

SS: 1033915 TBB Evaporator field fix support

This Service Solution does not imply any special warranty coverage. Standard warranty guidelines and coverage apply. This Service Solution is provided to assist Dealers/Customers in resolving the issue of possible the Evaporator may become loose can start cracking the Headliner, depending on the Road Conditions of the unit.

Applicable Vehicles

C2

Symptoms

Evaporator support becoming loose cracking the Headliner

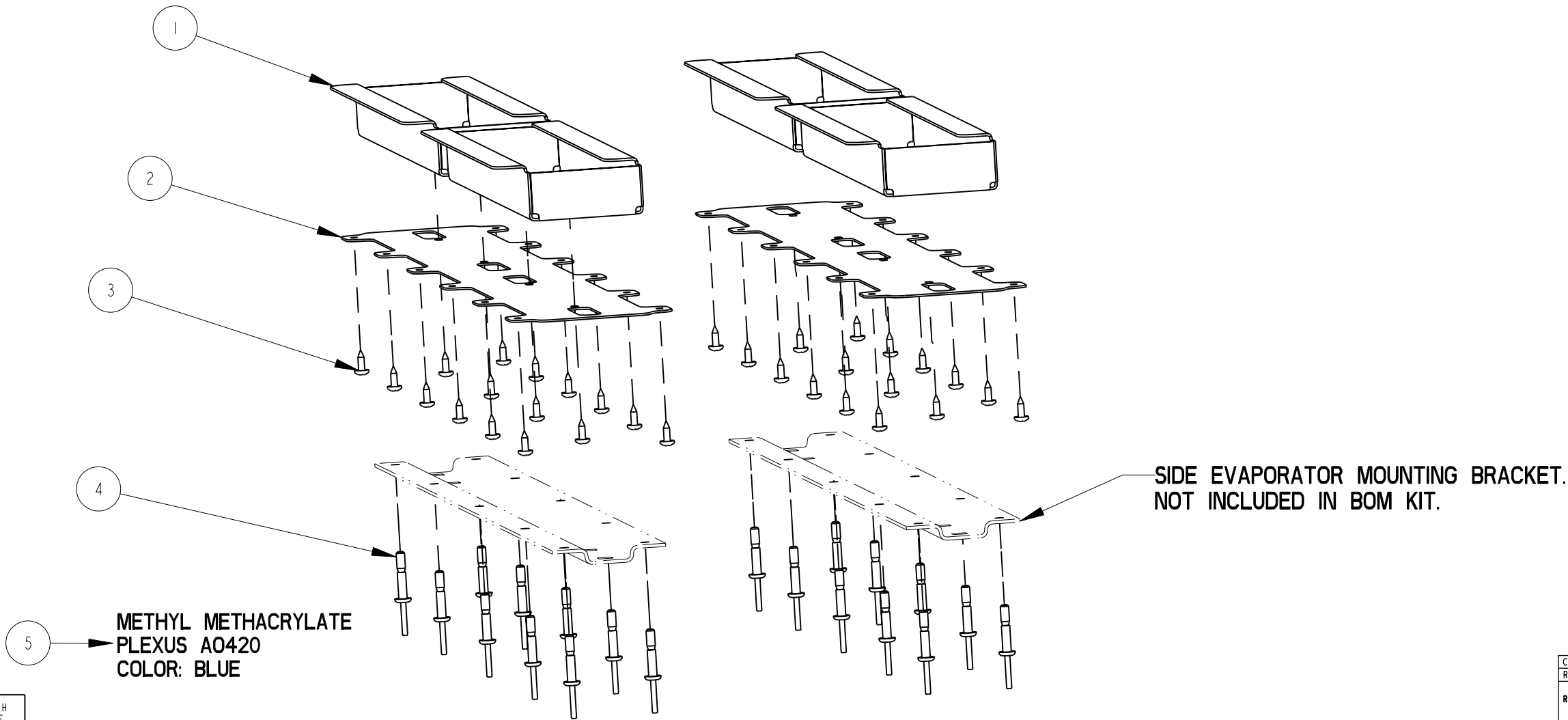
Issue

Cracking the Headliner

Solution:

Adding Headliner supports TBB 219071 (2) and Evaporator Braces TBB 219070 (4)

