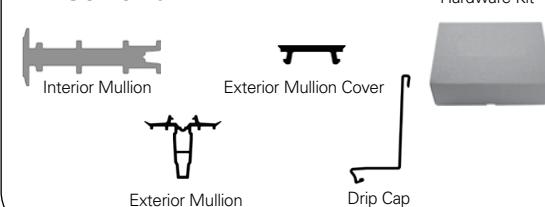


Nail Fin Frame ➤ Inovo Patio Door/Transom/Sidelite Field Mulling Instructions

Tools Needed



Kit Contents



- EXERCISE CAUTION WITH POWER TOOLS, THEY CAN STRIP OUT THE SCREW HOLES
- PLEASE CONFIRM THAT YOU RECEIVED ALL REQUIRED PARTS BEFORE PROCEEDING WITH THE INSTALLATION.
- FOR PROPER OPERATION, THE PARTS MUST BE INSTALLED IN THE SEQUENCE SHOWN.
- WARNING: WHILE REMOVING THE SASH RETAINER IN STEPS 3 & 4, THE OPERATING PANEL MUST BE HELD IN THE FRAME. OTHERWISE, THE PANEL MAY FALL CAUSING DAMAGE AND/OR INJURY.

1. Locate the door and transom or sidelites to be mulled, and inspect each unit for proper size, style, grid alignment (if applicable) and damage. If units are found to be incorrect or damaged, contact Simonton Service Solutions at 800-746-6704 for further instructions. It is strongly suggested to remove the operating panel from the door frame for reduced weight and easier handling even though it is not necessary for sidelites.

2. To prepare the door for mulling a sidelite on the fixed panel side or transom, first remove the panel stop from the head (if already installed). Remove the screws from the panel stop and set the screws and stop aside. Next remove the interior track cover from the side jamb at the fixed panel end (**Figure 1**). The track cover is snapped in.

NOTE: If mulling sidelites, skip to Step 5.

3. If a transom is being mulled to the door, the operating panel must first be taken out. Before the panel can be taken out, the sash retainer must be removed. Fully open the operating panel and remove the exposed screws fastening the sash retainer to the head of the door (**Figure 2**). Fully close the operating panel and remove the screws from the other end of the sash retainer. Keeping the operating panel fully engaged in the side jamb, carefully pull the panel retainer from the head (**Figure 3**), and set it aside.

Figure 1

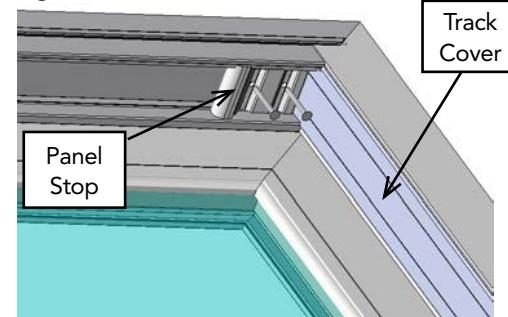


Figure 2

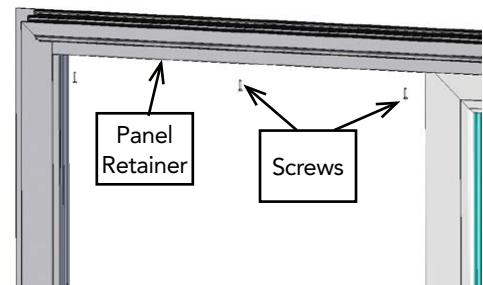
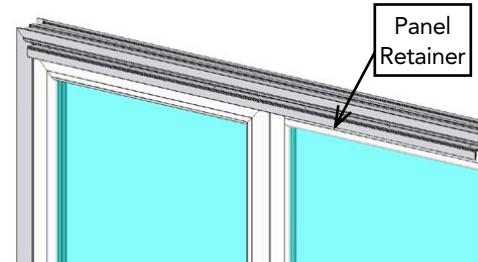


