



NAVIGATOR
Rig-out Installation
Guide
Rev:10/2007

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I. IMPORTANT INFORMATION:

NOTE: READ THROUGH THE ENTIRE RIGOUT INSTALLATION GUIDE BEFORE BEGINNING THE INSTALLATION. THIS GUIDE COVERS THE GENERAL PROCEDURES ON INSTALLING THE NAVIGATOR RIG-OUT ASSEMBLY AND IT IS NOT APPLICATION SPECIFIC . CONTACT CHRISMAN MANUFACTURING FOR QUESTIONS IN REGARDS TO INSTALLTION PROCEDURES FOR SPECIFIC APPLICATIONS . CHRISMAN MANUFACTURING RESERVES THE RIGHT TO MAKE CHANGES AND/OR IMPROVEMENTS WITHOUT PRIOR NOTICE OR OBLIGATION. ALWAYS CHECK WITH YOUR NAVIGATOR DEALER FOR POSSIBLE UPDATES.

Check with the truck manufacturer, truck body manufacturer and/or trailer manufacturer for information on trailer load limits and capabilities of handling a Navigator Rig-out and a Navigator forklift.

Check with the appropriate State Highway Patrol, National Highway Traffic Safety Administration, DOT offices, etc. for rules and regulations in regards to load limits, truck and/or trailer specifications, etc.

Fill out the appropriate Rig-out mounting application and fax it to Navigator (228) 864-1381 for approval. Contact Chrisman Manufacturing at (228) 864-6293 for the correct application.

All welds should be completed by a AWS D1.1 certified welder.

For any technical questions regarding the Rig-out mounting or the Navigator forklift please contact Navigator at (228) 864-6293.

The complete mounting system must be properly installed and wheel bumpers must be properly adjusted for the full limited warranty to be in effect.

IMPORTANT LIMITED WARRANTY INFORMATION

The Navigator machine warranty is only intended to cover defects encountered under normal use. Navigator will not be held liable or warranty any damage due to improper mounting, accidental damage, operator error, misuse, neglect, improper maintenance, improper lubrication, improper adjustments, improper repairs, improper installations or the use of non-Navigator components on the Navigator forklift or Rig-out.

All operators must be properly trained before attempting to operate any Navigator forklift and they must exercise the proper operator procedures that are provided in the operator section of the parts manual and on the Navigator Operator video. If the Navigator forklift is not operated correctly, not only can you void the warranty of the machine, also it can be extremely dangerous and possibly tip over.

II. GENERAL REQUIREMENTS

Contact the truck manufacturer, truck body manufacturer and/or trailer manufacturer for information on safe installation, trailer load limits, and capabilities of carrying a Navigator Rig-out and a Navigator forklift.

Fill out the appropriate Rig-out application and contact Chrisman Manufacturing to make sure your specific truck or trailer meets the requirements of carrying a Navigator Rig-out and Navigator forklift.

It is recommended that the truck and/or trailer is equipped with a air ride suspension.

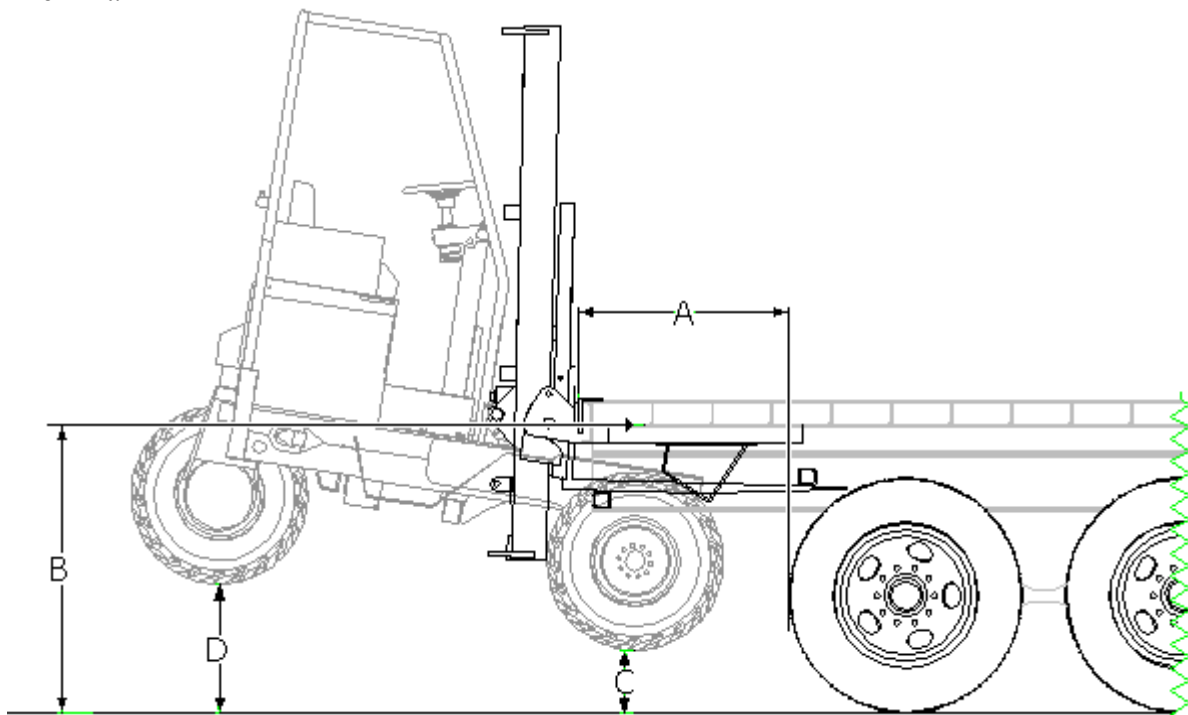
On most applications tail lights must be relocated and tail light harness will require modifications.

