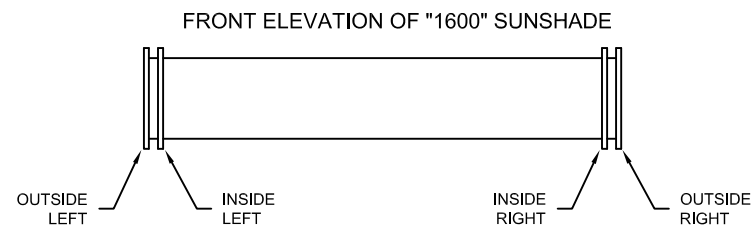


SUNSHADE INSTALLATION INSTRUCTIONS FOR TRIFAB 451T VG SHEAR BLOCK - CENTER GLAZED SYSTEM

THE FOLLOWING INSTRUCTIONS ARE FOR THE INSTALLATION OF THE KAWNEER SUNSHADE ON TRIFAB VG SHEAR BLOCK - CENTER GLAZED SYSTEM. USE THESE INSTRUCTIONS IN CONJUNCTION WITH TRIFAB VG SHEAR BLOCK INSTALLATION INSTRUCTIONS (451VG971).

THE TERMS "INSIDE" AND "OUTSIDE" ARE USED EXTENSIVELY IN THESE INSTRUCTIONS. THESE TERMS DO NOT REFER TO THE INTERIOR AND EXTERIOR OF THE BUILDING. THE TERMS REFER TO THE RELATIVE POSITION OF WORK PERFORMED ON THE SUNSHADE FROM AN ELEVATION PERSPECTIVE. SIMILARLY, THE TERMS "RIGHT" AND "LEFT" ARE USED.



GENERAL NOTES:

TUBULAR MULLION 451TCG005 MUST BE USED AT JAMBS ALONG WITH STEEL ANCHOR WHEN INSTALLING SUNSHADES ON TRIFAB FRAMING.

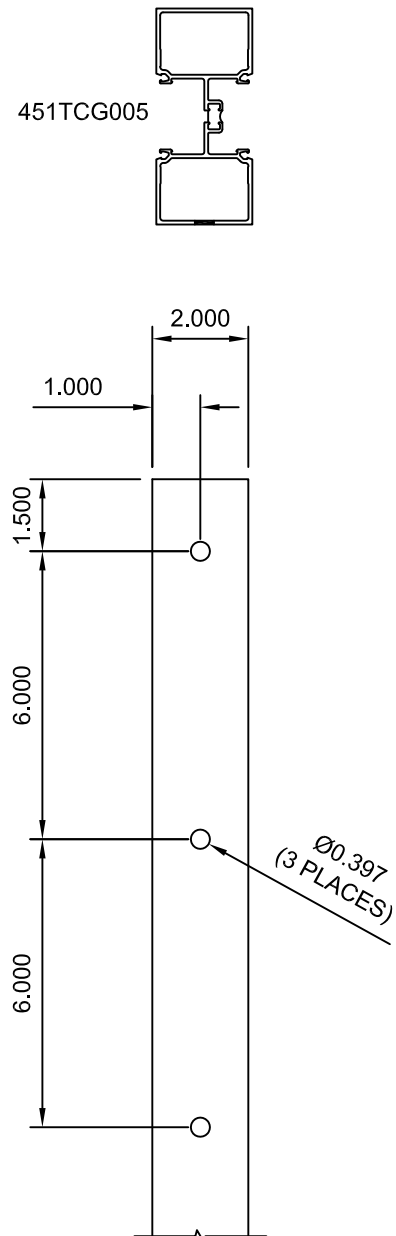
STANDARD OPEN JAMB MEMBER, 451TCG001, CANNOT BE USED.

A MINIMUM CAULK JOINT OF 1/2" IS REQUIRED AT THE HEAD OF THE FRAMING TO ACCOMMODATE THE STEEL ANCHOR.

STEP 1 - ANCHOR CLIP VERTICAL MULLIONS PREPS

COMPLETE STEPS ON PAGES 17 & 18 OF SECTION V - FRAME FABRICATION & ASSEMBLY AS OUTLINED IN THE TRIFAB VG SHEAR BLOCK INSTALLATION INSTRUCTION BOOKLET (451VG971).

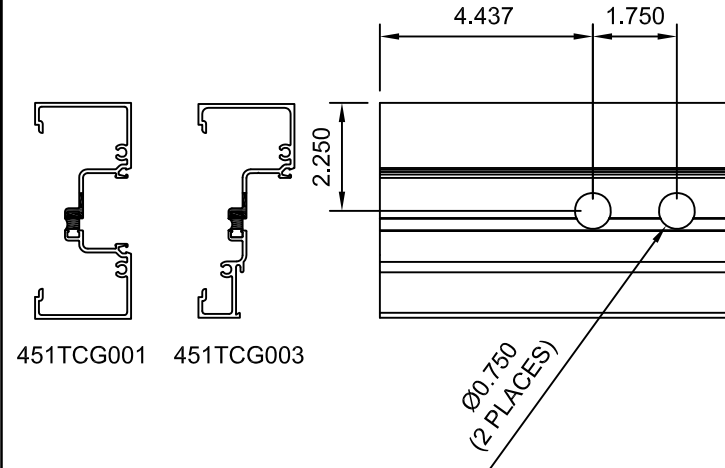
DRILL THREE CLEAR HOLES IN THE EXTERIOR FACE OF ALL VERTICAL MULLIONS AT THE LOCATIONS SHOWN BELOW.