Figure 3



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4. Partially open the operating panel and tilt the top toward the interior of the door (Figure 4). Lift the panel off the sill and set it aside.
5. Lay units down onto a clean, flat working surface with the interior facing up. If mulling a sidelight on the operable side, open the operating panel of the door to access the interior track of the side jamb. If mulling on the fixed panel side, remove the track cover.
6. Inspect welds on the corners of all sides of the units to be mulled together. If excess weld is present, clean weld using a utility knife or wood chisel to allow units to be pulled tightly into mullion. Be careful not to cut into frame (Figure 5)
NOTE: Any remaining portion of the fin must be removed including the 45 degree fin cut indicated in red on Figure 5.
7. Place the interior mullion between the door and the transom or sidelite as shown (Figure 6), aligning the ends of the mullion with the edges of the frames.

CAUTION: It is required to shim sidelites at the sill (and may be necessary at the top of sidelites or transoms) to ensure interior faces are flush (see Figures 6a & 6b) for proper assembly.

Figure 4

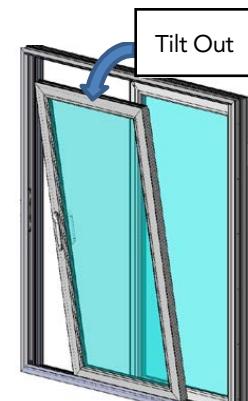
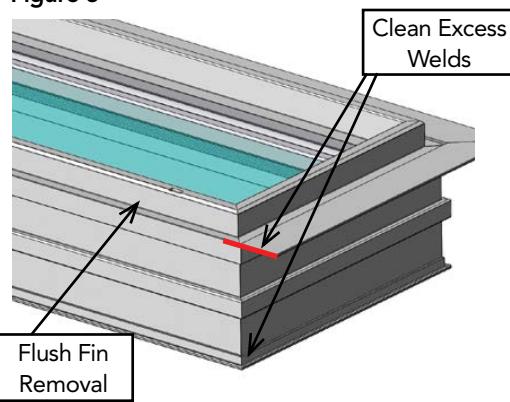


Figure 5



Mullion

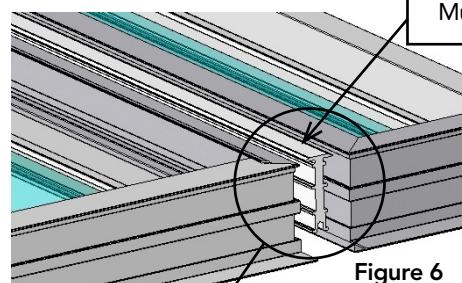


Figure 6

Figure 6a
BEFORE SHIMMING

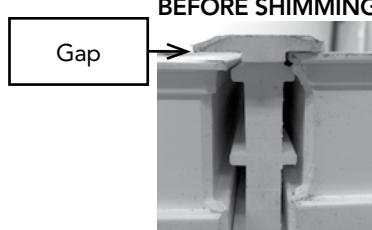
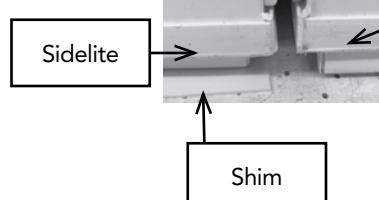
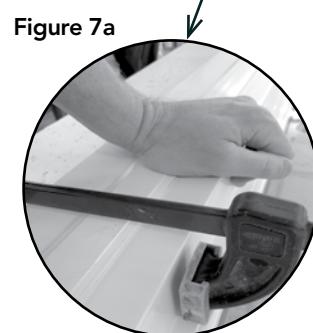
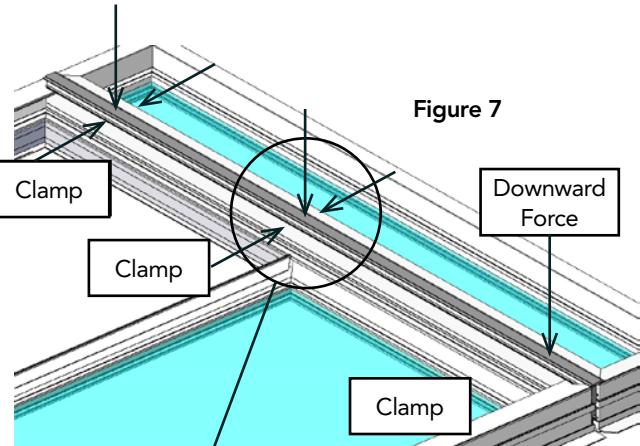


