

# MODEL FB17 FIRE BARRIER "T" TRANSITION INSTALLATION INSTRUCTIONS



## IMPORTANT INFORMATION

Prior to the commencement of Installation, all materials **MUST** be inspected for Damage. Any damage must be reported to CONSTRUCTION SPECIALTIES, INC., as soon as possible, so that replacement materials may be furnished without delay.

All work must be completed as per Architect's Approved "Shop Drawings", and in accordance with these Installation Instructions. When installation is complete, all materials must be protected from damage until the Architect's FINAL INSPECTION.

All materials should be arranged in the order that they are to be installed. All hardware required for each portion of the work should be placed with the appropriate materials.

Please review all Approved Shop Drawings and this Document to familiarize yourself with all the details and components of this assembly.

**IMPORTANT:**  
**READ THROUGH ALL INSTRUCTIONS PRIOR TO STARTING INSTALLATION**

07/27/2018



**Construction Specialties®**  
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General Instructions:

**ALWAYS WEAR GLOVES** when handling and cutting the barrier.

Before beginning installation, review the architectural drawings and approved Construction Specialties Inc. shop drawings to familiarize yourself with the joint cover models and locations.

Check all of the joint cover components to confirm that the correct joint cover model and size have been received. Also, check for materials that may have been damaged during shipping. Report all incorrect and/or damaged components to CS at 800-233-8493.

Read through all the steps of these instructions prior to beginning work. See separate installation instructions for straight runs of fire barriers.

**TOOLS:**

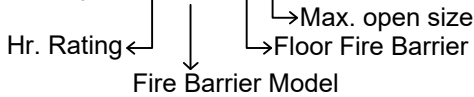
The following tools may be needed for installation of the FB17 fire barriers:

- Fabric or Leather Work Gloves
- Measuring Tape
- Hammer Drill
- Permanent Marker
- Tin Snips or Grinder
- Hammer
- Utility Knife
- Drill
- Quick Grip Clamps

Model designating - FB17 supplied is based on the max. open width.

FB17 Nomenclature

Example: 2FB17 - F12



Note: If FB17 Fire Barrier is with a "T" Transition, start from this point on the jobsite and then install the straight runs of fire barrier lengths.

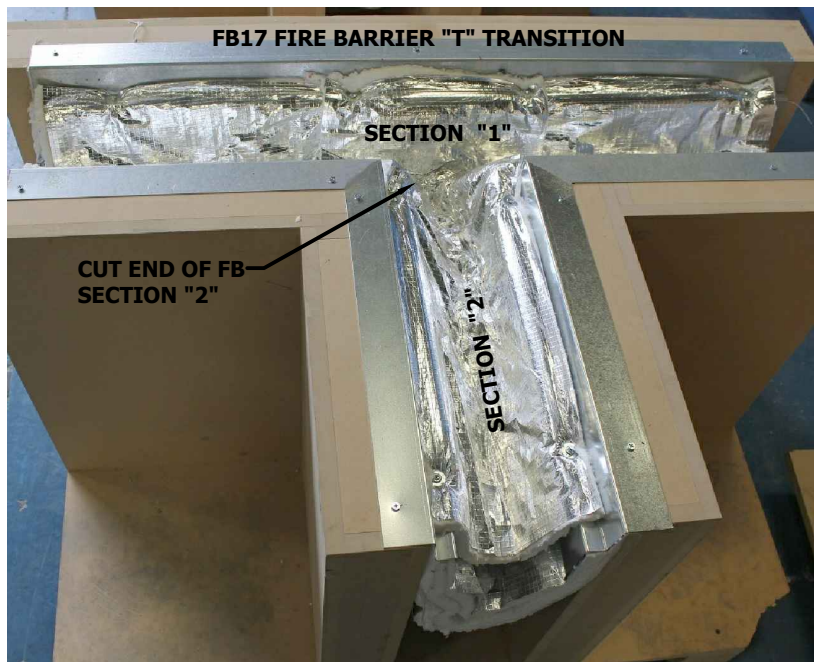
To view / download Installation Instructions for FB17 use QR code or visit [www.c-sgroup.com/expansion-joint-covers/accessories/fb-17](http://www.c-sgroup.com/expansion-joint-covers/accessories/fb-17)



# STEP 1

## "T" TRANSITION INSTRUCTIONS

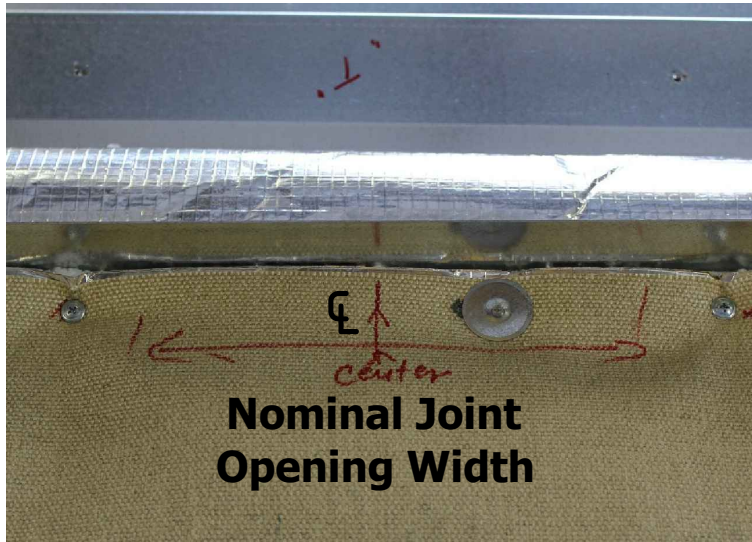
Note: The following instructions are to be used to create a "T" transition from two fire barrier lengths. These two fire barrier lengths are identified as Section "1" and the second length as Section "2".



