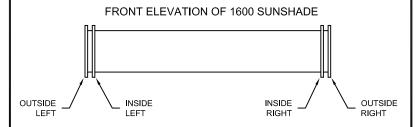
1600 SUNSHADE INSTALLATION INSTRUCTIONS FOR 1600 SYSTEM 1

THE FOLLOWING INSTRUCTIONS ARE FOR THE INSTALLATION OF THE KAWNEER 1600 SUNSHADE. USE THESE INSTRUCTIONS IN CONJUNCTION WITH 1600 SYSTEM 1 CURTAIN WALL INSTALLATION INSTRUCTIONS (162970).

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.

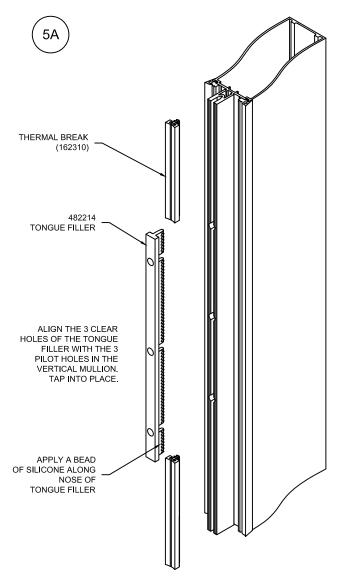


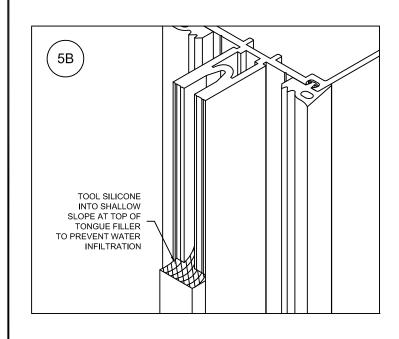
STEPS 1 - 19 PREPARING THE VERTICAL MULLIONS BEFORE HANGING THE SUNSHADES

COMPLETE STEPS 1-19 AS OUTLINED IN THE STANDARD 1600 SYSTEM 1 INSTALLATION INSTRUCTION (162970). PLEASE NOTE THE FOLLOWING MODIFICATIONS. IF NO MODIFICATIONS ARE LISTED BELOW, FOLLOW THE STANDARD 1600 SYSTEM 1 INSTALLATION INSTRUCTIONS.

MODIFY STEP 4 - FRAME ASSEMBLY

VERTICAL MULLIONS WILL BE LABELED DESIGNATING POSITION AND ORIENTATION. THESE DESIGNATIONS MUST BE IDENTIFIED AND MATCHED TO SHOP DRAWINGS BEFORE PROCEEDING WITH ANY ASSEMBLY. FAILURE TO PROPERLY ORIENT OR POSITION THE VERTICAL MULLIONS WILL PROHIBIT INSTALLATION OF THE SUNSHADE.





MODIFY STEP 5 - INSTALL 162310 THERMAL BREAK

INSTALLATION OF THE THERMAL BREAK ON HORIZONTAL MEMBERS REMAINS UNCHANGED.

SUNSHADES REQUIRE THE USE OF A TONGUE FILLER (482214) AT EVERY ANCHOR LOCATION. CHECK SHOP DRAWINGS FOR POSITION OF ANCHOR POINTS. FOR EACH LOCATION OF A TONGUE FILLER, THE VERTICAL MULLION HAS BEEN PREPPED WITH THREE PILOT HOLES, 6" O/C. ALIGN THE THREE CLEAR HOLES OF THE TONGUE FILLER WITH THE THREE HOLES IN THE MULLION. RUN A NARROW BEAD OF SILICONE ALONG THE "NOSE" OF THE TONGUE FILLER AND TAP INTO PLACE. ADJUST TONGUE FILLER UNTIL HOLES ARE IN PROPER ALIGNMENT. SEE 5A.

RUN A BEAD OF SILICONE ACROSS THE TOP OF THE TONGUE FILLER. SEE 5B. FORM SILICONE INTO A SHALLOW SLOPE TO PREVENT POSSIBLE WATER INFILTRATION. BE SURE TO FILL THE GAP BETWEEN THE "NOSE" OF THE TONGUE FILLER AND THE GROOVE OF THE TONGUE. ALLOW TO CURE BEFORE PROCEEDING.

