

DART Field Repair: Rust Treatment, Paint Touch-Up & Sikaflex-221 Application		
Work Instructions Revised: 2/17/2014	REVISION: 2	DOCUMENT: WI-077

1.0 PURPOSE

1.1 The purpose of this work instruction is to outline the procedure for performing rust corrosion field repair on DART 40' and Dart 31' frame assemblies. This field repair procedure specifies the use of Rust Treatment and Paint Touch-Up on affected areas of the frame assemblies where rust corrosion is observed. Additionally, this procedure specifies mandatory use of Sikaflex-221 on the welded gussets of Bracket MDA-1300100 (8 places) and the welded gussets of Tank Mount Weldment MDA-1100276 (12 places). Also specified is the application of Sikaflex-221 to the outside edges of Center Support Bracket MDP-1100497 where rust corrosion is observed.

2.0 SCOPE

2.1 This work instruction applies to the DART 40' and DART 31' installation effort.

2.2 Rust Treatment and Paint Touch-Up will be performed on areas of the frame where rust corrosion is present.

2.2.1 This process is mandatory for the welded gussets referenced in the PURPOSE STATEMENT.

2.3 Mandatory application of Sikaflex-221 to adjoining surfaces of welded gussets that are present in Bracket MDA-1300100 and Tank Mount Weldment MDA-1100276.

2.3.1 Additionally, where rust corrosion is observed, Sikaflex-221 will be applied to the adjoining surfaces of Center Support Bracket MDP-1100497 and the mating Door Support Channel MDP-1100496.