# STEP 1 Con't

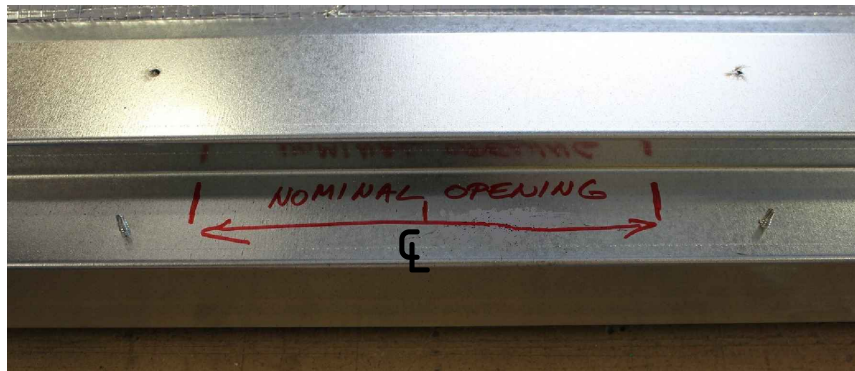
## CUTTING DOWN SECTION "1" GALVANIZED RETAINERS

- 1.1) Section "1" of the "T" transition, fold the fire barrier length in half being careful not to crush the fire barrier blankets. Measure and mark the center of the intersecting section "2" on Section "1". Using the centerline mark on Section "1" mark the nominal joint opening. (Fig. 1A)
- 1.2) Remove any weld pins located within the Nominal Joint Opening Width in the fabric and under the first fire barrier blanket. Measure over from the nominal opening measurement 1 1/2" and 1" down from the flange marking the fastener location for the supplied sheet metal screws. Install the screw through the fire blanket area in the upper portion of the galvanized retainer. (Fig. 1A) Cut off the screw portion that protrudes out from the galvanized retainer. If no weld pin(s) are located within the nominal opening width no sheet metal screw will be needed.

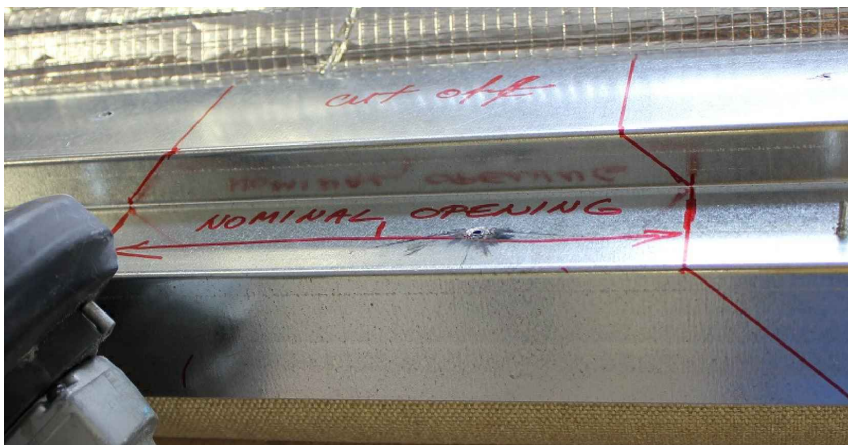


(Fig. 1A)

- 1.3) On the fire barrier galvanized retainer side of Section "1" mark the centerline and nominal joint width on the retainer. (Fig. 1B) Using the nominal opening size follow the profile marking the galvanized retainer profile at a 45° angle. Using a grinder cut off the Galvanized retainer along the marked cutting lines. (Fig. 1C - 1D)



(Fig. 1B)



(Fig. 1C)

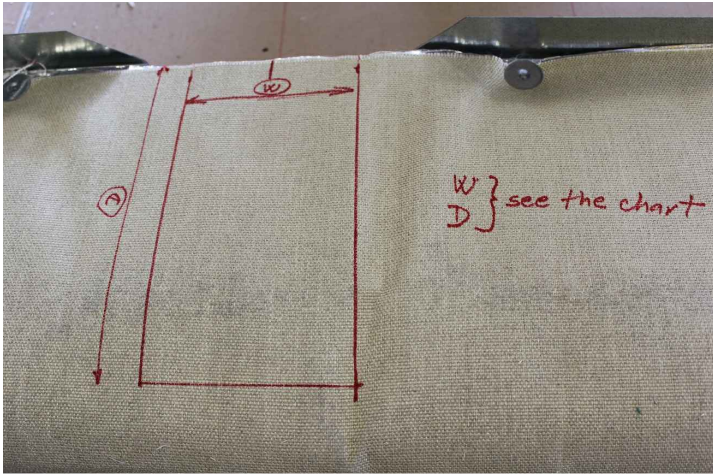


(Fig. 1D)