INSERT THERMAL BREAK (162310) ALONG THE FULL LENGTH OF THE VERTICAL MULLION TONGUE WITH THE EXCEPTION OF THE TONGUE FILLER. SEE 5A.
TRIM FLUSH AT TOP AND BOTTOM OF TONGUE FILLER. DO NOT OVERLAP.

MODIFY STEP 17 - INSTALL EXTERIOR PRESSURE PLATES

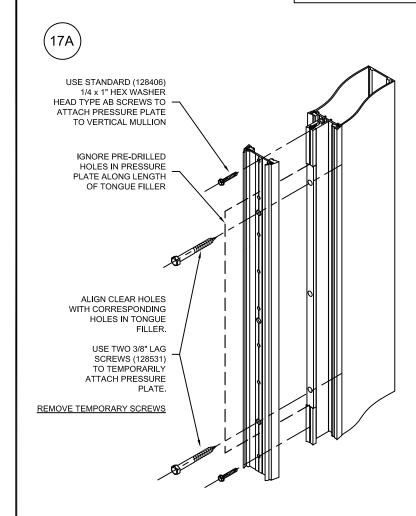
PRESSURE PLATES WILL BE PREPPED FOR THE SUNSHADES PRIOR TO SHIPMENT TO THE JOB SITE. THE PREP WILL CONSIST OF THREE CLEAR HOLES PER SUNSHADE ATTACHMENT. CLEAR HOLES IN PRESSURE PLATE MUST BE ALIGNED WITH CORRESPONDING CLEAR HOLES IN TONGUE FILLER. SEE 17A.

TO ENSURE ALIGNMENT, INSERT TWO 3/8" LAG SCREWS THROUGH THE CENTER OF THE CLEAR HOLES IN BOTH THE TOP AND BOTTOM POSITION AS TEMPORARIES (FINGER TIGHTEN).

INSTALL PRESSURE PLATES USING STANDARD 128406 $1/4 \times 1$ " HEX WASHER HEAD TYPE AB SCREWS. USE ONLY PRE-DRILLED HOLES IN PRESSURE PLATE AND APPLY ONLY THROUGH THERMAL BREAK. DO NOT SCREW INTO TONGUE FILLER (482214).

NOTE:

1600 SUNSHADES (FOR 1600 SYSTEM 1) MUST USE 162358 DEEP COVER PRESSURE PLATE.



MODIFY STEP 19 - INSTALL EXTERIOR COVERS

BEFORE INSTALLING THE EXTERIOR COVERS, THE SUNSHADE ANCHOR CLIP AND THE SUNSHADE ITSELF MUST FIRST BE INSTALLED. INSTALLING THE EXTERIOR COVER WILL BE THE FINAL STEP IN THE INSTALLATION PROCESS.

STEPS 20 - 22 HANGING THE SUNSHADES

STEP 20 - ATTACH ANCHOR CLIPS

ALIGN THE THREE CLEAR HOLES IN THE ANCHOR CLIP (482212) WITH THE THREE CLEAR HOLES IN THE PRESSURE PLATE AND ATTACH WITH THREE 3/8" x 2 1/2" LAG SCREWS (128531) (WITH THREE LOCK WASHERS 028779). SEE 20A.



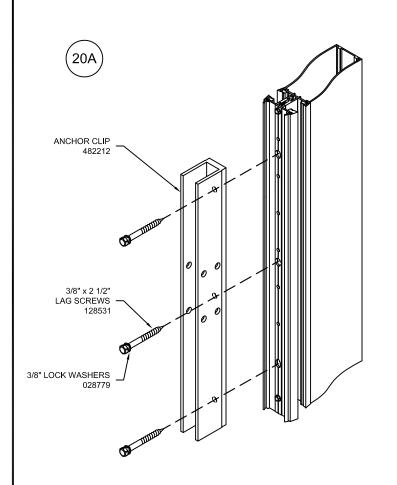
1600 SUNSHADE INSTALLATION INSTRUCTIONS 1600 SYSTEM 1

PART NUMBER 482970 1 OF 6

ORDER:

95494**-**06 10/06/03

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THE THREAD FORMING ACTION OF THE LAG SCREWS WILL CAUSE ADDITIONAL RESISTANCE AND REQUIRE EXTRA FORCE TO SEAT. APPLY A WAX LUBRICANT TO THE THREADS BEFORE PROCEEDING.