3.0 ASSOCIATED DOCUMENTS

3.1 Agility drawings MDA-100176 Rev A, MDA-1100157 Rev A, MDA-1300100, MDA-1100276, MDP-1100497

4.0 TOOLS, GAUGES, FIXTURES

4.1 Various hand tools

5.0 GENERAL INSTRUCTIONS

5.1 RUST TREATMENT AND PAINT TOUCH-UP

5.1.1 Perform using the following items:

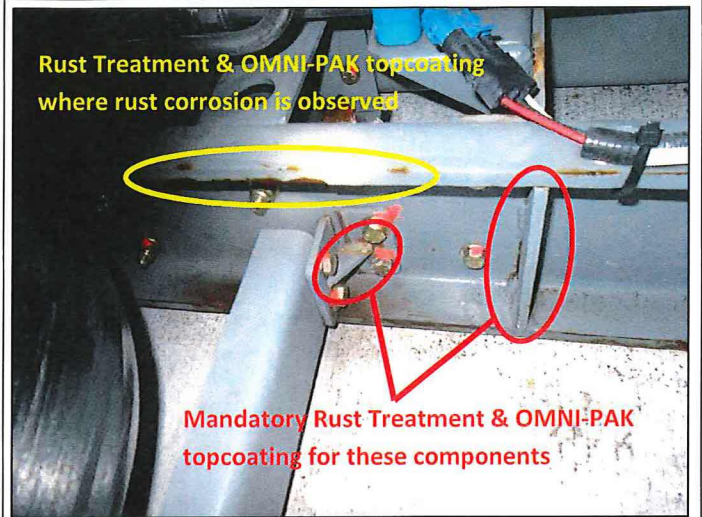
5.1.1.1 Permatex Rust Treatment

5.1.1.2 OMNI-PAK (Master Blend EZ Touch) Zinc Rich Primer Gray



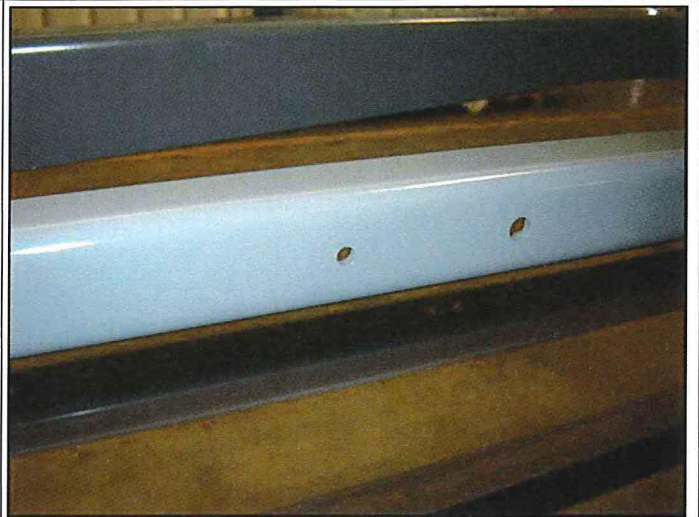
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- 5.2 Perform PERMATEX RUST TREATMENT as follows for areas where rust corrosion is observed including the mandatory treatment of the welded gussets
 - 5.2.1 As required, use shop air to remove moisture from areas that will be treated for:
 - 5.2.1.1 Rust and paint touch-up.
 - 5.2.1.2 Sikaflex application
 - 5.2.2 Using a shop rag, wipe the areas to remove any loose rust scale and debris.
 - 5.2.3 At 8-10 inches away, spray a thin coat onto rusted surface until surface is lightly and evenly coated.
 - 5.2.4 Apply 2-3 thin coats, allowing no more than two minutes drying time between coats.
 - 5.2.5 Final application should dry to a black finish.
 - 5.2.6 Allow a minimum of 2 hours drying time before topcoating with OMNI-PAK.



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- 5.3 After Rust Treatment drying time, apply OMNI-PAK topcoating as follows:
- 5.3.1 Follow directions on can for shaking.
 - 5.3.2 Apply in thin coats until no bare metal is exposed.
 - 5.3.3 Allow sufficient drying time to achieve a tack free condition.



- 5.4 **SIKAFLEX-221 APPLICATION:**
- 5.4.1 Sikaflex-221 (Multi-Purpose Polyurethane Sealant/Adhesive)
 - 5.4.2 Caulk Gun
 - 5.4.3 Isopropyl alcohol
 - 5.4.4 Shop Rags



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- 5.5 After sufficient drying of the OMNI-COAT, Sikaflex-221 shall be applied to adjoining surfaces as described below for the following components:
- 5.5.1 (2) Tank Mount Weldments: MDA-1100157
 - 5.5.1.1 Apply to both sides of gussets
 - 5.5.1.2 (6) gussets per weldment
 - 5.5.1.3 Total of (12) gussets
 - 5.5.2 (8) Brackets: MDA-1300100
 - 5.5.2.1 Apply to non-welded side of gusset
 - 5.5.2.2 (1) gusset per bracket
 - 5.5.2.3 Total of (8) gussets

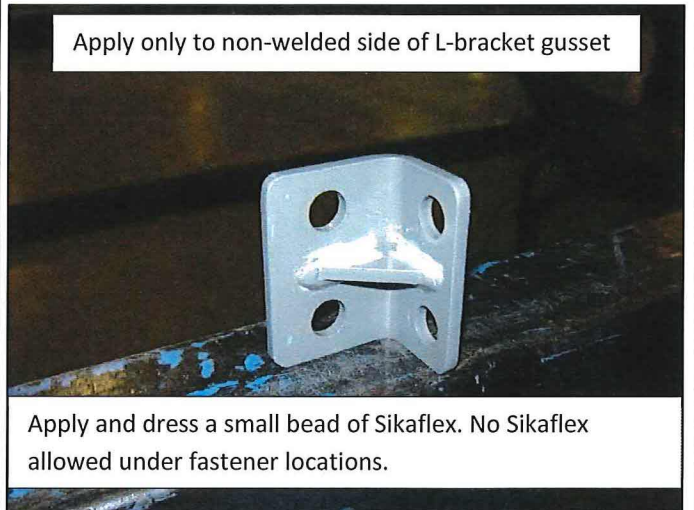


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- 5.6 Observe directions on sealant tube:
- 5.6.1 Clean surfaces with clean rag and assure that surface is dry.
 - 5.6.2 Apply short beads of sealant to as shown in photos.
 - 5.6.2.1 **Do not apply a continuous bead covering any welds.**
 - 5.6.3 Use isopropyl alcohol on finger or rag to achieve a smooth bead and sealed surface as follows:
 - 5.6.3.1 Assure there are no voids, pin holes or open pockets of sealant.
 - 5.6.3.2 Assure that the outer edges of the sealant bead are flush with mating surfaces and free of voids or open pockets.
 - 5.6.3.3 Typical cure time: Tack free in one hour.