# STEP 2

## CUTTING SECTION "1" FIRE BARRIER INSULATION

2.1) With Section "1" fire barrier folded in half, at the fabric side marked centerline, mark the "W" and "D" dimensions on the fabric using the "T" Splice Chart fire barrier model size (Max. Open). (Fig. 2A - 2B)



(Fig. 2A)

"T" SPLICE CHART			
FIRE BARRIER MODEL SIZE (MAX OPEN)	"W"	"D"	"E"
2FB17-F9	3"	9"	6"
2FB17-F12	5"	10"	7"
2FB17-F15	7"	11"	7"
2FB17-F18	9"	13"	8"
2FB17-F21	11"	14"	8"
2FB17-F24	13"	16"	9"
2FB17-F27	15"	17"	9"
2FB17-F30	17"	18"	10"

(Fig. 2B)

Note: Be careful to cut only the fire barrier fabric and insulation layers in one half of the folded fire barrier section "1". Insert a piece of cardboard or similar type of material in the center of the folded over "U" shaped fire barrier to prevent cutting the other half of section "1".

2.2) Using a utility knife cut only the fabric and first two layers of blanket insulation down along the "D" marked lines. Fold the cut fabric and the two insulation layer down out of the way. (Fig. 2C - 2D)

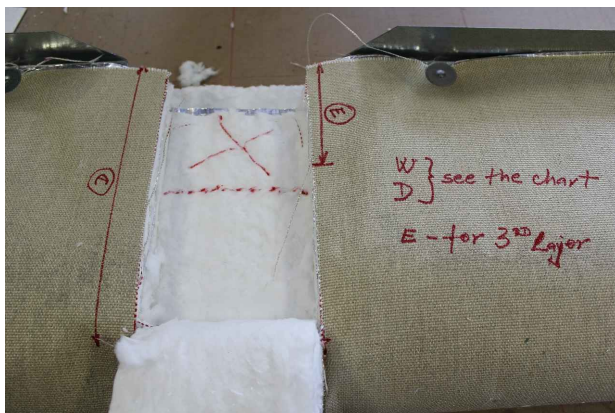


(Fig. 2C)

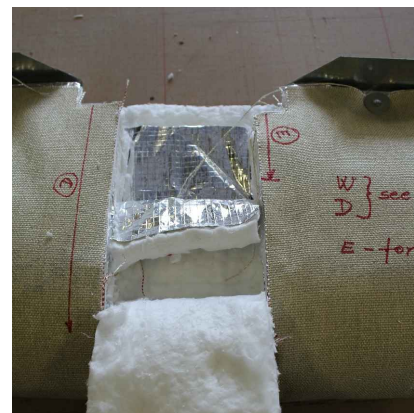


(Fig. 2D)

2.3) Using the Splice Chart find, measure, and mark dimension "E" on the fabric. Using a utility knife cut down along the "E" marked lines. Fold down the insulation layer. (Fig. 2E - 2F)



(Fig. 2E)



(Fig. 2F)

# STEP 3

## INSTALLATION OF SECTION "1" FIRE BARRIER

- 3.1) When beginning installation of the "T" transition Section "1" fold the fire barrier length into a "U" shape and lower into the joint. Secure in place with adjustable grip clamps to hold tightly to the inside face of the slabs. If the fire barrier is with Low Profile Retainers align the top edge of the retainer with the top edge of the joint slab.
- 3.2) Seat and follow FB17 floor instructions to install the galvanized retainers and fasteners on the mitered "T" Transition Section "1". (Fig. 3A)



# STEP 4

## INSTALLATION OF SECTION "2" TRANSITION

- 4.1) On a flat surface fold Section "2" fire barrier length into a "U" shape. Be careful not to crush the insulation layers.
- 4.2) From the fire barrier cut end measure and mark dimension "A" using the fire barrier model size (max. open) chart. (Fig.4A - 4B)
- 4.3) Remove any weld pins located within dimension "A" from the fabric and under the first fire barrier blanket areas. (Fig. 3A) (Fig. 4C - 4D)

"T" SPLICE CHART		
FIRE BARRIER MODEL SIZE (MAX OPEN)	"A"	"B"
2FB17-F9	2"	9"
2FB17-F12	3"	10"
2FB17-F15	3"	11"
2FB17-F18	4"	13"
2FB17-F21	5"	14"
2FB17-F24	6"	16"
2FB17-F27	7"	17"
2FB17-F30	8"	18"



(Fig. 4B)



(Fig. 4C)



(Fig. 4D)

(Fig. 4A)

- 4.4) From dimension "A" measure over 1 1/2" and 1" down from the flange to install the supplied sheet metal screw. Install the screw through the fire blanket area in the upper portion of the galvanized retainer. (Fig. 4E - 4F) Cut off the screw portion that protrudes out from the galvanized retainer. If no weld pin(s) are located within the "A" dimension no sheet metal screw will be needed.