NOTE: DO NOT INCREASE HOLE SIZE TO FACILITATE **INSTALLATION!**

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

ATTACH ALL ANCHOR CLIPS BEFORE PROCEEDING TO STEP 22.

STEP 21 - ASSEMBLING THE SUNSHADES

1600 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 21A. 21B AND 21C.

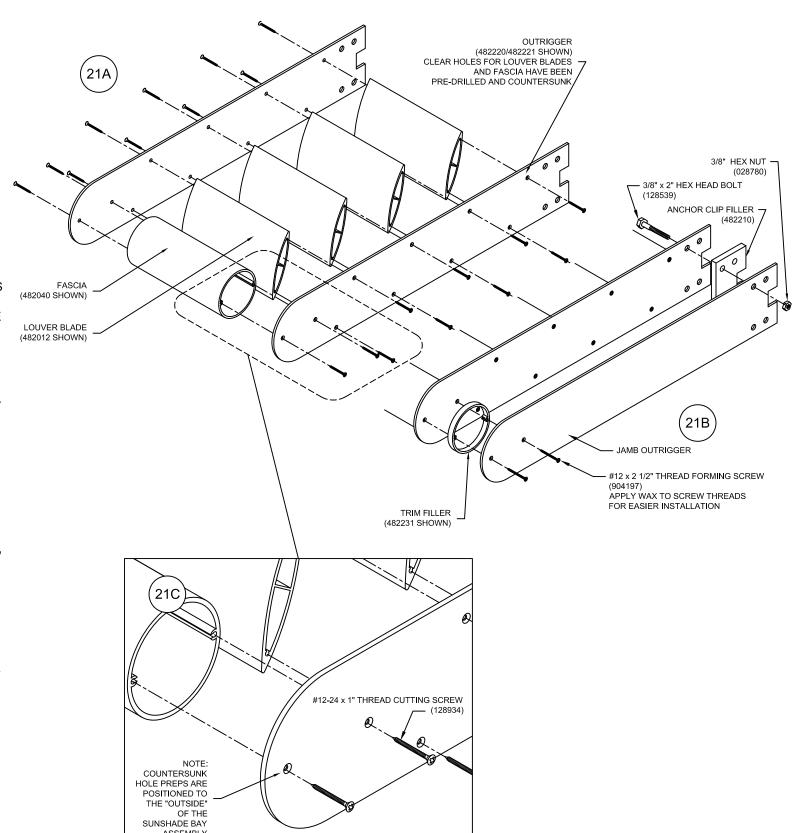
NOTE: SOME SUNSHADE CONFIGURATIONS DO NOT USE FASCIA MEMBERS.

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 21B. 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.





1600 SUNSHADE **INSTALLATION INSTRUCTIONS** 1600 SYSTEM 1

ORDER:

95494-08

11/28/05

PART NUMBER 482970 2 OF 6

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.

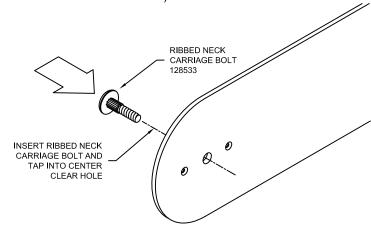
PREPARE OUTRIGGER END ASSEMBLIES.

"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).

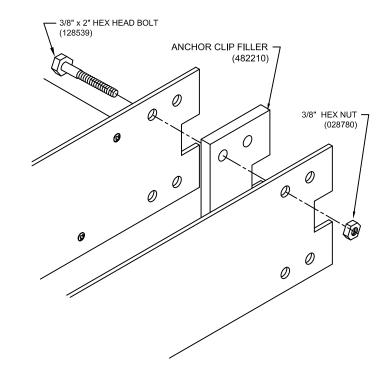
NOTE: THE "END OF ARRAY" OUTRIGGER IS PREPPED WITH A .250" DIAMETER CENTER HOLE FLANKED BY TWO COUNTERSUNK HOLES. THE COUNTERSINK FACES TOWARD THE "OUTSIDE". THUS, ON THE RIGHT "END OF ARRAY" OUTRIGGER, THE COUNTERSINK IS ON THE RIGHT SIDE OF THE PART AND ON THE LEFT "END OF ARRAY" OUTRIGGER, THE COUNTERSINK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

