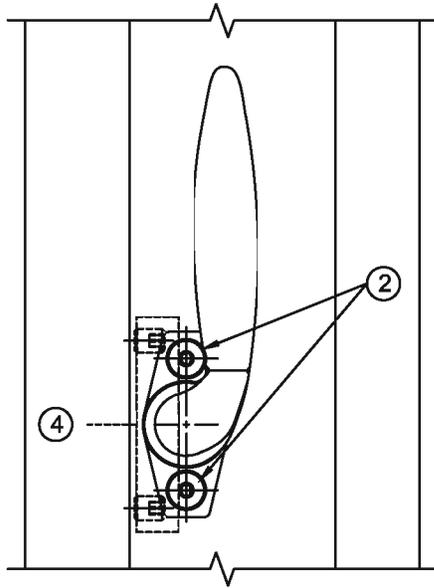
Optional Prima multi-point handles allow the handle and gearbox cover to be field installed to avoid damage during shipping.

- ① Insert monodirectional drive fork and travel limiter (248431) into gearbox as previously shown for assembling standard multi-point lock handle.
- ② For inswing windows attach gearbox to vent with two #8 x 1" FHTF 15-0815 (128538) and two M5-0.8 x 10mm Hex SHCS 15-0818 (128942) fasteners and lock plate 30-4634 (248414) as shown.
- ③ Attach gearbox cover and finished handle with supplied set screw using 3mm hex key.

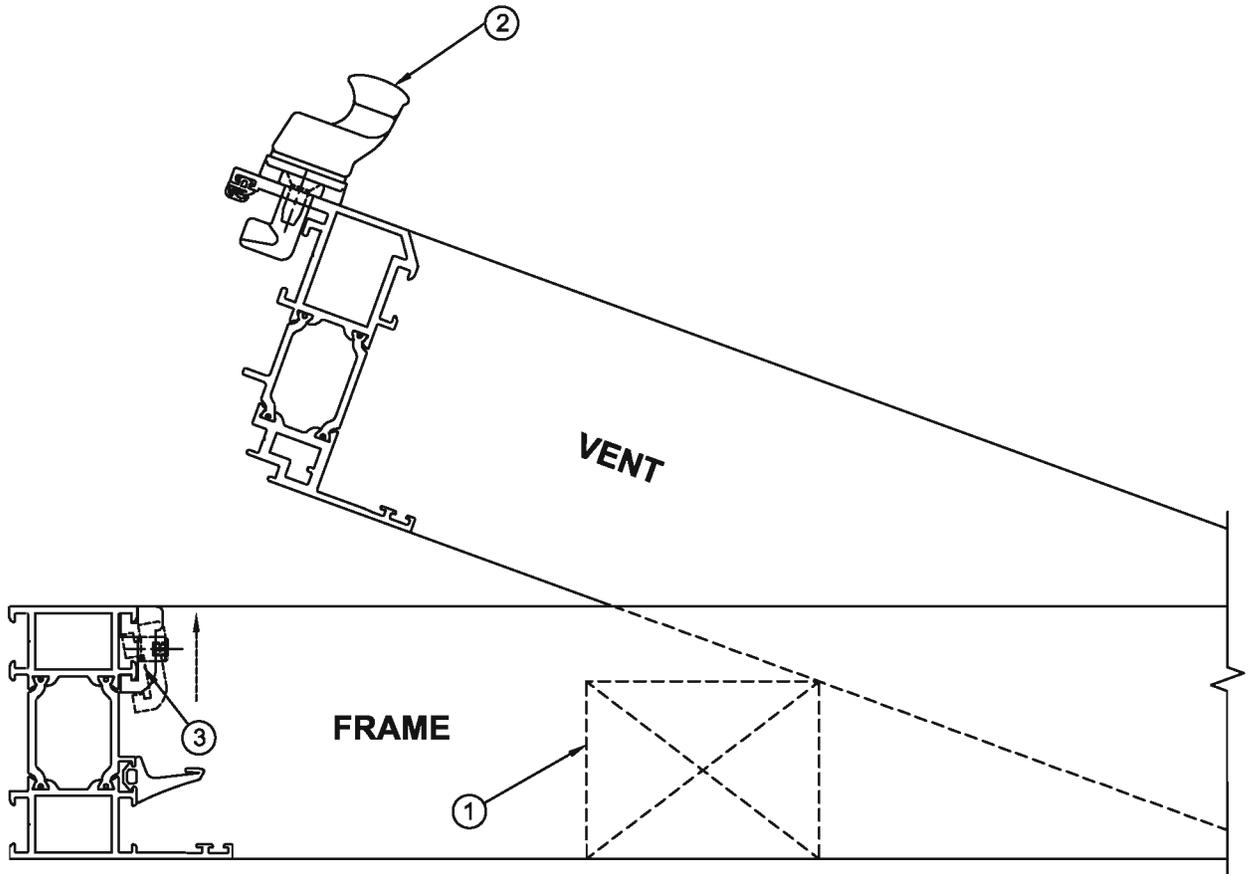


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- ① Place window on bench with exterior side facing down. With a pencil mark the centerlines of cam handles on frame. Partially open vent and place blocks underneath each side of vent to keep it open.
- ② Attach cam handles 30-1908-BC/30-1909-BC (225401/225402) to vent leg with two #10 x 7/16" FHTF 15-0791 (128415) per handle.
- ③ Loosen cam handle keeper 30-4643 (248424) set screws and rock keeper into frame Euro-Groove as shown.
- ④ Slide keeper down Euro-Groove track and center keeper over previously marked centerline. Tighten keeper set screws with 1/8" allen key.

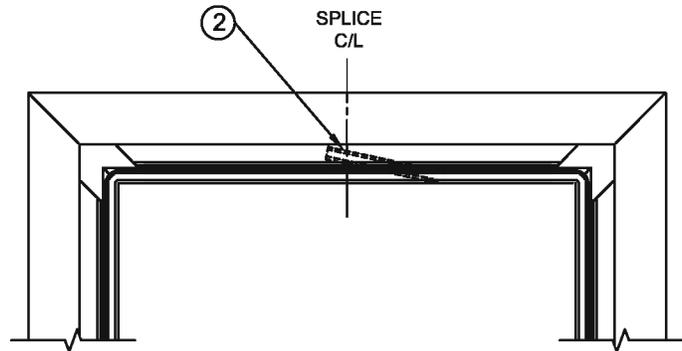
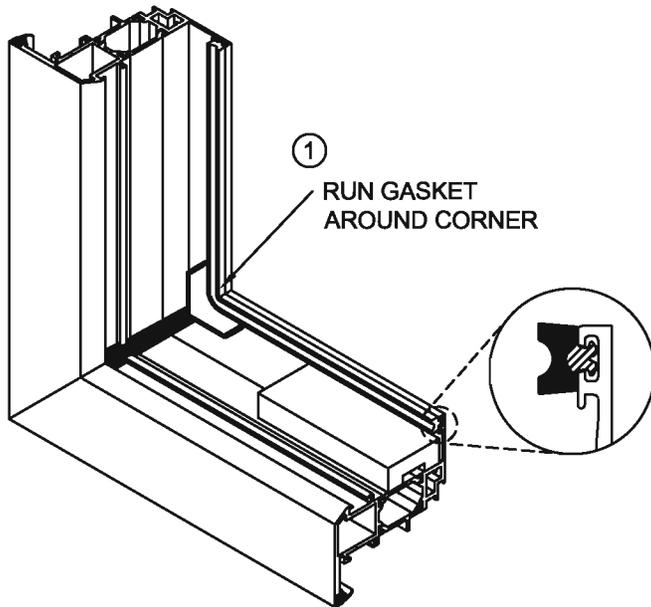


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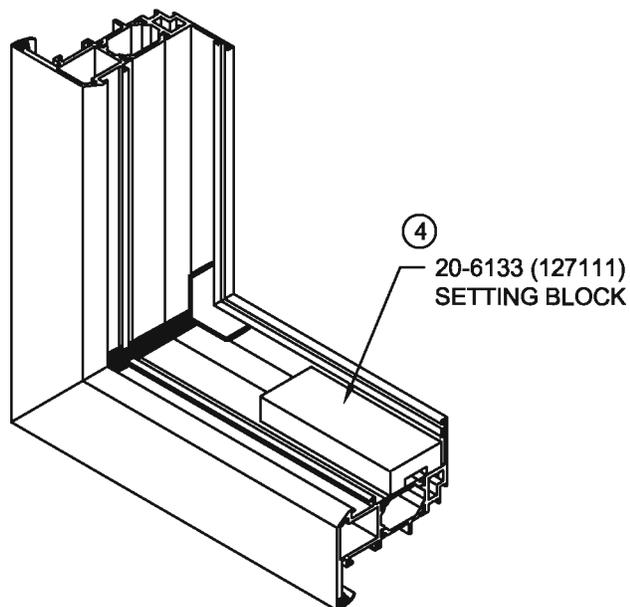
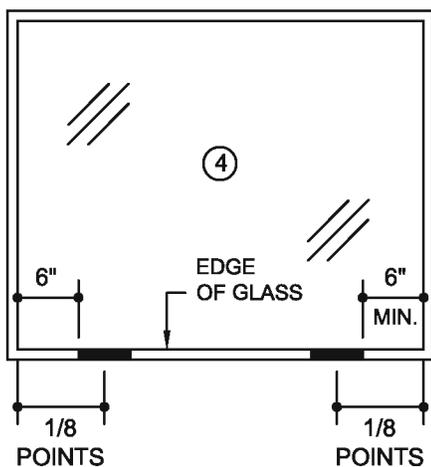
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- ① Push in exterior glazing gasket 20-4278 (127115) into glazing leg reglet starting at centerline of DLO at top of vent. Be careful NOT TO STRETCH gasket. Wrap gasket around corner making sure gasket is crowded and firmly seated in reglet. Continue pushing in gasket around vent in same manner.
- ② Leave gasket end about 1/2" long and cut it squarely. Butt remaining gasket end tight against start end and push in remaining gasket.



FRAME AND VENT MUST BE ALIGNED AND SQUARE BEFORE GLAZING

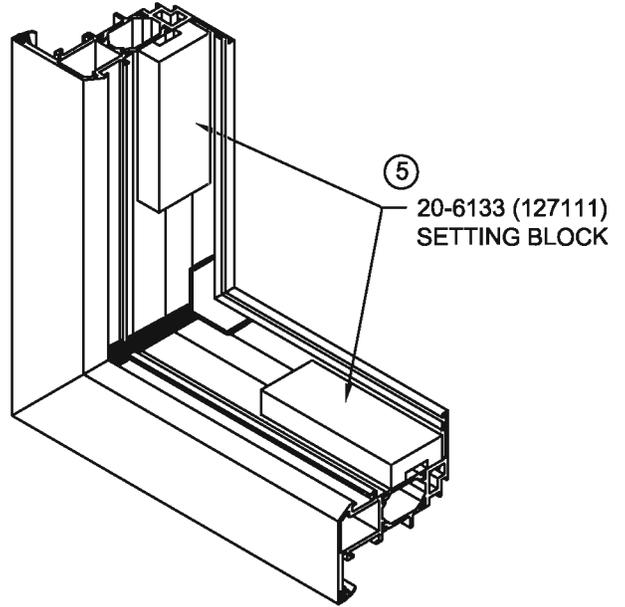
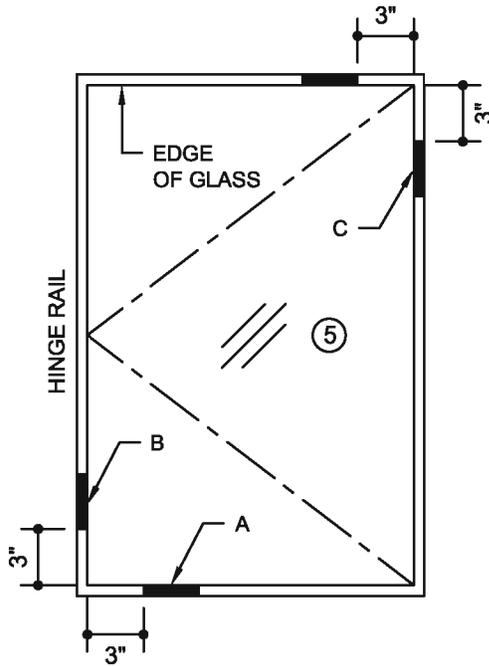
- ③ Glazing surfaces (window and glass) must be free from dust, grease, and burrs. Clean all surfaces with isopropyl alcohol on a clean cloth.
- ④ SETTING BLOCKS FOR PROJECT-IN WINDOWS
Position glass setting blocks at 1/8 points for D.L.O.'s up to 48" wide. For D.L.O.'s equal to or wider than 48", place setting blocks 6" from the glass edge. Set blocks in sealant.



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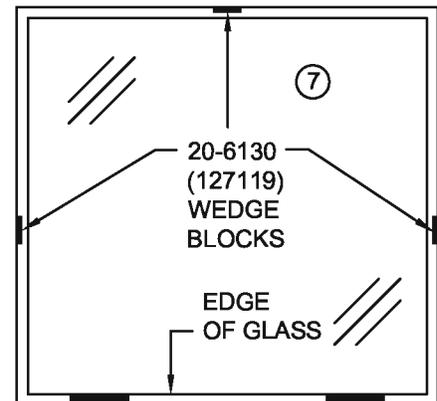
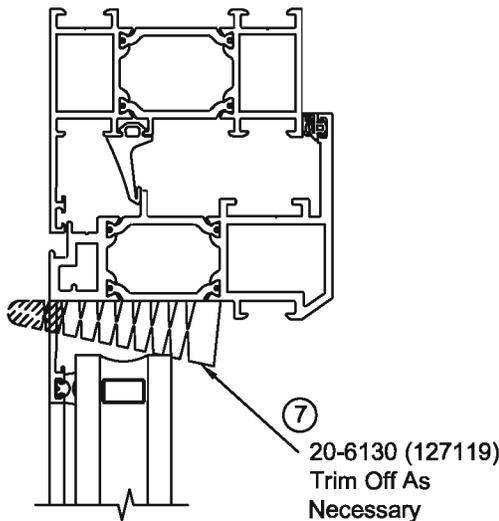
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5 SETTING BLOCKS FOR INSWING CASEMENT WINDOWS
Set glass setting blocks in sealant at locations A, B, & C.



6 Gently set glass into vent while keeping glass against setting blocks. Center glass in the opening.

7 GLAZING WEDGES FOR PROJECT-IN WINDOWS
Press wedge blocks 20-6130 (127119) into jamb and head until glass is snug. Trim off excess wedge as necessary. For windows with DLO 24" or less, use one wedge block. For windows with DLO over 24", use 2 wedge blocks.

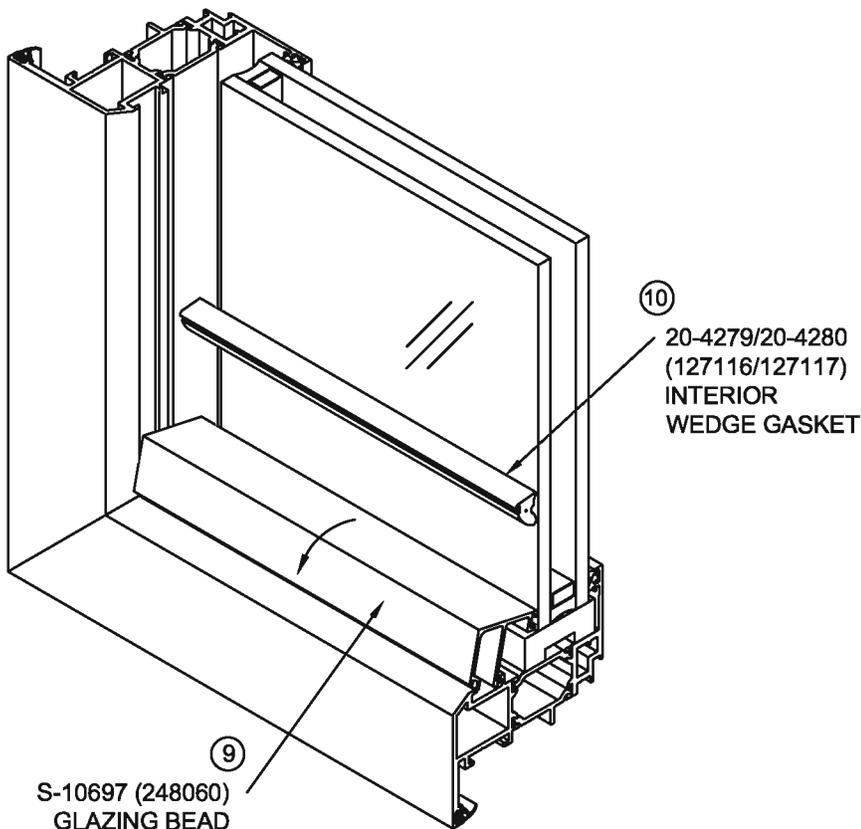
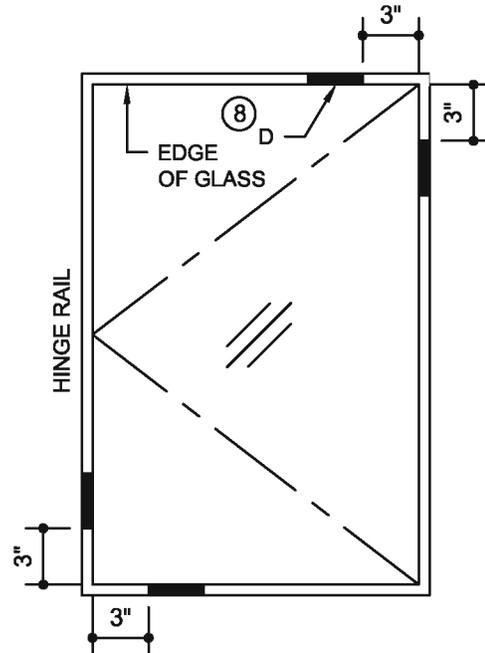


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- ⑧ INSWING CASEMENT WINDOWS
Install setting block at location D. After installing block, shim for a tight fit or for additional squaring of vent with frame. When shimming raise the vent lock rail 1/16" above level to allow compression in block.
- ⑨ Snap in horizontal glazing beads and then vertical beads by engaging bead hook and applying downward pressure toward vent as shown.
- ⑩ Cut interior wedge gasket 20-4279 (127116) to DLO plus 1/4" per foot of length. Push in gasket at each end first. Insert remaining gasket starting at the middle of gasket length and work towards each end.

NOTE: For proper compression thicker wedge gasket 20-4280 (127117) may be required.

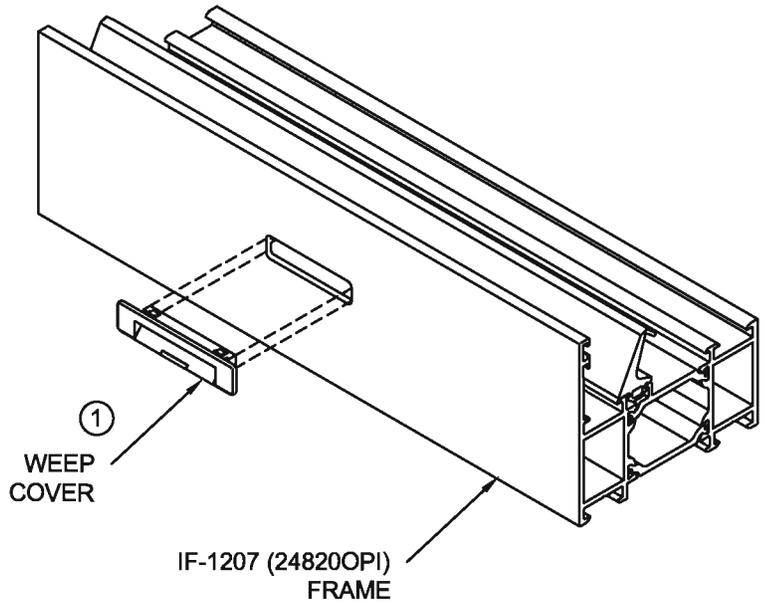
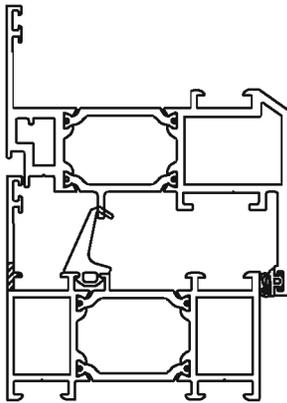


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Optional weep covers are available for project-in and inswing casement windows.
To avoid damage or loss weep covers should be installed just prior to window installation.