ITEM	QUANTITY	PART NUMBER	DESCRIPTION
1	4	219070	SUPPORT BRACE, EM-1, C2, SERVICE ONLY
2	2	219071	HEADLINER SUPPORT, EM-1, C2, SERVICE ONLY
3	32	69003272	SCREW, TAPPING, #10 PAN HD, 5/8" LONG,
4	20	69005029	RIVET-1/4 DIA. BREAK MANDREL
5	AS REQ	216039	STRUCTURAL ADHESIVE,



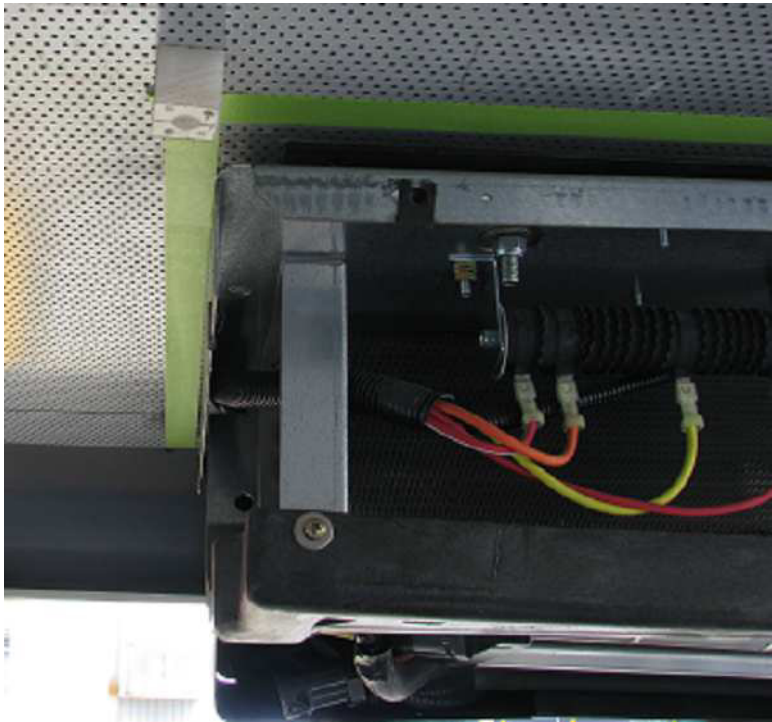
DELIVERY MUST CONFORM EXACTLY WITH
DRAWING SPECIFICATIONS AND, WHERE
REQUIRED BY Q.A., WITH APPROVED
Q.A. SAMPLES. ABSOLUTELY NO CHANGES
ARE PERMITTED WITHOUT PRIOR APPROVAL
BY THOMAS BUILT BUSES, INC. THIS INCLUDES
CHANGES TO: SOFTWARE, MATERIALS,
INTERNAL COMPONENTS AND MANUFACTURING
PROCESSES.

NOTES:
1) MATERIAL: REFERENCE INDIVIDUAL COMPONENT CALLOUTS.
2) CALCULATED WEIGHT: 18.250 LBS
3) BURRS: N/A
4) FINISH: N/A
5) COLOR: N/A
6) REFERENCE: N/A
7) PART NUMBER IDENTIFICATION: ALL COMPONENTS/ASSEMBLIES BEING PROVIDED TO TBB
BY AN OUTSIDE SUPPLIER SHALL HAVE THE TBB PART NUMBER PERMANENTLY IDENTIFIED
THROUGH AN ACCEPTABLE MARKING METHOD AS DESCRIBED BY 49-00051.

CHG NO.:		ECR-14094		CHG DATE:		08/02/18	
REV BY:		P. SHERMER		REVIEWED BY:		S. CHAPMAN	
REVISION		DESCRIPTION		APPROVED BY:		B. CLEAVINGER	
RELEASED							
TOLERANCE UNLESS OTHERWISE SPECIFIED						THIRD ANGLE PROJECTION	
DECIMAL INCH		METRIC [mm]		ANGULAR			
.XXX ±.015		.XXX ±0.5		±1°			
.XX ±.06		.XX ±1.0					
.X ±.1		.X ±1.5					
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APPROVER:		B. CLEAVINGER		08/02/18			
C2 A/C EVAPORATOR FIELD FIX INSTALLATION							
219761				REV A		CAD VERSION 0+	
						SHEET 1 OF 6	

