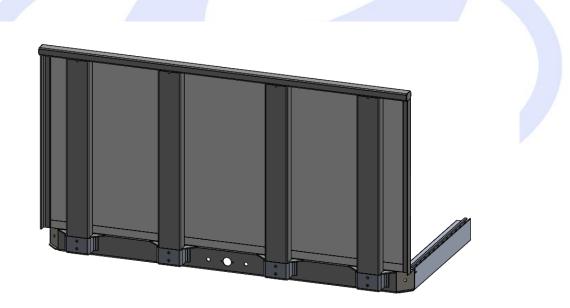


Title			Repair Manual No.			
Retrofit front area to strengthen bulkhead			FLA5-008A			
Created By:						
Name	Position	Date	Signature			
James Lee	Engineer	July 15, 2019				
Approved By:						
Name	Position	Date	Signature			
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Version	Date	Edited By:	Change Description	
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### I. PURPOSE

To ensure build quality and structural integrity of the bulkhead by providing the below instructions on retrofitting the front area of the flatbed. The following modifications should be applied to material #30013845 (Q21477) flatbed:

- 1. Top flange reinforcement
- 2. Inner reinforcement beam channel

## **II. MATERIAL REQUIRED**

PART DESCRIPTION		PART NUMBER	DRAWING	QTY
1.	Top Flange	20137095N	101-151016	2
2.	Reinforcement Plate Front Reinforcement Plate	20136706N	101-151009	2
3.	Joint Plate	20076219	115-15577	2
4.	H H Bolt 3/8-16	10063020		8
5.	H Lock Nut 3/8	10063076		8
6.	Nylon Washer	10034471		8
7.	Zinc rich primer (80% zinc content)	10038951		0.25 Gal
8.	Cold galvanizing paint	10028798		75 OZ

### **III. TOOLS REQUIRED**

- 1. Hammer
- 2. Arc Welding M/C
- 3. Paint applicator
- 4. Wire Brush
- 5. Angle Grinder
- 6. Power Tools (Huck Rivets Gun)
- 7. Safety Equipment (gloves, safety glasses, etc.)



## **IV.** Preparation

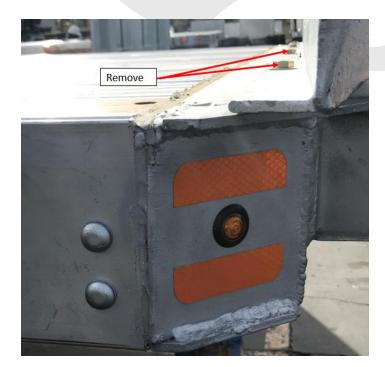
1. Place flatbed in a safe location in order to work on the repairs in accordance with safety standards. Crank up the landing gear so to keep the flatbed level and parallel with the ground.



Please note the following procedure must be performed by trained personnel and all safety precautions must be taken into consideration.

# V. Repair Procedure

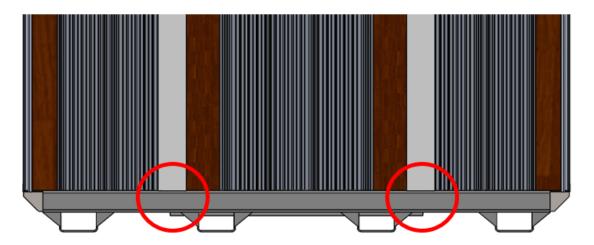
- 1. Unload and remove all forms of cargo on the flatbed.
- Disconnect any sensors and electrical components that are associated with the front end of the trailer. (This includes the 7-Way, corner markers, gladhands, PSI marker, etc.) This is the most important step.
- 3. Remove the four fasteners that connect the front sill to the bulkhead and remove the two fasteners in all four stake pockets (eight in total) in order to remove the bulkhead assembly from the front stake pockets.