- 1 Attach weep cover 30-4658 (248445 thru 248447) to weep slots on frame as shown.



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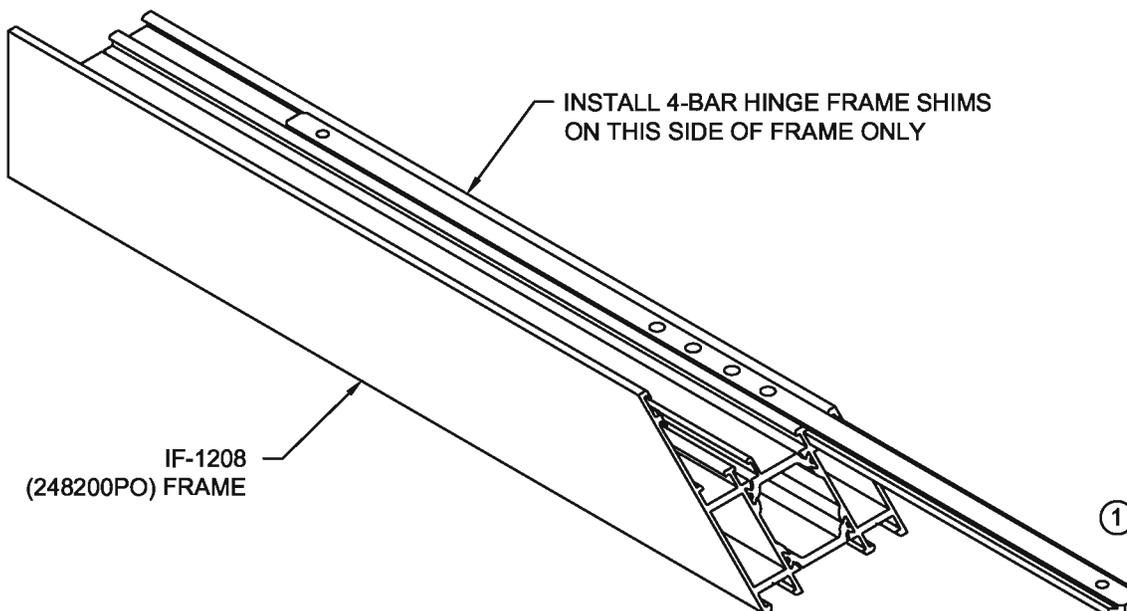
- ① Identify which frame members are to receive 4-bar hinges. Insert shim into frame member Euro-Groove track opposite glazing leg as shown.

Frame 4-bar hinge shims are non-handed and may be inserted from either end.

NOTE:

FRAME 4-BAR HINGE SHIMS MUST BE INSTALLED BEFORE WINDOW FRAMES ARE COMPLETELY ASSEMBLED. FAILURE TO DO SO WILL PREVENT INSTALLATION OF 4-BAR HINGES.

4-BAR HINGE FRAME SHIM	
PART #	DESCRIPTION
30-4736 (248524)	10" PROJECT OUT
30-4738 (248538)	12" CASEMENT OUTSWING
30-4741 (248526)	16" PROJECT OUT
30-4743 (248529)	24" PROJECT OUT

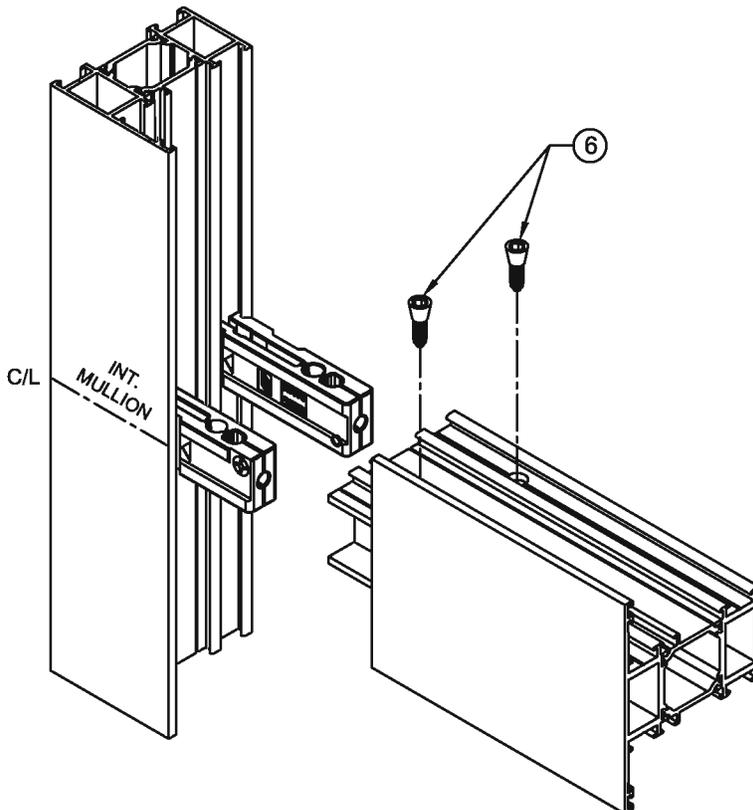
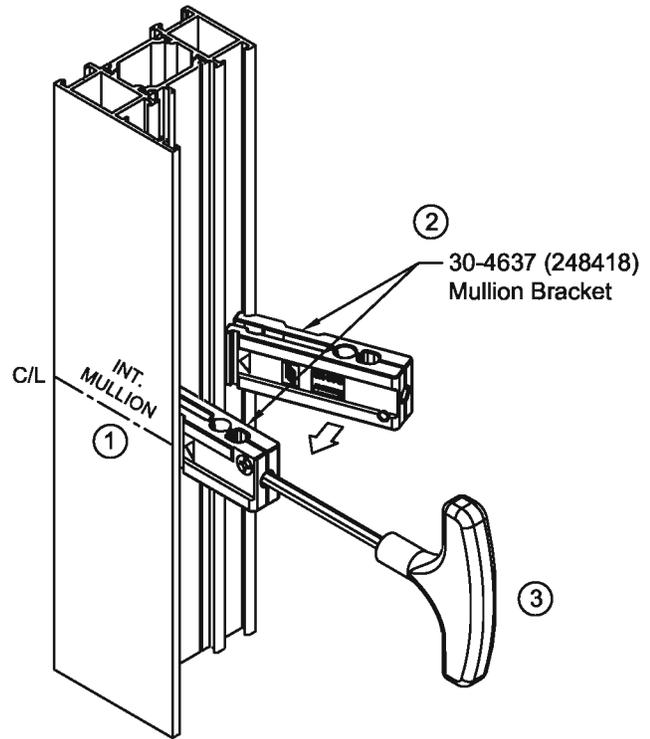


NOTE: 4 Bar Hinge Shim Installation Shown; Friction Adjuster Installation Similar.

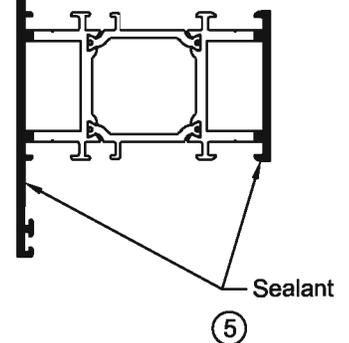
Intermediate mullions must be attached to frame prior to joining frame corners.

- ① Using a pencil, mark the center line of intermediate mullion along both exterior and interior face of frame.
- ② Engage one end of intermediate mullion bracket 30-4637 (248418) at feet and rock into Euro-groove. Align indicator arrow on bracket with center line of mullion.
- ③ Insert 4mm hex key into access hole at end of bracket and tighten bracket set screw.
- ④ Before applying any sealant ensure that all surfaces are free from dust, grease, and burrs. Clean all mating surfaces with isopropyl alcohol on clean cloth.
- ⑤ Apply sealant (Dow Corning 1199 or equal) to each coped end of intermediate mullion as shown.
- ⑥ Slide intermediate mullion over brackets and fasten with bracket fasteners 15-0820 (248444). Tighten fasteners using 4mm hex key. Ensure that mullion joint is flush.

Repeat Steps 1 through 6 on opposite end of mullion.



IF-1211 (248202PO)
Shown
Others Similar

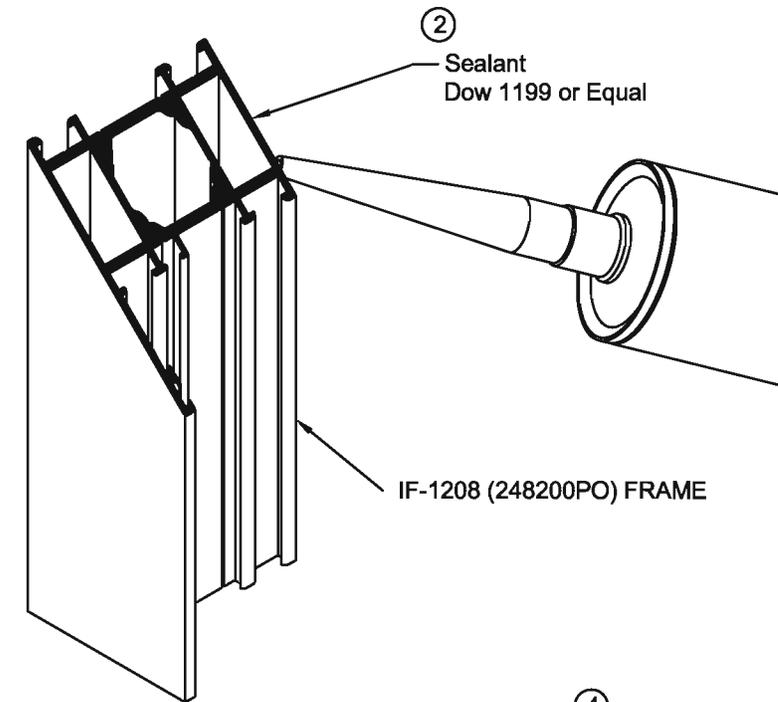


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SECTION IV PO/OSC WINDOW ASSEMBLY & GLAZING
ASSEMBLE FRAME - SCREW APPLIED CORNER BRACKET

E.C. 95506-024



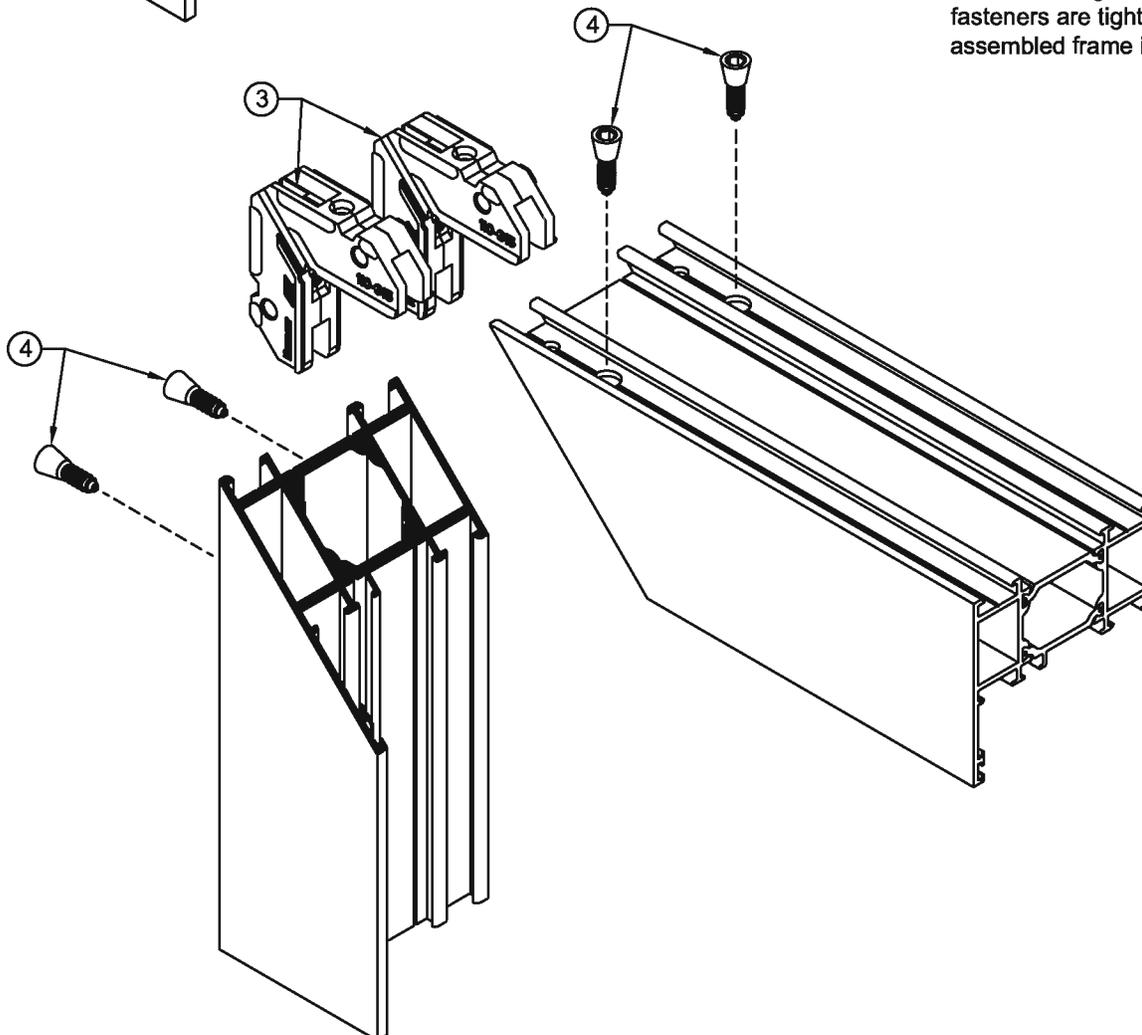
① Before applying any sealant ensure that all surfaces of mitered ends and brackets are free from dust, grease, and burrs. Clean all mating surfaces with isopropyl alcohol on a clean cloth.

② Apply sealant (Dow Coming 1199 or equal) to each mitered end of frame member IF-1208 (248200PO) as shown.

③ Insert corner brackets 30-4635 (248415) into each hollow of same member at each end. Guide corner bracket ends into the hollows of both adjacent members and slide the members together tight.

Repeat Steps 2 & 3 for opposite member.

④ Fasten frame members to corner brackets with bracket fasteners 15-0820 (248444). Tighten each fastener one side at a time using 4mm hex key until all fasteners are tight. Ensure that assembled frame is flat and square.



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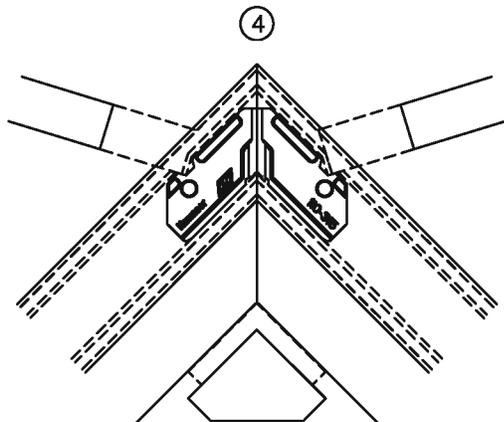
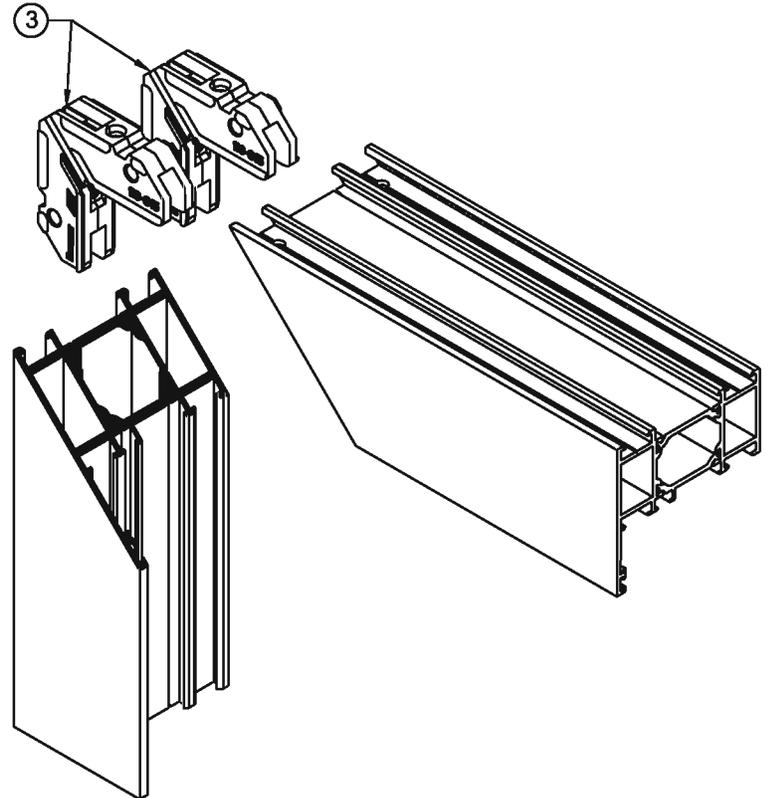
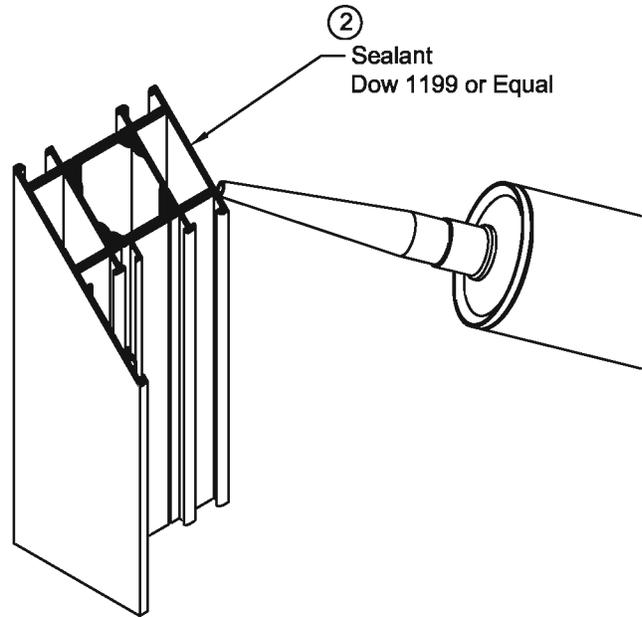
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- ① Before applying any sealant ensure that all surfaces of mitered ends and brackets are free from dust, grease, and burrs. Clean all mating surfaces with isopropyl alcohol on a clean cloth.
- ② Apply sealant (Dow Corning 1199 or equal) to each mitered end of frame member as shown.
- ③ Insert corner brackets 30-4635 (248415) into each hollow of same member at each end. Guide corner bracket ends into the hollows of both adjacent members and slide the members together tight.

Repeat Steps 2 & 3 for opposite member.

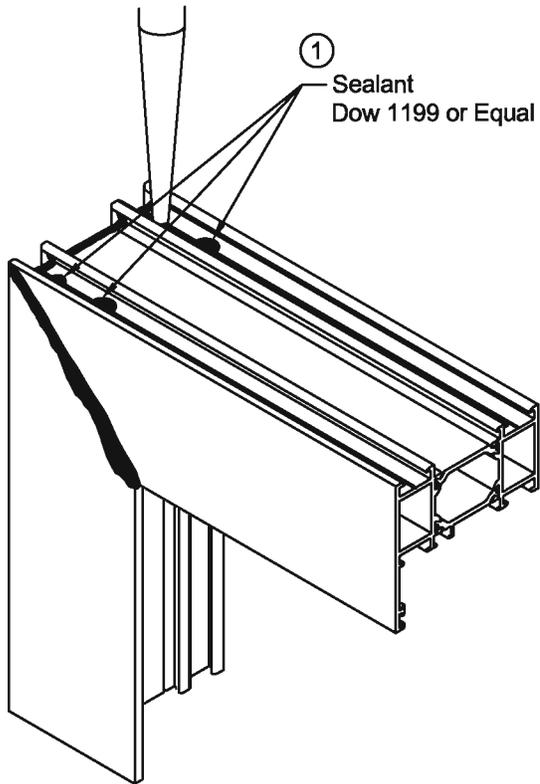
- ④ Place frame corner into the staking machine and operate the machine according to manufacturer's instructions. Ensure that assembled frame is flat and square.

For general setup of staking knives,
See Fab Drawing IF-1207-02 (D248004).