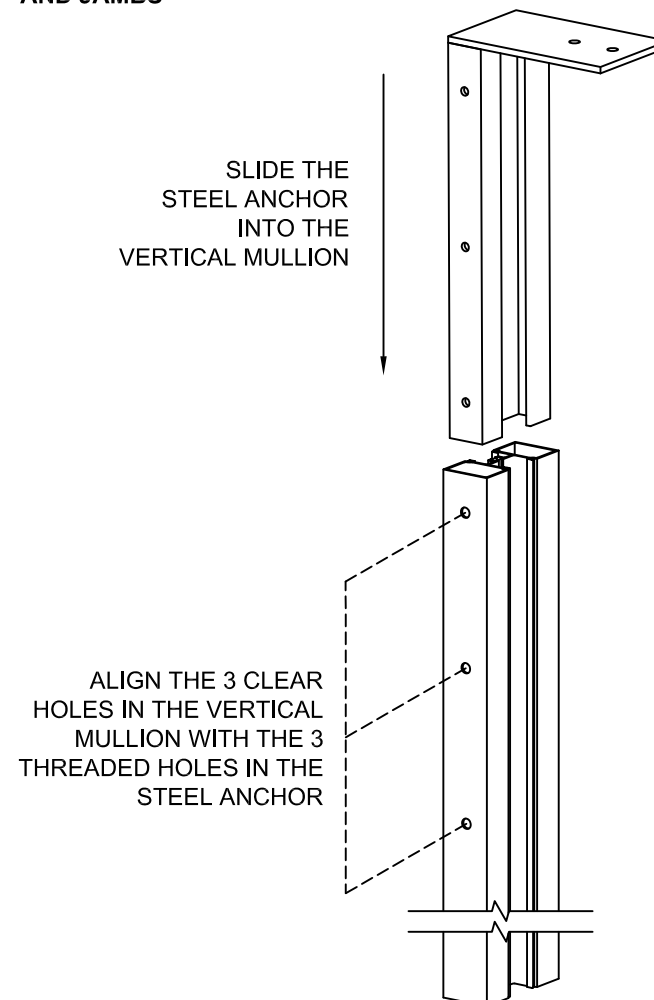
STEP 2 - ADD ANCHOR PERIMETER ACCESS HOLES TO HEAD MEMBERS.

COMPLETE STEPS ON PAGE 19 OF SECTION V - FRAME FABRICATION & ASSEMBLY AS OUTLINED IN THE TRIFAB VG SHEAR BLOCK INSTALLATION INSTRUCTION BOOKLET (451VG971).

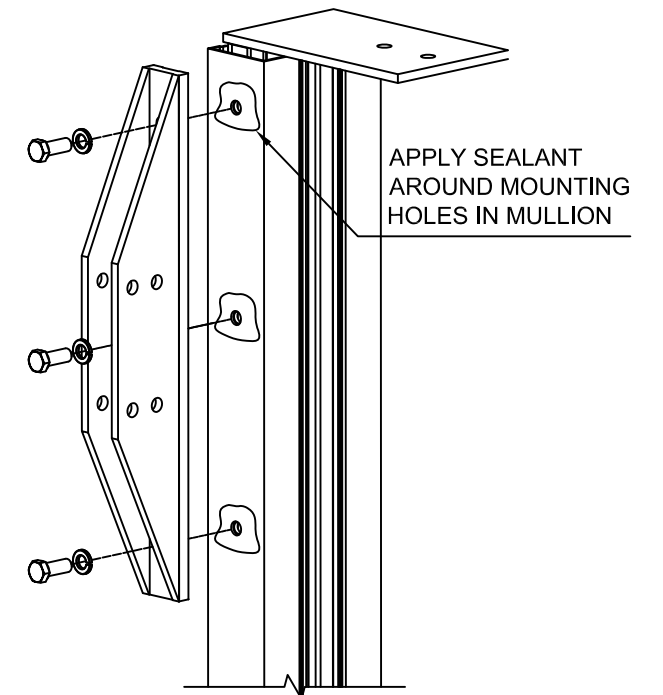
DRILL TWO ACCESS HOLES ON BOTH ENDS OF THE HEAD MEMBERS AS SHOWN BELOW.



STEP 3 - INSTALL STEEL ANCHOR IN VERTICAL MULLIONS AND JAMBS



STEP 4 - ATTACH ANCHOR CLIP TO VERTICAL MULLIONS AND JAMBS



ALIGN THE THREE CLEAR HOLES IN THE ANCHOR CLIP (482249) WITH THE THREE CLEAR HOLES IN THE VERTICAL MULLION AND THE THREADED HOLES IN THE STEEL ANCHOR.

APPLY SEALANT AROUND THE CLEAR HOLES ON THE VERTICAL MULLIONS AND TO THE THREADS OF THE FASTENERS BEFORE ATTACHING THE ANCHOR CLIP.

ATTACH THE ANCHOR CLIPS TO THE VERTICAL MULLIONS WITH THREE 3/8"- 24 x 1" HEX HEAD BOLTS (128963) AND LOCK WASHERS (028779) THREADED INTO THE STEEL ANCHOR.

USING A STANDARD 9/16" SOCKET WRENCH, TIGHTEN THE ATTACHMENT BOLTS. BE SURE THE SPRING TYPE LOCK WASHERS ARE COMPRESSED. THEN TIGHTEN APPROXIMATELY 1/2 TURN MORE.



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STEP 5 - ASSEMBLING THE SUNSHADES

SUNSHADES WILL BE SHIPPED FACTORY FABRICATED AND READY TO ASSEMBLE. SINCE THERE MAY BE VARIATIONS OF MULLION SPACING THROUGHOUT THE PROJECT, IT IS IMPORTANT TO CAREFULLY CHECK SHOP DRAWINGS TO MATCH CUT LENGTHS OF THE LOUVER BLADES AND FASCIA MEMBERS TO THE SPECIFIED BAY SECTIONS.

SUNSHADE BAY ASSEMBLIES USE SCREW SPLINE JOINERY. LAYOUT LEFT AND RIGHT OUTRIGGERS (THESE ARE HANDED PARTS BECAUSE OF THE COUNTERSUNK SCREW PREPS) AND APPROPRIATE LOUVER BLADES AND FASCIA COMPONENTS. SEE 5A, 5B AND 5C.