Figure 6b
AFTER SHIMMING



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8. Clamp the units together near the ends and at the center of the unit (**Figure 7**) while applying downward force on the mull face to remove any gaps between backside of the mull and the interior faces (**Figure 7a**). Keep the clamps in place until fasteners and steel strap are installed. If sufficient clamp force cannot be applied, the downward force will need to be applied while driving the screws.

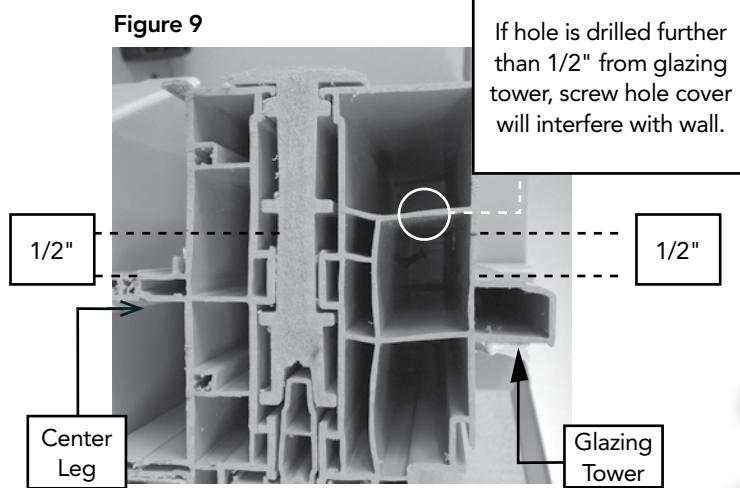
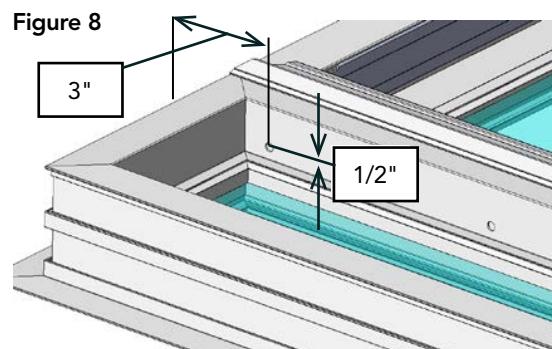


9. Mark the mulling screw hole locations on the transom or sidelite. Screws should be located 1/2" max from the glazing tower as shown (**Figure 8**). Locate the end screws approximately 3" from the edge of the frame, and space screws approximately 11" – 14" apart over the span of the transom or sidelite.

CAUTION: If holes are located beyond 1/2", the screen hole cover may not fit (See Figure 9).

10. Drill holes at all screw locations using a stepped drill bit (3/8" to 1/8"), drilling the 3/8" hole through the first wall of vinyl only.

11. Secure the transom or sidelite to the mullion using #8 x 1-3/4" screws.

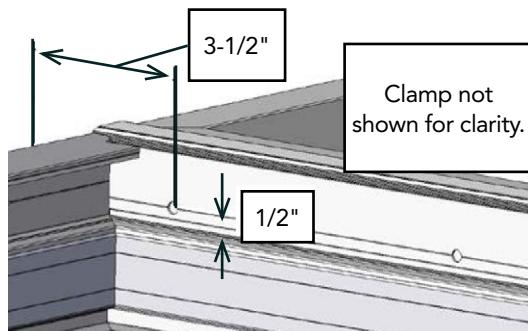


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12. Lay out the mulling screw hole locations in the door frame (head or side jamb as applicable). Screws should be located approximately 1/2" from the center frame leg as shown (**Figure 9**), and offset about 1/2" from the screw locations in the transom or sidelite so as to not interfere (**Figure 10**). The head profile has a reference score line at 1/2 inches for ease of drilling. Drill the holes in the frame using the stepped drill bit, drilling the 3/8" hole through the first wall of vinyl only.