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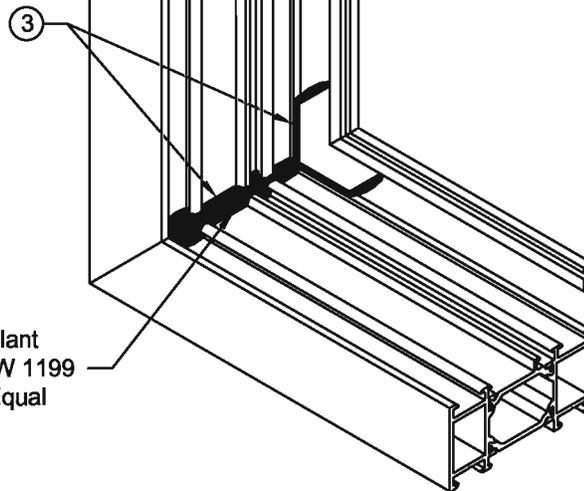
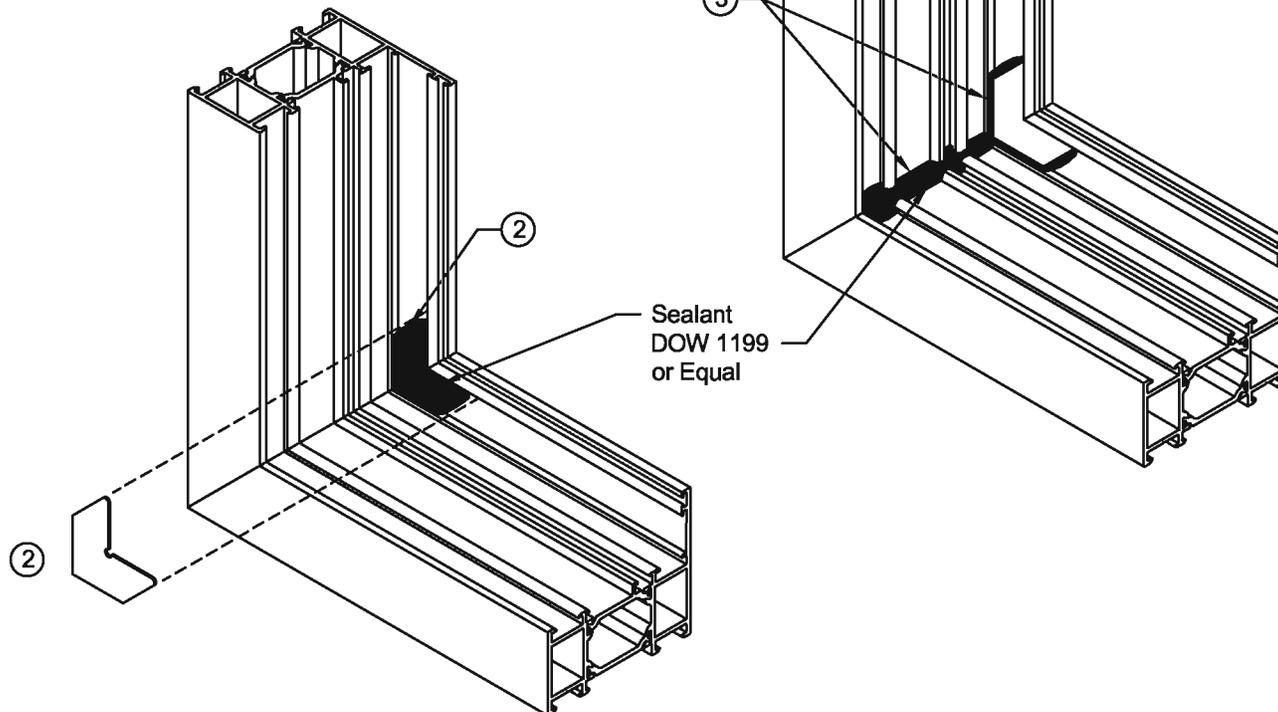
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① Using the pre-drilled 3/16" holes, inject sealant until it oozes out of frame joints. Wipe away any excess sealant IMMEDIATELY from all exterior surfaces, taking care to clean away from glazing bead and gasket grooves. Also, apply sealant over all fastener heads or stake recesses.

② Back seal glazing leg with sealant as shown for corner brace 30-4633 (248413). Set corner brace into sealant and push it towards the gasket reglet corner.

③ Back seal entire interior mitered joint with sealant, again taking care not to fill glazing bead and gasket reglets.



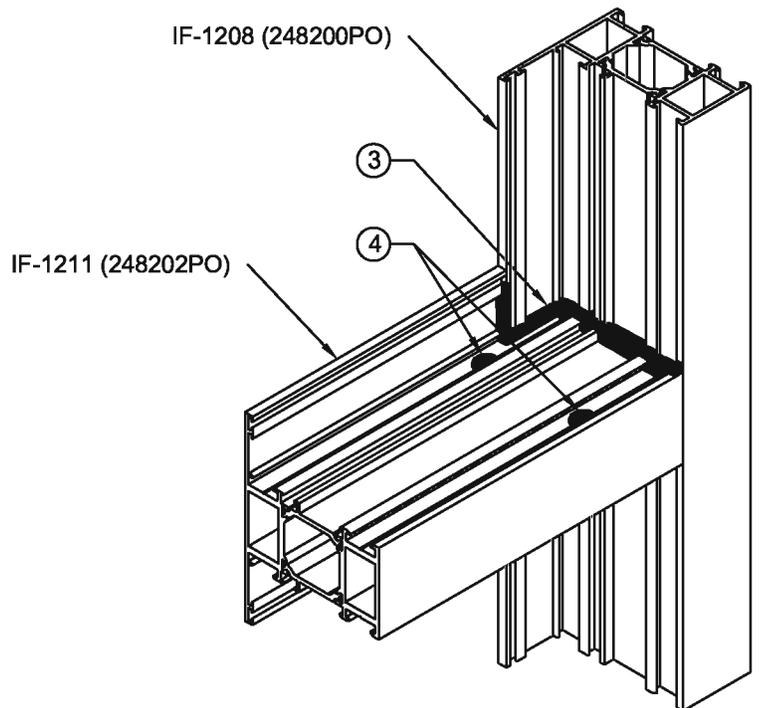
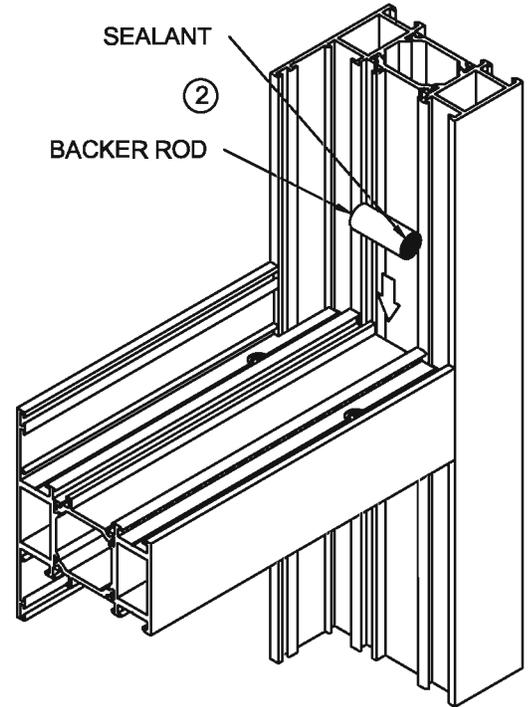
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- ① Before applying any sealant ensure that all surfaces are free from dust, grease, and burrs. Clean all mating surfaces with isopropyl alcohol on a clean cloth.
- ② Cut about a 1" piece of 3/8" diameter backer rod, apply sealant to each end, and insert it into the gap between the vertical and horizontal polyamide.
- ③ Apply and tool sealant to ALL intermediate mullion joints as shown.
- ④ Seal over exposed fastener heads as shown.

Standard Intermediate mullion IF-1211 (248202PO) with frame IF-1208 (248200PO) shown; others similar.



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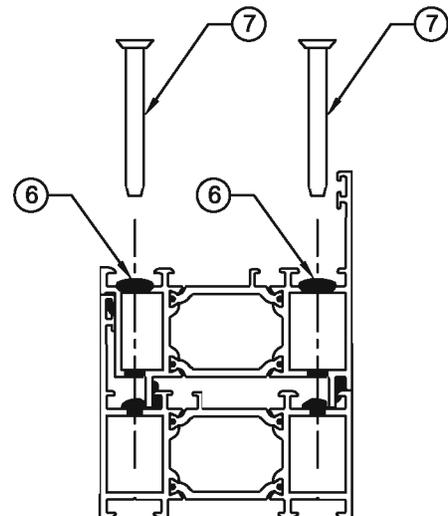
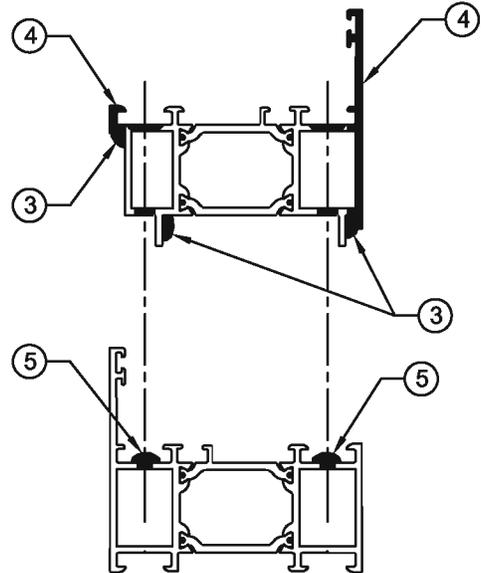
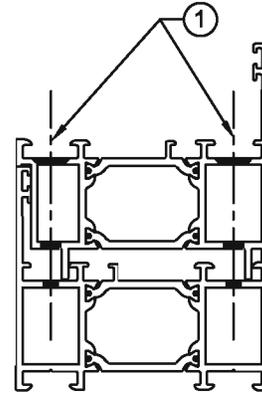
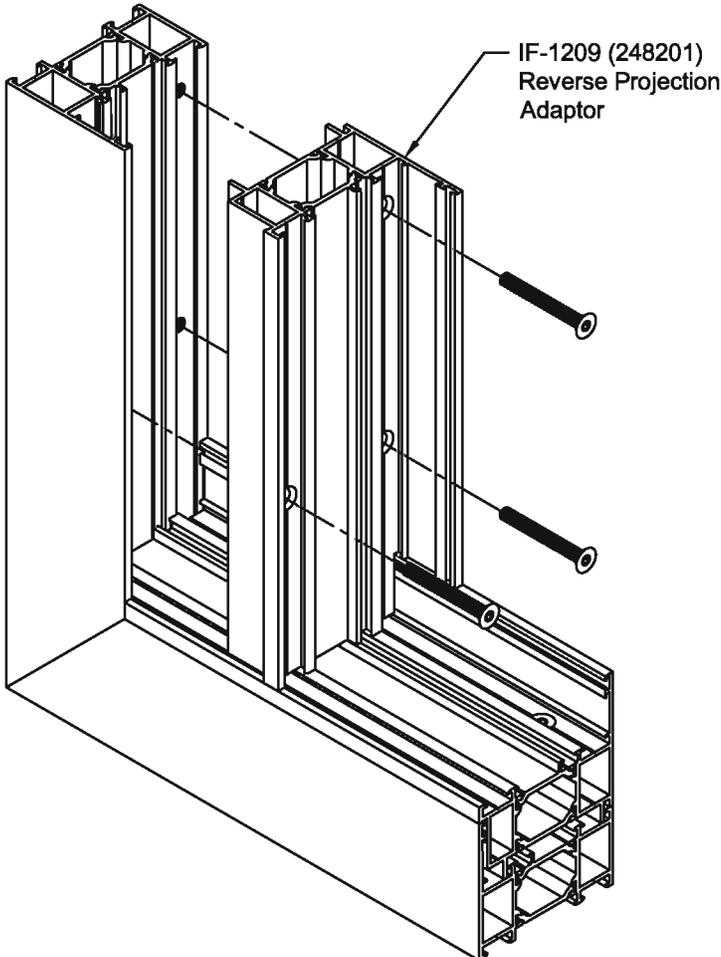
SECTION IV PO/OSC WINDOW ASSEMBLY & GLAZING
ATTACH REVERSE PROJECTION ADAPTOR (AS REQUIRED)

E.C. 95506-024

Reverse projection adaptors are required in vent portion of fixed with outswing combination frames where the fixed lite must be inside glazed.

- ① Dry fit reverse projection adaptor IF-1209 (248201) to frame at sill. Going thru pre-fabricated holes on adaptor, line drill thru first wall of frame using #26 bit (0.147" dia.).
- ② Before applying any sealant ensure that all surfaces are free from dust, grease, and burrs. Clean all mating surfaces with isopropyl alcohol on clean cloth.
- ③ Remove adaptor and apply sealant bead along full length of sill adaptor at each location shown.
- ④ Apply sealant to adaptor at each end as shown.
- ⑤ Liberally apply sealant around holes previously drilled in frame.
- ⑥ Insert frame 4-bar hinge shims, re-fit adaptors and apply sealant around all countersink holes.
- ⑦ Fasten adaptor to frame with #10 x 1-5/8" FHTF Type B fasteners 15-0794 (128425).

Repeat above steps to attach reverse projection adaptor at head next and then jambs.



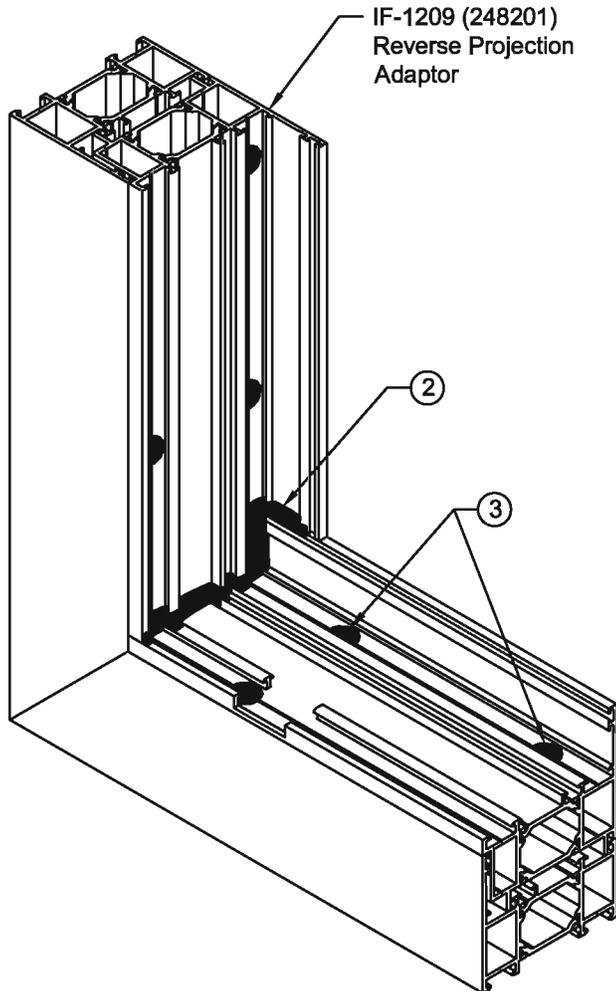
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SECTION IV PO/OSC WINDOW ASSEMBLY & GLAZING
SEAL REVERSE PROJECTION ADAPTOR JOINTS (AS REQUIRED)

- ① Before applying any sealant ensure that all surfaces are free from dust, grease, and burrs. Clean all mating surfaces with isopropyl alcohol on a clean cloth.
- ② Apply and tool sealant to ALL reverse projection adaptor joints as shown.
- ③ Seal over exposed fastener heads as shown.

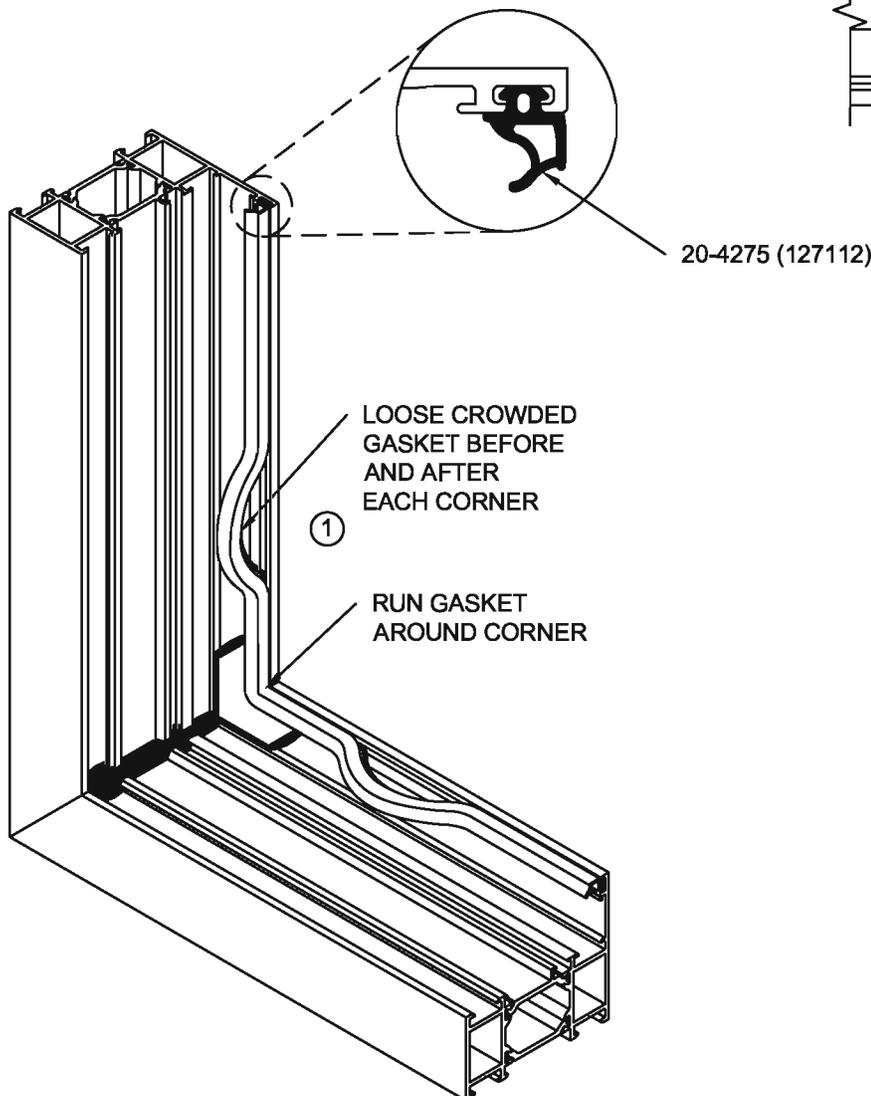
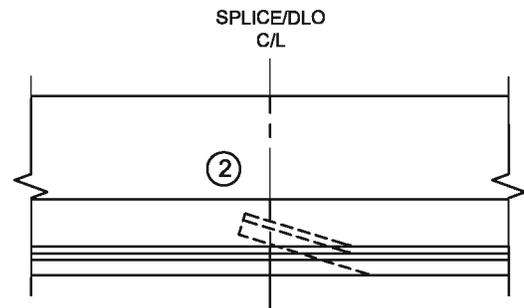
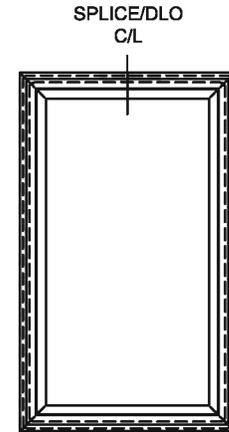


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Project out/outswing casement windows require weathering to be installed on the frame.

- ① Push in weathering gasket 20-4275 (127112) into frame IF-1208 (248200PO) reglet starting at the centerline of DLO at top of frame. Be careful NOT TO STRETCH gasket. Leave about 2" of gasket loose and crowded before corner. Wrap gasket around corner making sure gasket dart is fully engaged in reglet. Again, leave about 2" of gasket loose and crowded after corner. Continue pushing in gasket around vent in same manner.
- ② Square cut gasket about 1/2" long, butt against start end and complete installation.