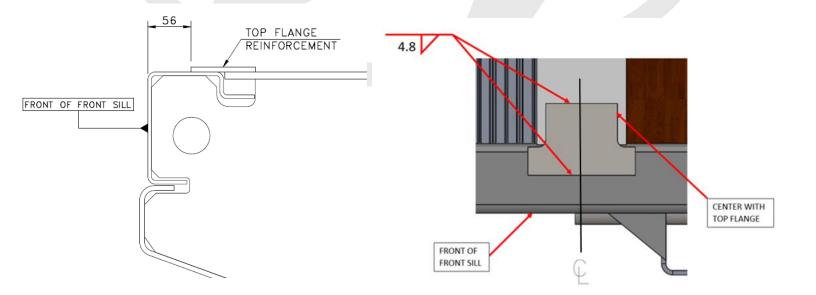




 Clean the front area of any zinc material with an angle grinder, as shown below. This is so that the zinc does not volatize during the welding process. This is where the top flange reinforcement (20137095N) will be added.

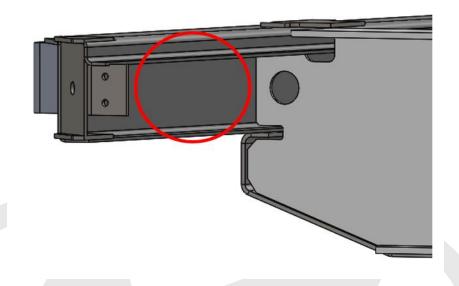


5. Weld the top flange reinforcement (20137095N) to the front area so that there is a brace between the top of the front sill and the top flange. This must be done to both top flanges.

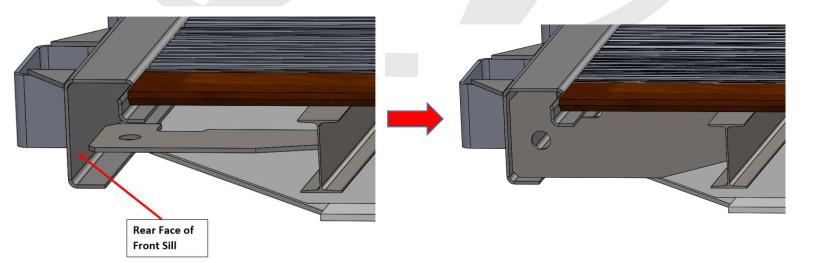




 Clean the inside area of the front sill of any zinc material with an angle grinder, as shown below, on both sides of the unit. Remove zinc on the front sill on both sides of the web. This is where the front reinforcement plate (20136706N) will be added.

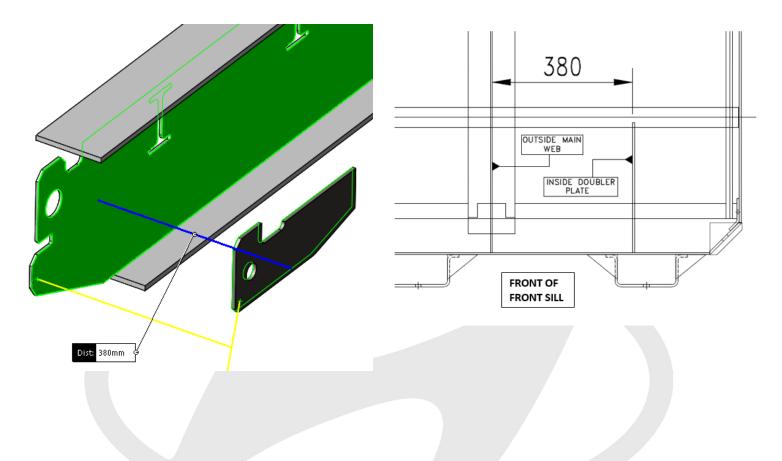


7. Insert the front reinforcement plate (20136706N) such that the plate is parallel to the ground. Once the plate makes contact with the rear face of the front sill, flip the plate 90° towards the side rail.