NOTE: For sidelites on the operable panel side, you will need to remove the keeper, unless the screw spacing eliminates the need to do so.

Figure 10



13. Secure the door frame to the mullion with #8 x 1-3/4" screws and remove the clamps. Do not use the factory installation holes.

14. Fill the void at the end of the interior mullion with 100% silicone sealant, over the width of the mullion, as shown (**Figures 11 & 11a**). Center the supplied steel strap (with the turned leg up) over the gap between the door and the sidelite or transom, and install the strap into the groove closest to the exterior (**Figure 11b**). Fasten the strap with #8 x 3/8" screws. Repeat caulking and strap application at the remaining ends of all mullions.

NOTE: Make sure weld flash is fully cleaned and flush where the steel strap attaches.

Figure 11

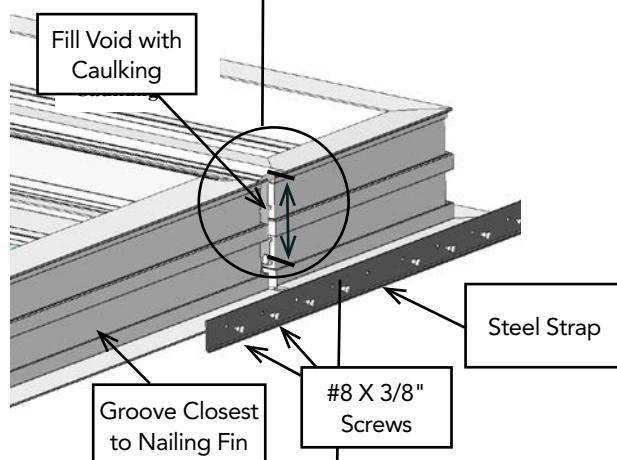
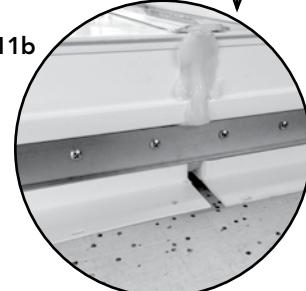


Figure 11b



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15. CAREFULLY FLIP THE MULLED ASSEMBLY OVER AT THIS TIME (SO THAT THE EXTERIOR IS FACING UP), SUPPORTING THE UNITS WHILE DOING SO.

CAUTION: If the mull is going to be left unassembled longer than 30 minutes, any caulk must be removed from the ends on the exterior side that were just caulked in step 14 (Figure 12).

16. Apply the supplied foam tape (MA-1002) into the groove on each side of the exterior mullion as shown (Figure 13). To ensure a good seal, extend the tape $1/8"$ - $1/4"$ past the ends of the mullion (this will be trimmed flush once installed).

CAUTION: Ensure the door, mullion pieces and fixed unit vinyl are free of debris prior to installing the exterior mullion.

17. Peel the protective backing off the foam tape. Position the exterior mullion into the groove between the two units being mulled, centering it over the length (Figure 14). Press the exterior mullion down into the interior mullion, tapping it lightly to seat it if necessary.