(Fig. 4E)



(Fig. 4F)

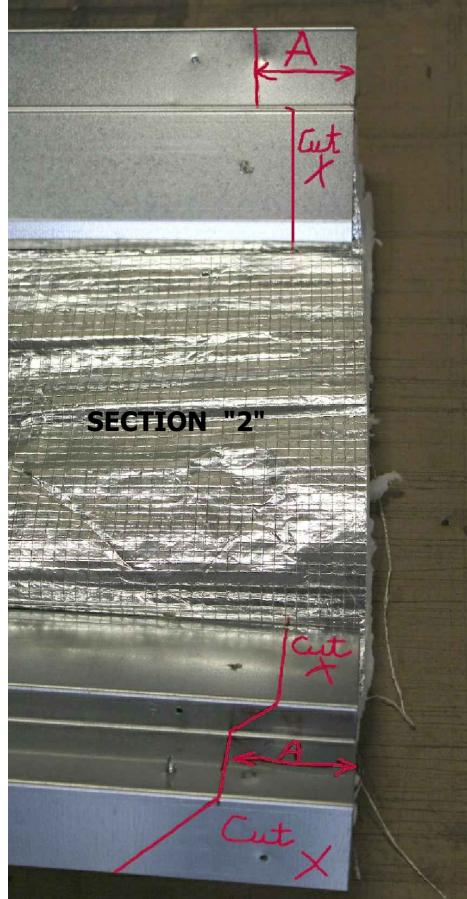
# STEP 5

## CUTTING DOWN SECTION "2" GALVANIZED RETAINERS

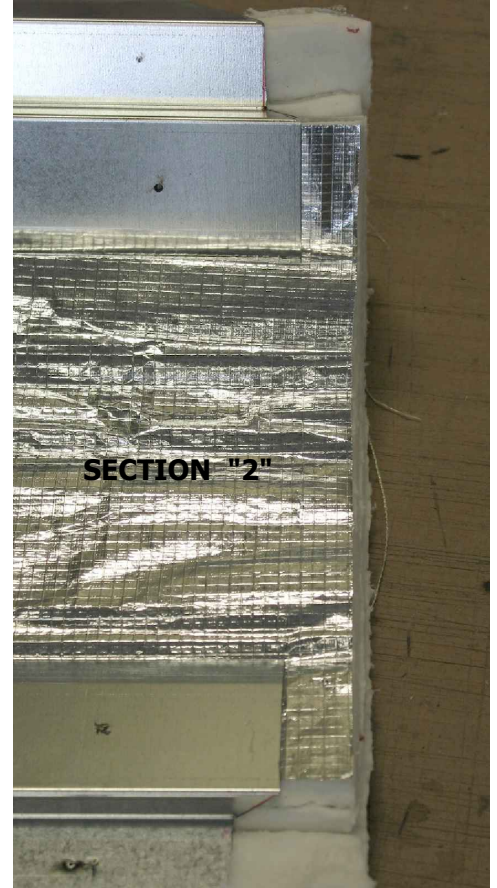
- 5.1) Lay Section "2" fire barrier flat. From the cut end measure and mark dimension "A" on both galvanized retainers using the "T" Splice Chart fire barrier model size (Max. Open). Follow the profile marking the galvanized retainers at a 45° angle. (Fig. 5A - 5B)
- 5.2) Using a grinder cut off the galvanized retainers along the marked cutting lines. (Fig. 5B - 5C)

"T" SPLICE CHART		
FIRE BARRIER MODEL SIZE (MAX OPEN)	"A"	"B"
2FB17-F9	2"	9"
2FB17-F12	3"	10"
2FB17-F15	3"	11"
2FB17-F18	4"	13"
2FB17-F21	5"	14"
2FB17-F24	6"	16"
2FB17-F27	7"	17"
2FB17-F30	8"	18"

(Fig. 5A)



(Fig. 5B)

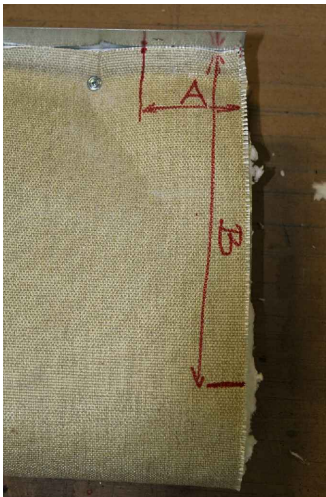


(Fig. 5C)

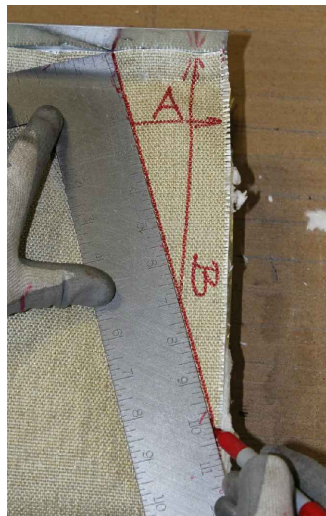
# STEP 6

## CUTTING SECTION "2" FIRE BARRIER INSULATION

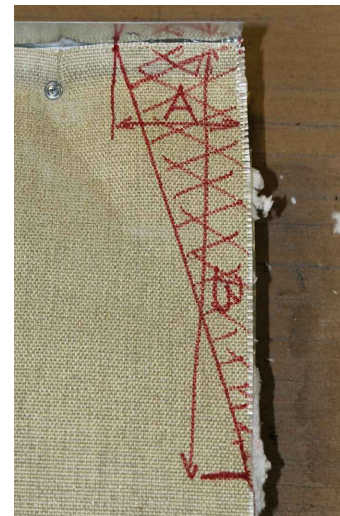
- 6.1) Fold Section "2" fire barrier back into the "U" shape. Using the "T" Splice Chart fire barrier model size (max. open) mark dimension "B" along the cut end of the fabric. (Fig. 6A) Draw a diagonal line connecting "A" and "B" points. (Fig. 6B - 6C)