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

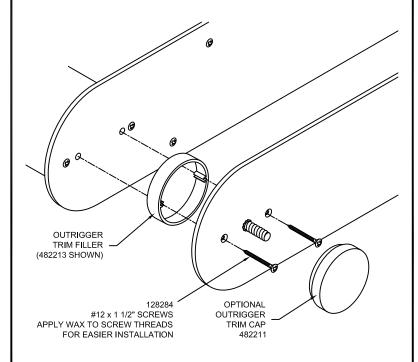
INSERT 1/4-20 \times 3/4" RIBBED NECK CARRIAGE BOLT (128533) INTO THE CENTER HOLE FROM THE SIDE OPPOSITE THE COUNTERSINK. HAMMER THE BOLT UNTIL FIRMLY SEATED ON THE PART. (THE THREADED PORTION OF THE BOLT SHOULD BE ON THE COUNTERSINK SIDE OF THE OUTRIGGER. IF NOT, GENTLY TAP BOLT UNTIL IT DISENGAGES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



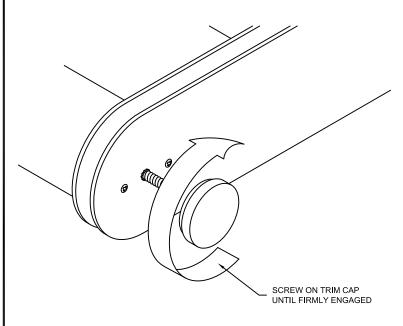
INSTALL ANCHOR CLIP FILLER (482210) USING (1) 3/8" x 2" HEX HEAD BOLT (128539) AND TEMPORARILY ATTACH (1) 3/8" HEX NUT (028780) TO SECURE JAMB OUTRIGGER DURING INSTALLATION.



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.

STEP 22 - 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 22A AND 22B. END ASSEMBLY WILL REQUIRE TEMPORARY FASTENER AT ANCHOR CLIP FILLER TO BE REMOVED JUST PRIOR TO ANCHORING.

