

"DOCUMENT UNCONTROLLED IF PRINTED"

DOC #	PROCESS NAME	PAGE	REVISION	STATION	BY	DATE
AR872	SOI-F Frame Reinforcement	1 OF 1		SER-E	C.WARD	1/16/2020

Read process before beginning. If you do not understand any part please contact: Chris Ward, VP of Parts and Warranty at 1-866-953-5555 or by E-mail @ cward@ARBOCSV.com.

Good Mechanics safety practice must be followed on any repairs.

Safety practices should include but not be limited to properly supporting the chassis, axles, blocking tires, and a work area free of clutter.

Complaint: Structural stress crack of chassis frame at rear suspension

Cause: Concentrated Stress Loads

Correction: Drill 1/8" Stop Holes into Frame at the end of cracks and weld provided retrofit bracket in affected area

Vehicles Affected: 2018/2019 Spirit of Independence - Ford (SOI-F)

Labor Operation Code: 0124901

ARBOC Work Orders Provided for Affected Units

Labor Time Allowance: 4 hours per unit

Parts Returned: No

Tools Required

Hoist (ability to raise and support the unit)

Welder

Flame/Spark Resistant Tarp (use to protect interior harness, fuel lines, brake lines, etc.)

Parts Required

1313351 Plate, Reinforcement 7 GA 2.02" x 3.18" x 9.00"

NAPA Rubberized Undercoating (not supplied)

Repair Instructions:

Step 1: Pull unit onto hoist, chock front tires to prevent bus from rolling forward or backwards.

Step 2: Disconnect positive (red lead) battery cable from the chassis and auxiliary battery.

Step 3: Raise unit to a comfortable working height.

Step 4: Loosen/remove rubber isolators from exhaust hangers to allow movement in the exhaust for the curbside brackets.

Step 5: Loosen/remove wiring, as needed, to access the frame.

Step 6: If unit is currently experiencing cracking, drill 1/8" hole at the ends of the existing cracks (right photo below)



Step 7: Weld any existing cracks and grind surface clean.



Step 8: Following the attached weld guidelines, weld reinforcement plates.

Step 9: Using a high quality Rubberized Undercoat, paint repaired area. NAPA Rubberized Undercoating or Mac's 8400 Rubberized undercoat (not supplied).

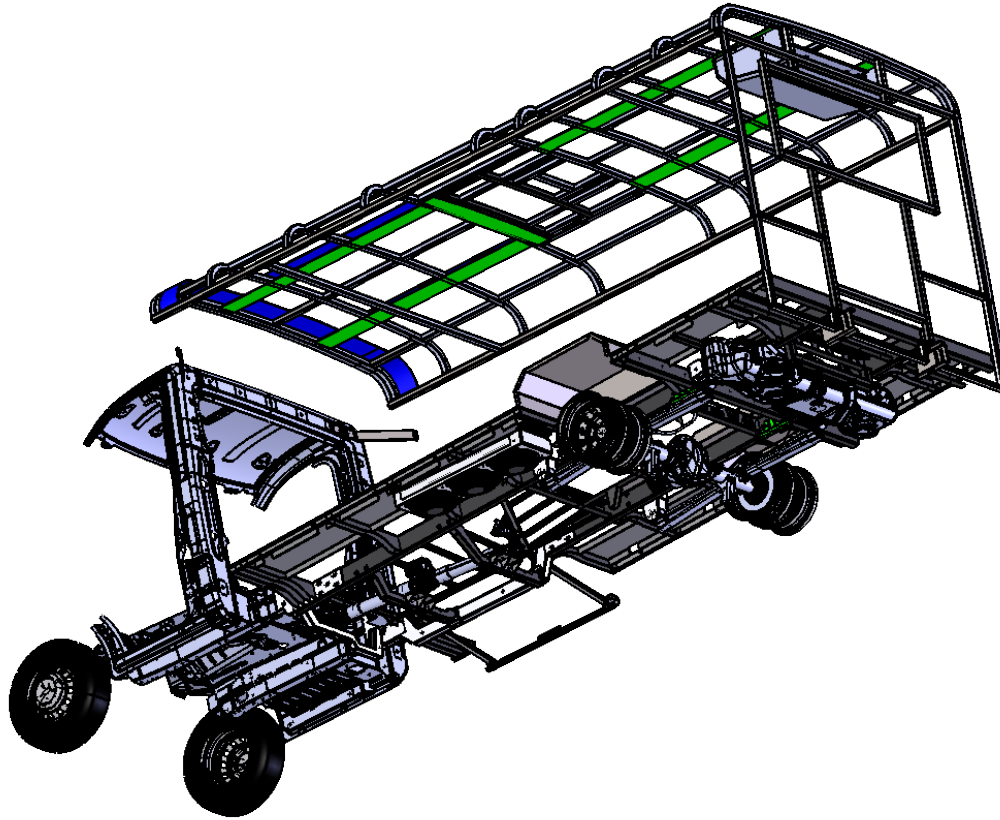
Step 10: Re-install rubber isolators to exhaust hangers.