INSTALLATION NOTE SECTION 1 OF 9

- A.THIS METHOD WILL ALLOW THE CURRENT HEADERLINER TO REMAIN INTACT
THUS ELIMINATING THE NEED FOR INTERIOR PAINTING.
- B.TRACE EVAPORATOR COVER PERIMETER WITH PAINTERS' TAPE ONTO THE
EXISTING HEADLINER. NOT SHOWN.
- C.REMOVE EVAPORATOR COVER.
- D.TRACE EVAPORATOR BASE PERIMETER WITH A PERMANENT MARKER OR
PAINTERS TAPE ON THE EXISTING HEADLINER. THIS WILL SET VISUAL BOUNDRIES SO AS
TO NOT GO BEYOND DURING THE HEADLINER CUTTING PROCESS.



LEFT SIDE VIEW
INSTALLATION NOTE 1 OF 9



RIGHT SIDE VIEW
INSTALLATION NOTE 1 OF 9

INSTALLATION NOTE SECTION: 2 OF 9.

- A.LOCATE THE (4) FOUR 3/8-16 BOLTS USED TO MOUNT THE EVAPORATOR.
ADDITIONAL ASSISTANCE WILL BE REQUIRED.
- B.REMOVE 4 NUTS AND WASHERS ASSOCIATED WITH MOUNTING BOLTS.



AFT VIEW
LOOKING FORWARD
INSTALLATION NOTE 3 OF 9

INSTALLATION NOTE SECTION: 3 OF 9.

- A.TRACE THE PERIMETER FOR BOTH EVAPORATOR MOUNTING BRACKETS WITH A
PERMANET MARKER ONTO THE EXISTING HEADLINER - RED OUTLINE.
- B.THE LEADING EDGE WILL BE NOTED AS BEING NEAR THE CENTERLINE OF BUS.

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219761	REV A	CAD VERSION 0+	SHEET 2 OF 6

INSTALLATION NOTE SECTION: 4 OF 9.

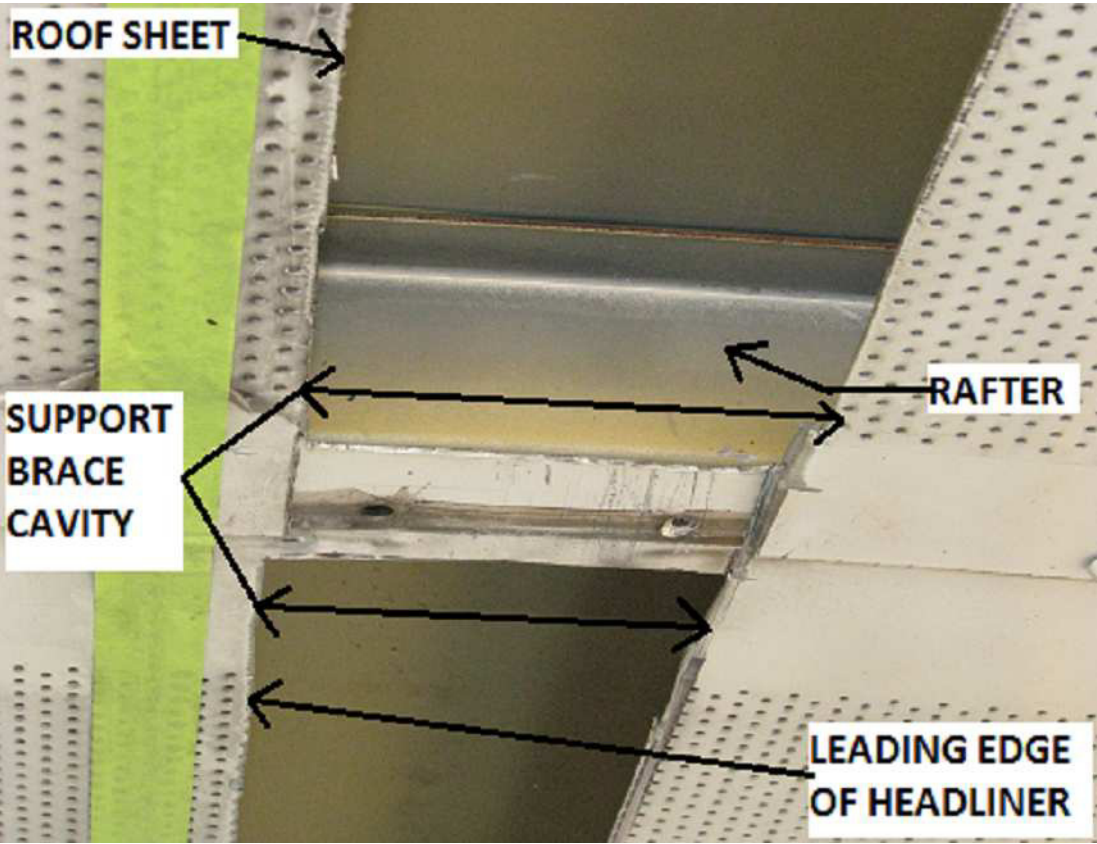
- A. USE GOGGLES OR FACE SHIELD ALONG WITH SAFTEY GLASSES BEFORE PERFORMING THE FOLLOWING OPERATION.
- B. REMOVE EVAPORATOR BRACKET BY REMOVING THE RIVETS USED TO SECURE THE TWO BRACKETS.
- C. THIS CAN BE ACCOMPLISHED BY EITHER A .25" DRILL OR BY A 4 INCH ROTARY CUT-OFF WHEEL (SEE PICTURE)