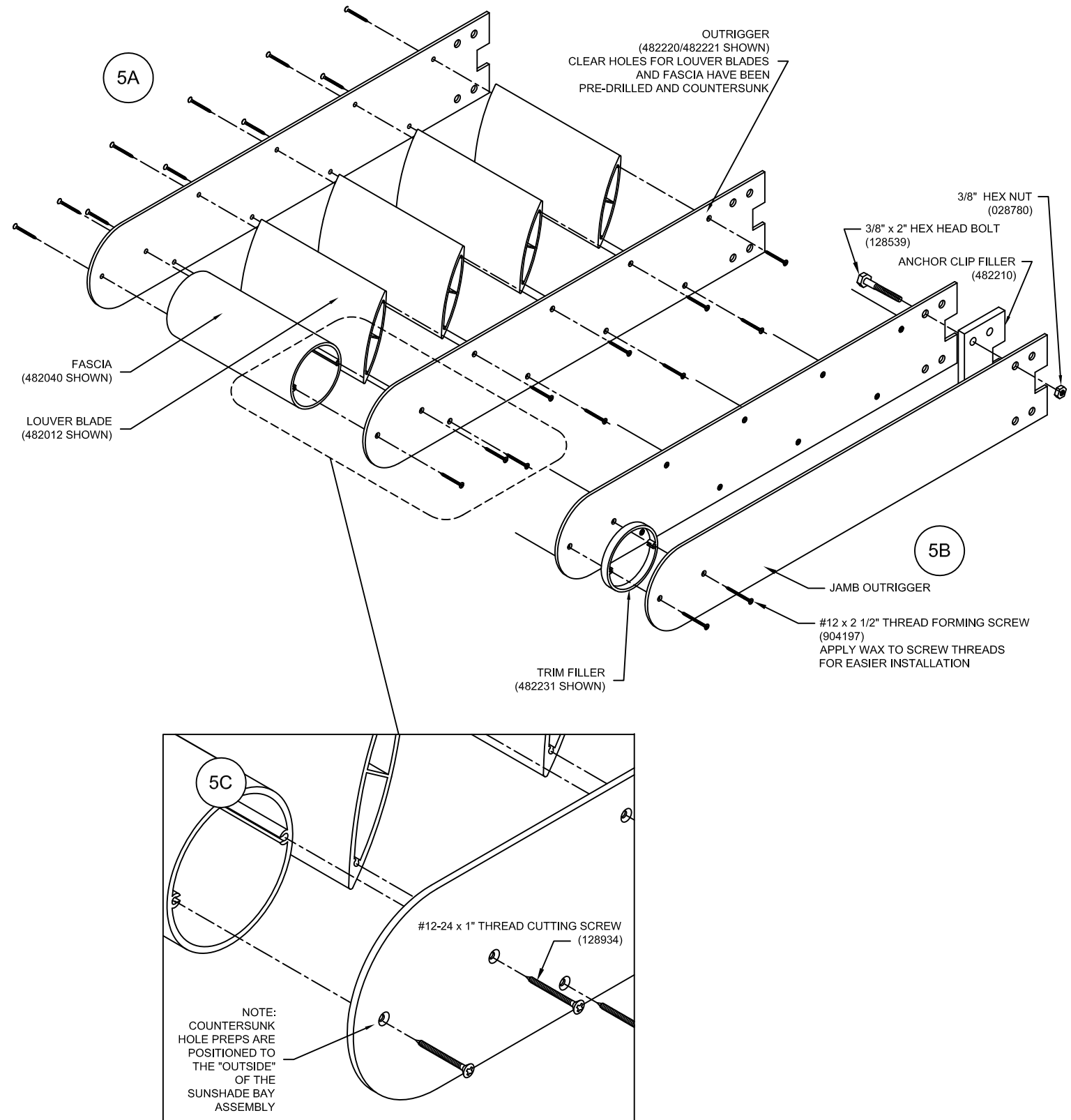
NOTE: SOME SUNSHADE CONFIGURATIONS DO NOT USE FASCIA MEMBERS.

ALL OUTRIGGERS HAVE BEEN PREPPED WITH CLEAR HOLES TO CREATE THE SPECIFIED SUNSHADE CONFIGURATION. ALIGN ALL PARTS AND MATCH TO SHOP DRAWINGS BEFORE ASSEMBLING.

USING #12-24 x 1" FLAT HEAD COUNTERSUNK THREAD CUTTING SCREWS (128934), JOIN LOUVER BLADES AND FASCIA COMPONENTS TO ONE OUTRIGGER. DO NOT TIGHTEN. ALIGN THE OPPOSITE OUTRIGGER AND CONNECT PARTS SIMILARLY. TIGHTEN BOTH SIDES.

NOTE: END ASSEMBLY REQUIRES JAMB OUTRIGGER TO BE ATTACHED BEFORE INSTALLATION. USING #12 x 2 1/2" FLAT HEAD COUNTERSUNK THREAD FORMING SCREWS (904197) AND APPROPRIATE TRIM FILLER, JOIN JAMB OUTRIGGER TO BAY ASSEMBLY. TIGHTEN UNTIL FULLY SEATED AND FLUSH WITH THE SURFACE OF THE "END OF ARRAY" OUTRIGGER. INSTALL ANCHOR CLIP FILLER (482210) USING (1) 3/8" x 2" HEX HEAD BOLT (128539) AND TEMPORARILY ATTACH (1) 3/8" HEX NUT (028780) TO SECURE JAMB OUTRIGGER DURING INSTALLATION. SEE 5B. CHECK SHOP DRAWINGS TO DETERMINE SPECIFIC "END OF ARRAY" CONDITION BEFORE PROCEEDING. SEE NEXT SECTION IF OPTIONAL OUTRIGGER TRIM CAPS ARE USED.

ASSEMBLE ALL OF THE SUNSHADE BAY ASSEMBLIES AND MARK OR TAG EACH ONE TO MATCH CORRESPONDING UNIT AS SHOWN ON SHOP DRAWINGS.



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OPTIONAL "END OF ARRAY" OUTRIGGER TRIM CAP END ASSEMBLIES

NOTE: CONDITIONS ON THE LEFT AND RIGHT OUTER ENDS OF THE SUNSHADE ARRAY SHOULD BE IDENTICAL. THE FOLLOWING INSTRUCTIONS APPLY TO BOTH END CONDITIONS.

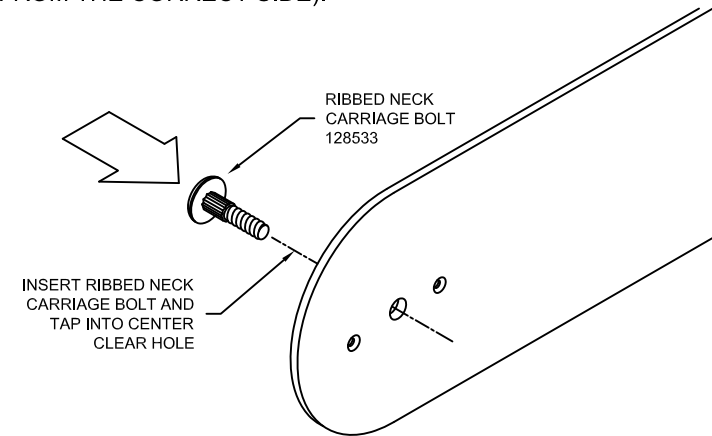
PREPARE OUTRIGGER END ASSEMBLIES.