Step 11: Lower unit and connect positive (red lead) battery cable to the chassis and auxiliary battery.

Step 12: Remove from hoist

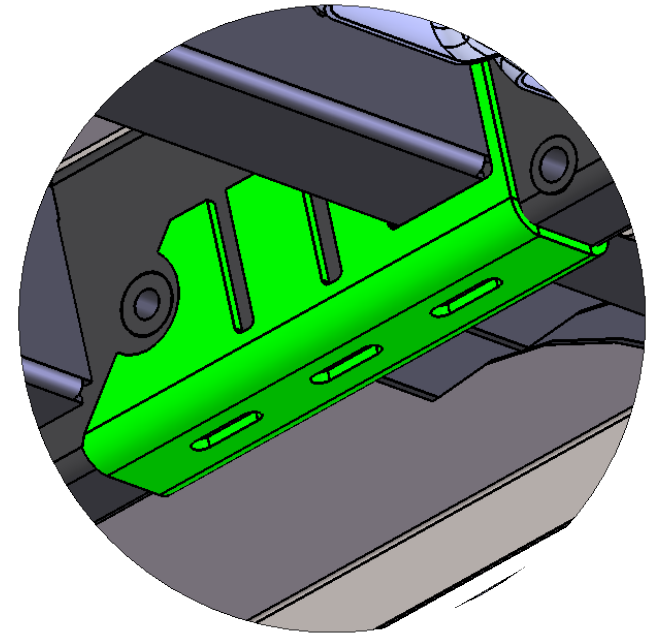
FRAME REINFORCEMENT SOI-F

REVISIONS					
ZONE	REV.	DESCRIPTION	DATE	REV BY	CHECKED



TOOLS NEEDED

- GRINDING EQUIPMENT
- PAINT MARKER
- DRILL AND DRILL BIT (<=/= 0.25")
- WELDER
- RUST PREVENTATIVE PAINT



FRAME REINFORCEMENT PROCEDURE

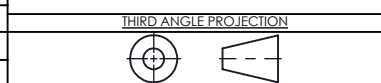
- FOR ANY EXISTING CRACK
 - REMOVE ALL POWDER COAT AROUND THE CRACK
 - DRILL EACH END OF THE CRACK TO PREVENT ADDITIONAL GROWTH
 - FILL IN CRACK WITH WELD AND GRIND FLUSH
 - PAINT OVER ALL EXPOSED SURFACES
- TEST FIT REINFORCEMENT PLATE TO ENSURE NO WELD OR STRUCTURAL INTERFERENCE
- MARK AREAS WHERE THE EDGE OF THE PLATE MEETS THE FRAME AND LOCATION OF THE SLOTS ON THE BOTTOM
- REMOVE POWDER COAT ALONG ALL MARKED SURFACES TO CREATE SUITABLE WELD CONTACT
- CLAMP PLATE TO FRAME AND WELD TO THE SPECIFICATION ON PAGE 2

TOLERANCES UNLESS OTHERWISE NOTED:

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DOC. # AME-008A
REV2: 6-26-14