HEADLINER VIEW
INSTALLATION NOTES 4 OF 9

INSTALLATION NOTE SECTION: 5 OF 9.

- A. A STRAIGHT EDGE SIMILAR TO A PIECE OF .5 INCH ANGLE SECURED TO THE HEADLINER AND ALIGNED WITH THE TRACE MARKS AT STEP 6 WITH THE FASTENERS LOCATED WITHIN THE PERIMETER MADE AT STEP 3, MAY AID IN THE FOLLOWING OPERATION.
- B. USING A 4 INCH ROTARY CUTTING WHEEL, BEGIN CUTTING THE LEADING EDGE OF THE PERIMETER OF THE EVAPORATOR SUPPORT BRACKETS INTO THE HEADLINER ITSELF. SEE STEP 7.
- C. THIS WILL BE THE ACCESS CAVITIES USED TO INSTALL THE FIELD SUPPORT BRACES.
MAKE SURE THE RAFTER ITSELF IS NOT CONTACTED BY THE ABRASIVE CUTOFF WHEEL!
- D. THE SUPPORT BRACES THEMSELVES MEASURE 3.5 INCHS WIDE SO THE TRAILING EDGE WILL NEED TO BE CUT TO 3.63 INCHES TO 3.75 INCHES FROM THE LEADING EDGE SO THE SUPPORT BRACKETS CAN BE INSTALLED EFFECTIVELY.
- E. ONCE ALL ACCESS CAVITIES ARE SUCCESFULLY CUT IN PLACE AND ALL BURRS ARE REMOVED THEN A TRIAL RUN OF INSTALLING THE FIELD SUPPORT BRACKETS WILL NEED TO TAKE PLACE SINCE PLEXUS WILL BE THE FASTENING METHOD.