Apply only to non-welded side of L-bracket gusset

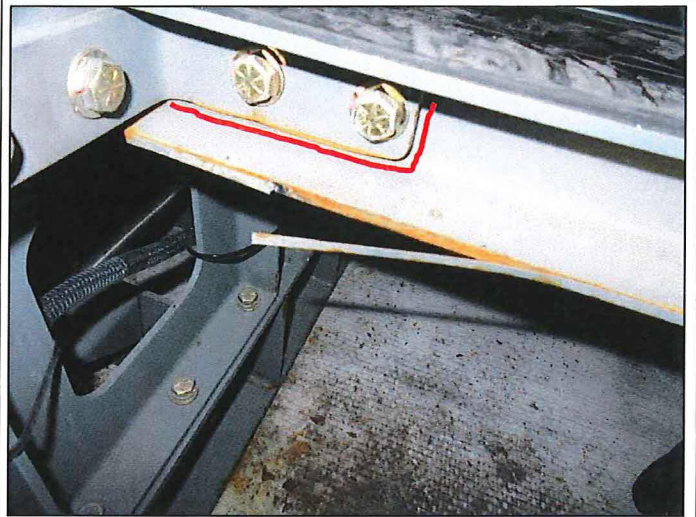


Apply and dress a small bead of Sikaflex. No Sikaflex allowed under fastener locations.

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5.7 Where rust corrosion is observed and after sufficient drying of the OMNI-COAT, Sikaflex-221 shall be applied to adjoining surfaces of Center Support Bracket(s) MDP-1100497 and Door Support Channel(s) MDP-1100496 as follows:

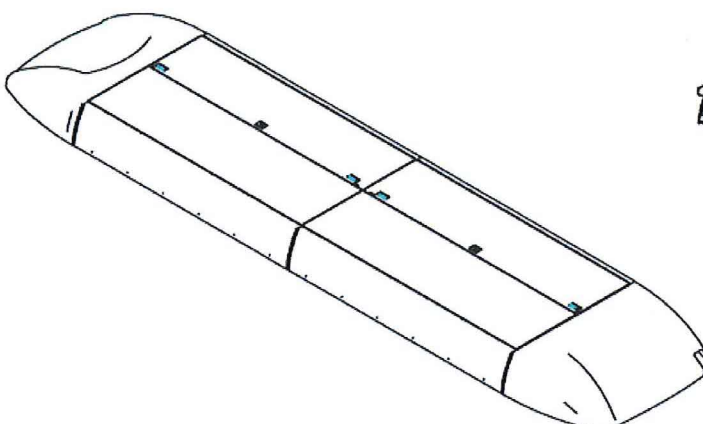
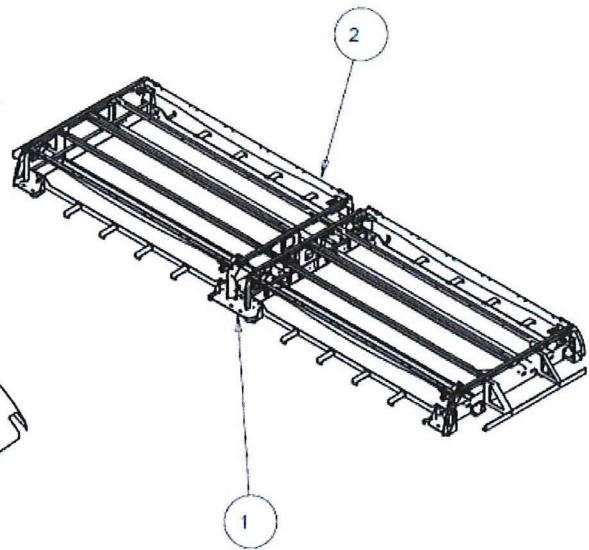
- 5.7.1 Apply a continuous bead of sealant to the adjoining surfaces as shown in photos.
- 5.7.2 Use isopropyl alcohol on finger or rag to achieve a smooth bead and sealed surface as follows:
 - 5.7.2.1 Assure there are no voids, pin holes or open pockets of sealant.
 - 5.7.2.2 Assure that the outer edges of the sealant bead are flush with mating surfaces and free of voids or open pockets.
 - 5.7.2.3 Typical cure time: Tack free in one hour.