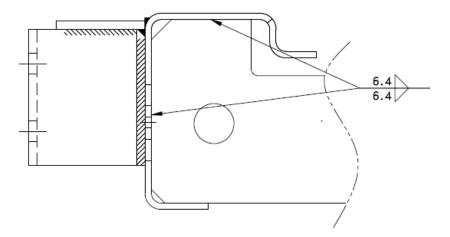




8. Measure 380 mm from the outside face of the main web to the inside face of the front reinforcement plate (20136706N).

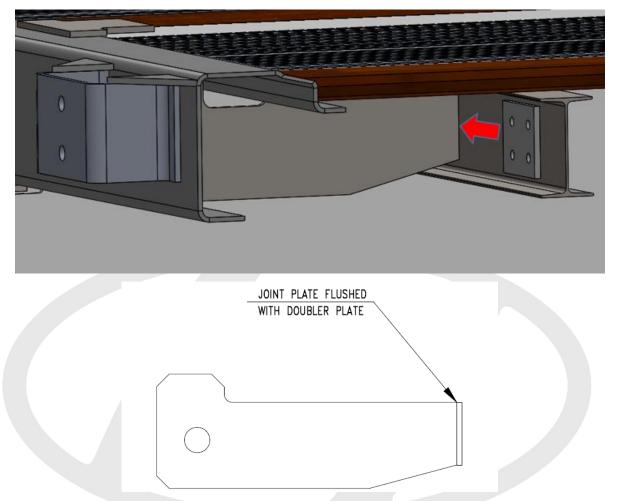


9. Weld the front reinforcement plate (20136706N) to the front sill.

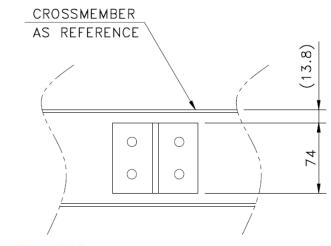




Slide the joint plate (20076219) behind the front reinforcement plate (20136706N). The joint plate must be centered with the doubler plate.

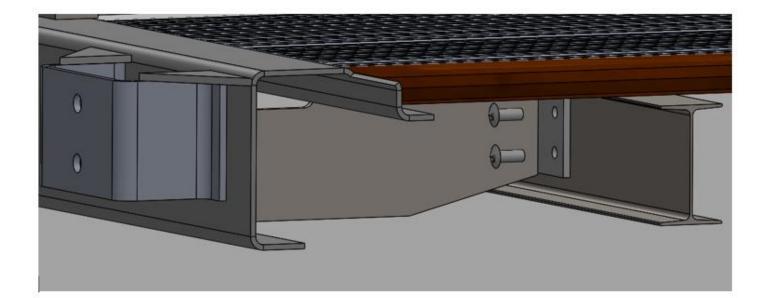


11. Drill holes into the first crossmember using the joint plate (20076219) as a guide on both sides of the trailer. Make sure the joint plate is centered with the front reinforcement plate.

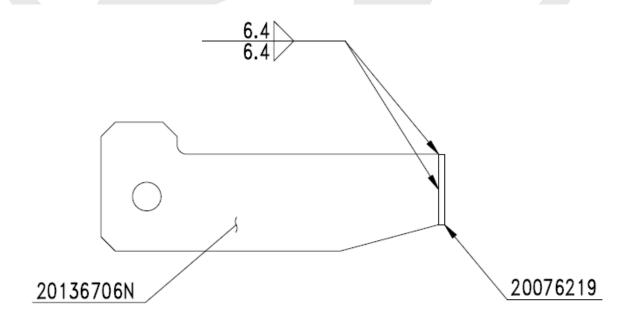




#### 12. Add four fasteners to the joint plate.



13. Weld the joint plate (20076219) to the front reinforcement plate (20136706N).





- 14. Repeat steps 6 12 for the opposite side of the trailer.
- 15. Remove all welding splatters using a steel wire brush around the welded areas and clean the welded areas.
- 16. Apply the zinc primer over the new front reinforcement plate, top flange reinforcement, and welding areas.
- 17. Once the zinc primer is dry, apply cold galvanizing top paint on reinforcement materials so that the exterior surface would not corrode.
- 18. Reconnect the bulkhead by fastening the stake pockets and then the front sill.
- 19. Reconnect all electrical components and gladhand components.