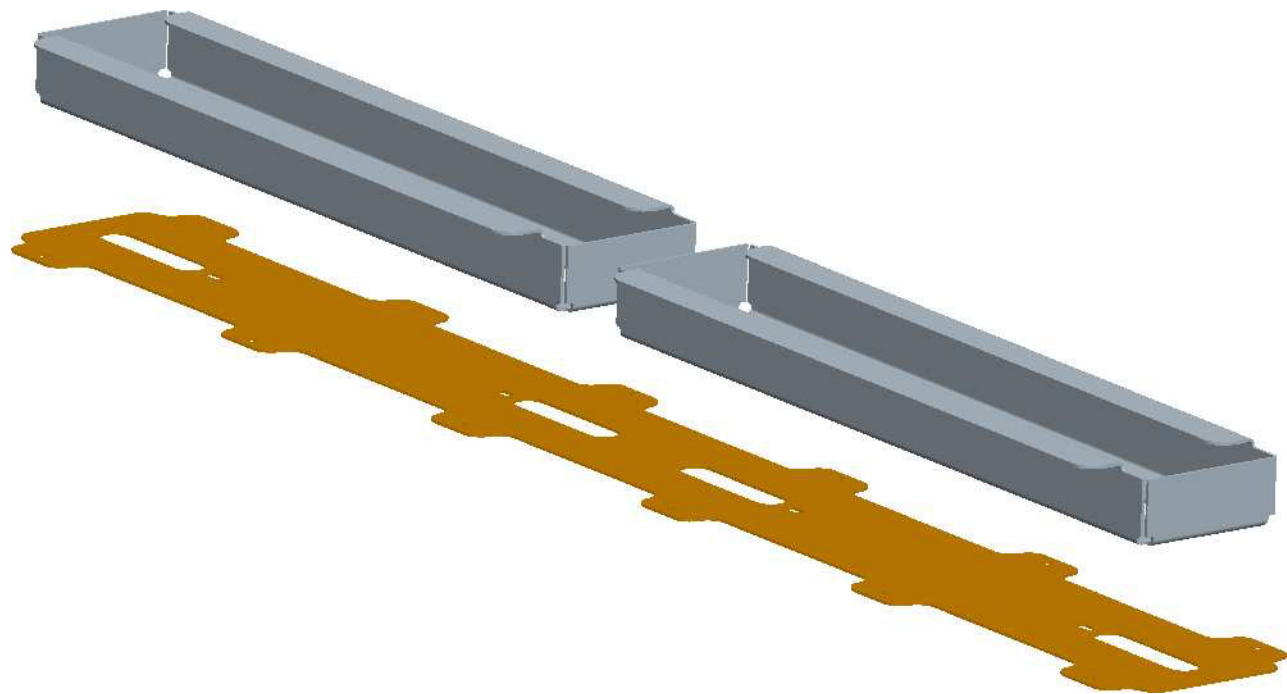


HEADLINER VIEW
INSTALLATION NOTES: 5 OF 9

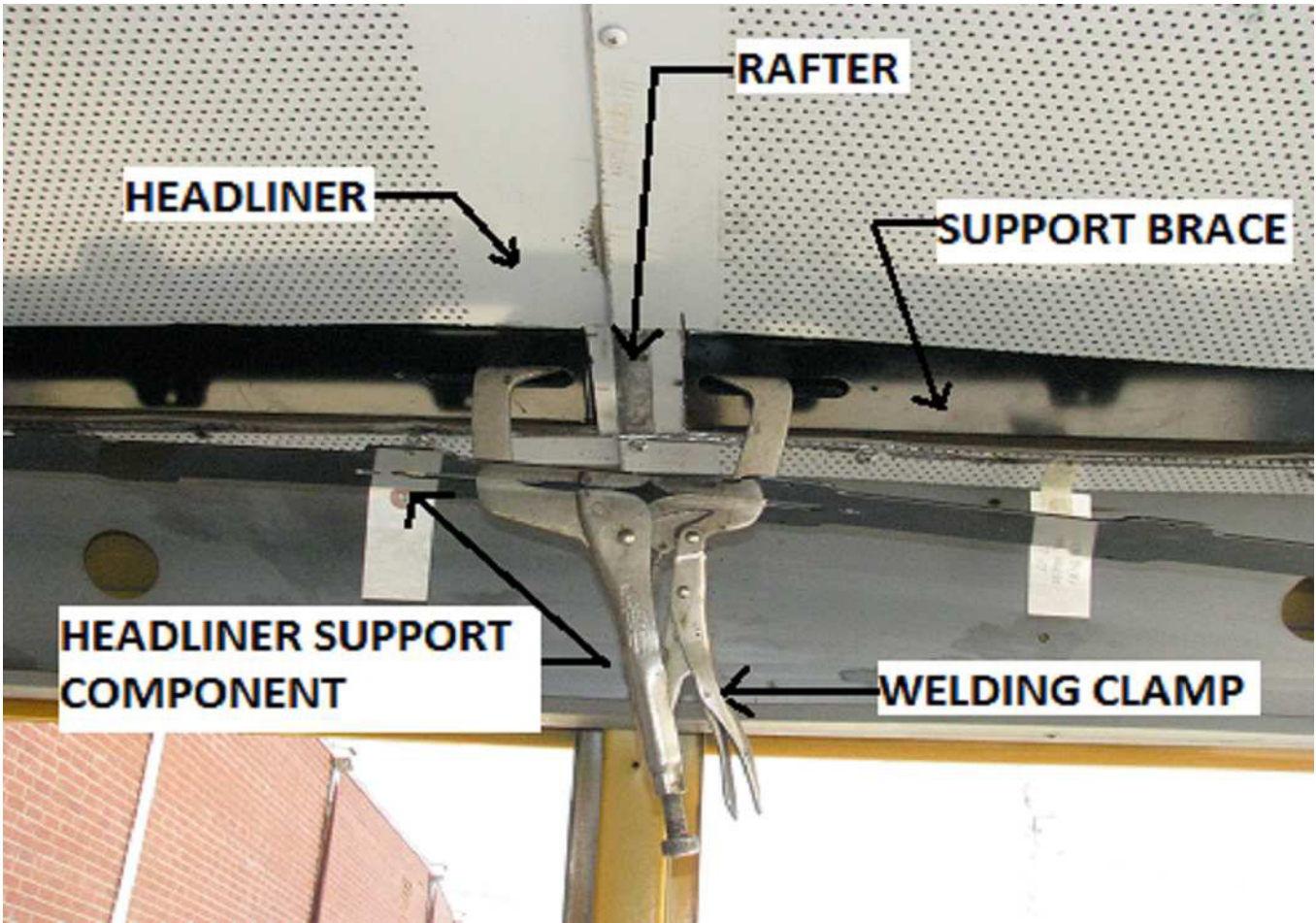
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INSTALLATION NOTE SECTION: 6 OF 9.