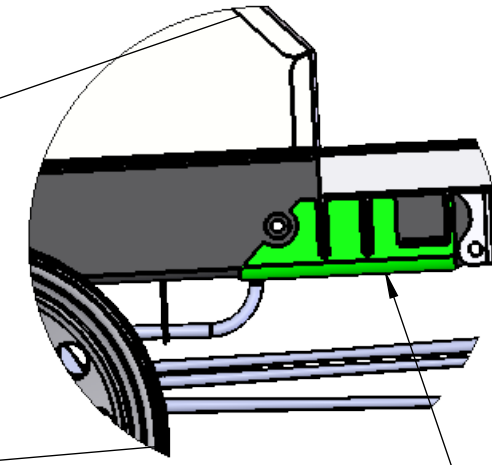
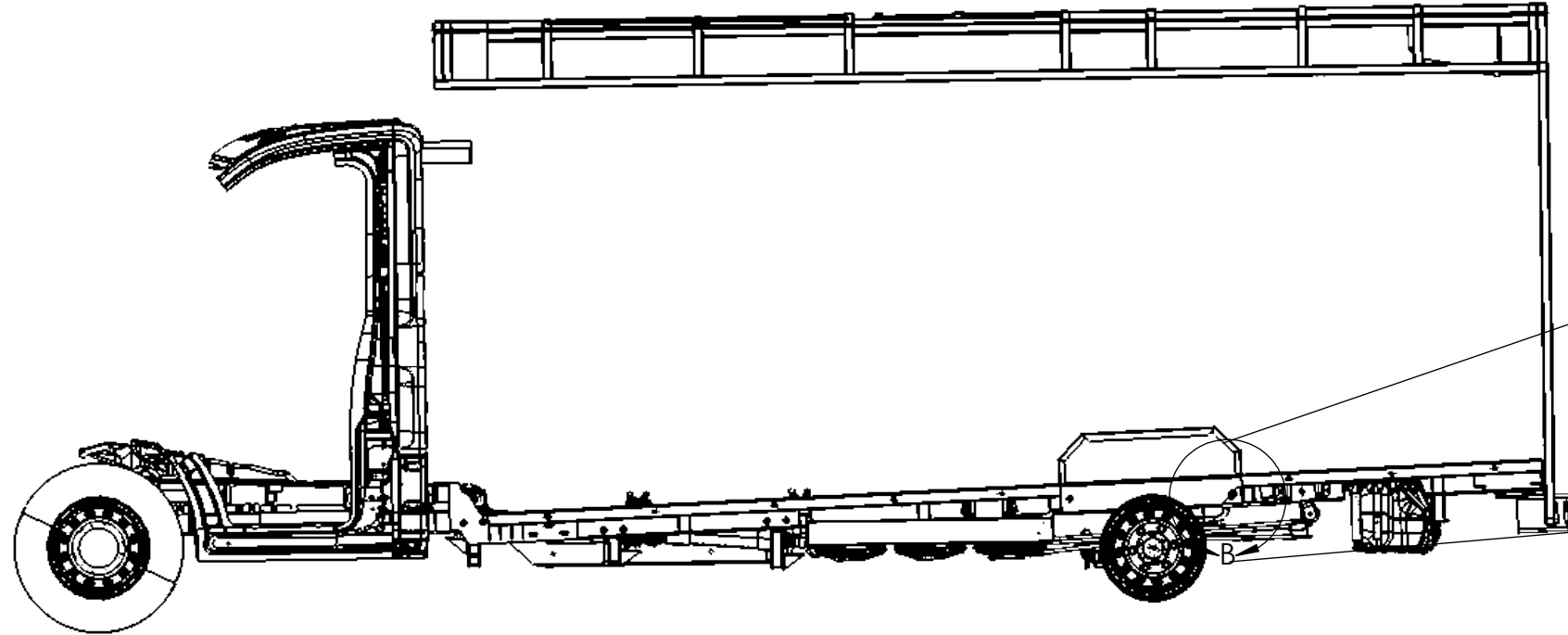


MATERIAL: -	-
FINISH WEIGHT: 2443.592lbs.	
FINISH: -	



SIGNATURES/DATES	
MODELED: DH	1/2/2019
DRAWN:	
CHECKED:	

DESCRIPTION: FORD TRANSIT REINFORCEMENT PLATE INSTRUCTIONS				
DRAWING NUMBER: SOI-F REINFORCEMENT	DRAWING SIZE: A	SHEET: 1 OF 2	SCALE: 1:128	REV: -