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1600 SUNSHADE
INSTALLATION INSTRUCTIONS
1600 SYSTEM 1

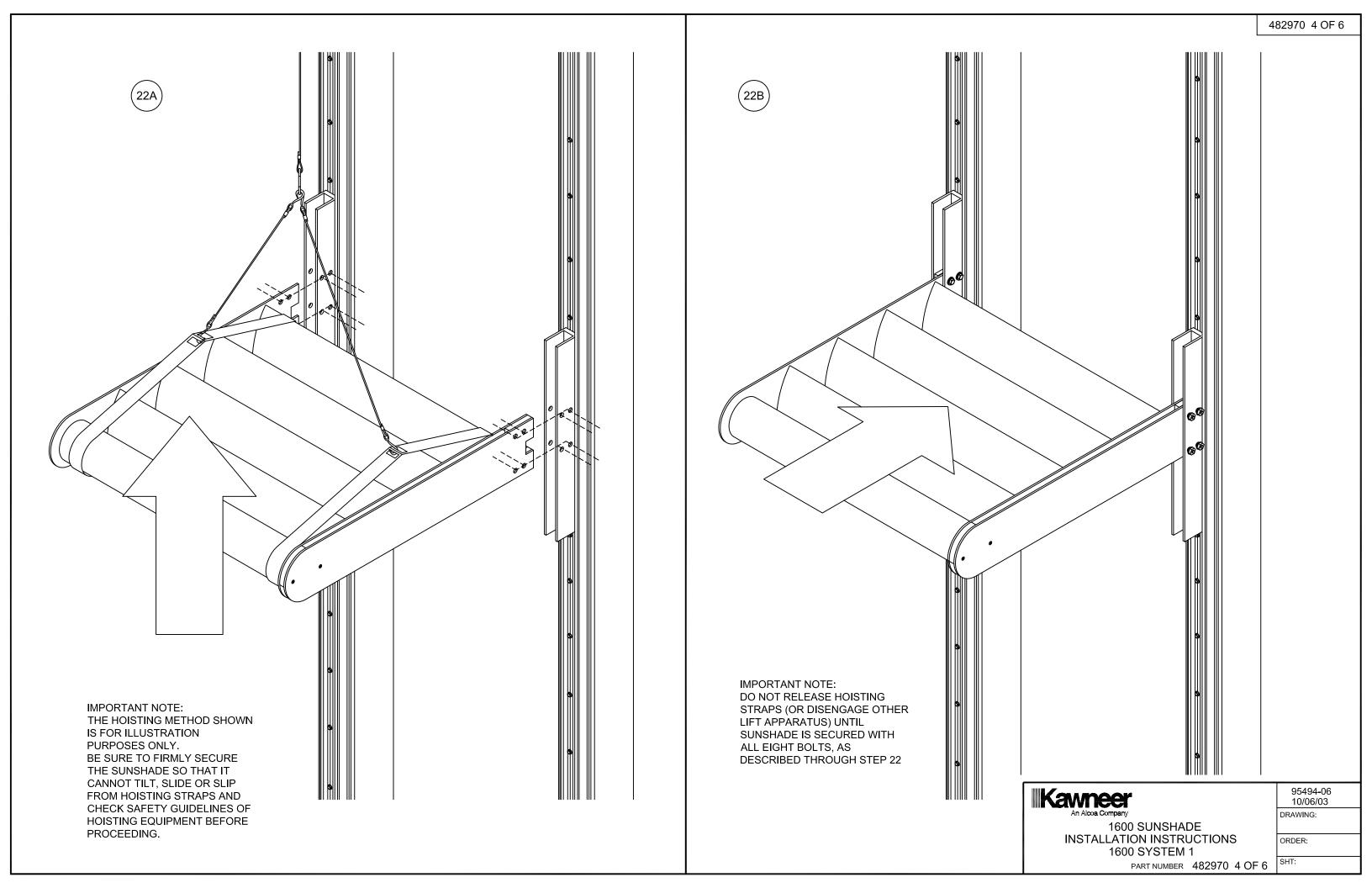
PART NUMBER 482970 3 OF 6

ORDER:

95494-07

06/22/05

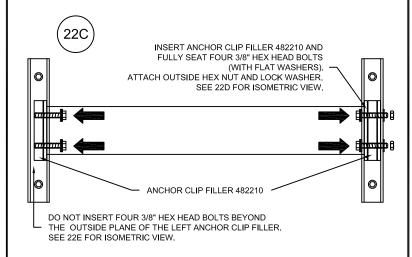
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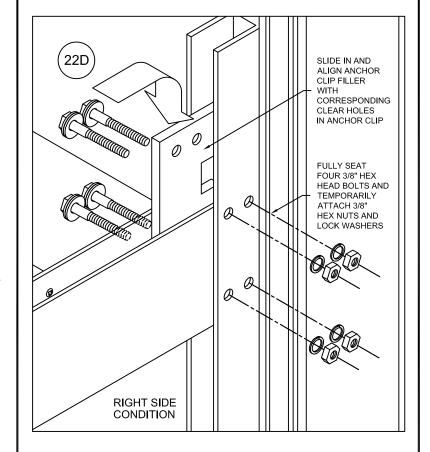


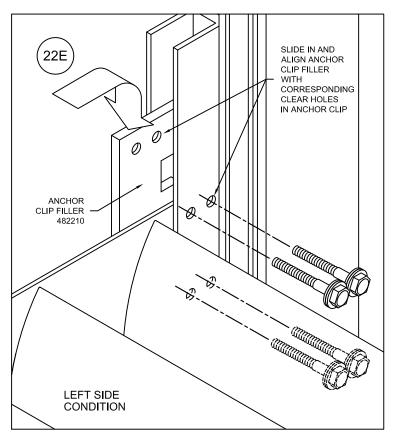
FINGER TIGHTEN. SEE 22C.

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 22C. 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).