Figure 12



Remove caulk
from this area

Figure 13

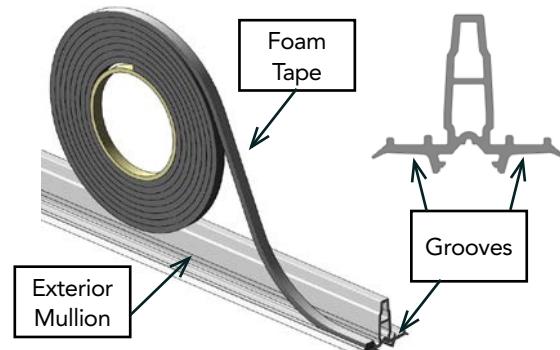
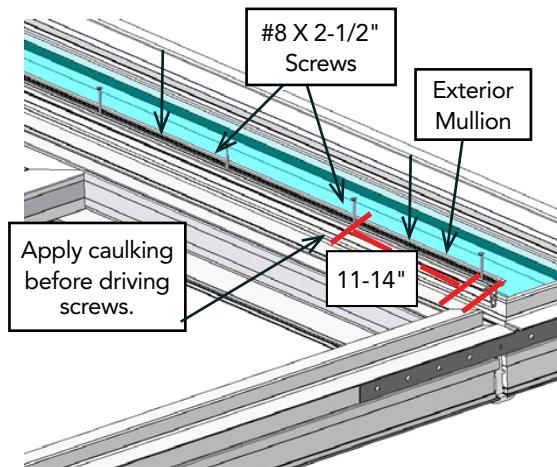


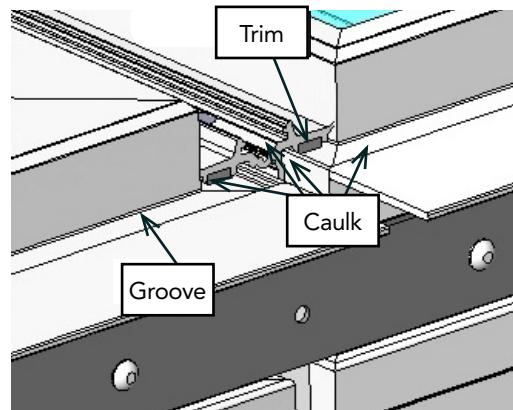
Figure 14



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18. Lay out screw locations in the center groove of the exterior mullion for fastening it to the interior mullion. The first screw on each end should be 1" from the end of the exterior mullion (Figure 14). Space the screws evenly 11" – 14" apart (Figure 14). Apply a small dab of caulking at each screw location before driving #8 x 2-1/2" Flat Head screws into the groove of the exterior mullion and into the interior mullion. Do not overtighten screws.

Figure 15



19. Trim off any excess foam tape from the ends with a sharp knife (Figure 15). Run a small bead of 100% silicone caulking across both ends of the exterior mullion and 1" into the groove in addition to filling the grooves in the frames with caulking, for a length of about 1" on each side of the mulled joint.

Figure 16

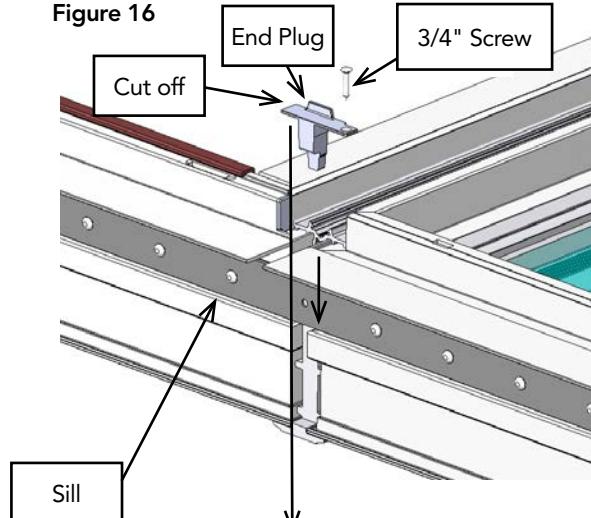
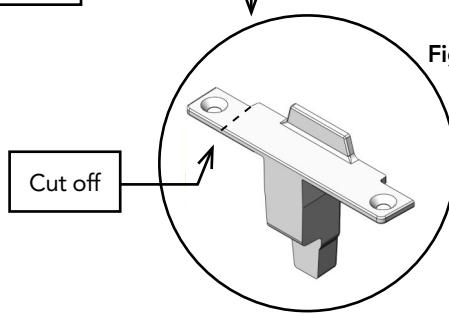