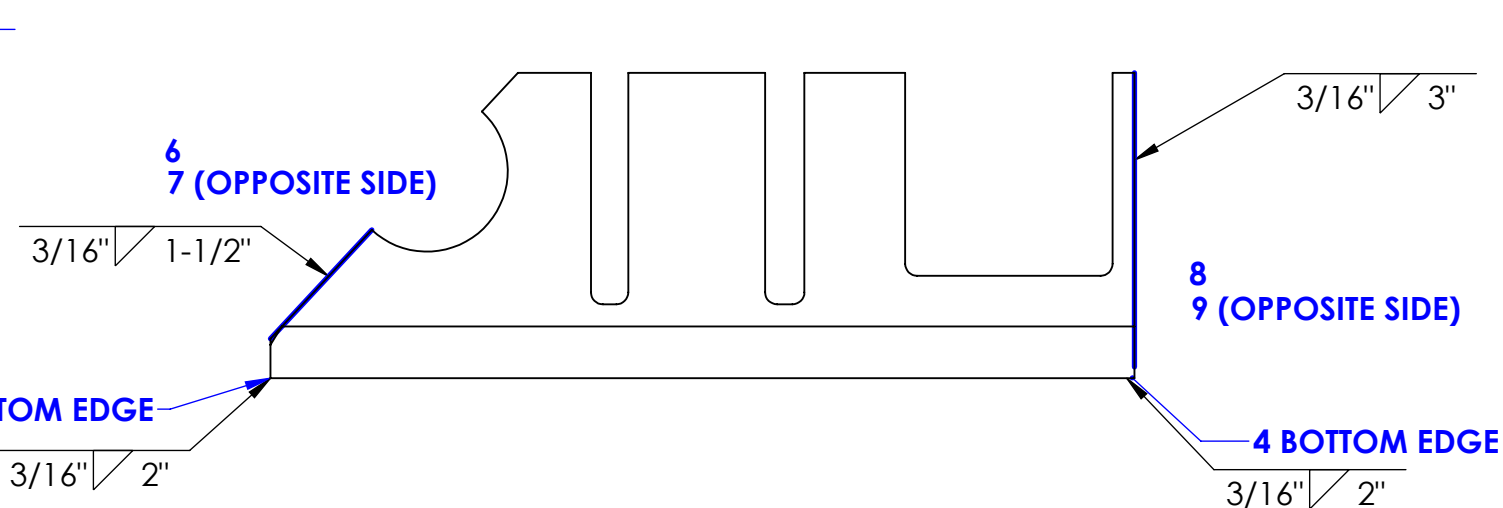
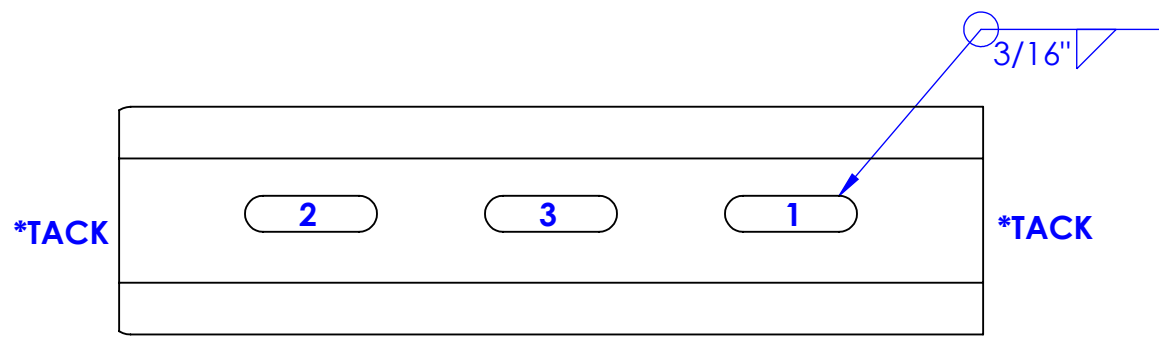


1313351

DETAIL B
SCALE 1 : 8

BOTTOM VIEW (SYMMETRIC PART)

SIDE VIEW (SYMMETRIC PART)



WELD PROCEDURE

- CLAMP PART TO THE FRAME TO PREVENT MOVEMENT
- TACK EACH END OF THE PART TO HOLD IT IN PLACE
- WELD THE SLOTS ON THE BOTTOM IN THE ORDER SHOWN. ENTIRE SLOT DOES NOT NEED TO BE FILLED. WELD ALONG THE PERIMETER OF THE SLOT SEAM.
- WELD FRONT AND BACK OF PLATE. ALTERNATE BACK AND FORTH TO PREVENT OVERHEATING THE MATERIAL
- USE RUST INHIBITING PAINT TO PAINT ALL RAW OR EXPOSED STEEL
- REPEAT PROCEDURE ON CURBSIDE RAIL

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THIRD ANGLE PROJECTION		SIGNATURES/DATES			
MATERIAL: -		MODELED: DH		DESCRIPTION: FORD TRANSIT REINFORCEMENT PLATE INSTRUCTIONS	
FINISH WEIGHT: 2443.902 LBS.		DRAWN: -		DRAWING NUMBER: SOI-F REINFORCEMENT	
FINISH: -		CHECKED: 3		DRAWING SIZE: B	
				SHEET: 2 OF 2	
				SCALE: 1:96	
				REV: -	