"END OF ARRAY" OUTRIGGERS LOOK SIMILAR TO THE BAY ASSEMBLY OUTRIGGERS WITH THE EXCEPTION OF THE HOLE PREPS. "END OF ARRAY" OUTRIGGERS WILL HAVE ONLY THREE HOLES TOWARD THE OUTER END OF THE PART. (THIS CONDITION COULD VARY WITH EACH APPLICATION. CHECK SHOP DRAWINGS TO DETERMINE SPECIFIC "END OF ARRAY" CONDITION BEFORE PROCEEDING).

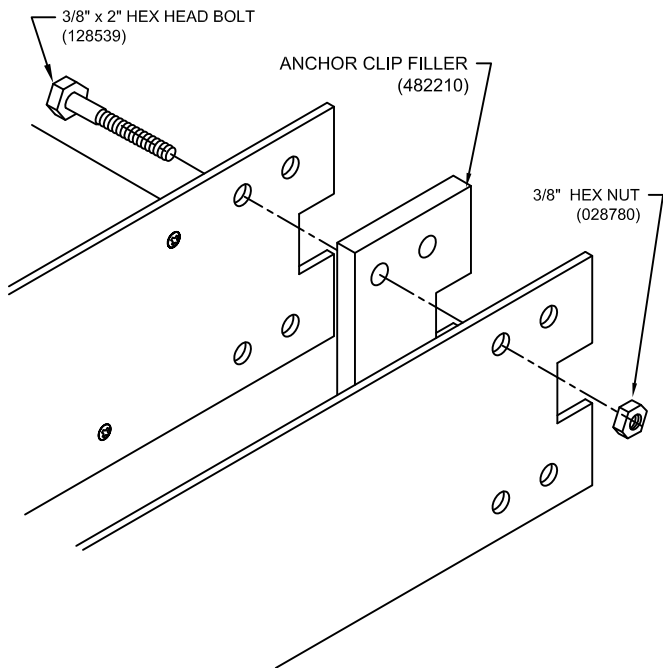
NOTE: THE "END OF ARRAY" OUTRIGGER IS PREPPED WITH A .250" DIAMETER CENTER HOLE FLANKED BY TWO COUNTERSUNK HOLES. THE COUNTERSINK FACES TOWARD THE "OUTSIDE". THUS, ON THE RIGHT "END OF ARRAY" OUTRIGGER, THE COUNTERSINK IS ON THE RIGHT SIDE OF THE PART AND ON THE LEFT "END OF ARRAY" OUTRIGGER, THE COUNTERSINK IS ON THE LEFT SIDE OF THE PART.

THE FOLLOWING INSTRUCTIONS ARE FOR THE RIGHT "END OF ARRAY" CONDITION.

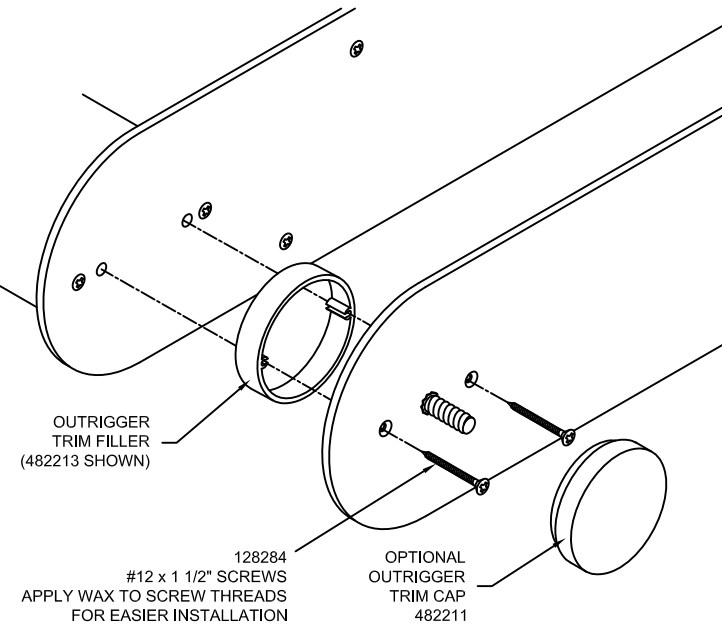
INSERT 1/4-20 x 3/4" RIBBED NECK CARRIAGE BOLT (128533) INTO THE CENTER HOLE FROM THE SIDE OPPOSITE THE COUNTERSINK. HAMMER THE BOLT UNTIL FIRMLY SEATED ON THE PART. (THE THREADED PORTION OF THE BOLT SHOULD BE ON THE COUNTERSINK SIDE OF THE OUTRIGGER. IF NOT, GENTLY TAP BOLT UNTIL IT DISENGAGES FROM THE OUTRIGGER AND REINSERT IT FROM THE CORRECT SIDE).



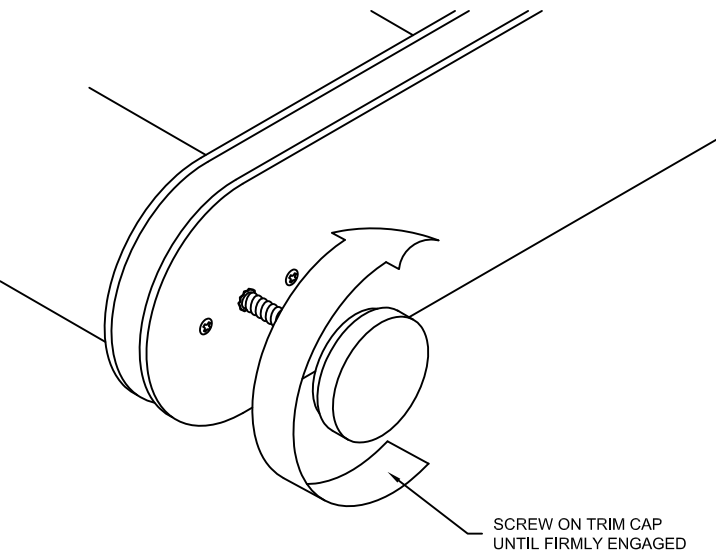
INSTALL ANCHOR CLIP FILLER (482210) USING (1) 3/8" x 2" HEX HEAD BOLT (128539) AND TEMPORARILY ATTACH (1) 3/8" HEX NUT (028780) TO SECURE JAMB OUTRIGGER DURING INSTALLATION.