Figure 16a



20. INSTRUCTIONS FOR SILL END ONLY:

(STEPS 20, 21 & 22)

Place the supplied End Plug against the exterior mullion **at the sill end only**, between the gap in the frames as shown (Figure 16). **NOTE: The flange of the end plug will need to be cut off on the door side only to clear the sill.** (As shown in Figure 16a) Fill the cavity and frame areas where the plug fits with caulk. (Figure 16b) Start the end plug at an angle and push the down firmly onto the frames, making sure the caulking in the grooves makes a good seal between the frames and the end plug. Install a #6 x 3/4" screw in the hole in the flange of the end plug and into the sidelite frame.

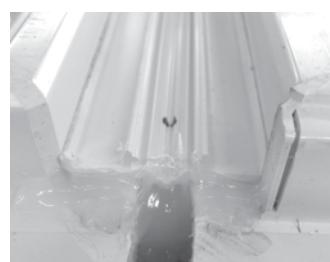


Figure 16b

Nail Fin Frame ➤ Inovo Patio Door/Transom/Sidelite Field Mulling Instructions

21. INSTRUCTIONS FOR SILL END ONLY:

Cut a notch out of one corner of the supplied adhesive patch (to clear the sill as shown). Apply the patch across the end plug and nailing fin, against the frame (**Figure 17**). Make sure the patch overlaps the end plug on both sides. Press the patch down firmly and wrap the excess around the nailing fins tightly.

CAUTION: Clean silicone from the vinyl where the patch is applied prior to applying.

22. INSTRUCTIONS FOR SILL END ONLY:

After the patch is firmly pressed against the frame, caulk the joint between the end cap and mull across the entire width as shown in (**Figure 18**). In addition, apply sealant to joints at top and bottom of the adhesive patch

23. Prior to installing the mull cap, verify the length is correct and extends to the edges of the door frame and sidelite. Caulk the backside of the mull cap along the length (that rests on the frame) and up the sides 1" from the ends (**Figure 19**). Do not caulk the area that hooks over the fin. Center the mull cap across the top of the unit. Hook the rear of the cap over the nailing fin (**Figure 19a**). Be sure to press the cap on across its entire length to fully seat it. Caulk the seam between the mull cap and the mullion(s) (**Figure 19b**), and caulk all gaps at the ends of the mull cap (**Figure 19c**).