(Fig. 6A)



(Fig. 6B)



(Fig. 6C)

# STEP 6 Con't

## CUTTING SECTION "2" FIRE BARRIER INSULATION

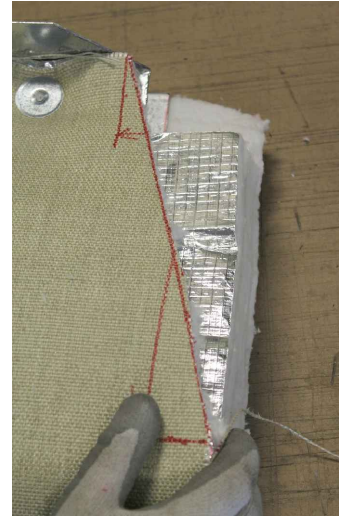
6.2) Using a utility knife cut only the fabric and first two layers of insulation along the diagonal line. Be careful not to cut the third insulation layer. (Fig. 6D - 6E)

\*Note: To prevent cutting the third insulation layer insert a piece of cardboard or similar type of material between the second and third layers of insulation.

6.3) Repeat instructions of 4.1 - 4.4 and 6.1 - 6.2 for the opposite side of the folded fire barrier section "2".



(Fig. 6D)



(Fig. 6E)

# STEP 7

## INSTALLATION OF SECTION "2" FIRE BARRIER

7.1) To install Section "2" of the "T" transition fold the fire barrier length into a "U" shape and lower into the joint. Pull up and back the cut fabric and installation layers of Section "1". (Fig. 7A) Seat Section "2" so that the angle cut retainers align with the substrate joint corners and Section "1" angle cut retainers. Secure in place with adjustable grip clamps to hold tightly to the inside face of the slabs. (Fig. 7B) \*If the fire barrier is with Low Profile Retainers align the top edge of the retainers with the top edge of the joint slab.

7.2) Follow FB17 floor installation instructions to install the galvanized retainers and fasteners on the mitered "T" Section "2".

7.3) Pull up and back the fire barrier blanket material of the installed Section "2" transition segment. (Fig. 7C)



(Fig. 7A)



(Fig. 7B)



(Fig. 7C)

# STEP 7 Con't

## INSTALLATION OF SECTION "2" FIRE BARRIER

7.4) Overlap the bottom fire barrier fabric layers, interweaving fabric and insulation layers to the top foil scrim layer. (Fig. 7D - 7E)



(Fig. 7D)



(Fig. 7E)

7.5) Using the CS supplied Foil Tape, tape exposed fire blanket areas at the intersecting splice. (Fig. 7F - 7G)



(Fig. 7F)



(Fig. 7G)



# STEP 8

## INSTALLATION OF SECTION "1" TOP HEAT SHIELD

Note: The Top Heat Shield has been supplied in 50' lengths. Beginning at the same end as the floor fire barrier installation, begin installing the Top Heat Shield.

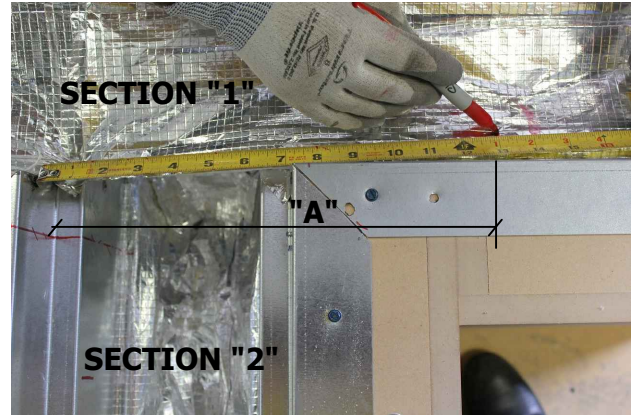
- 8.1) Starting at the end of the fire barrier place a length of Top Heat Shield unrolling over Section "1" of the "T" transition. Install a supplied fastener along the top edge of the galvanized retainer at the mitered "T" corner to hold in place. (Fig. 8A)
- 8.2) From the installed fastener at the galvanized flange edge measure over and mark the fire barrier model size (max. open) dimension "A" of section "1" found in the Top Heat Shield Splice Chart. (Fig. 8B - 8C)



(Fig. 8A)