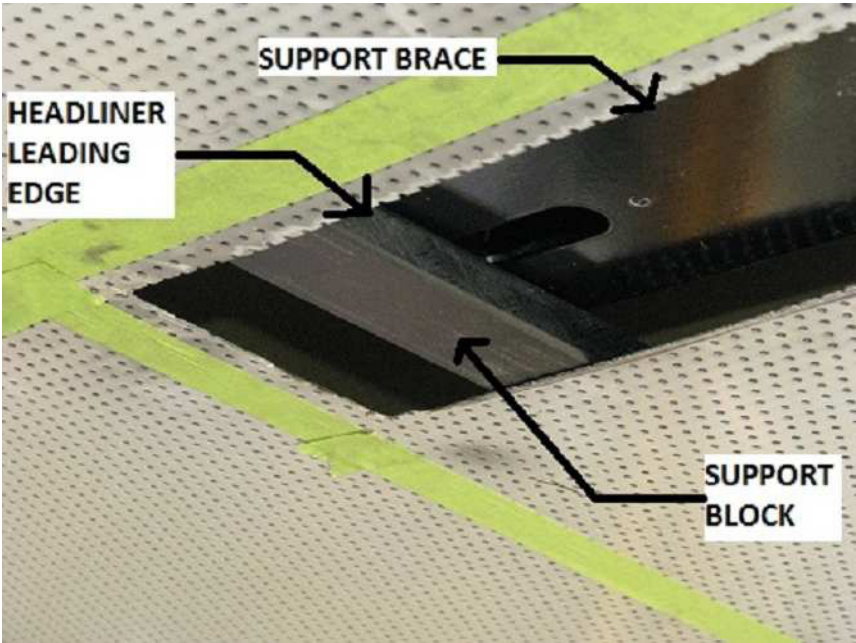
- A.FOLLOW THESE STEPS FOR THE TRIAL RUN AS WELL AS WHEN THE PLEXUS ADHESIVE IS APPLIED TO THE SUPPORT BRACE AND RAFTER FACES.
- B.SECURE P/N 219071 TO P/N 219070 USING 4 #10 SELF TAPPING SCREWS AS SHOWN IS SHEET 2 - THE #10 SELF TAPPING SCREWS SHOULD NOT BE FULLY TIGHTENED BECAUSE AT THIS POINT THEY ARE BEING UTILIZED FOR ALIGNMENT PURPOSES ONLY.
- C.USING A SINGLE WELDING CLAMP INSTALL THE SINGLE ASSMEBLY AS NOTED ON SHEET 2 - SEE PICTURE. CRESENT C6CC OR IRWIN 6R WORK WELL FOR THIS OPERATION.
- D.SECURE WELDING CLAMP.
- E.REMOVE HEADLINER SUPPORT BRACKET BY REMOVING THE 4 #10 SELF TAPPING SCREWS INSTALLED EARLIER AT STEP 17. THE ALIGNMENT AT THIS POINT SHOULD BE ACCEPTABLE.
- F.PLACE A SUPPORT BLOCK BETWEEN THE HEADLINER AND SUPPORT BRACE AT EACH END OF THE ASSEMBLY. THIS WILL FORCE THE SUPPORT BRACE AGAINST THE ROOF SHEET. THE SUPPORT UTILILIZED MEASURED 0.5' X .75' X 5.0" (SEE PICTURE)