Figure 17

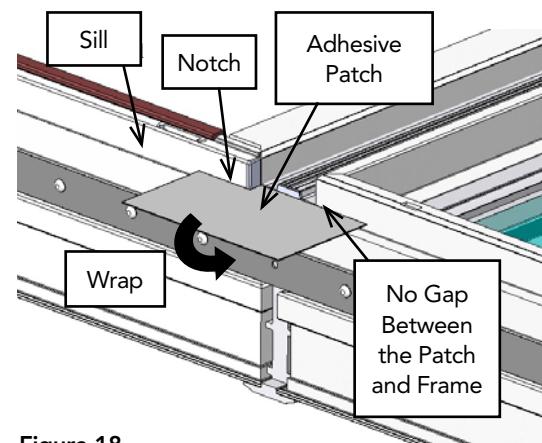


Figure 18

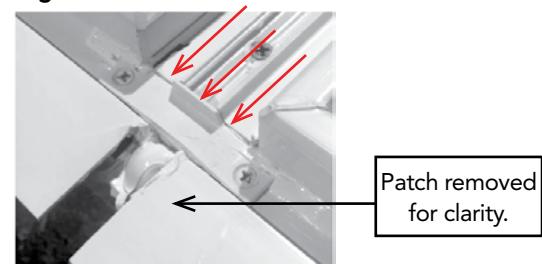


Figure 19

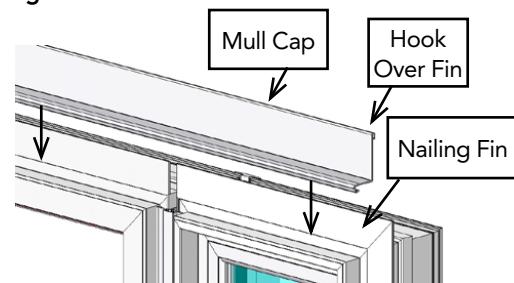


Figure 19a



Figure 19b

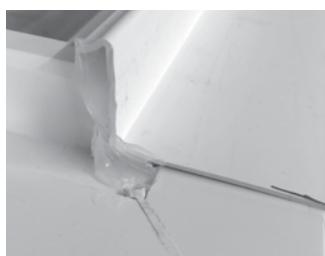


Figure 19c

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24. Clean area of excess caulk where patch will be applied. Remove the release paper and apply adhesive patches to the ends of the mull cap to secure it to the nail fin with approximately $\frac{1}{4}$ of the patch over hanging the end (as shown in **Figure 20**). Once the patch is applied, fold the long side over the back of the nail fin (**Figure 20a**) and then wrap the end to the back of the nail fin (**Figure 20b**).

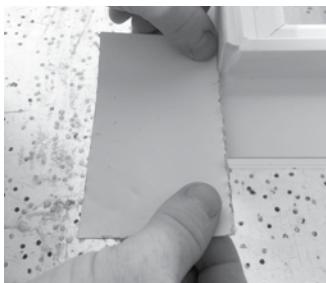


Figure 20



Figure 20a

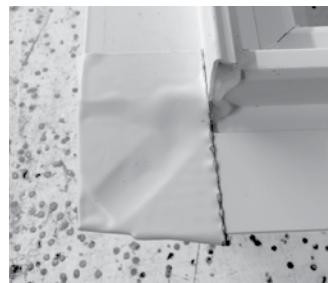


Figure 20b

25. Additionally apply a patch in the center of the mull cap as well. The patch should be applied lengthwise on the mull cap with half wrapping the cap and backside of fin.

If you are not immediately installing the mull, clamp a 2x4 across the entire length of the mull cap to endure a good seal is achieved (Figure 21). Proceed to step 28.



Figure 21

TRANSOM ONLY:

26. Fill the cavity and frame areas where the plug fits with caulk (**Figure 16b**). Place a supplied end plug against the exterior mullion on both ends as shown, between the gap in the frames (**Figure 22**). Start the end plug at an angle and push the down firmly onto the frames, making sure the caulking in the grooves makes a good seal between the frames and the end plug. Secure the end plug with #6 x $\frac{3}{4}$ " screws.

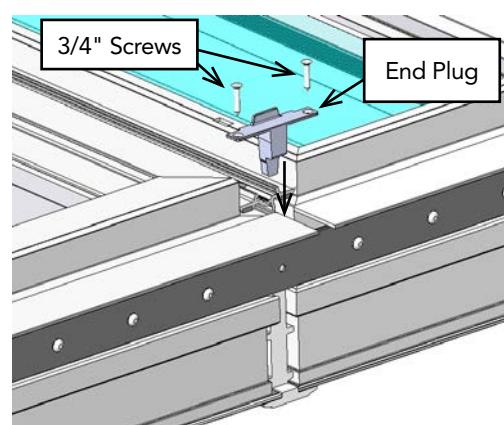


Figure 22



Nail Fin Frame ➤ Inovo Patio Door/Transom/Sidelite Field Mulling Instructions

27. Clean area of excess caulk where patch will be applied. Apply the supplied adhesive patch across the end plug and nailing fin, against the frame, making sure the patch overlaps the end plug on both sides (**Figure 23**). Press the patch down firmly and wrap the excess around the nailing fins tightly.
28. Finish filling the ends with caulking, covering the portion of the end plug under the nailing fin (**Figure 24**). Snap the screw cover strip into each exterior mullion as shown (**Figure 25**).
29. Install screw hole covers into the 3/8" mulling screw holes in the sidelite or transom frame (**Figure 26**). If a sidelite was mulled to the operating side of the door, install hole covers into the mulling screw holes in that side jamb as well. **Do not install covers on the head of the door when mulling a transom as it will interfere with the head insert.**
30. Install the unit into the opening (refer to separate installation instructions). At top of unit, run installation screws through mull cap (if applicable), nailing fin, and into structure.