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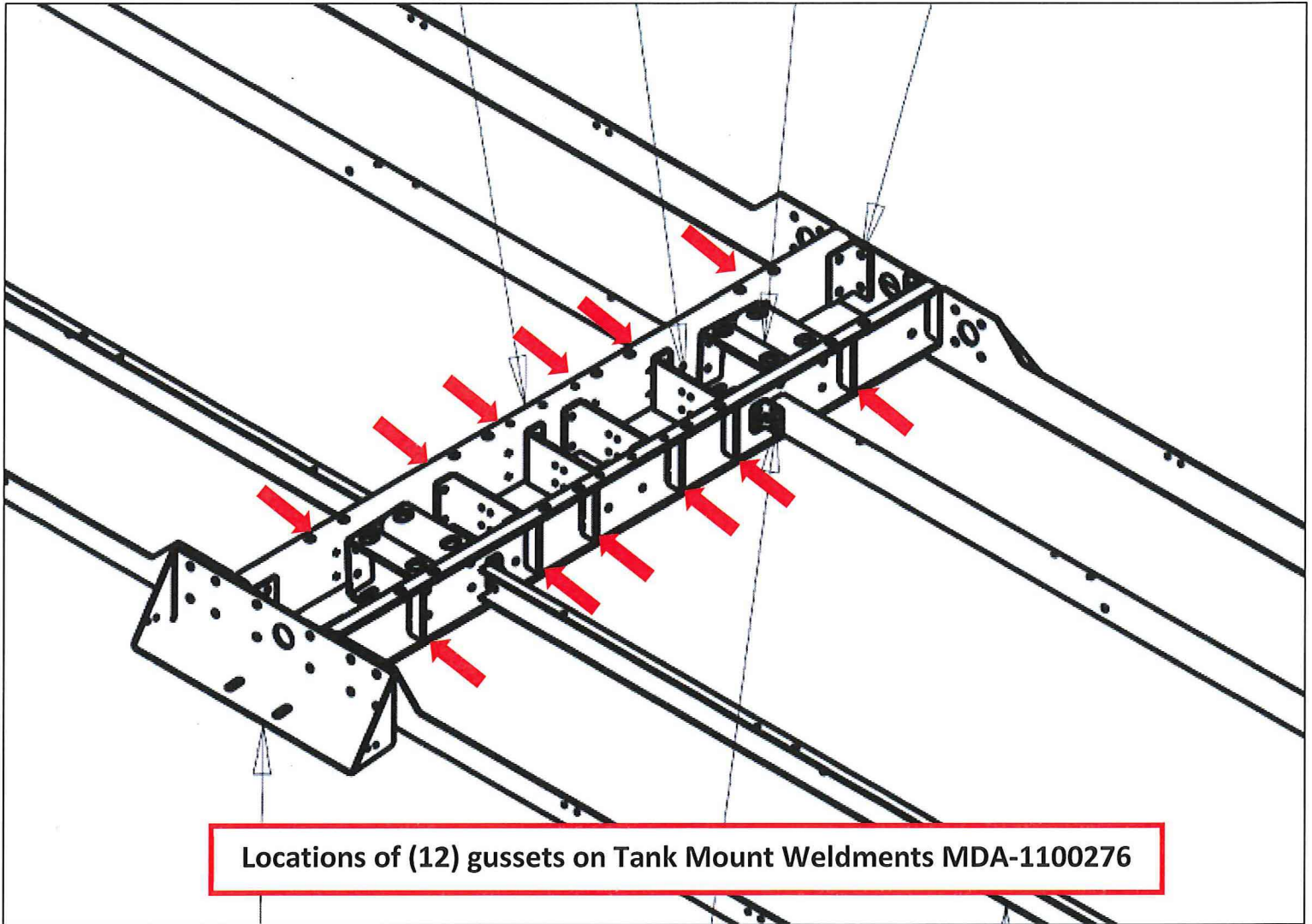
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ITEM	QTY.	PART NO.	DESCRIPTION	FILE NAME
1	1	MDA-11001E7	FRAME ASSEMBLY	MDA-11001E7
2	1	MDA-11001E8	COVER ASSEMBLY	MDA-11001E8