ISO VIEW
STEP 18
INSTALLATION NOTES: 6 OF 9



HEADLINER VIEW
STEP 19
INSTALLATION NOTES: 6 OF 9

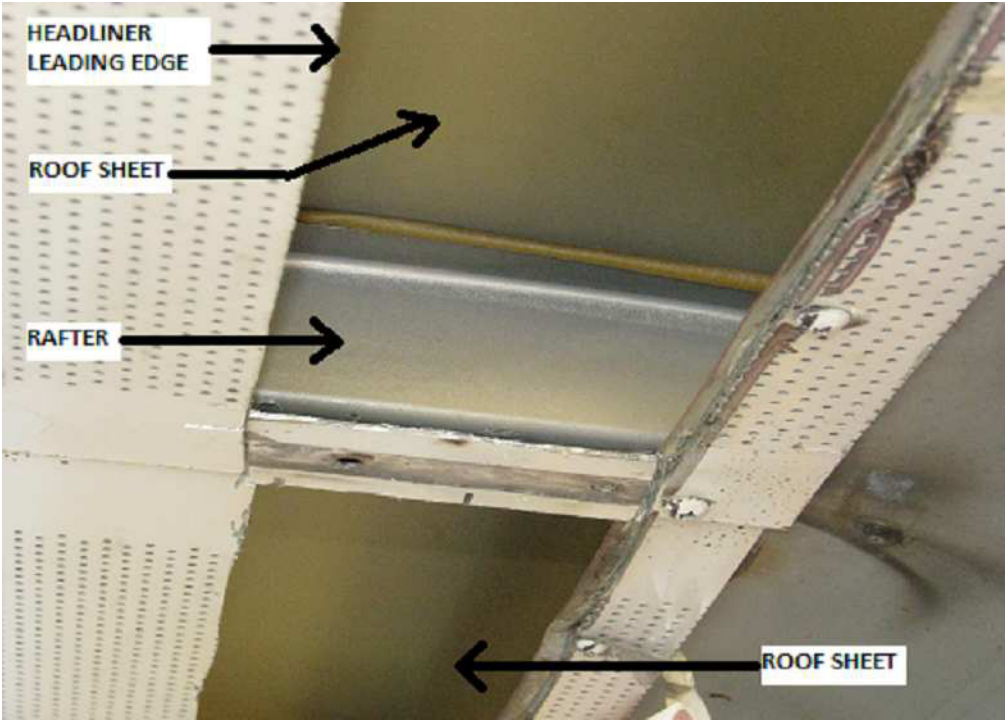


HEADLINER VIEW
STEP 22
INSTALLATION NOTES: 6 OF 9

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.XX ±.06	.XX ±1.0		
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APPROVER:	B.CLEAVENGER	08/02/18	
C2 A/C EVAPORATOR FIELD FIX INSTALLATION			
219761		REV A	CAD VERSION 0+
			SHEET 4 OF 6

INSTALLATION NOTE SECTION 7 OF 9.