SLIDE IN OUTRIGGER TRIM FILLER (482213 SHOWN) BETWEEN THE "END OF ARRAY" OUTRIGGER AND THE BAY ASSEMBLY OUTRIGGER. ALIGN HOLES AND INSERT TWO #12 x 1 1/2" FLAT COUNTERSUNK THREAD FORMING SCREWS (128284). TIGHTEN UNTIL FULLY SEATED AND FLUSH WITH THE SURFACE OF THE "END OF ARRAY" OUTRIGGER.



SCREW ON OUTRIGGER TRIM CAP (482211 SHOWN) ONTO EXPOSED THREAD OF THE RIBBED NECK CARRIAGE BOLT. HAND TIGHTEN UNTIL FIRMLY ENGAGED.



REPEAT THIS PROCESS FOR THE LEFT CONDITION OF THE SUNSHADE ARRAY.



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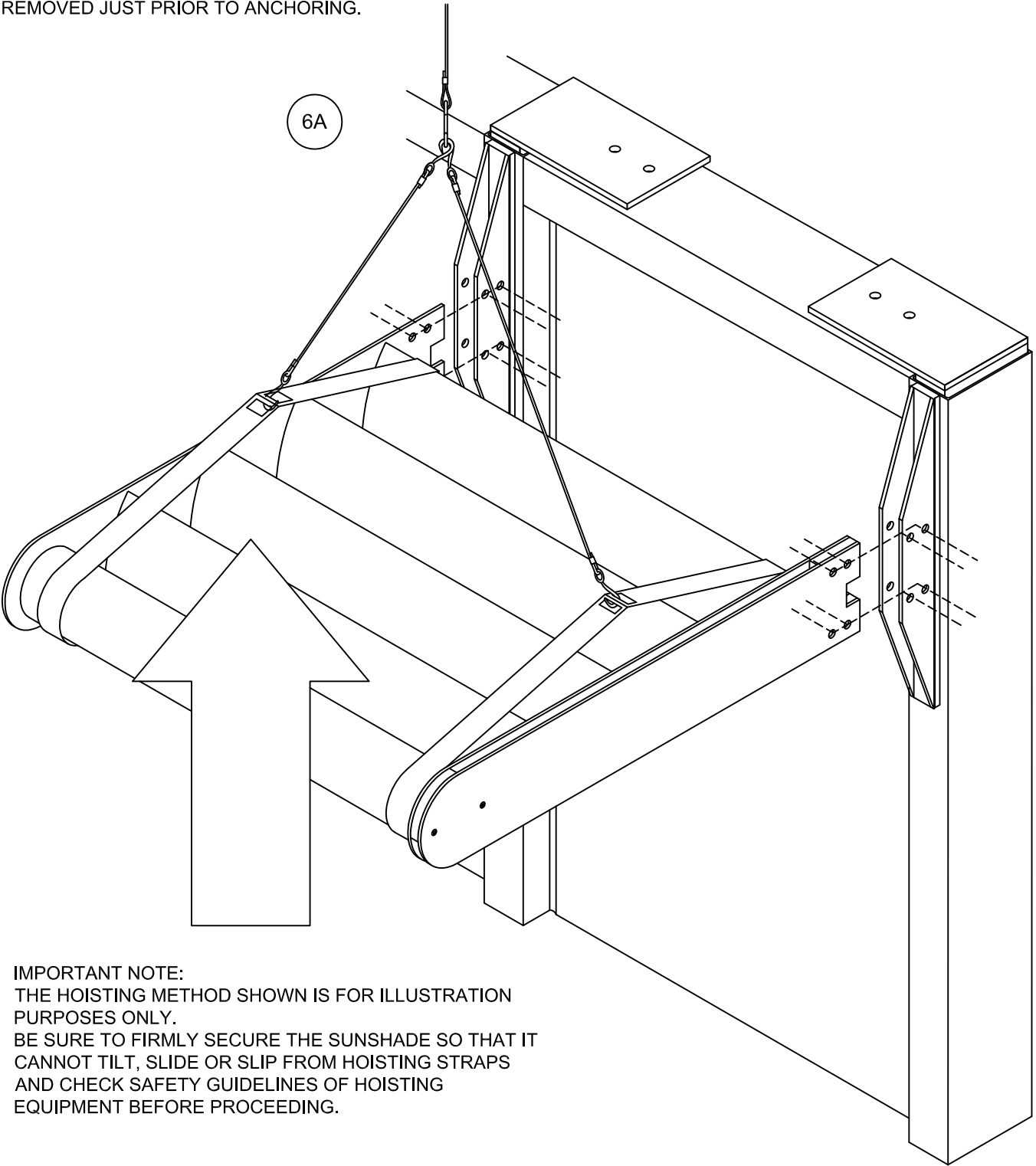
STEP 6 - INSTALLING THE SUNSHADES

ARRANGE THE SUNSHADE BAY ASSEMBLIES ON THE CONSTRUCTION SITE ACCORDING TO THEIR CORRESPONDING POSITION ON THE BUILDING. CHECK AGAINST SHOP DRAWINGS.