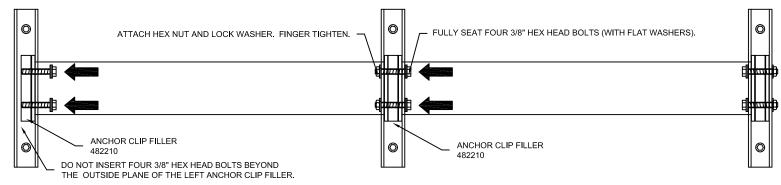
B. INSTALL SECOND BAY ASSEMBLY

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.

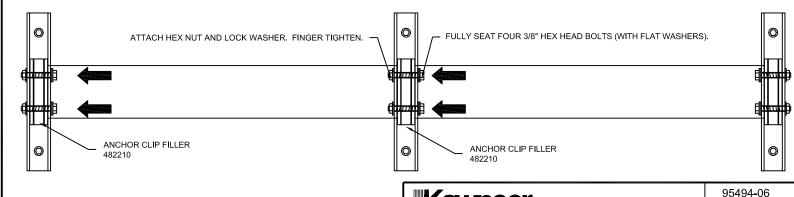
AT RIGHT SIDE, MAKE MINOR ADJUSTMENTS HORIZONTALLY TO ALIGN ALL THE SUNSHADES WHILE TIGHTENING BOLTS AT THE ANCHOR CLIPS. (DO NOT OVER TIGHTEN BOLTS. TIGHTEN TO A "SNUG TIGHT" POSITION WITH PARTS BROUGHT INTO GOOD CONTACT. BE SURE THE SPRING TYPE LOCK WASHERS ARE COMPRESSED. THEN TIGHTEN APPROXIMATELY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



1600 SUNSHADE **INSTALLATION INSTRUCTIONS** 1600 SYSTEM 1

10/06/03 ORDER:

PART NUMBER 482970 5 OF 6

STEP 23 - INSTALL COVERS ON VERTICAL MULLIONS (REFER TO STEP 19 OF THE 1600 SYSTEM 1 INSTALLATION INSTRUCTIONS 162970 FOR STANDARD INSTRUCTIONS)

1600 SUNSHADE REQUIRES THE USE OF DEEP COVERS ONLY (162239) ON THE VERTICAL MULLION. THESE COVERS HAVE BEEN FACTORY PREPPED AND SHIPPED READY TO INSTALL. FOLLOW STANDARD INSTRUCTIONS, WITH THE FOLLOWING EXCEPTIONS:

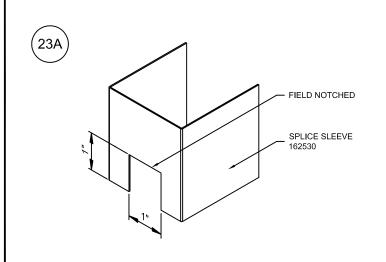
THE VERTICAL MULLION COVERS THAT SURROUND THE SUNSHADE HAVE BEEN SPLIT INTO TWO PARTS. THE SPLICE SLEEVE (162530) MUST BE FIELD NOTCHED TO CLEAR THE OUTRIGGERS. SEE 23A. SET THE MODIFIED SPLICE SLEEVE INTO SEALANT AT THE BOTTOM OF THE TOP COVER ABOVE THE SUNSHADE. SEE 23B. ALIGN THE COVER ON THE MULLION WITH THE NOTCHED SPLICE SLEEVE FACING DOWN. SLIDE IT OVER THE TWO OUTRIGGERS AND CHECK FOR CLEARANCE BEFORE ATTEMPTING TO ENGAGE. SEE 23D.

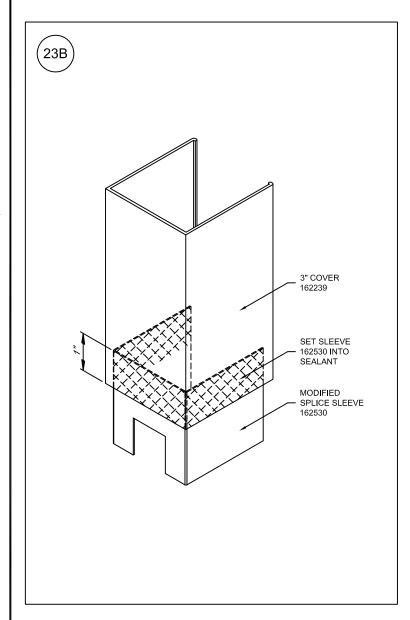
NOTE: THE 3/8" HEX HEAD BOLTS AND CORRESPONDING NUTS MUST BE CENTERED ON THE ANCHOR CLIP IN ORDER FOR THE SPLICE SLEEVE TO FIT. CHECK AND MAKE ADJUSTMENTS BEFORE PROCEEDING.