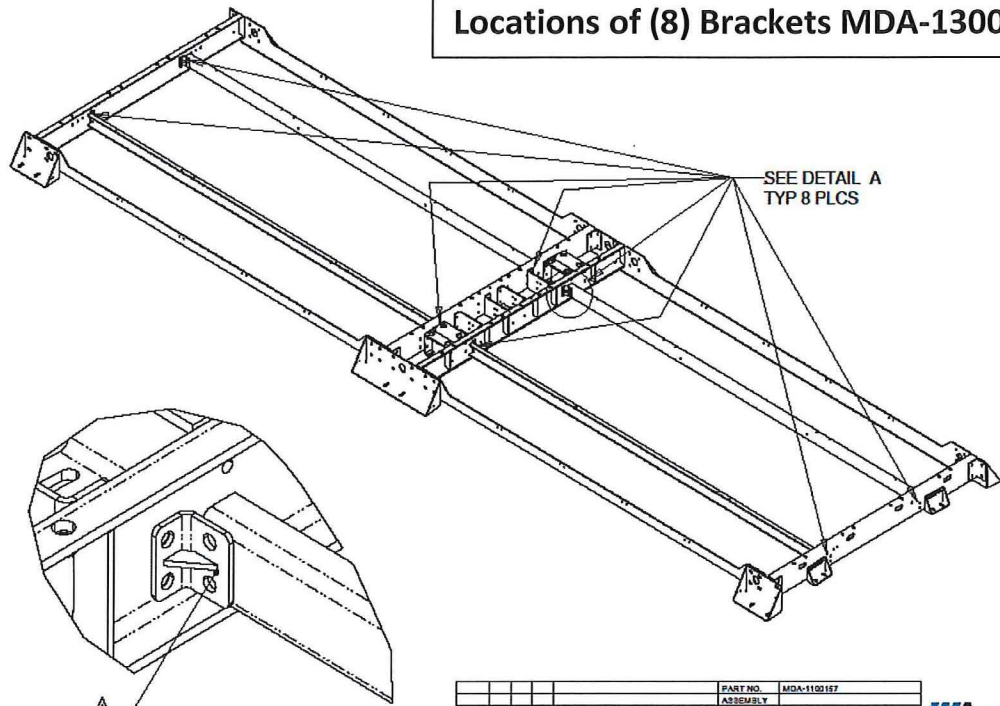
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Locations of (8) Brackets MDA-1300100