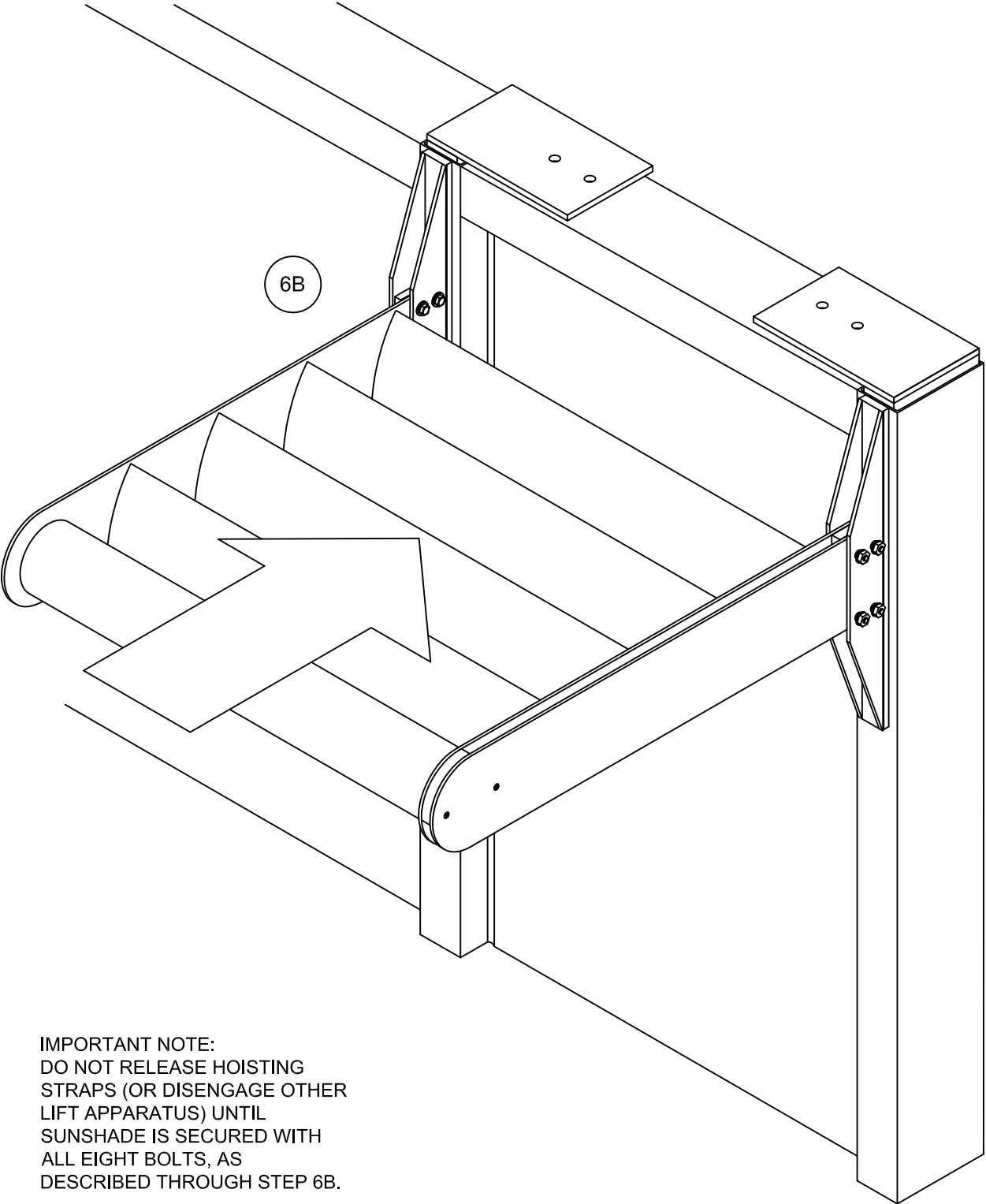
IMPORTANT NOTE: DO NOT BEGIN INSTALLATION UNTIL EACH BAY ASSEMBLY IS PROPERLY IDENTIFIED AND POSITIONED. INSTALLATION CAN TAKE PLACE LEFT TO RIGHT OR RIGHT TO LEFT AS WELL AS TOP TO BOTTOM OR BOTTOM TO TOP (IN MULTIPLE STORY INSTALLATIONS). DEPENDING ON HOISTING METHOD, DETERMINE THE ORDER MOST APPROPRIATE FOR YOUR INSTALLATION. THE FOLLOWING INSTRUCTIONS WILL DEMONSTRATE A ONE-STORY INSTALLATION, RIGHT TO LEFT.

A. INSTALL FIRST BAY ASSEMBLY

HOIST AND POSITION THE FIRST SUNSHADE BAY ASSEMBLY UNTIL THE FOUR CLEAR HOLES ON BOTH OUTRIGGERS ALIGN WITH THE CORRESPONDING HOLES IN THE ANCHOR CLIPS. (THE OUTRIGGERS SHOULD BE POSITIONED ON THE INSIDE OF THE ANCHOR CLIP. SEE 6A AND 6B. END ASSEMBLY WILL REQUIRE TEMPORARY FASTENER AT ANCHOR CLIP FILLER TO BE REMOVED JUST PRIOR TO ANCHORING.



IMPORTANT NOTE:
THE HOISTING METHOD SHOWN IS FOR ILLUSTRATION PURPOSES ONLY.
BE SURE TO FIRMLY SECURE THE SUNSHADE SO THAT IT CANNOT TILT, SLIDE OR SLIP FROM HOISTING STRAPS AND CHECK SAFETY GUIDELINES OF HOISTING EQUIPMENT BEFORE PROCEEDING.



IMPORTANT NOTE:
DO NOT RELEASE HOISTING STRAPS (OR DISENGAGE OTHER LIFT APPARATUS) UNTIL SUNSHADE IS SECURED WITH ALL EIGHT BOLTS, AS DESCRIBED THROUGH STEP 6B.