The license plate may require relocating so it is visible with or without the Navigator mounted.

Trailers Built on or after January 1998 may require a replacement drop bumper that complies with the NHTSA standard No. 223 & 224.

DIMENSIONS

Note: The information below covers the general dimensions and requirements to accept most Navigator Forklifts. Fill out a Rig-out application and contact Chrisman Manufacturing to make sure your specific truck or trailer meets the requirements of carrying a Navigator Rig-out and a Navigator forklift.



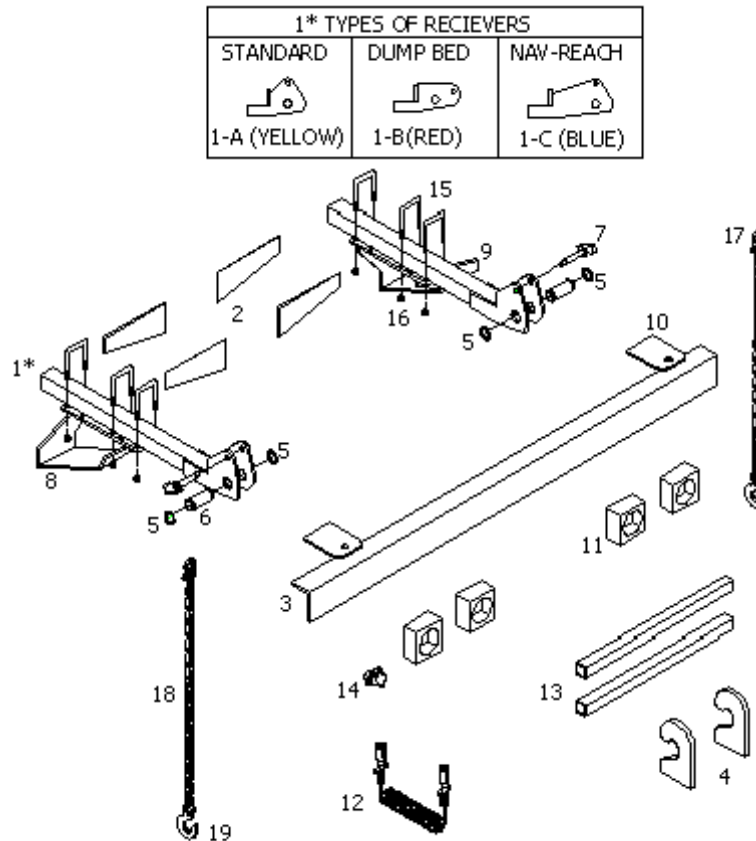
A. A minimum dimension of 32" is recommended from the back of the rear tire to the end of the bed. The maximum dimension is 48".

B. The minimum dimension from bottom of the rear cross member to the ground must be at least 49". It is recommended that the Navigator is mounted as high as possible to avoid contact with the ground while in transport.

C. The minimum recommended distance from the bottom of the front tire to the ground when mounted is 11".

D. The minimum recommended distance from the bottom of the rear tire to the ground when mounted is 17".

III. RIG-OUT PARTS BREAKDOWN



Ref #	Description	Part #	Qty	Old Part #
1A	Standard receiver	12-0005	2	RO-001
1B	Dump Bed Receiver	12-0025	2	RO-020
1C	Nav Reach (Scissors) Receiver	12-0024	2	RO-019
2	Gusset	12-0006	4	RO-002
3	Angle	12-0007	1	RO-003
4	Hook (Supplied with Forklift)	12-0010	2	RO-004
5	2" Snap ring	12-0037	4	FH-266
6	2" x 5" Receiver Pin	12-0009	2	RO-0069
7	Safety Pin with Handle	12-0036	2	FH-220
8	Wheel Bumper (Left)	12-0013	1	RO-007
9	Wheel Bumper (Right)	12-0014	1	RO-008
10	Safety Chain Lug	12-0016	2	RO-010
11	Tail Light Housing	12-0017	4	RO-011
12	Pigtail Wiring Harness	12-0033	1	EL-035
13	Fork Support Tube	12-0018	2	RO-012
14	Pigtail Receptacle	12-0034	1	EL-036
15	U-Bolts w/ nuts (2 Spare)	12-0021	8	RO-017
16	Nuts	07-0101	16	FH-122
17	1/2" Shackles	12-0020	2	RO-016
18	Safety Chain	12-0015	2	RO-009
19	1/2" Slip Hooks	12-0019	2	RO-015
20	9/16" NF Lock washer*	07-0185	16	N/A

* Not Shown in Diagram

IV. INSTALLATION PROCEDURE

Note: The general requirements must be met and a Rig-out application must be approved before beginning installation. Always wear the appropriate safety equipment and take caution when needed. Make sure all welding surfaces are properly prepped before welding. All welds must be 1/8" larger than the thinnest member unless noted otherwise.