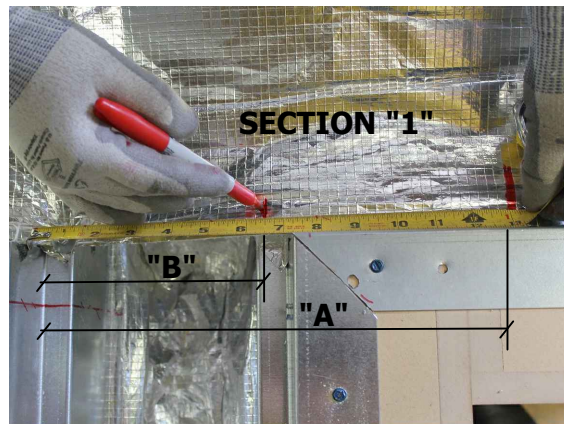
TOP HEAT SHIELD SPLICE CHART		
FIRE BARRIER MODEL SIZE (MAX OPEN)	"A"	"B"
2FB17-F9	10"	5"
2FB17-F12	13"	6 1/2"
2FB17-F15	16"	8"
2FB17-F18	19"	9 1/2"
2FB17-F21	22"	11"
2FB17-F24	25"	12 1/2"
2FB17-F27	28"	14"
2FB17-F30	31"	15 1/2"

(Fig. 8B)

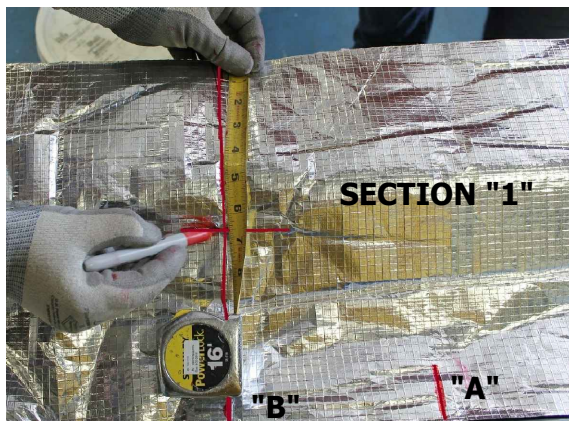


(Fig. 8C)

- 8.3) Measure back from dimension "A" and mark dimension "B" (dimension "B" is half the width of the supplied Top Heat Shield). Use Splice Chart fire barrier model size (max. open) to find dimension "B". (Fig. 8D)
- 8.4) From dimension "B" point draw a line straight across the Top Heat Shield to the opposite side. Find and mark the center of the Top Heat Shield (half its width). Using a utility knife cut the Top Heat Shield half it's width along the marked line. (Fig. 8E)



(Fig. 8D)



(Fig. 8E)

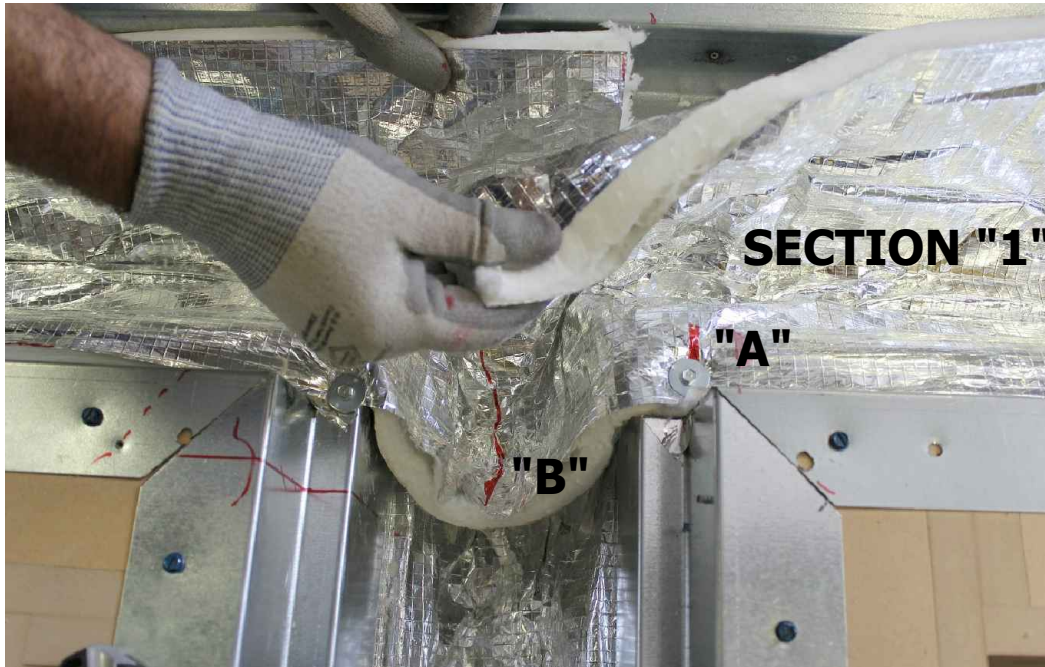


(Fig. 8F)