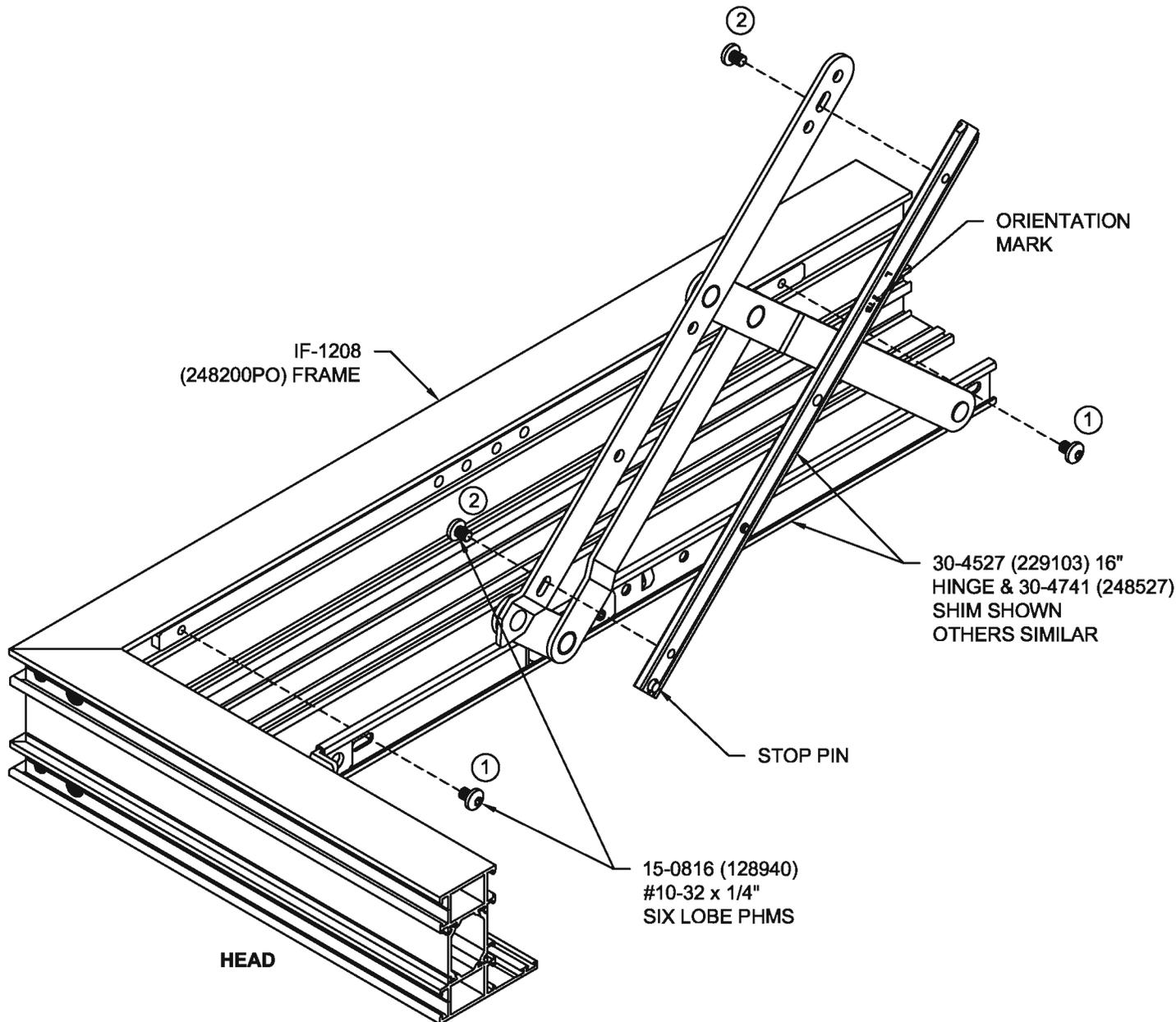


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Fully extend 4-bar hinges and orient them in proper position.

- ① Loosely attach 4-bar hinge to frame shim previously installed with #10-32 x 1/4" SIX LOBE PHMS 15-0816 (128940) fasteners as shown. Slide the 4-bar hinge and shims towards the frame corner until it bottoms out and tighten the fasteners all the way.
- ② Vent portion of 4-bar hinge shims are handed and stamped R or L as viewed from the exterior along with an orientation arrow. The arrow should always point towards the frame. Attach vent portion of 4-bar hinge shims with #10-32 x 1/4" SIX LOBE PHMS 15-0816 (128940) fasteners as shown. Do not completely tighten fasteners yet.



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SECTION IV PO/OSC WINDOW ASSEMBLY & GLAZING
ASSEMBLE VENT - SCREW APPLIED CORNER BRACKET

E.C. 95506-024

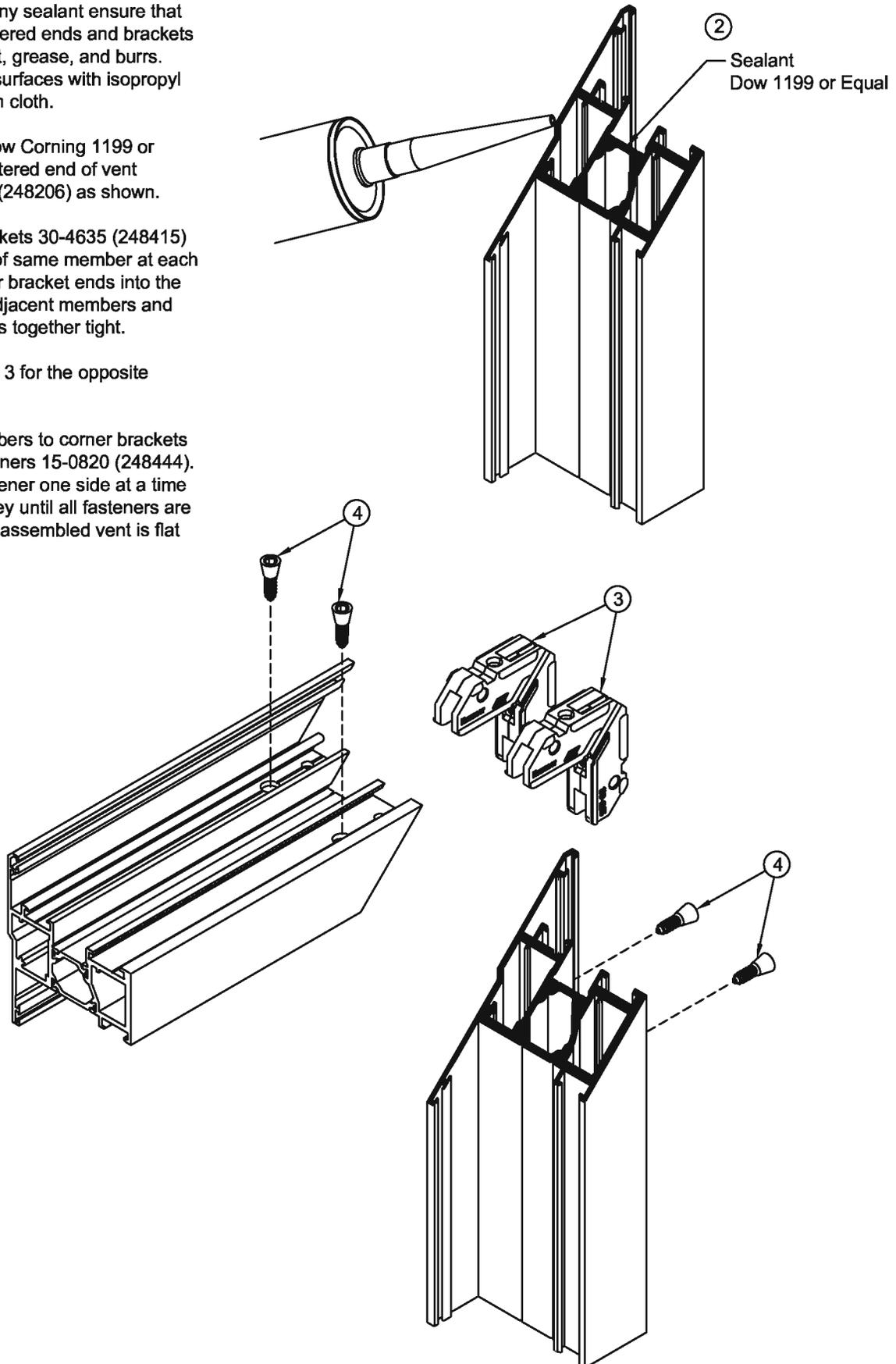
- ① Before applying any sealant ensure that all surfaces of mitered ends and brackets are free from dust, grease, and burrs. Clean all mating surfaces with isopropyl alcohol on a clean cloth.

- ② Apply sealant (Dow Corning 1199 or equal) to each mitered end of vent member IF-1218 (248206) as shown.

- ③ Insert corner brackets 30-4635 (248415) into each hollow of same member at each end. Guide corner bracket ends into the hollows of both adjacent members and slide the members together tight.

Repeat Steps 2 & 3 for the opposite member.

- ④ Fasten vent members to corner brackets with bracket fasteners 15-0820 (248444). Tighten each fastener one side at a time using 4mm hex key until all fasteners are tight. Ensure that assembled vent is flat and square.



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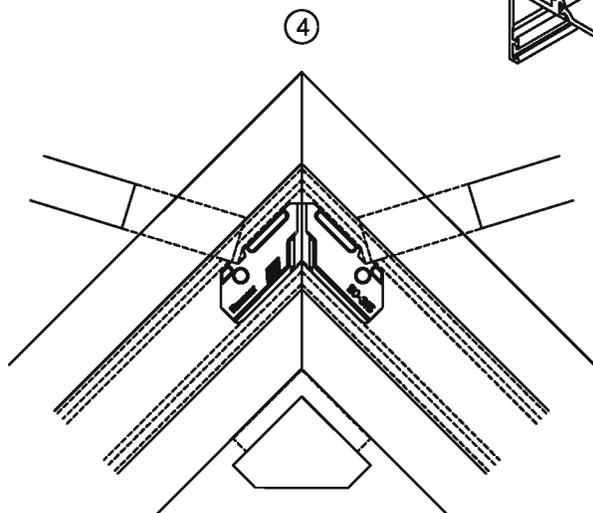
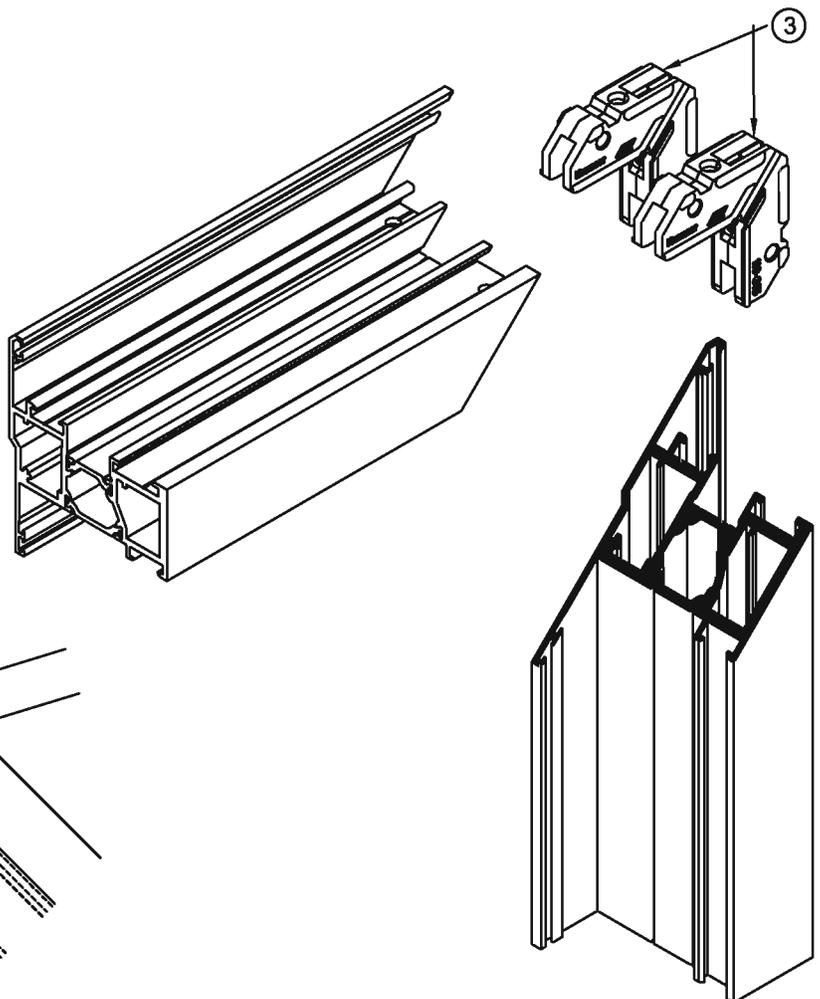
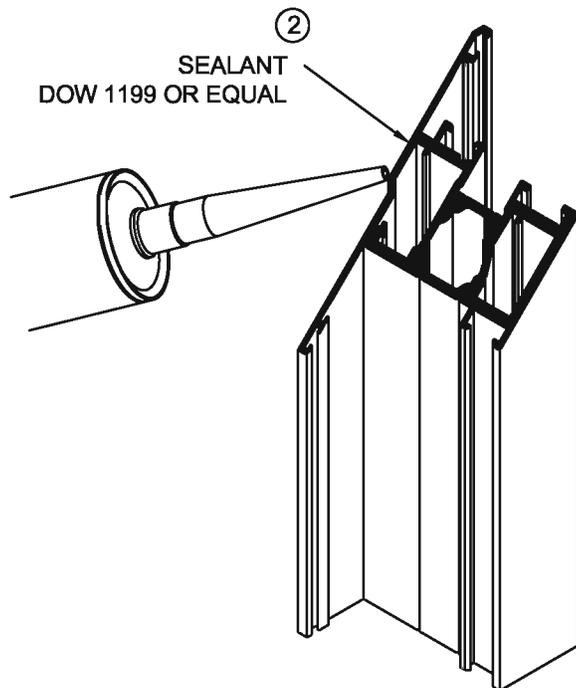
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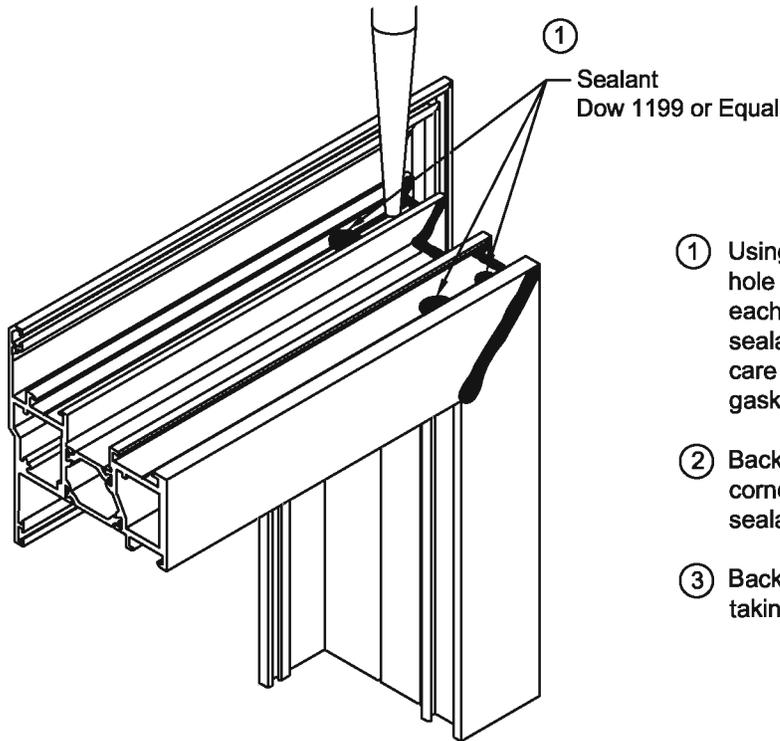
- ① Before applying any sealant ensure that all surfaces of mitered ends and brackets are free from dust, grease, and burrs. Clean all mating surfaces with isopropyl alcohol on a clean cloth.
- ② Apply sealant (Dow Corning 1199 or equal) to each mitered end of vent member IF-1218 (248206) as shown.
- ③ Insert corner brackets 30-4635 (248415) into each hollow of same member at each end. Guide corner bracket ends into the hollows of both adjacent members and slide the members together tight.

Repeat Steps 2 & 3 for opposite member.

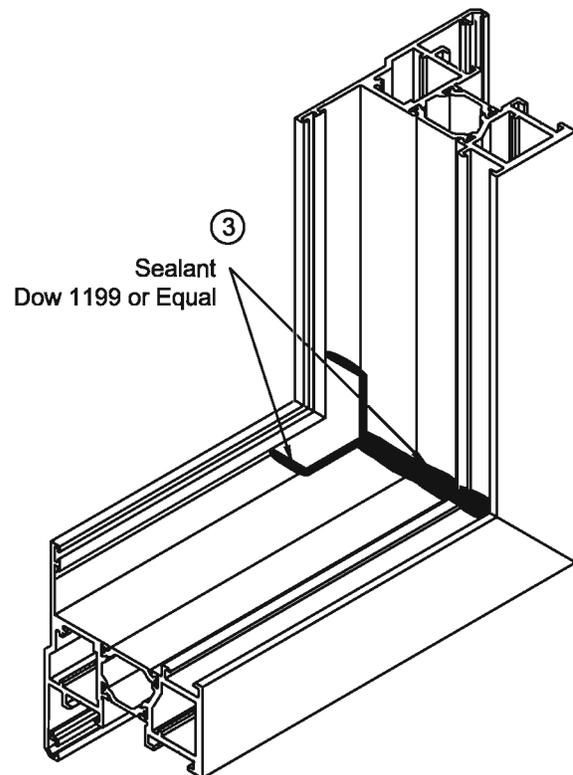
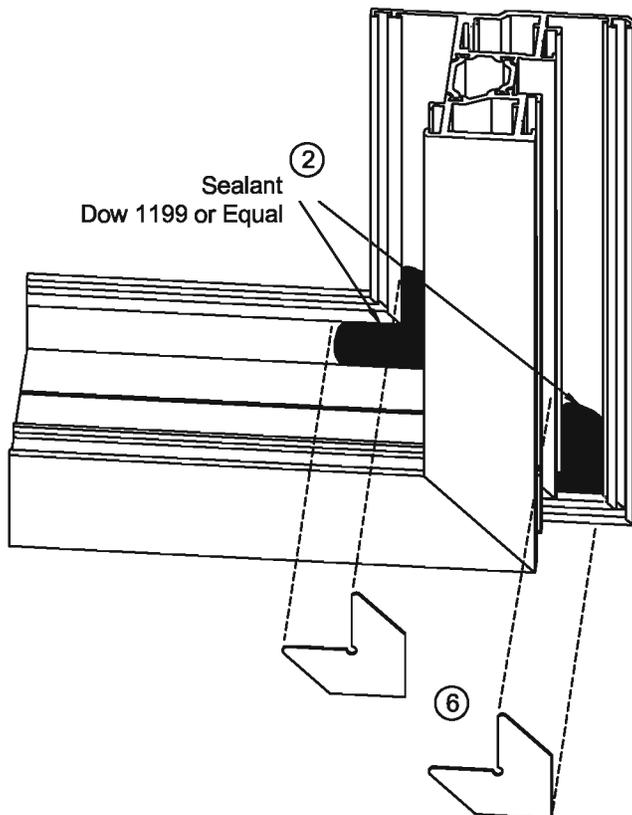
- ④ Place vent corner into the staking machine and operate the machine according to manufacturer's instructions. Ensure that assembled vent is flat and square.

For general setup of staking knives,
See Fab Drawing IF-1218-01 (D248005).





- ① Using the pre-drilled 3/16" holes, inject sealant into each hole until it oozes out of vent joints. Apply sealant over each bracket screw head. Wipe away any excess sealant IMMEDIATELY from all exterior surfaces, taking care not to push any sealant into glazing bead and gasket reglets.
- ② Back seal both vent legs with sealant as shown for corner brace 30-4633 (248413). Set chevrons into sealant and push them toward gasket reglet corners.
- ③ Back seal entire interior mitered joint with sealant, again taking care not to fill glazing bead and gasket reglets.