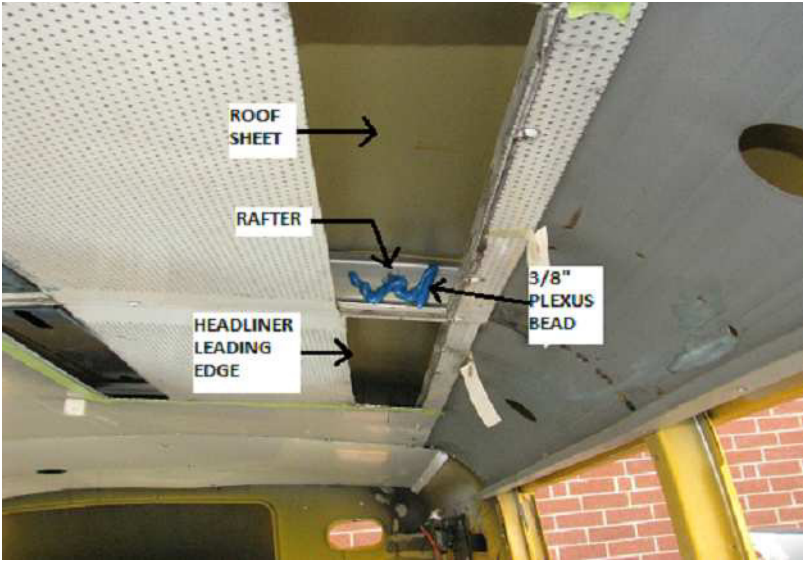
- A. PREPARATION FOR APPLYING THE PLEXUS ADHESIVE TO THE RAFTER AND ROOF SHEET MAY REQUIRE THE FOLLOWING PROCEDURE.
- B. LOOK FOR ANY PAINT OVERSPRAY ON THE RAFTER FLANGE AND AREA ABOVE THE CAVITY CUT-OUT - IE ROOF SHEET - WHERE THE SUPPORT BRACES WILL BE PLACED.
- C. IF PAINT OVERSPRAY DOES EXIST, USING A SCOTCH BRITE HAND PAD OR EQUIVALENT WILL BE NECESSARY TO REMOVE ANY PAINT OVERSPRAY.
- D. THE FINISH OF THE PREPARED SURFACE WILL HAVE DULL LOOK TO IT.
- E. NEXT REMOVE ANY RESIDUE THAT WAS A RESULT OF USING THE SCOTCH BRITE HAND PAD - IE MINERAL SPIRITS OR OTHER FAST DRYING CLEANER.
- F. NOTE! THIS PROCESS WILL NOT BE REQUIRED FOR THE PRIMED COMPONENTS IN THE SERVICE KIT ASSEMBLY!



HEADLINER VIEW
INSTALLATION NOTES: 7 OF 9

INSTALLATION NOTE SECTION: 8 OF 9.

- A. APPLY THE PLEXUS ADHESIVE TO BOTH SIDES OF RAFTER USING A 3/8 INCH SIZE BEAD IN THE SHAPE OF THE LETTER W. SEE PICTURE.
- B. APPLY THE PLEXUS ADHESIVE TO BOTH FLANGES USING A 3/8 INCH BEAD, ZIG ZAG THE BEAD AS MUCH AS POSSIBLE. SEE PICTURE.
- C. REPEAT STEPS 23 THRU 30 FOR BOTH CAVITIES AND SUPPORT BRACES.
- D. ALLOW THE PLEXUS TO CURE FOR MINIMUM 4.0 HOURS.



HEADLINER VIEW
STEP 29
INSTALLATION NOTES: 8 OF 9



PLEXUS APPLICATION VIEW
STEP 30
INSTALLATION NOTES: 8 OF 9

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C2 A/C EVAPORATOR FIELD FIX INSTALLATION			
219761	REV A	CAD VERSION 0+	SHEET 5 OF 6

INSTALLATION NOTE SECTION: 9 OF 9

- A.REMOVE THE SUPPORT BLOCKS USED AT EACH END OF THE SUPPORT BRACE.
- B.REMOVE THE WELDING CLAMPS.
- C.REASSEMBLE HEADLINER SUPPORT TO THE SUPPORT BRACE USING 4 #10 SELF TAPPING SCREWS.
- D.USING THE HEADLINER SUPPORT AS A DRILL TEMPLATE. DRILL HOLES INTO THE HEADLINER USING A #26 (0.147") DRILL.
THERE WILL BE 12 ADDITIONAL #10 SELF TAPPING SCREWS UTILIZED TO SECURE THE HEADLINER SUPPORT BRACKET TO THE HEADLINER ITSELF.
- E.REATTACH THE SIDE EVAPORATOR MOUNTING BRACKET TO THE HEADLINER SUPPORT/SUPPORT BRACE USING THE 1/4 INCH RIVET.
HOLE SIZE AND DRILL#: 0.261 INCH TO 0.272 INCH DRILL (G, 17/64, I). THE CENTER OF THE SIDE EVAPORATOR MOUNTING BRACKET SHOULD BE ALIGNED WITH THE CENTER OF THE RAFTER WALL ☐ SAME LOCATION PRIOR TO REMOVAL AT STEPS 9 & 10.
- F.REINSTALL THE 4 3/8-16 BOLTS USED TO MOUNT THE EVAPORATOR. ADDITIONAL ASSISTANCE WILL BE REQUIRED FOR THIS TASK AS BEFORE.
- G.REINSTALL THE EVAPORATOR COVER.



HEADLINER VIEW
INSTALLATION NOTES: 9 OF 9

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