# STEP 8 Con't

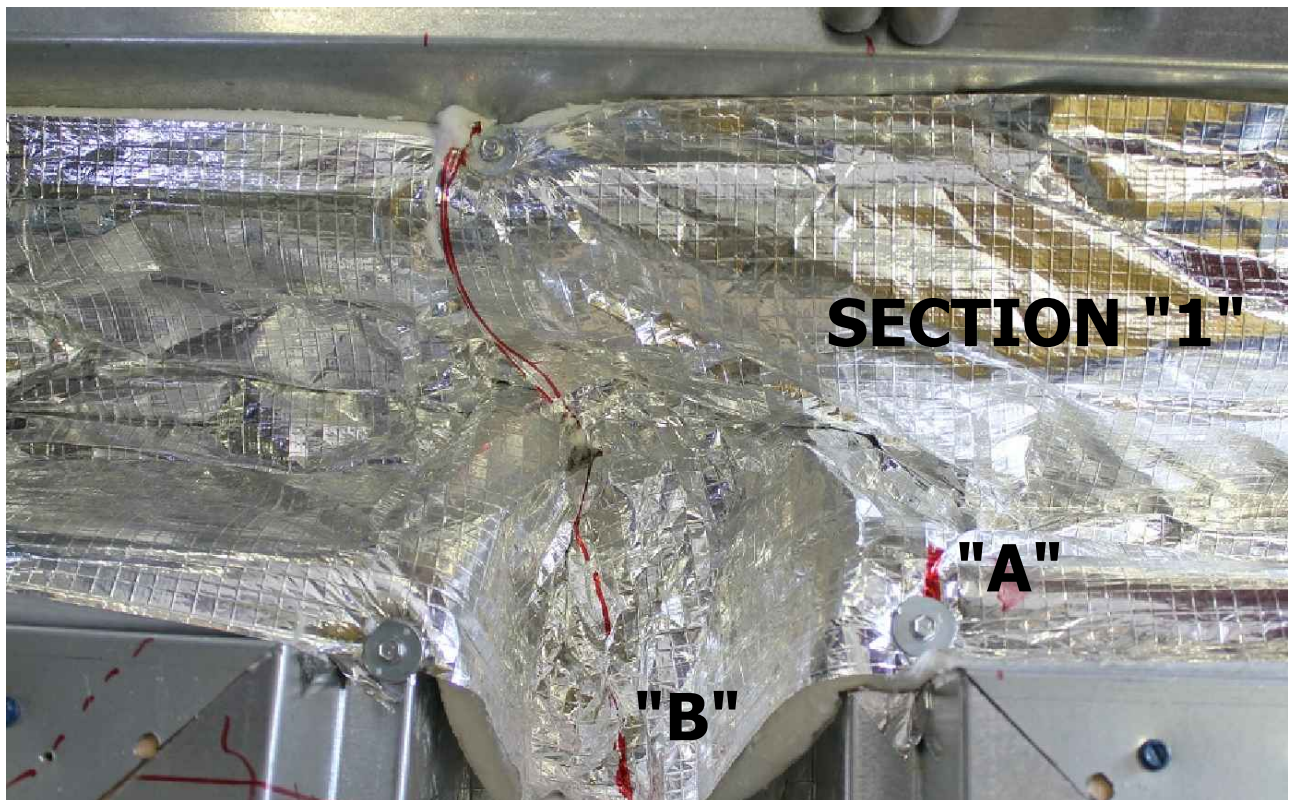
## INSTALLATION OF SECTION "1" TOP HEAT SHIELD

- 8.5) Align the marked dimension "A" line on the Top Heat Shield with the opposite joint edge corner of the "T" transition. The dimension "B" line of Section "1" is centered on the joint space when shaped into a "U" drape. Overlap the insulation blanket areas at the cut line in the Top Heat Shield. Install a supplied fastener in the top edge of the galvanized retainer. (Fig. 8F)



(Fig. 8F)

- 8.6) Install a supplied fastener in the top edge of the retainer at the overlapped "B" line. (Fig. 8G) Continue to install the CS supplied fasteners in the Top Heat Shield for Section "1" installing at 12" O.C. following FB17 floor installation instructions.



(Fig. 8G)

# STEP 9

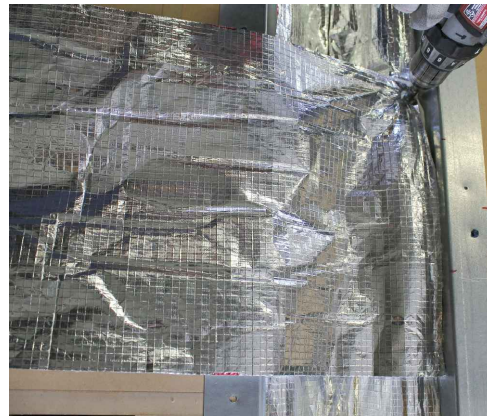
## INSTALLATION OF SECTION "2" TOP HEAT SHIELD

Note: The Top Heat Shield has been supplied in 50' lengths. Section "2" of the "T" transition is installed over Section "1" Top Heat Shield and centered over the joint of Section "2".

- 9.1) Unroll Section "2" Top Heat Shield length and center over the joint of Section "2". Install the CS supplied fasteners at the galvanized retainer edge at each end of the Section "2" Top Heat Shield. (Fig. 9A - 9B)



(Fig. 9A)



(Fig. 9B)

- 9.2) Shape Section "2" Top Heat Shield following the installed drape profile of Section "1". Install a CS supplied fastener at the mitered corners of the "T" transition along the top edge of the galvanized retainer. (Fig. 9C - 9D)



(Fig. 9C)



(Fig. 9D)

- 9.3) Continue to fold Section "2" Top Heat Shield length following the profile drape of Section "2" fire barrier. Install the supplied fasteners along the galvanized retainer edge of Section "2" at 12" O.C.