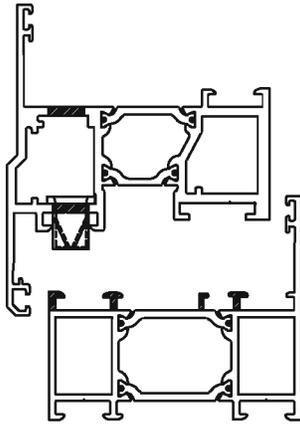
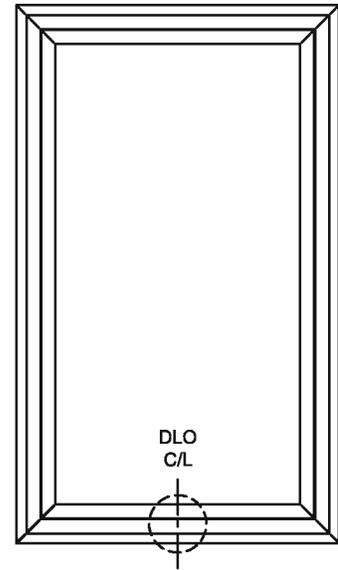


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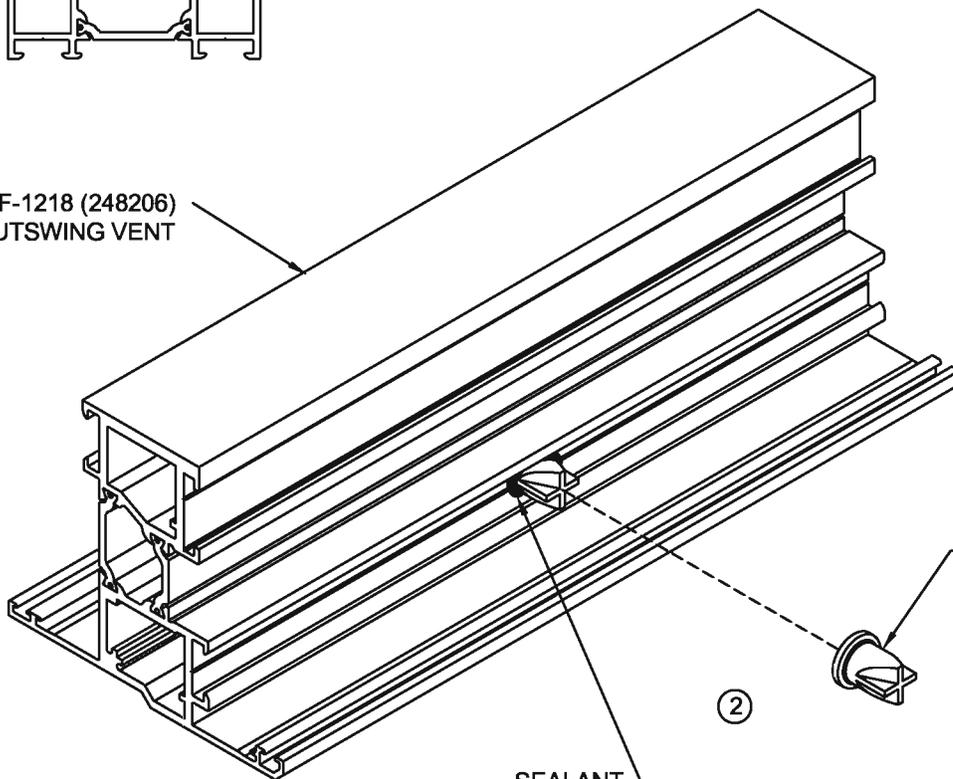
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Each project out/outswing casement vent must have a weep check valve 30-3522 (225536) inserted at the sill in order to weep properly.

- ① Before applying any sealant ensure that all contact surfaces are free from dust, grease, and burrs. Clean all surfaces with isopropyl alcohol on a clean cloth.
- ② Pinching open end of valve, insert it into pre-drilled hole at underside of exterior sill chamber. Be careful not to push valve completely through hole. Gently pull valve back tight against inside wall of sill and apply sealant where valve meets sill member as shown.



IF-1218 (248206)
OUTSWING VENT



30-3522 (225536)
WEEP CHECK VALVE

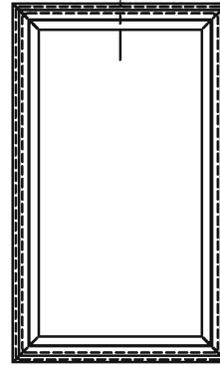
②

SEALANT
DOW 1199 OR EQUAL

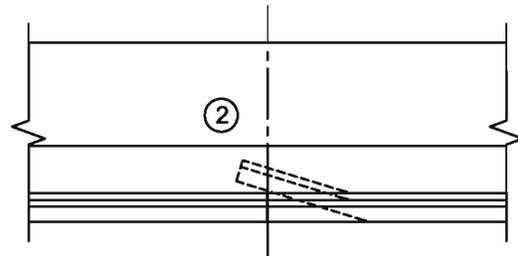
Project out/outswing casement windows require weathering to be installed on the vent.

- ① Push in weathering gasket 20-4275 (127112) into vent (248206) reglet starting at the centerline of DLO at top of frame. Be careful NOT TO STRETCH gasket. Leave about 2" of gasket loose and crowded before corner. Wrap gasket around corner making sure gasket dart is fully engaged in reglet. Again, leave about 2" of gasket loose and crowded after corner. Continue pushing in gasket around vent in same manner.
- ② Square cut gasket about 1/2" long, butt against start end and complete installation.

SPLICE/DLO
C/L



SPLICE/DLO
C/L

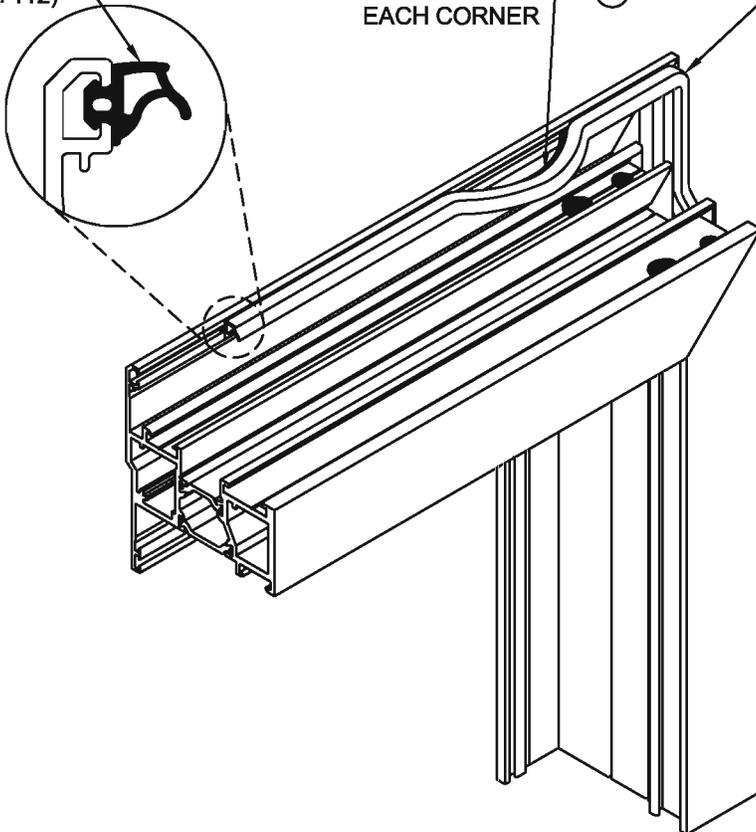


20-4275
(127112)

LOOSE CROWDED GASKET
BEFORE AND AFTER
EACH CORNER

①

RUN GASKET
AROUND CORNER

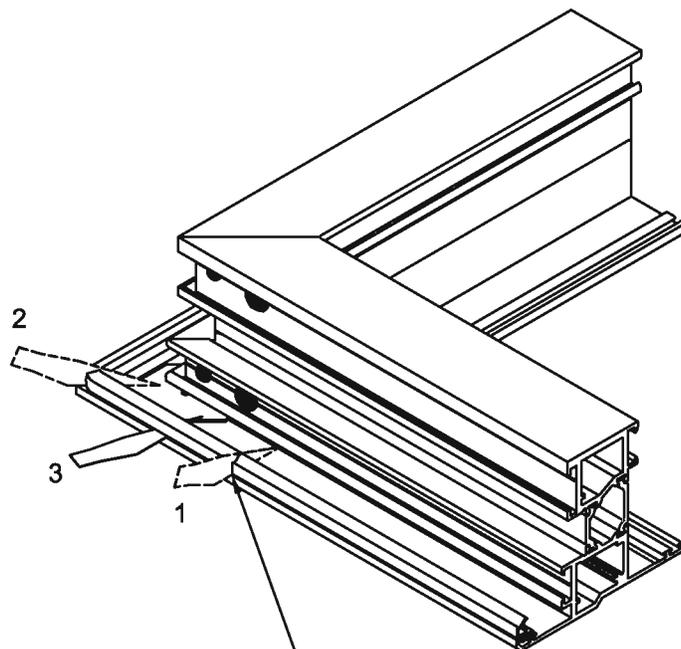
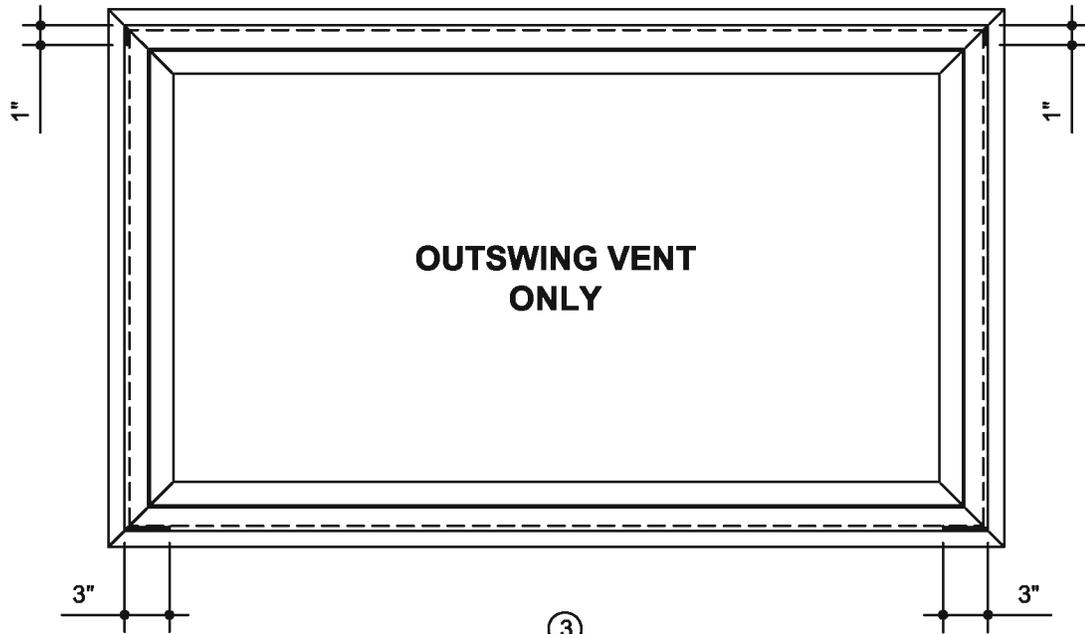


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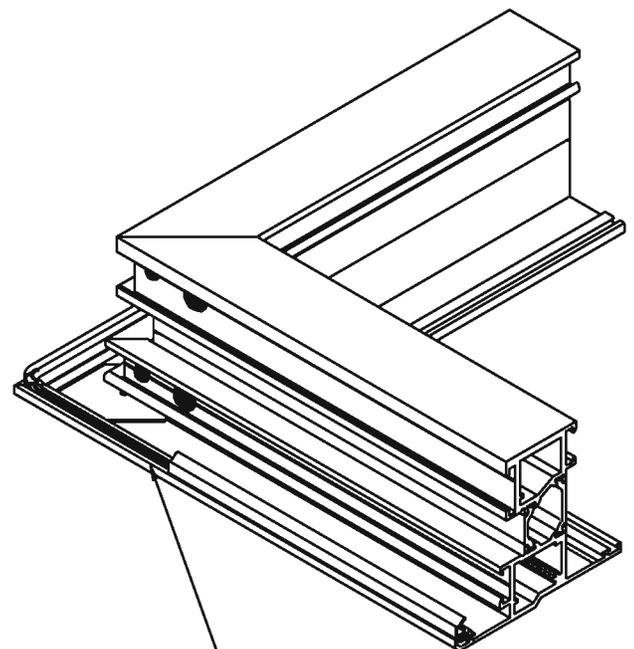
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- ③ Portions of weathering gasket 20-4275 (127112) on project-out/outswing casement vents (248206) must be notched at jambs and sill in order for windows to weep properly. Cut weathering gasket at each corner as shown.



Cut Weathering
Down to Aluminum



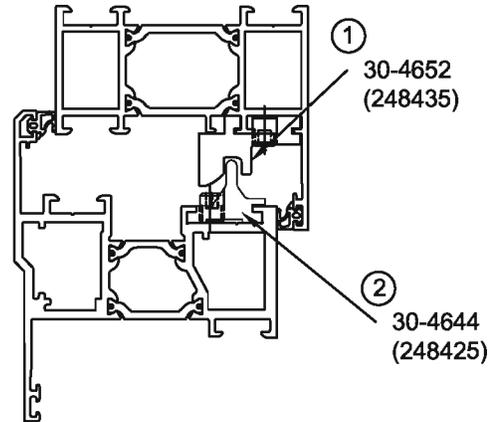
Cut Weathering
Down to Aluminum

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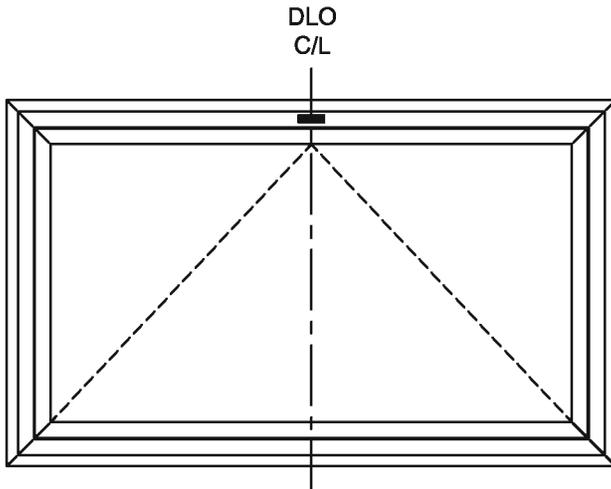
Operable windows hung with 4-bar hinges must have snubbers installed opposite lock side to operate correctly. Install snubber receivers on frame and snubber drivers on vents as shown prior to assembly.

- ① Loosen set screws for frame snubber receiver 30-4652 (248435) and rock it into frame Euro-Groove. Slide into place and loosely tighten set screws with 1/8" allen key. Adjust frame snubber receiver location after vent is attached to frame.
- ② Slide in vent snubber driver 30-4644 (248425) from Euro-Groove end. Slide into place and loosely tighten set screw with 1/8" allen key. Adjust vent snubber driver location after vent is attached to frame.

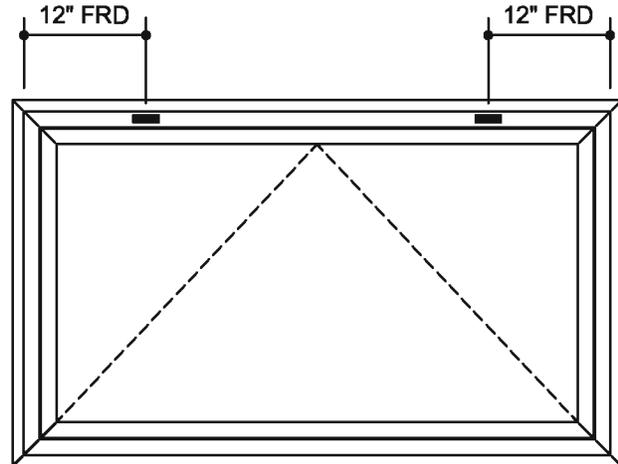


SNUBBER LOCATIONS

PROJECT-OUT SHOWN, OUTSWING CASEMENT SIMILAR



WINDOWS WITH 2 LOCK LOCATIONS



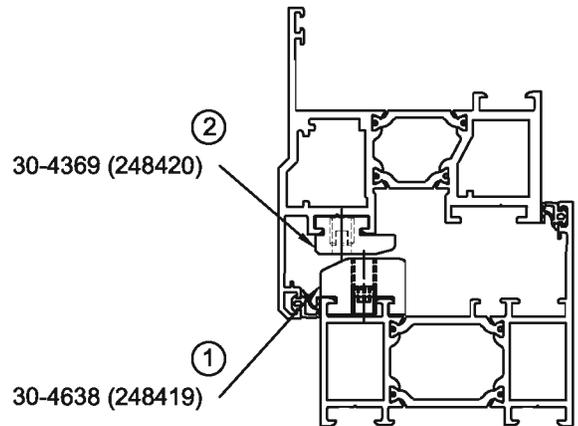
WINDOWS WITH 3 LOCK LOCATIONS
FRD = FRAME REFERENCE DIMENSION

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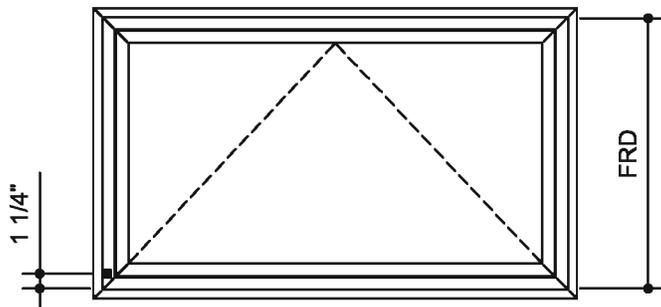
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All casement windows must have riser blocks installed at sill, and projected windows with multi-point locks must have side blocks installed at jambs. Attach riser/side blocks as shown prior to assembly.

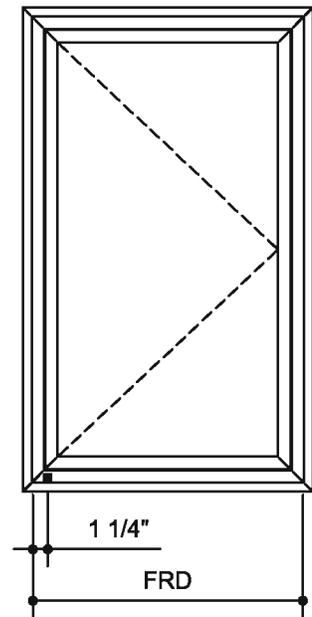
- ① Loosen set screw for frame riser/side block 30-4638 (248419) and rock into frame Euro-Groove. Slide into place and tighten set screw with 1/8" allen key.
- ② Slide in outswing vent riser/side block 30-4369 (248420) from Euro-Groove end. Slide into place and tighten set screw with 1/8" allen key.