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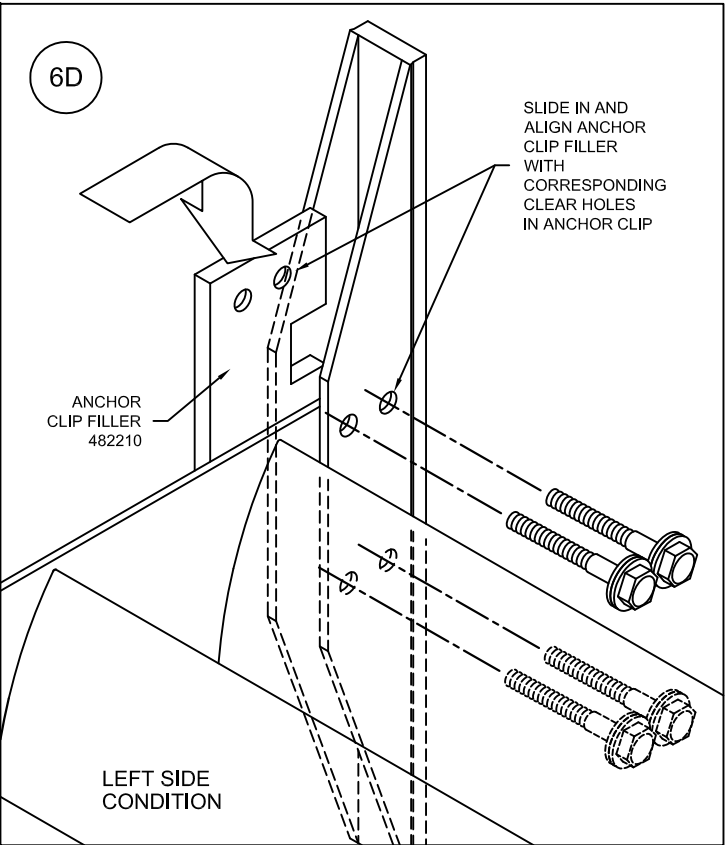
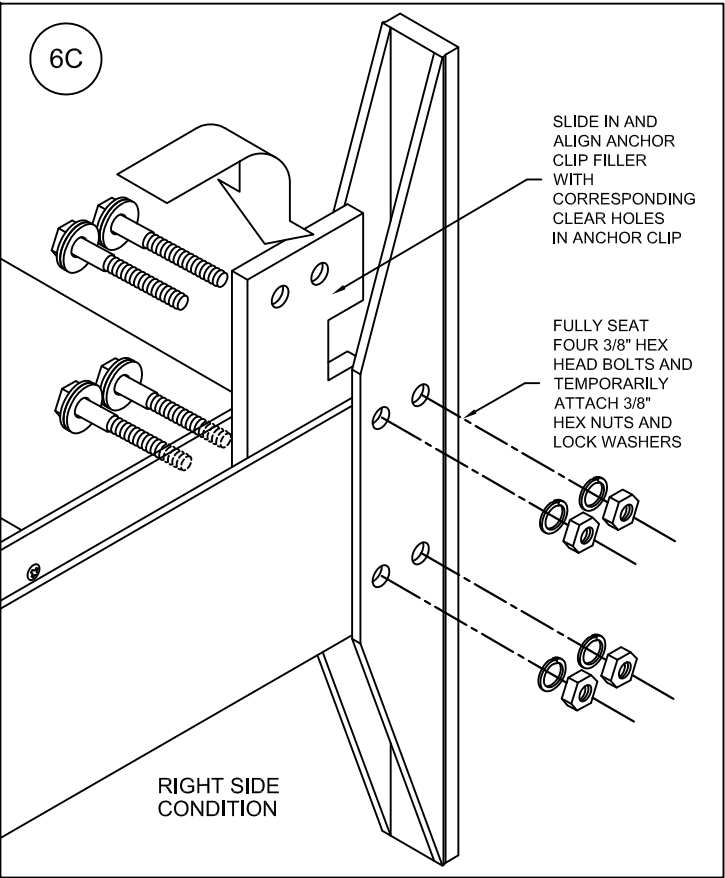
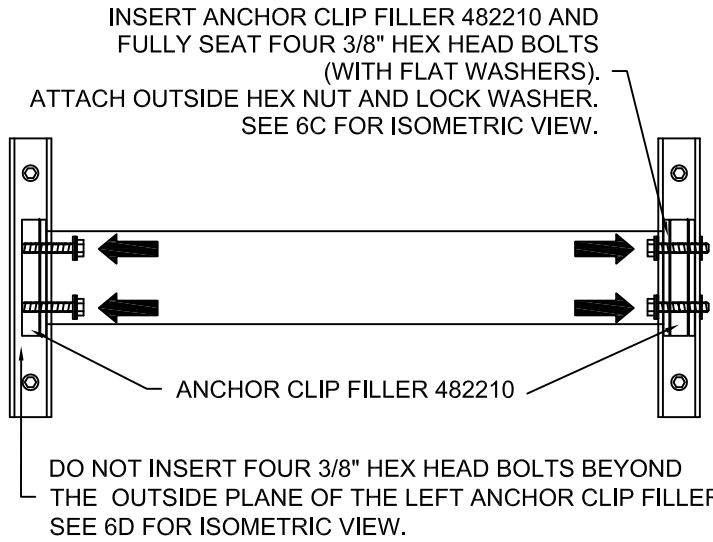
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SLIDE (2) 3/8" FLAT WASHERS (028596) PER BOLT ONTO THE 3/8" x 2" HEX HEAD BOLTS (128539). ON THE RIGHT SIDE (END ASSEMBLY), REMOVE THE TEMPORARY FASTENER AT ANCHOR CLIP FILLER (482210) AND ALIGN THE FILLER AND OUTRIGGER WITH THE ANCHOR CLIP. COMPLETELY SEAT THE RIGHT SET OF BOLTS AND FLAT WASHERS UNTIL THE FLAT WASHERS CONTACT THE SURFACE OF THE ANCHOR CLIP. ATTACH FOUR 3/8" HEX NUTS (028780) AND FOUR LOCK WASHERS (028779) TO THE RIGHT SET OF BOLTS. FINGER TIGHTEN. SEE 6C.

ON THE LEFT SIDE, INSERT FOUR 3/8" x 2" HEX HEAD BOLTS WITH WASHERS INTO ANCHOR CLIP AND THROUGH THE OUTRIGGERS. INSERT ANCHOR CLIP FILLER (482210) INTO THE CENTER OF THE ANCHOR CLIP AND CONTINUE INSERTING THE FOUR 3/8" x 2" HEX HEAD BOLTS UNTIL THE OUTER ENDS OF THE BOLTS ARE FLUSH WITH THE OUTSIDE SURFACE OF THE ANCHOR CLIP FILLER. SEE 6D. DO NOT COMPLETELY SEAT AND DO NOT ATTACH THE SECOND SET OF HEX NUTS.

TIGHTEN NUTS AT RIGHT SIDE. (DO NOT OVER TIGHTEN BOLTS. TIGHTEN TO A "SNUG TIGHT" POSITION WITH PARTS BROUGHT INTO GOOD CONTACT. BE SURE THE SPRING TYPE LOCK WASHERS ARE COMPRESSED. THEN TIGHTEN APPROXIMATELY 1/2 TURN MORE).