ASSEMBLE MDA-1300100
 USING 3/8" GRADE 8 YZP BOLTS
 8 PLCS

DETAIL A
 SCALE 0.400

PART NO.		MDA-1100197
ASSEMBLY		
DESCRIPTION		
EQUIPMENT		
DATE		
BY		
REV		
ECM		

DESCRIPTION: FRAME ASSEMBLY
 DATE: May-21-13
 NAME: CHRIS CANNON
 DRAWN: 0 DEE
 SHEET: 3 of 3
 SPECIAL: MDA-1100197 A

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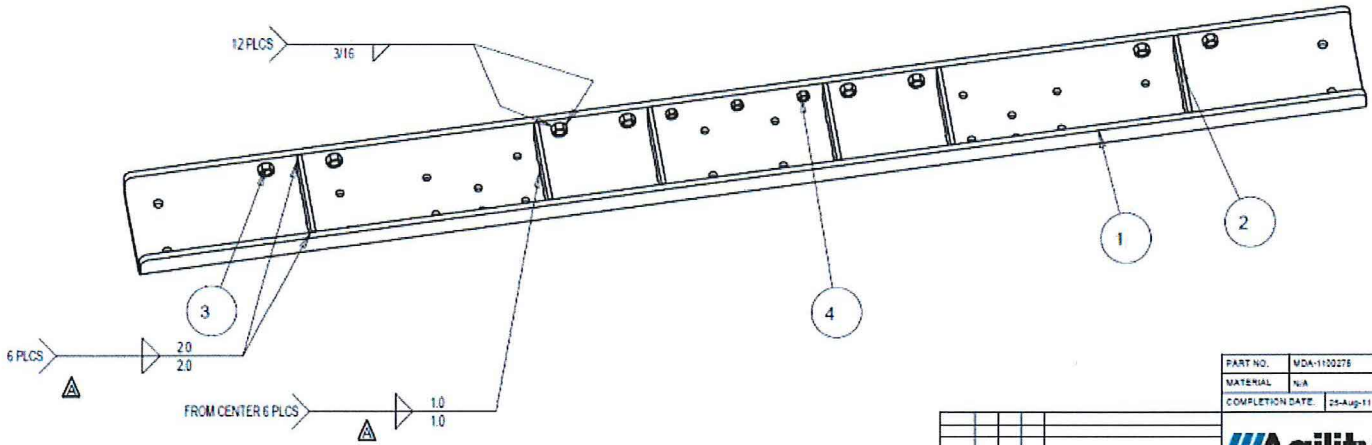
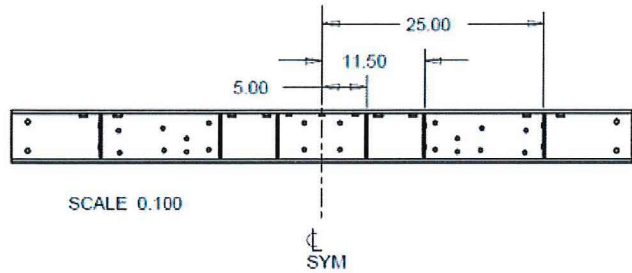
BILL OF MATERIALS				
ITEM	QTY	PART NUMBER	DESCRIPTION	REV
1	1	MDP-1100484	ANGLE BRACKET	
2	1	MDP-1300105	GUSSET	

NOTE:
REMOVE WELD SPATTER
MATERIAL:
N/A
FINISH:
POWDER COAT GRAY ZINC

	PART NO. MDA-1300100
	ASSEMBLY
DESCRIPTION BRACKET ASSEMBLY	
DATE: 11/21/13	
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ITEM	QTY.	PART NO.	DESCRIPTION	FILE NAME
1	1	MDP-1100430	C-CHANNEL TANK SUPPORT	MDP-1100430
2	6	MDP-1100435	TANK BRACKET GUSSET	MDP-1100435
3	8	FN-GN-02013-HN81ZP	1/2-13 UNC HEX NUT GRD. 8 YSP	0010HN000
4	2	FN-GN-03016-HN8Y2P	3/8-16 UNC HEX NUT GRD. 8 YSP	0316HN000