RISER/SIDE BLOCK LOCATIONS
FRD = FRAME REFERENCE DIMENSION



**PROJECT- OUT WITH
MULTI-POINT LOCK ONLY**



**OUTSWING CASEMENT
WITH ALL LOCK TYPES**

NOTE:

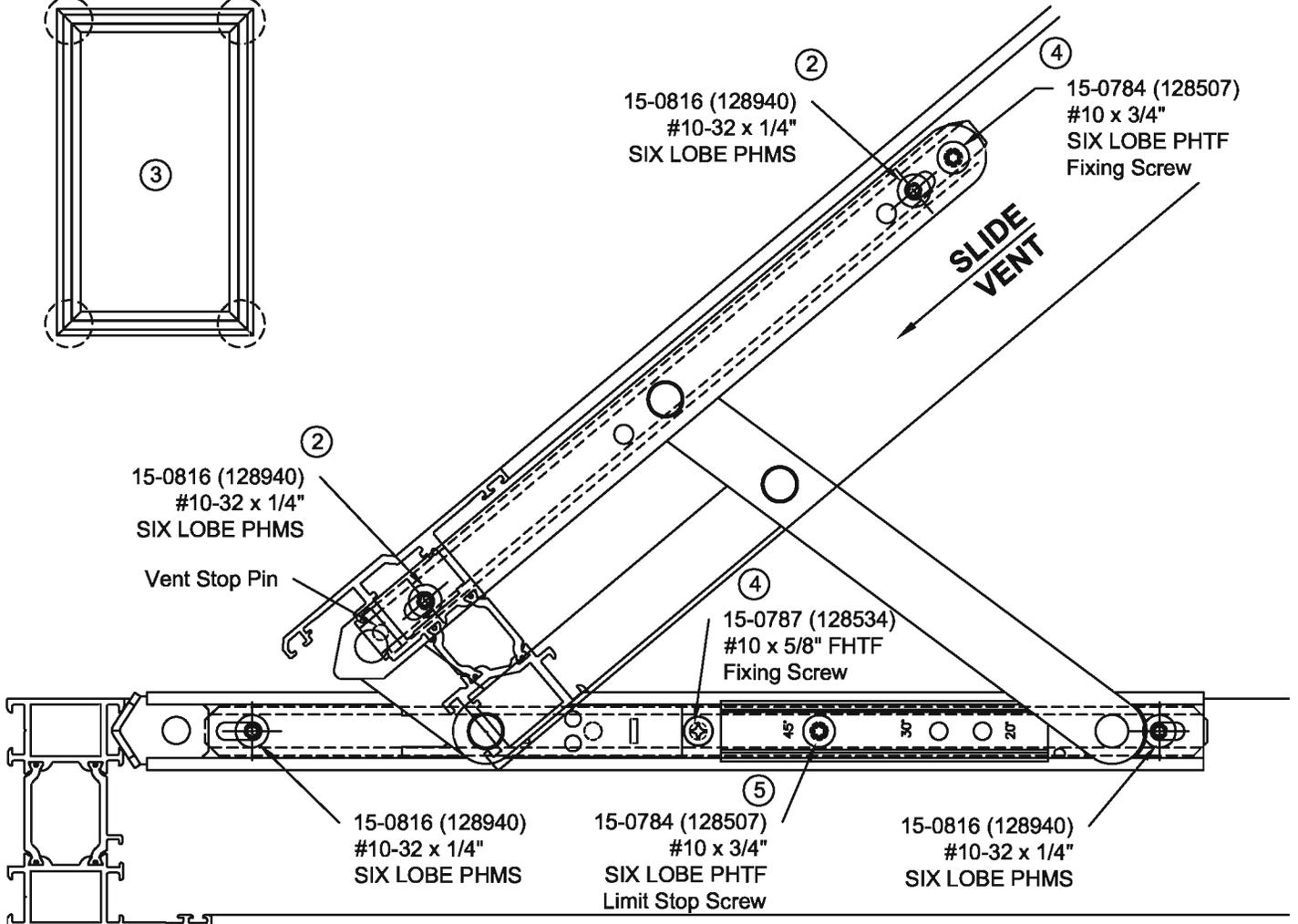
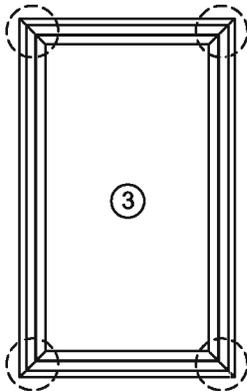
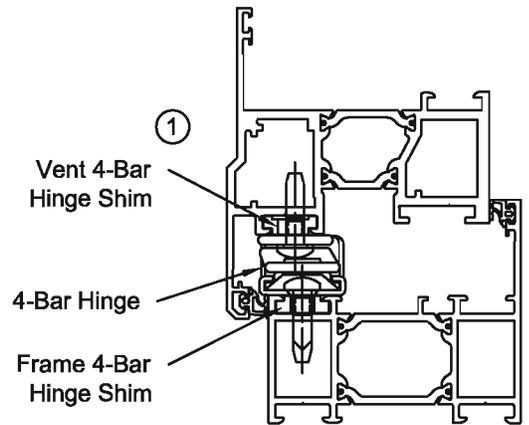
ADDITIONAL RISER BLOCK REQUIRED FOR CASEMENT FRD'S OVER 24" WIDE WHEN WIDTH/HEIGHT RATIOS>2:1 OR ON ANY CASEMENT FRD'S OVER 30". LOCATE ADDITIONAL RISER BLOCK 2" FROM THE END OF THE 4-BAR HINGE. FOR UNITS WITH BUTT HINGES AND FRICTION ADJUSTERS, LOCATE THE ADDITIONAL RISER BLOCK 2" FROM THE HINGE SIDE OF THE FRICTION ADJUSTER TRACK SCREW.

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SECTION IV PO/OSC WINDOW ASSEMBLY & GLAZING
ATTACH VENT TO FRAME - OUTSWING CASEMENT WITH 4-BAR HINGES

- ① Align vent Euro-Groove ends with ends of vent 4-bar hinge shims and slide vent down until it bottoms out on vent stop pins.
- ② Tighten 4-bar hinge to vent shim using #10-32 x 1/4" SIX LOBE PHMS 15-0816 (128940) fasteners on each side of vent as shown.
- ③ Close vent and make sure the vent and frame miters line up. If required, loosen vent shim fasteners, adjust vent and repeat Steps 2 & 3.
- ④ Line drill using #26 bit (0.147" dia.) thru one wall only and install #10 x 3/4" SIX LOBE PHTF 15-0784 (128507) and #10 x 5/8" FHTF 15-0787 (128534) fasteners where indicated.
- ⑤ Slide limit stop to align desired opening (45°, 30°, or 20°) hole with 4-bar hinge hole. Line drill using #26 bit (0.147" dia.) thru one wall only and install #10 x 3/4" SIX LOBE PHTF (128507) fastener.



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SECTION IV PO/OSC WINDOW ASSEMBLY & GLAZING
ATTACH VENT TO FRAME - BUTT HINGES (OSC ONLY)

E.C. 95506-024

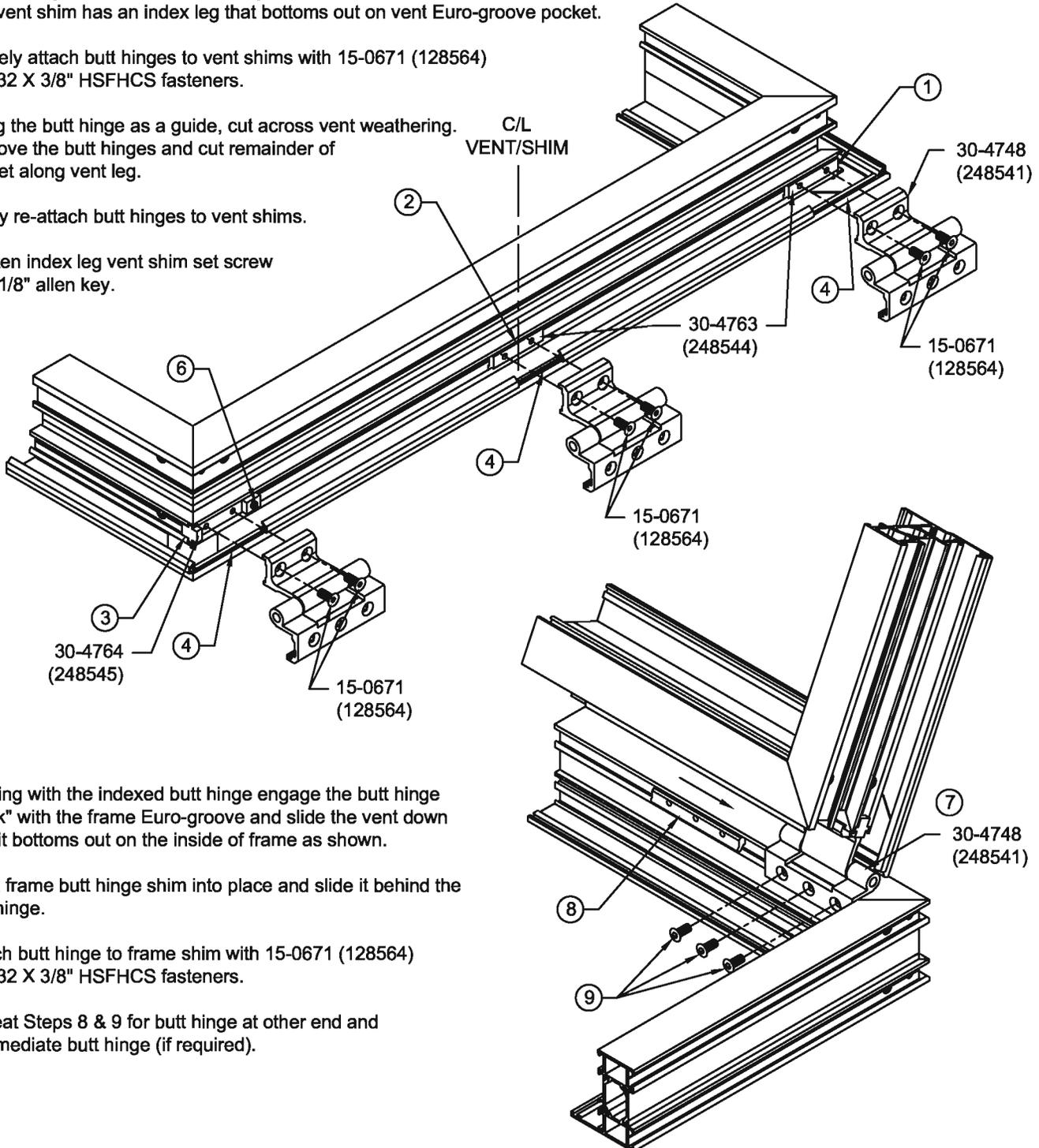
Insert butt hinge vent shims into Euro-groove as shown.

NOTE: For Casement Outswing windows indexed butt hinge shim must be installed at bottom. Butt hinges ARE NOT TO BE USED with project-out windows.

- ① Top Hinge: Use butt hinge 30-4748 (248541) & 30-4763 (248544) vent shim. The top of the vent shim should be aligned with top edge of vent Euro-groove pocket.
- ② Intermediate Hinge: Use butt hinge 30-4748 (248541) & 30-4763 (248544) vent shim. The center line of the vent shim should be aligned with the center line of the vent.
- ③ Bottom Hinge: Use indexed butt hinge 30-4748 (248541) & 30-4764 (248545) vent shim. The vent shim has an index leg that bottoms out on vent Euro-groove pocket.

Loosely attach butt hinges to vent shims with 15-0671 (128564) #10-32 X 3/8" HSFHCS fasteners.

- ④ Using the butt hinge as a guide, cut across vent weathering. Remove the butt hinges and cut remainder of gasket along vent leg.
- ⑤ Firmly re-attach butt hinges to vent shims.
- ⑥ Tighten index leg vent shim set screw with 1/8" allen key.



- ⑦ Starting with the indexed butt hinge engage the butt hinge "hook" with the frame Euro-groove and slide the vent down until it bottoms out on the inside of frame as shown.
- ⑧ Rock frame butt hinge shim into place and slide it behind the butt hinge.
- ⑨ Attach butt hinge to frame shim with 15-0671 (128564) #10-32 X 3/8" HSFHCS fasteners.

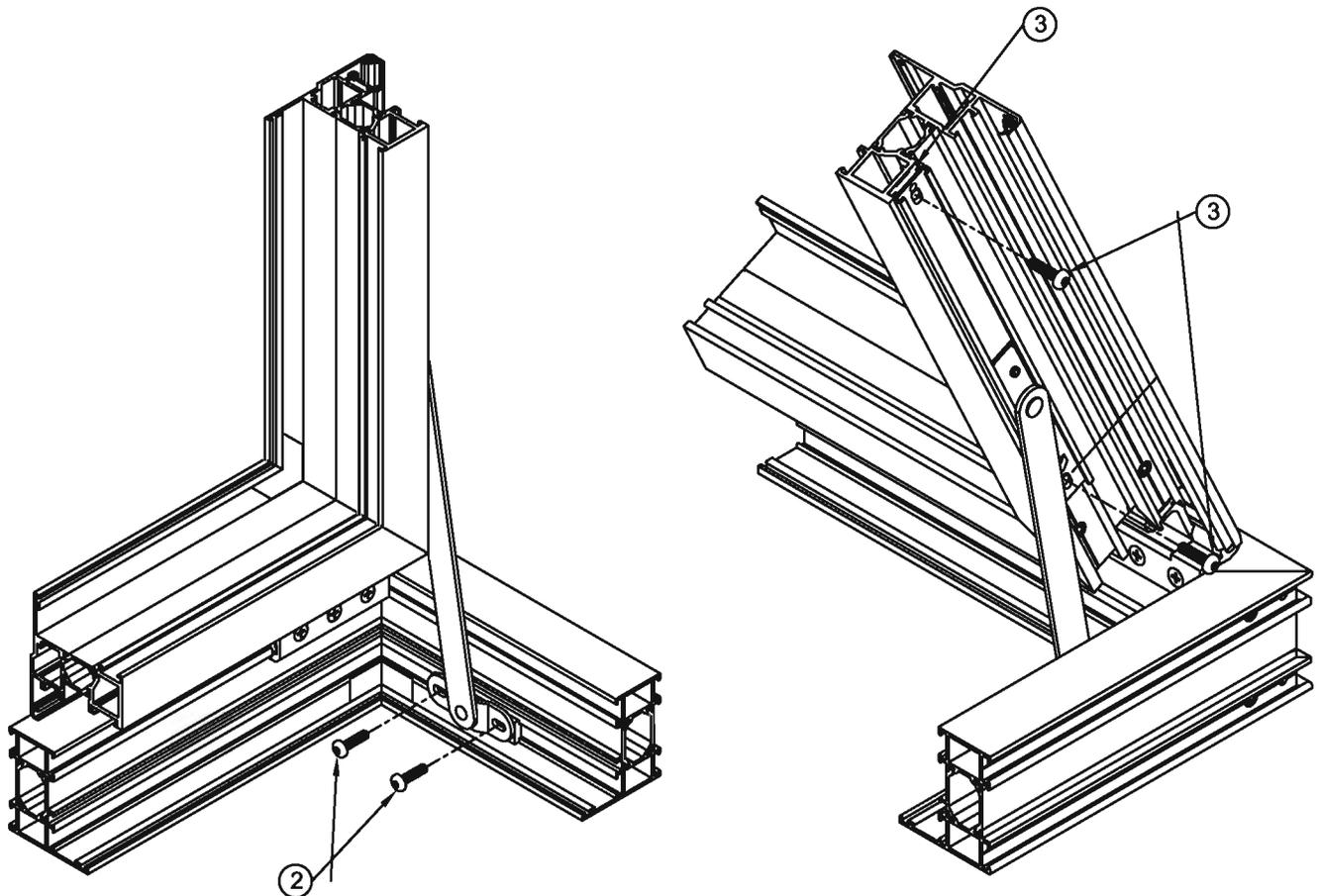
Repeat Steps 8 & 9 for butt hinge at other end and intermediate butt hinge (if required).

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Outswing casement windows with butt hinges require friction adjusters at the head and sill.
Outswing casement windows with butt hinges and roto operator require friction adjuster at the head only.

- ① Open the vent and locate the two pre-drilled holes on frame for friction adjuster attachment.
- ② Align friction adjuster frame shim with pre-drilled holes in frame and attach friction adjuster through the shim into the frame with two #10 x 3/4" SIZ LOBE PHTF Type "B" fasteners 15-0784 (128507) as shown.
- ③ Insert friction adjuster vent shims into vent Euro-groove from the notched out end and align friction adjuster vent shim with pre-drilled holes in vent and attach friction adjuster through the shim into the vent with two #10 x 3/4" SIX LOBE PHTF Type "B" fasteners 15-0784 (128507) as shown.



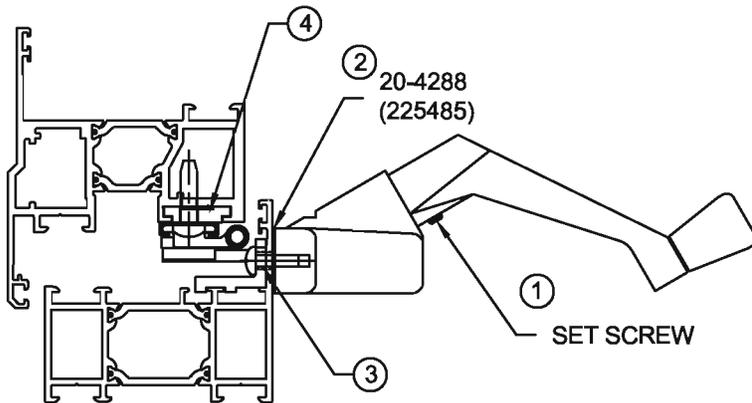
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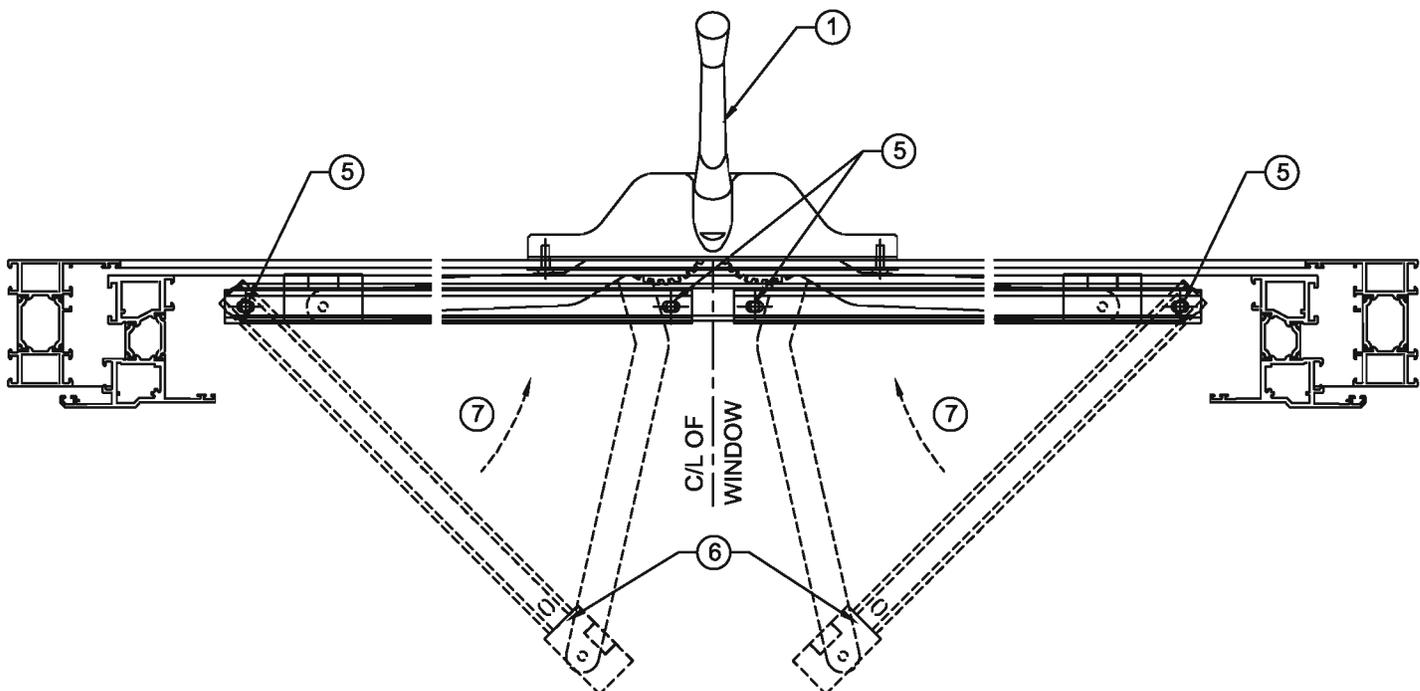
Optional pivot shoe roto operators are used on project-out windows only; they must also be used with loose rivet 4-bar hinges, 30-4538 (229144 (10")), 30-3868 (229146 (16")), and 30-4761 (229148 (24")).

NOTE: Loose rivet 4-bar hinges are installed similar to standard 4-bar hinges as shown on Page-60 of this document.

- ① Attach roto operator handle 30-3041 (229116) onto operator 30-4727 ((229181) 5.5") or 30-4632 ((823346) 11") and tighten set screw on handle to secure it.
- ② Remove adhesive backing from roto operator gasket 20-4288 (225485) and affix it to roto.
- ③ Turn the roto handle to open the roto operator arms and insert the operator through the frame prep. Position backup plate 50-1854 (248492) into place and attach roto operator to frame with two #8-32 x 1/2" PHMS 15-0811 (029330) fasteners as shown.
- ④ Insert the pivot shoe roto operator track shims 304728 ((248504) 5.5") or 30-4676 ((248491) 11") into vent Euro-groove at notched out end. Slide them down until shims line up with pre-drilled holes in vent.
- ⑤ Align pivot shoe roto tracks with shim and loosely attach at far ends only with #10 x 3/4" TORX PHTF 15-0784 (128507) fasteners.