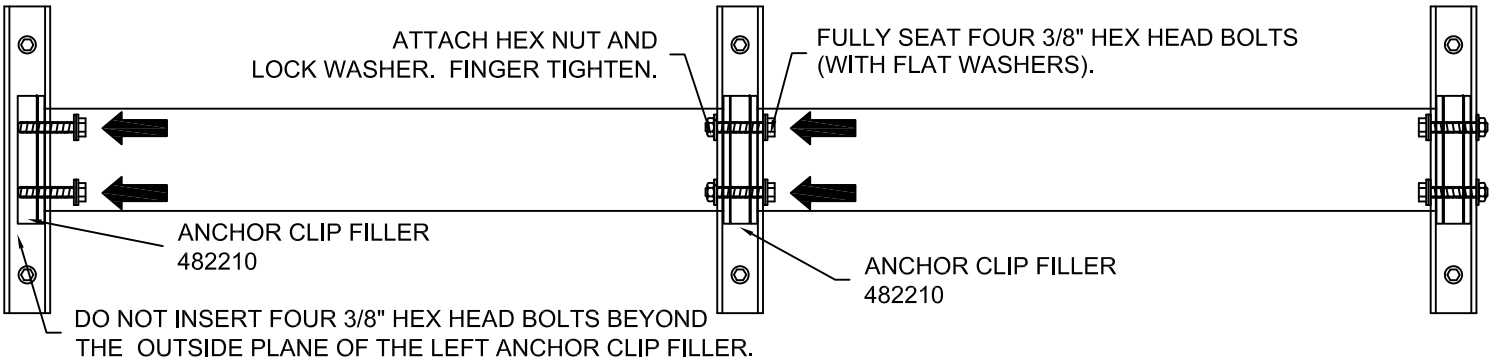
B. INSTALL SECOND BAY ASSEMBLY

NOTE: THE FOLLOWING INSTRUCTIONS APPLY TO THE BALANCE OF ALL INTERMEDIATE BAY ASSEMBLY INSTALLATIONS.

HOIST AND POSITION SUNSHADE BAY ASSEMBLY UNTIL THE FOUR CLEAR HOLES OF THE OUTRIGGERS ALIGN WITH THE CORRESPONDING HOLES IN THE ANCHOR CLIPS. THE RIGHT SIDE SHOULD BE RELATIVELY TIGHT SINCE THE ANCHOR CLIP SPACER IS ALREADY IN POSITION. ON THE RIGHT SIDE, COMPLETELY SEAT THE FOUR 3/8" HEX HEAD BOLTS AND FLAT WASHERS (THROUGH THE OUTRIGGER AND ANCHOR CLIP). APPLY FOUR LOCK WASHERS (028779) AND FOUR HEX NUTS (028780) AND FINGER TIGHTEN. SEE BELOW.

ON THE LEFT SIDE, ALIGN AND INSERT AN ANCHOR CLIP FILLER (482210) INTO THE CENTER OF THE ANCHOR CLIP AND PARTIALLY SEAT ANOTHER SET OF FOUR 3/8" x 2" HEX HEAD BOLTS AND FLAT WASHERS. RUN BOLTS THROUGH ASSEMBLY UNTIL THE OUTER ENDS OF THE BOLTS ARE FLUSH WITH THE OUTSIDE SURFACE OF THE ANCHOR CLIP FILLER. DO NOT COMPLETELY SEAT AND DO NOT ATTACH THE SECOND SET OF HEX HEAD NUTS. SEE BELOW.

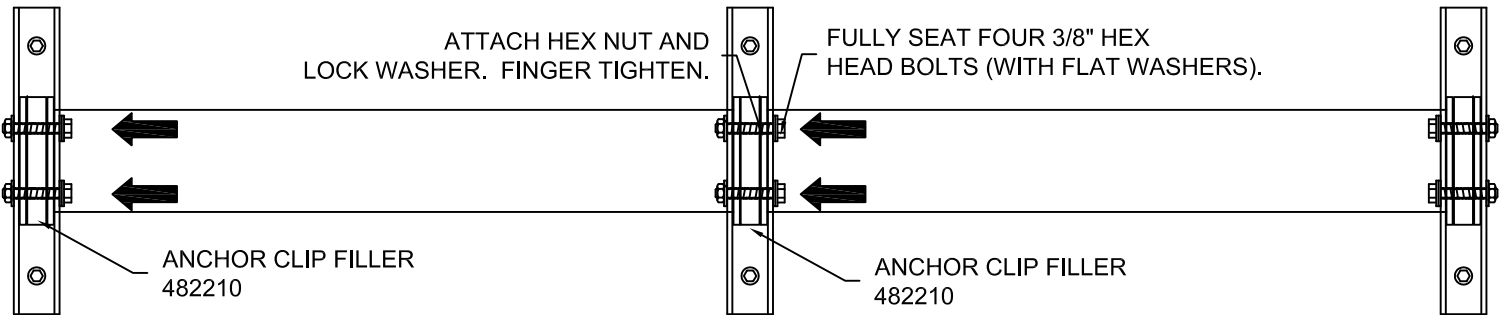
AT RIGHT SIDE, MAKE MINOR ADJUSTMENTS HORIZONTALLY TO ALIGN ALL THE SUNSHADES WHILE TIGHTENING BOLTS AT THE ANCHOR CLIPS. (DO NOT OVER TIGHTEN BOLTS. TIGHTEN TO A "SNUG TIGHT" POSITION WITH PARTS BROUGHT INTO GOOD CONTACT. BE SURE THE SPRING TYPE LOCK WASHERS ARE COMPRESSED. THEN TIGHTEN APPROXIMATELY 1/2 TURN MORE).



C. INSTALL FINAL BAY ASSEMBLY

ON THE FINAL BAY INSTALLATION (END ASSEMBLY), REMOVE THE TEMPORARY FASTENER AT ANCHOR CLIP FILLER (482210) AND ALIGN THE FILLER WITH THE ANCHOR CLIP AND COMPLETELY SEAT THE SET OF BOLTS AND FLAT WASHERS UNTIL THE FLAT WASHERS CONTACT THE SURFACE OF THE ANCHOR CLIP. APPLY FOUR LOCK WASHERS (028779) AND FOUR HEX NUTS (028780) AND FINGER TIGHTEN. SEE BELOW.

MAKE MINOR ADJUSTMENTS HORIZONTALLY TO ALIGN ALL THE SUNSHADES WHILE TIGHTENING BOLTS AT THE ANCHOR CLIPS. (DO NOT OVER TIGHTEN BOLTS. TIGHTEN TO A "SNUG TIGHT" POSITION WITH PARTS BROUGHT INTO GOOD CONTACT. BE SURE THE SPRING TYPE LOCK WASHERS ARE COMPRESSED. THEN TIGHTEN APPROXIMATELY 1/2 TURN MORE).



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