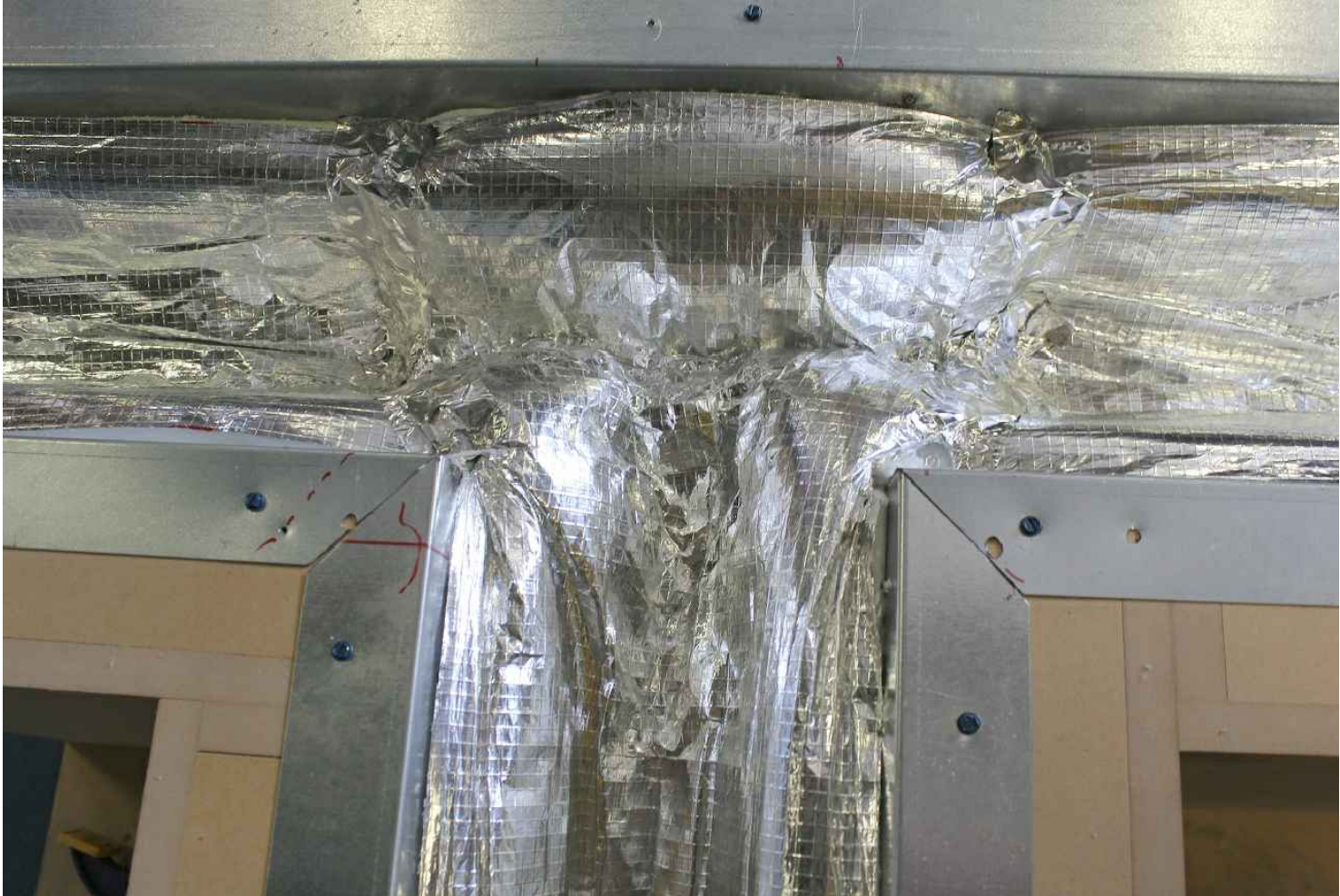
- 9.4) Using the supplied Foil Tape, tape the fire barrier foil scrim areas across Section "1" sealing the Top Heat Shield fire barrier blanket areas. (Fig. 9E)



(Fig. 9E)

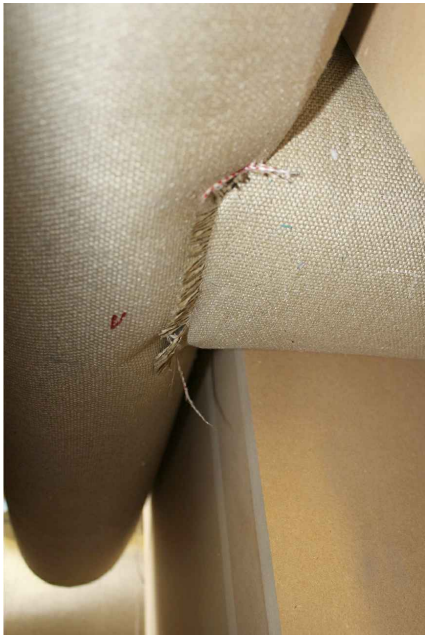
# STEP 9 Con't

INSTALLATION OF SECTION "2" TOP HEAT SHIELD



(Fig. 9F)

\* Note: (Fig. 9F) Finished "T" Transition picture above. (Fig. 9G) picture of the "T" Transition taken from inside the joint showing the underside, at the inner leafing of the fire barrier fabric splice. (Fig. 9G)



(Fig. 9G)