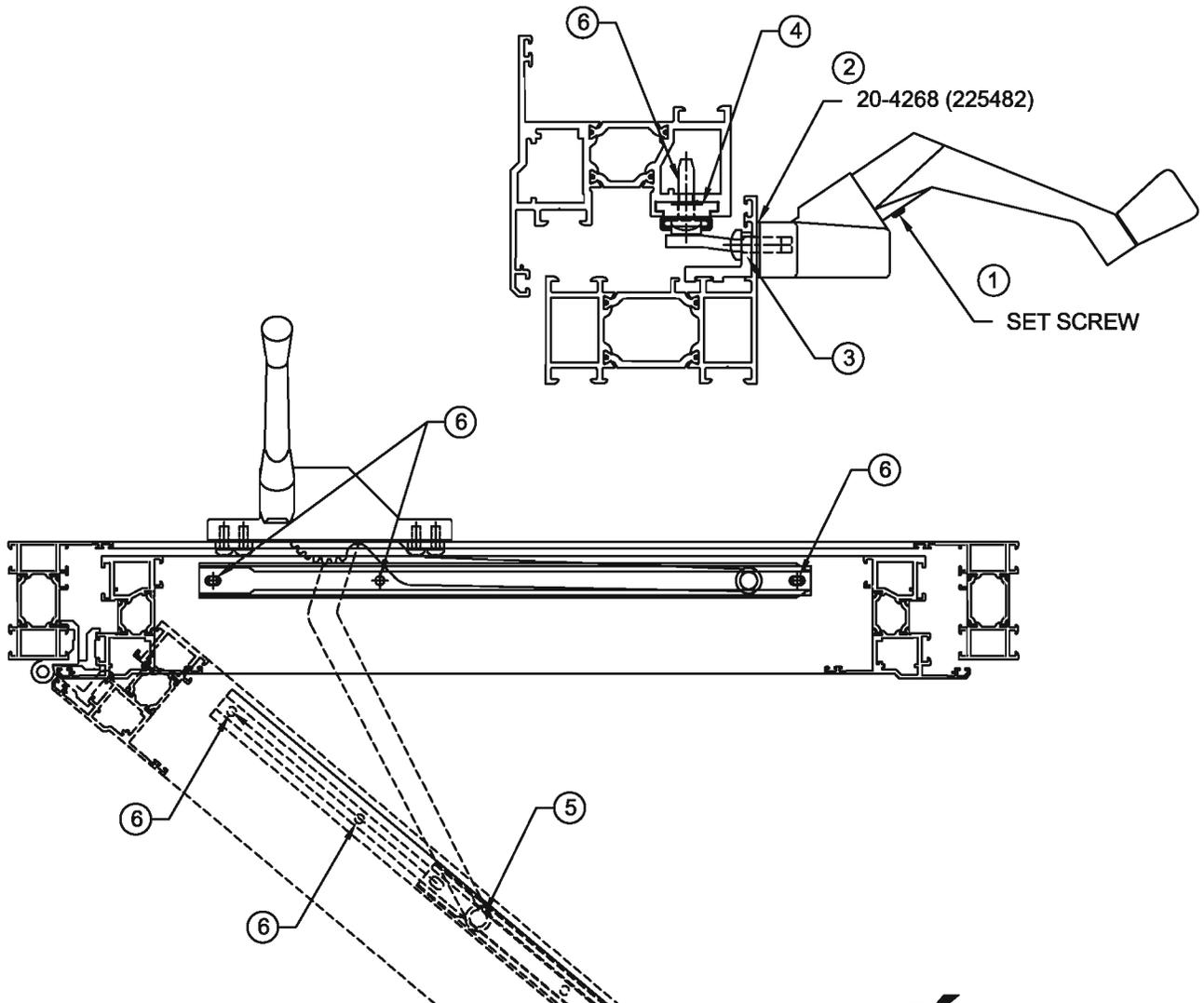
- ⑥ Rotate the roto tracks out and slip the pivot shoes into the tracks. Adjust roto arm angle as necessary.
- ⑦ Turn the roto operator handle to close the arms. The roto tracks should rotate back towards the vent and shims.
- ⑧ Once the roto track mounting slot is aligned with the track shim mounting hole, attach the roto track to the vent with #10 x 3/4" TORX PHTF 15-0784 (128507) fasteners and tighten the previously installed fastener at the other end.



Optional roto operators are used on casement outswing windows only; they must also be used with outswing friction adjuster packages, 30-4535 (229114 (10")), 30-4536 (229115 (12")), and 30-4542 (229158 (14")), at the head.

- ① Insert roto operator handle 30-3041 (229116) onto operator 30-4564/4565 (229171/172) and tighten set screw on handle to secure it.
- ② Remove adhesive backing from roto operator gasket 20-4268 (225482) and affix it to roto.
- ③ Turn the roto handle to open the roto operator arm and insert the operator through the frame prep. Position backup plate 50-1853 (248490) into place and attach roto operator to frame with four #10-24 x 1/2" PHMS 15-0810 (028996) fasteners as shown.
- ④ Insert the roto operator track shim 30-4672 (248479) into vent Euro-groove at notched out end as shown.
- ⑤ Bring roto track into position and insert roto arm roller into open end of track. Adjust roto arm angle as necessary.

Slide roto track back so that the track mounting slots align with shim mounting holes and attach roto track to vent through shims with #10 x 3/4" SIX LOBE PHTF 15-0784 (128507) fasteners at each location as shown.



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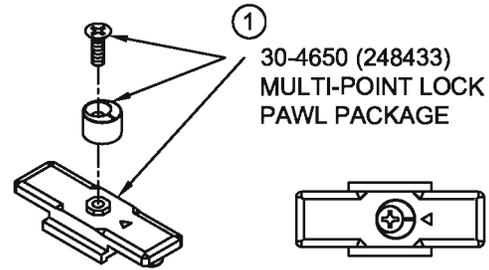
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SECTION IV PO/OSC WINDOW ASSEMBLY & GLAZING
ASSEMBLE MULTI-POINT LOCK HARDWARE

E.C. 95506-024

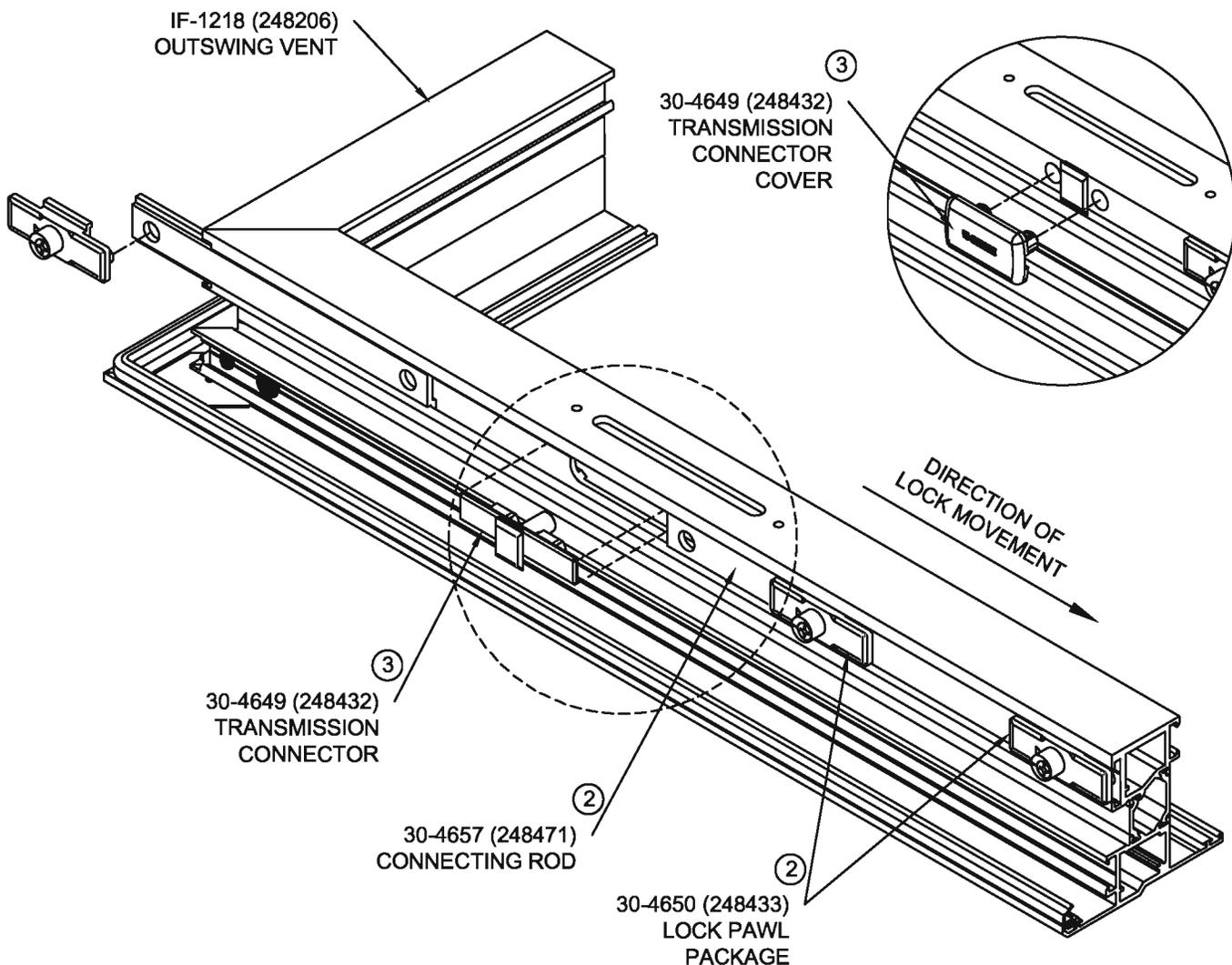
Partially open vent and place blocks underneath each side of vent to keep it open.

- ① Assemble multi-point lock pawl package 30-4650 (248433) as shown. Ensure alignment marks on lock pawl and lock pawl base plate line up.
- ② Connect lock pawls 30-4650 (248433) to link rods 30-4657 (248471) and insert into Euro-Groove end as shown. Ensure all lock pawls are oriented so that alignment marks on base plates point in direction of lock movement.
- ③ Position multi-point lock transmission connector 30-4649 (248432) centered over slot, attach link rods to it, and snap in transmission connector cover as shown.



① 30-4650 (248433)
MULTI-POINT LOCK
PAWL PACKAGE

NOTE: 3-point lock shown; others similar.



IF-1218 (248206)
OUTSWING VENT

③ 30-4649 (248432)
TRANSMISSION
CONNECTOR
COVER

③ 30-4649 (248432)
TRANSMISSION
CONNECTOR

② 30-4657 (248471)
CONNECTING ROD

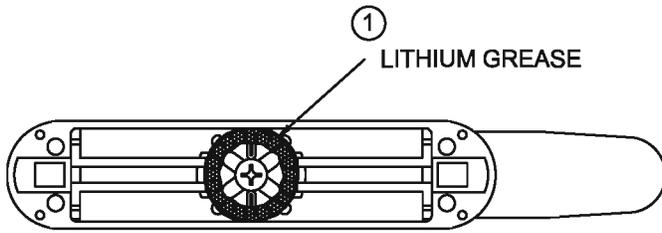
② 30-4650 (248433)
LOCK PAWL
PACKAGE

DIRECTION OF
LOCK MOVEMENT

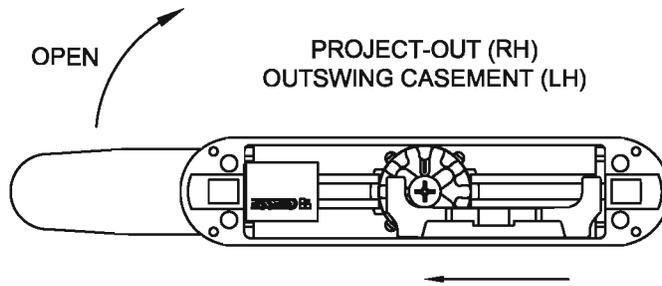
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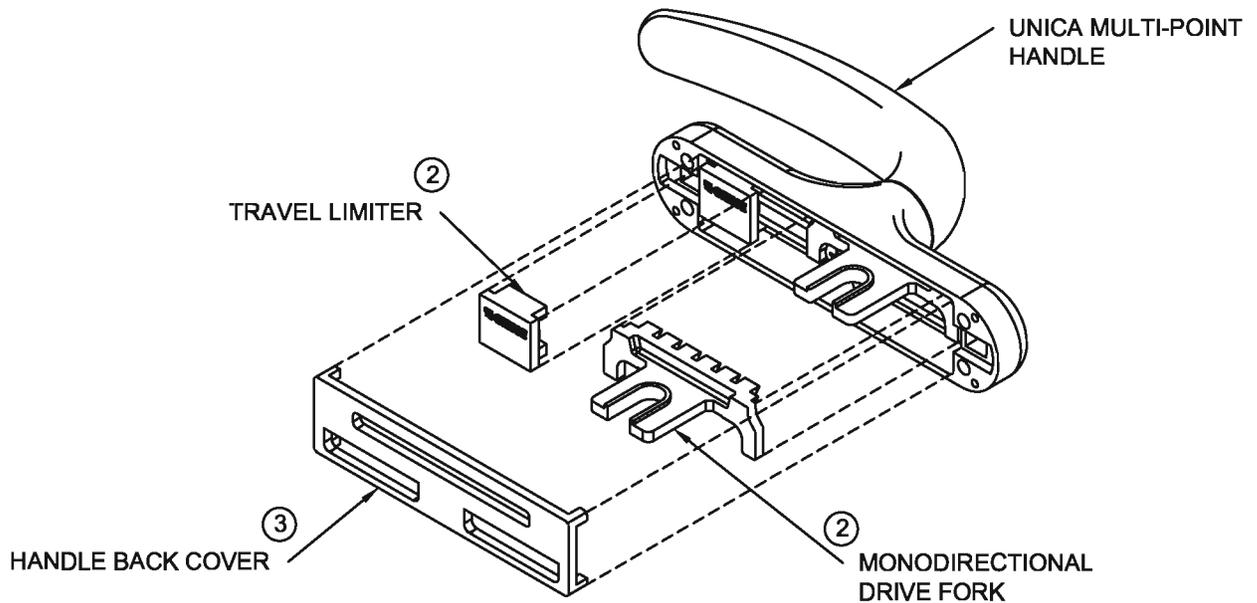
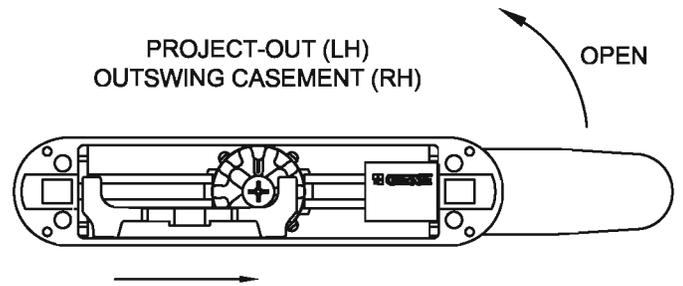
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- ① Apply a liberal amount of lithium grease to gear of standard Unica multi-point lock handle 30-4647 (248428-30).
- ② Insert monodirectional drive fork and travel limiter 30-4648 (248431) according to window handing and operation as shown.
- ③ Snap in multi-point lock handle back cover 30-4648 (248431) as shown.

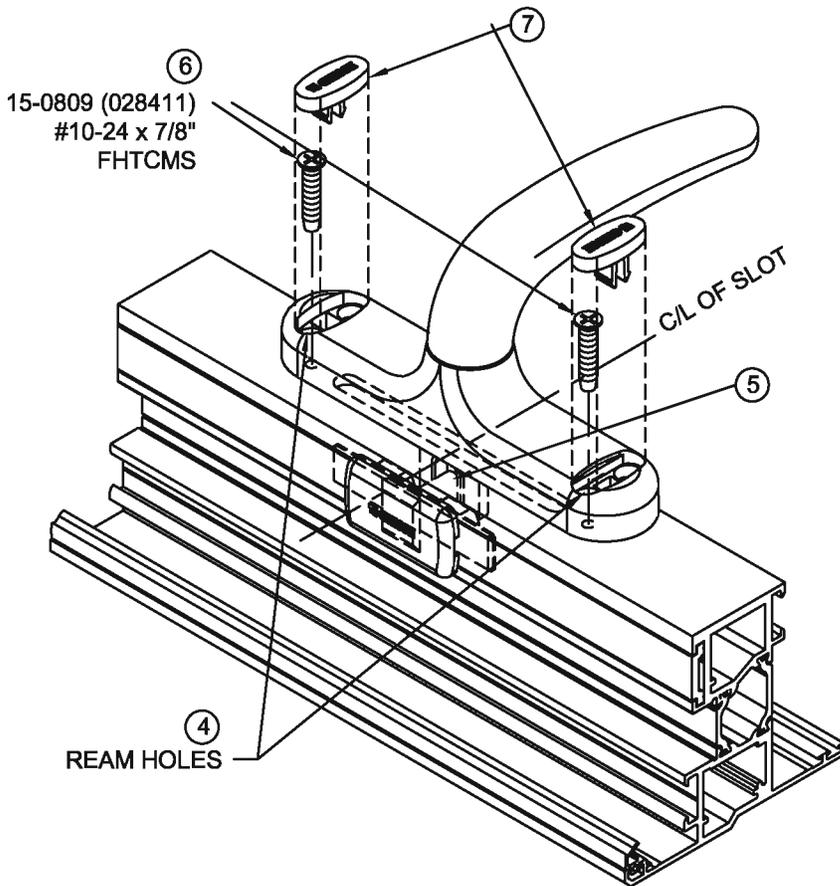


②

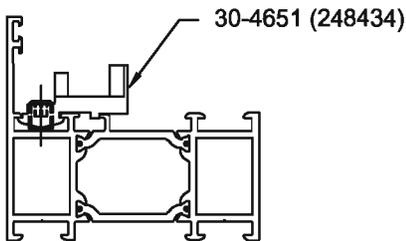


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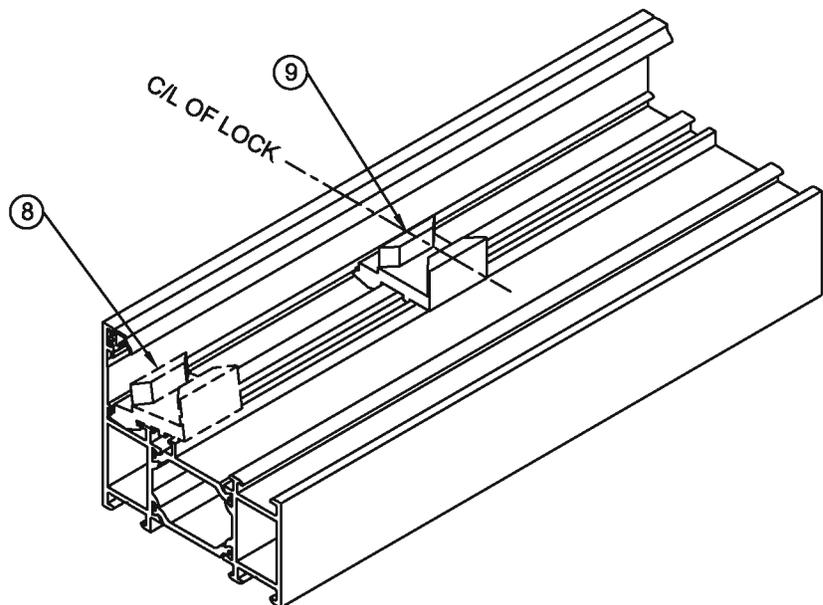


- ④ Use 0.191 dia. (#11 drill bit) to ream 2 attachment holes in handle prior installing gearbox on window.
- ⑤ Slide outswing transmission connector so that it is centered with slot. Turn multi-point lock handle to open position and insert handle into slot with drive fork straddling transmission connector as shown.
- ⑥ Attach multi-point handle to vent with two #10-24 x 7/8" FHTCMS 15-0809 (028411) fasteners.
- ⑦ Attach multi-point handle fastener covers included in handle package.