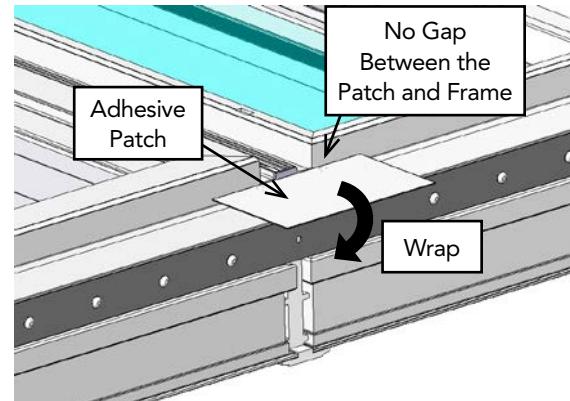


Figure 23

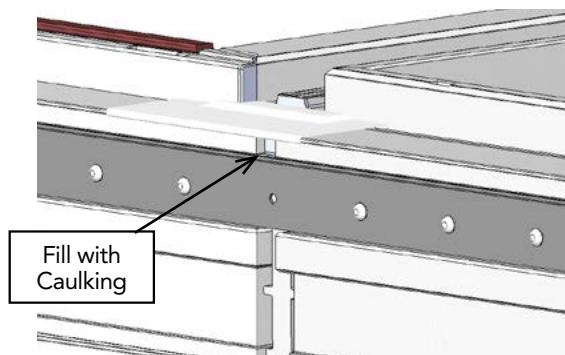


Figure 24

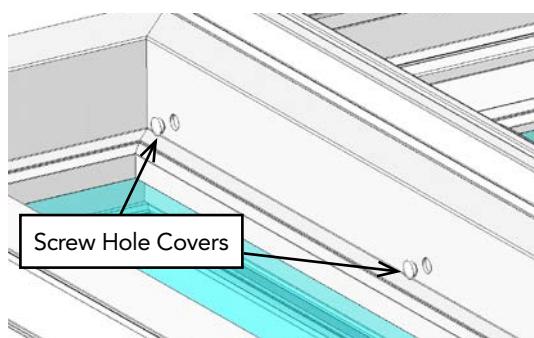


Figure 26

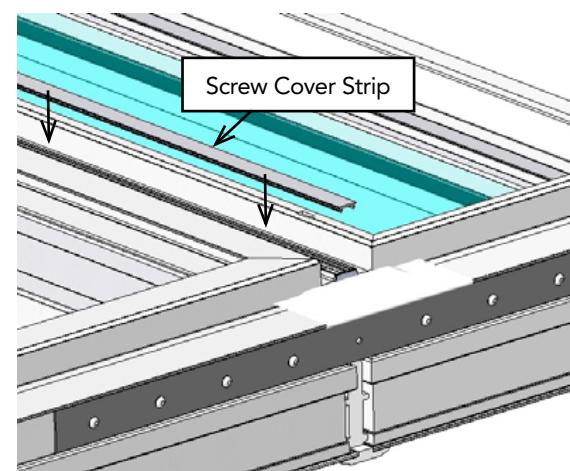


Figure 25



Nail Fin Frame ➤ Inovo Patio Door/Transom/Sidelite Field Mulling Instructions

- 31.** After installation, check drip cap seams/ends and re-caulk if necessary.
- 32.** If the operating panel was removed, re-install it at this time, sliding the panel completely into the side jamb before releasing it. Then re-install the panel retainer (if applicable).
- 33.** Snap the track cover that was removed in Step 2 back into the interior track of the side jamb. Re-install the sash stop.