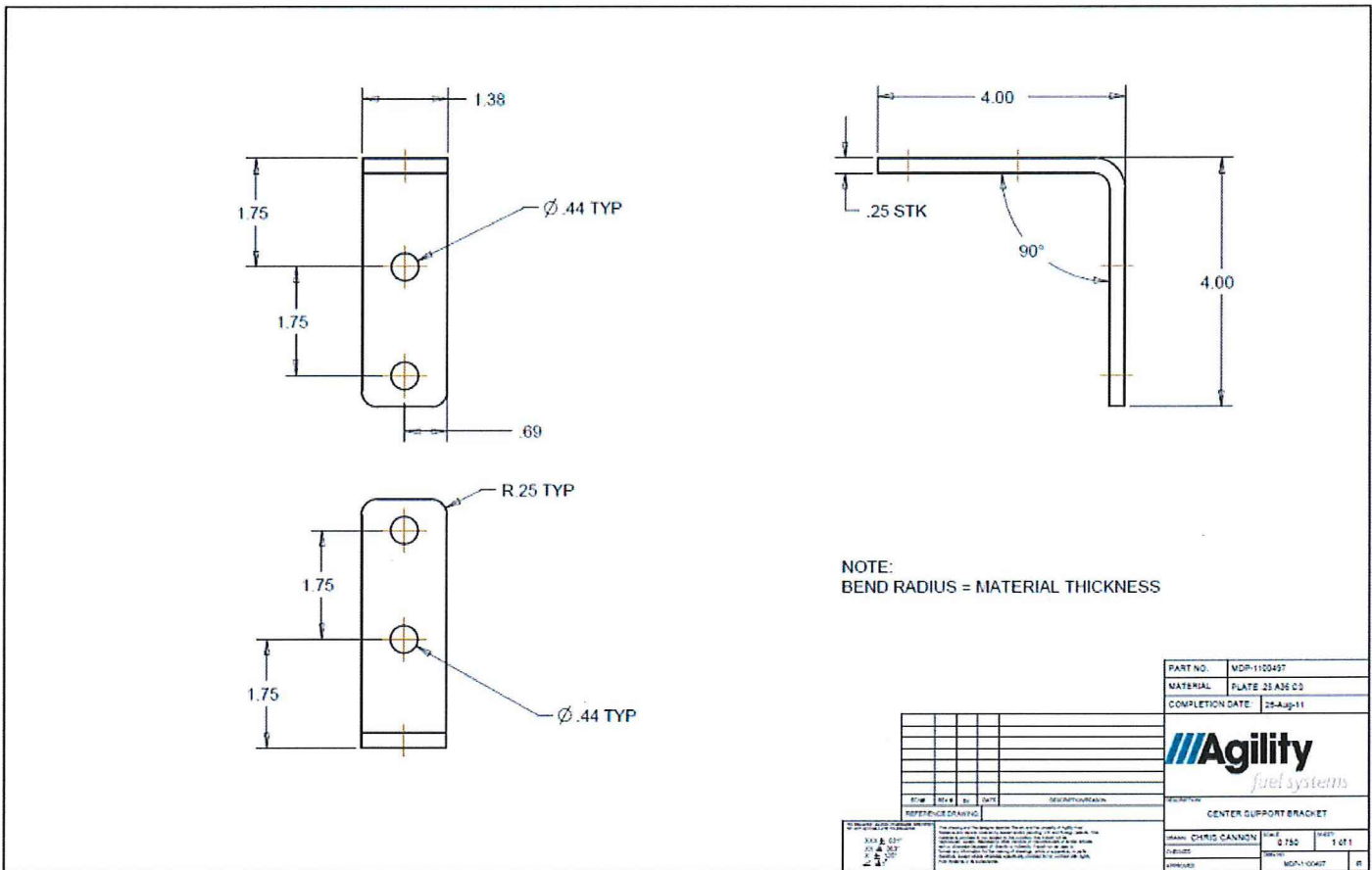


REV	DATE	BY	DESCRIPTION
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

PART NO.	MDA-1100278
MATERIAL	%A
COMPLETION DATE	25-Aug-11
TANK MOUNT WELDMENT	
DESIGNER	CHRIS CANNON
CHECKED	G 200
DATE	3-8-12
APPROVED	MDA-1100278

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