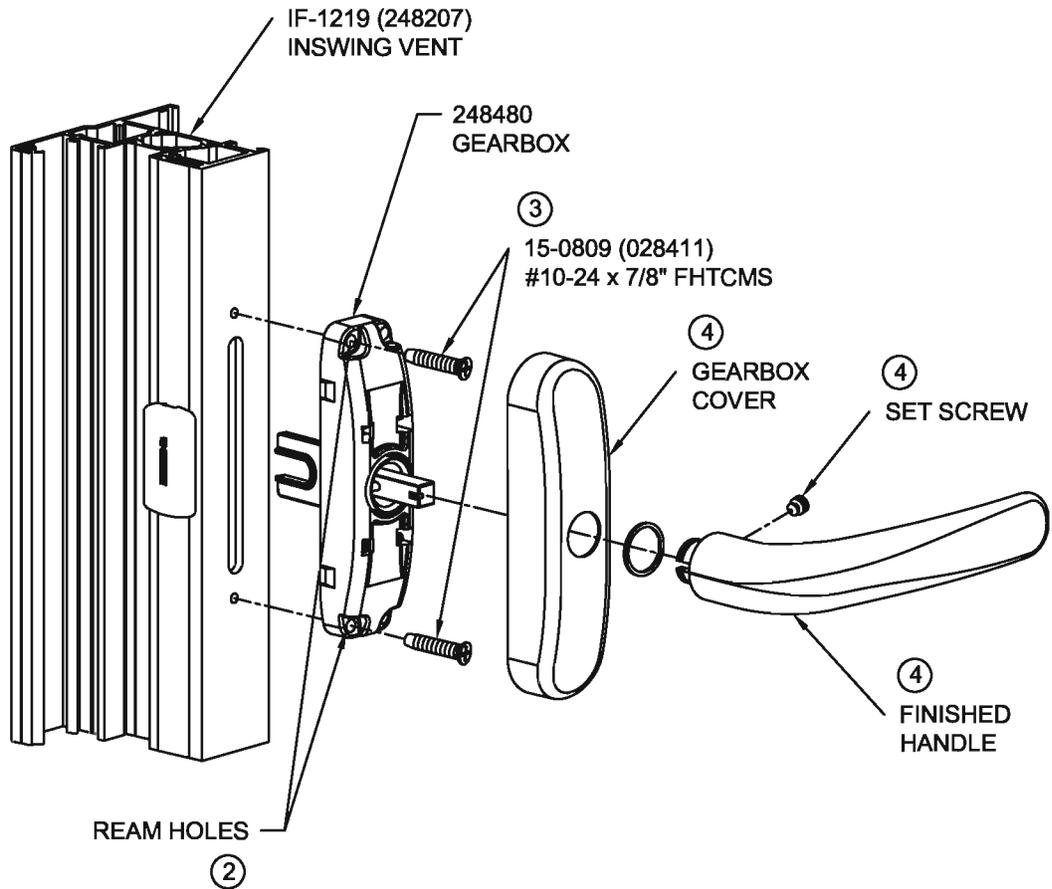
With a pencil mark the centerlines of lock locations on frame.

- ⑧ Loosen outswing multi-point lock keeper 30-4651 (248434) set screw and rock keeper into frame Euro-Groove as shown.
- ⑨ Slide keeper down Euro-Groove track and center keeper over previously marked centerline. Tighten keeper set screw with 1/8" allen key.



Optional Prima multi-point handles allow the handle and gearbox cover to be field installed to avoid damage during shipping.

- ① Insert monodirectional drive fork and travel limiter 30-4648 (248431) into gearbox as previously shown for assembling standard multi-point lock handle.
- ② Use 0.191 dia. (#11 drill bit) to ream 2 attachment holes in handle prior installing gearbox on window.
- ③ Attach gearbox to vent with two #10-24 x 7/8" FHTCMS 15-0809 (028411) fasteners as shown.
- ④ Attach gearbox cover and finished handle with supplied set screw using 3mm hex key.

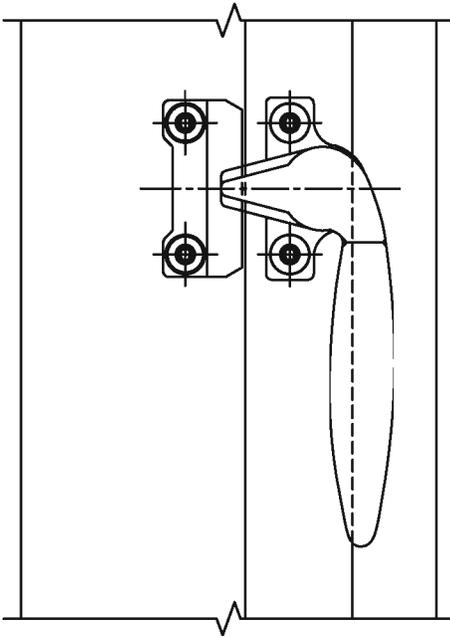


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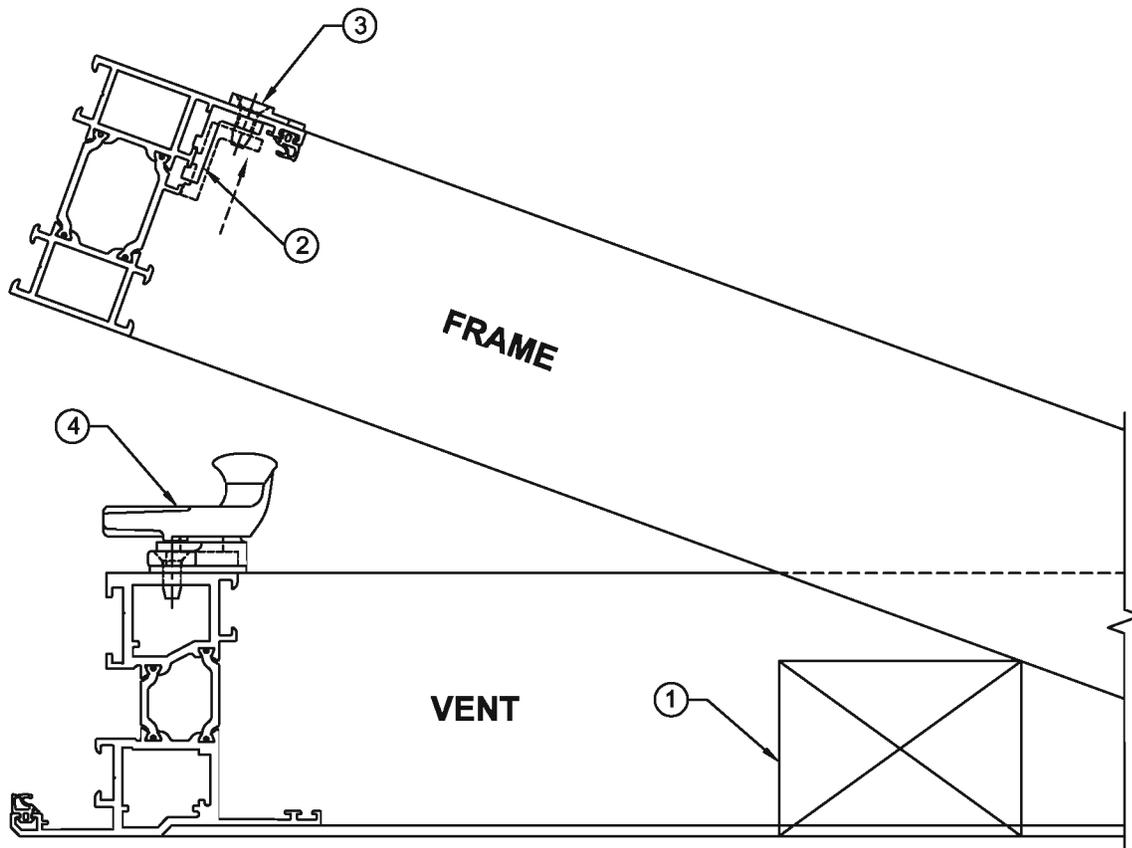
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SECTION IV PO/OSC WINDOW ASSEMBLY & GLAZING
ATTACH OPTIONAL CAM HANDLE LOCKS

E.C. 95506-024



- ① Place window on bench with exterior side facing down. Partially open window by lifting frame portion and place blocks underneath each side of frame to keep it open.
- ② Slip lock strike backup plate into frame Euro-Groove as shown and align the backup plate holes with pre-drilled holes on frame leg for lock strike.
- ③ Attach lock strike 30-4642 (248423) to frame and backup plate with two #10 x 7/16" FHTF 15-0791 (128415) per strike.
- ④ Place cam handle shim 30-4641 (248422) between cam handle and vent. Attach cam handles 30-1905/30-1906 (225405/248406) to vent leg with two #10 x 7/16" FHTF 15-0791 (128415) per handle.

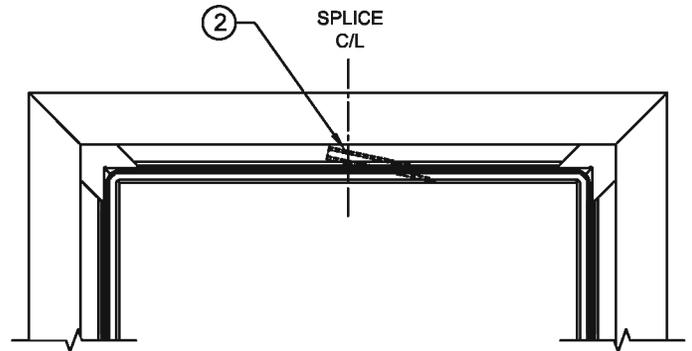
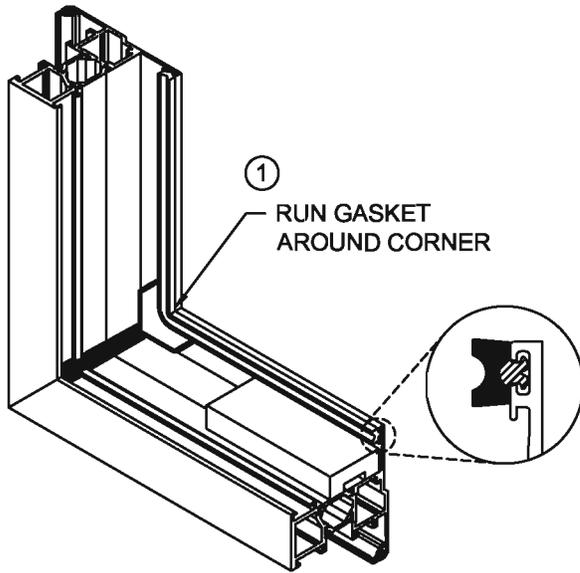


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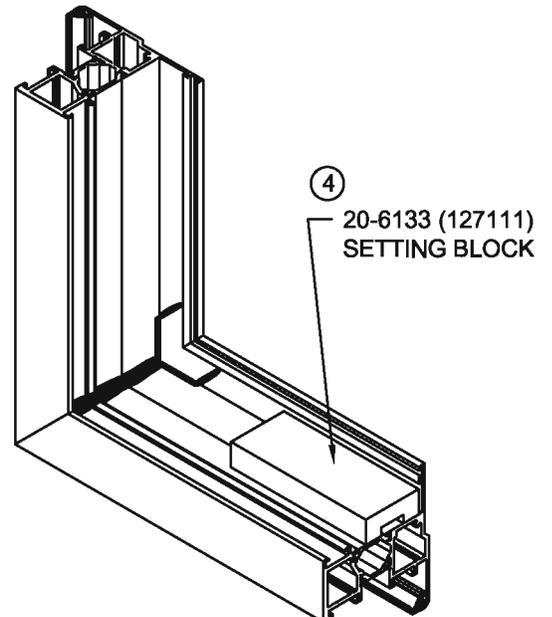
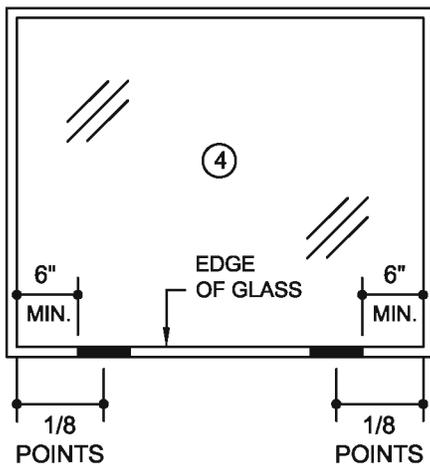
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- ① Push in exterior glazing gasket 20-4278 (127115) into glazing leg reglet starting at centerline of DLO at top of vent. Be careful NOT TO STRETCH gasket. Wrap gasket around corner making sure gasket is crowded and firmly seated in reglet. Continue pushing in gasket around vent/window in same manner
- ② Leave gasket end about 1/2" long and cut it squarely. Butt remaining gasket end tight against start end and push in remaining gasket.

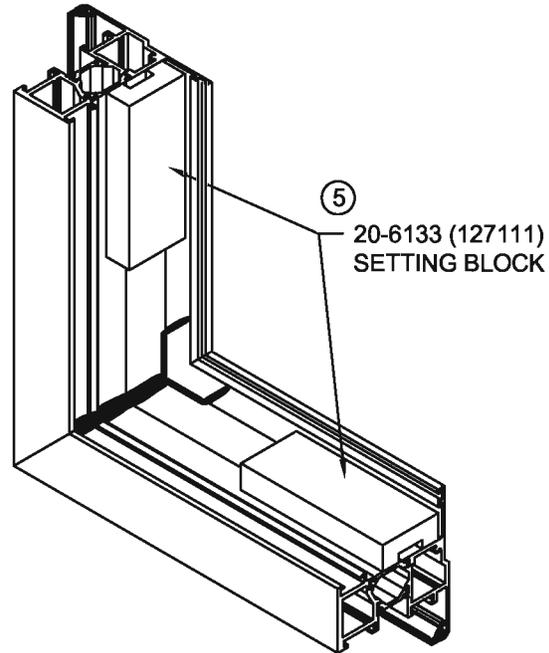
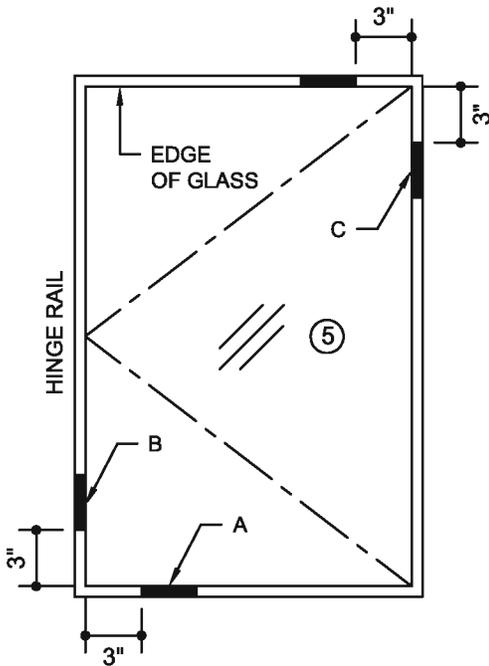


FRAME AND VENT MUST BE ALIGNED AND SQUARE BEFORE GLAZING

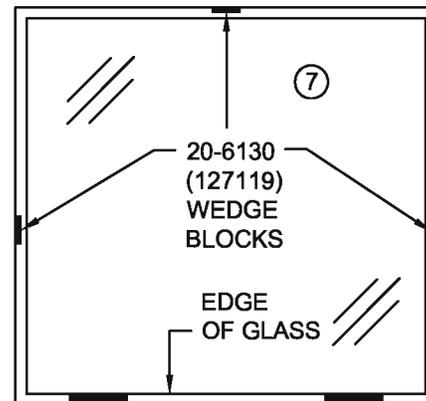
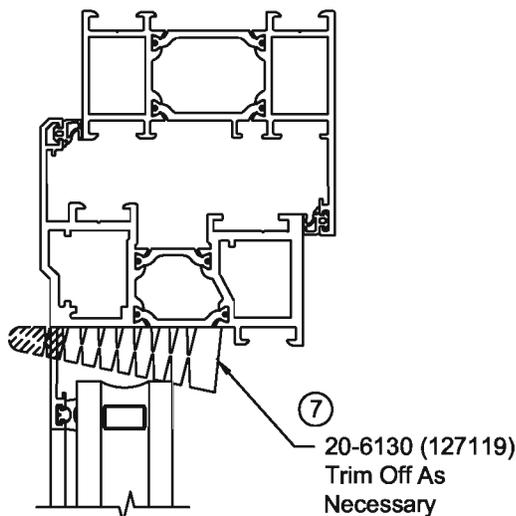
- ③ Glazing surfaces (window and glass) must be free from dust, grease, and burrs. Clean all surfaces with isopropyl alcohol on a clean cloth.
- ④ **SETTING BLOCKS FOR PROJECT-OUT WINDOWS**
Position glass setting blocks at 1/8 points for D.L.O.'s up to 48" wide. For D.L.O.'s equal to or wider than 48", place setting blocks 6" from the glass edge. Set blocks in sealant.



- ⑤ SETTING BLOCKS FOR OUTSWING CASEMENT WINDOWS
Set glass setting blocks in sealant at locations A, B, & C.



- ⑥ Gently set glass into vent while keeping glass against setting blocks. Center glass in the opening.
- ⑦ GLAZING WEDGES FOR PROJECT-OUT WINDOWS
Press wedge blocks 20-6130 (127119) into jamb and head until glass is snug. Trim off excess wedge as necessary. For windows with DLO 24" or less, use one wedge block. For windows with DLO over 24", use 2 wedge blocks.

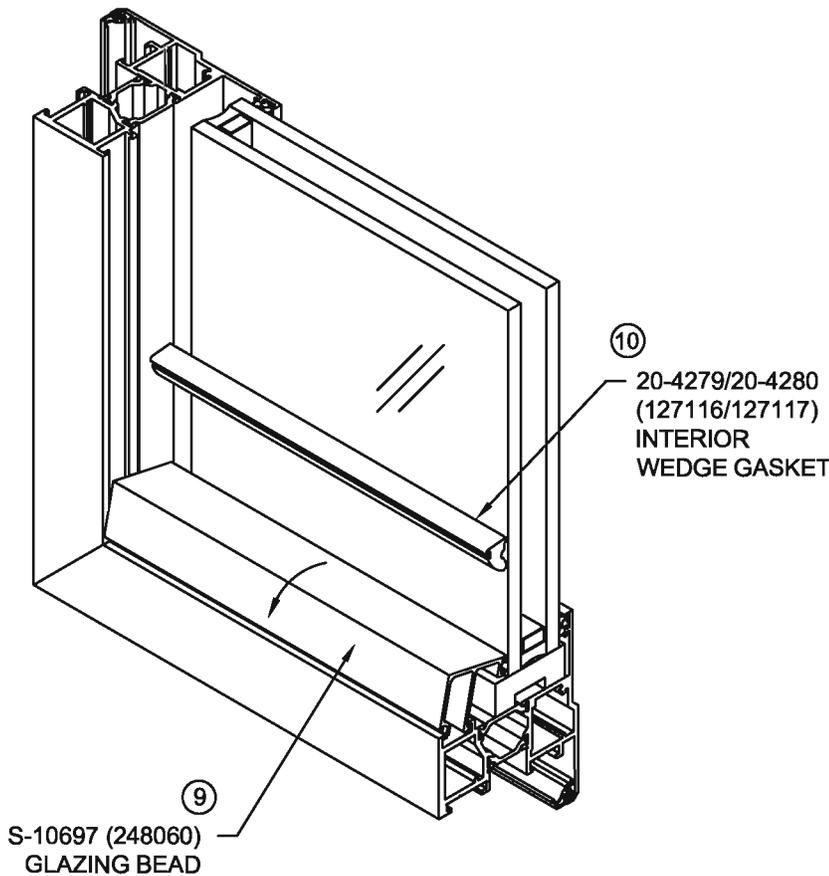
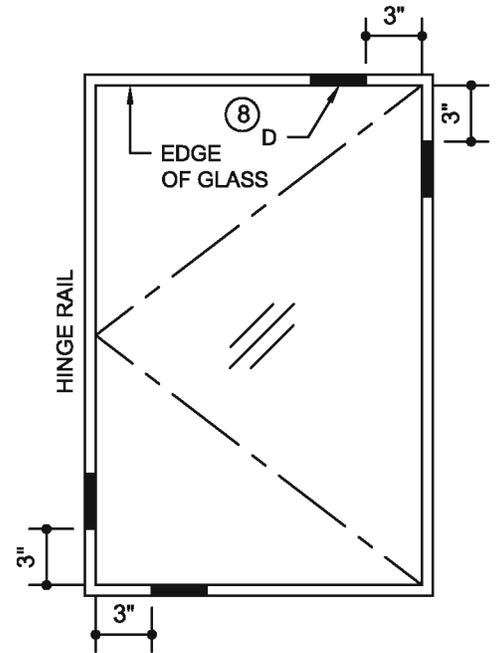


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- ⑧ **OUTSWING CASEMENT WINDOWS**
Install setting block at location D. After installing block, shim for a tight fit or for additional squaring of vent with frame. When shimming raise the vent lock rail 1/16" above level to allow compression in block.
- ⑨ Snap in horizontal glazing beads and then vertical beads by engaging bead hook and applying downward pressure toward vent as shown.
- ⑩ Cut interior wedge gasket 20-4279 (127116) to DLO plus 1/4" per foot of length. Push in gasket at each end first. Insert remaining gasket starting at the middle of gasket length and work towards each end.

NOTE: For proper compression thicker wedge gasket 20-4280 (127117) may be required.



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