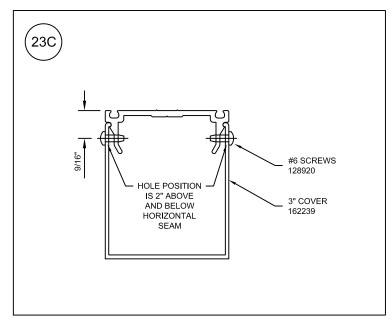
RE-ALIGN THE COVER AND ENGAGE AS PER STANDARD INSTALLATION INSTRUCTIONS.

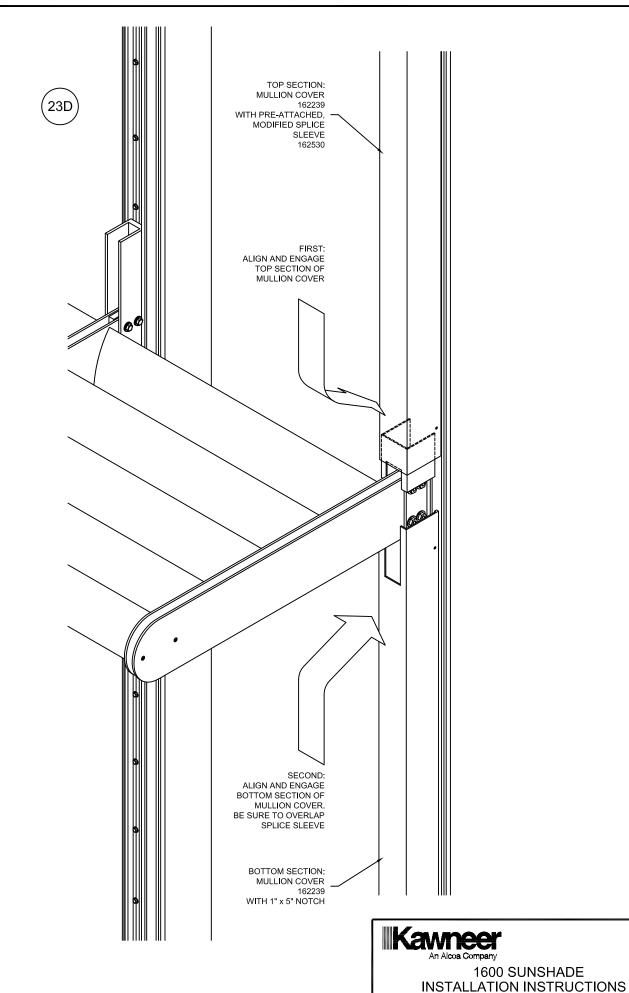
THE BOTTOM HALF OF THE COVER HAS BEEN FACTORY FABRICATED WITH A 1" x 5" NOTCH. ALIGN THE COVER ON THE MULLION WITH THE NOTCH FACING UP. SLIDE IT COMPLETELY OVER THE OUTRIGGERS AND OVER THE SPLICE SLEEVE UNTIL THE BOTTOM OF THE NOTCH COMES IN FIRM CONTACT WITH THE OUTRIGGER. ENGAGE AS PER STANDARD INSTALLATION INSTRUCTIONS. SEE 23D.

PIN BOTH HALVES OF THE VERTICAL COVERS. DRILL A .106" DIAMETER HOLE (#36 DRILL) 2" ABOVE AND BELOW THE SEAM AND 9/16" FROM THE INSIDE SURFACE OF THE PRESSURE PLATE. SEE 23C. INSTALL 128920 #6 x 3/8" PAN HEAD SCREWS.









95494-06 10/06/03 1600 SUNSHADE

PART NUMBER 482970 6 OF 6

1600 SYSTEM 1