Park the truck or trailer on a level surface. Apply the parking brake and chock the wheels to prevent any movement whatsoever.

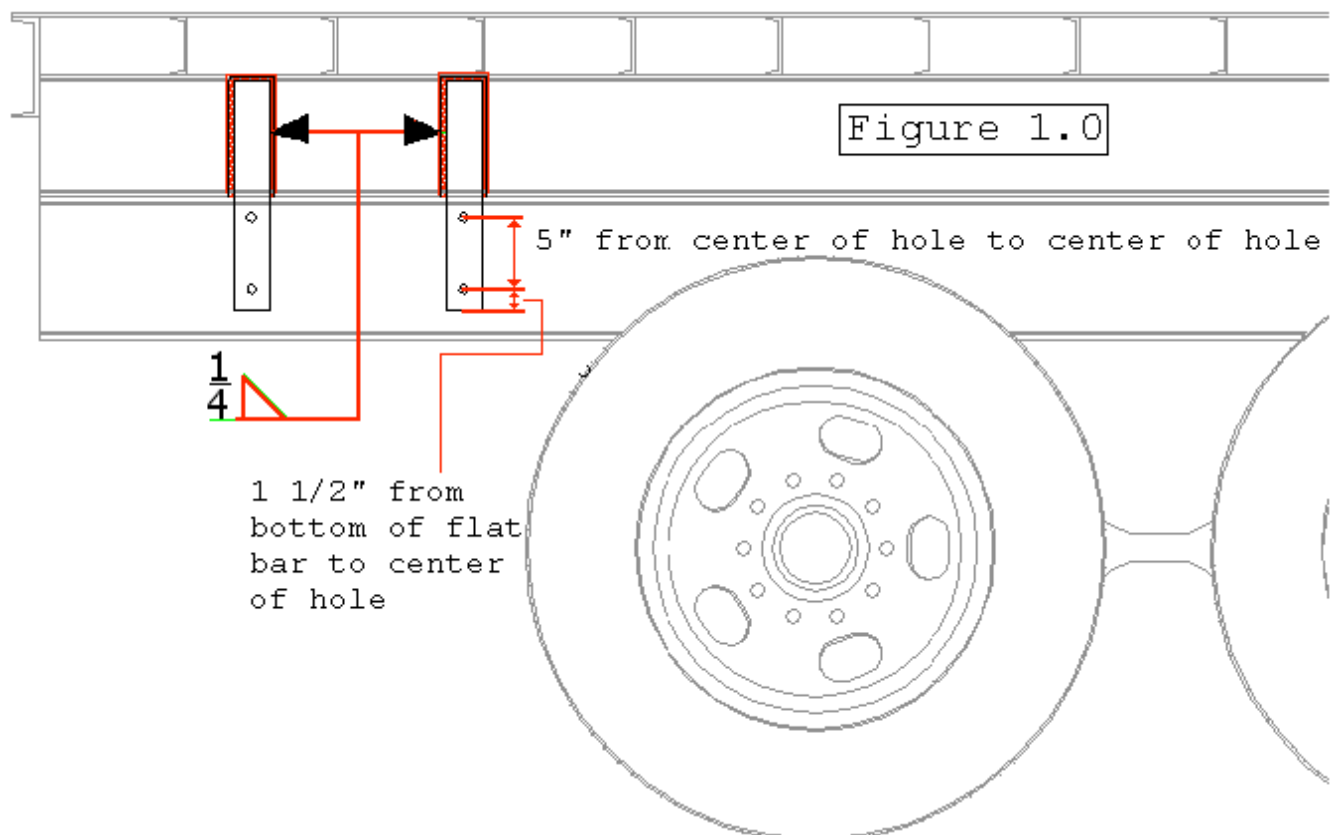
Disconnect all battery cables to prevent damage to any electrical components.

Remove all tail lights and reroute any wires, hoses, etc. that could be damaged during installation.

Make sure that the drop bumper is flush with the rear cross member. If it extrudes past the rear cross member it will have to be modified.

If the truck or trailer has stake pockets or anything attached to the rear side of the rear cross member it will have to be removed.

If Rig-out is being installed on a straight truck it is highly recommended to remove all U-bolts behind the rear axle or spring hangers. Do not remove any U-bolts in front of the rear axle or spring hangers. Replace the every U-bolt removed with 3/8" x 2 1/2" x 16" flat bar as a minimum. Place the flat bar vertical and Weld the top 8" of the flat bar to the trailer body as shown on **Figure 1.0** . The bottom 8" of flat bar will be bolted to the frame using two 5/8" grade 8 bolts with a flat washer on each side and nylock nuts per flat bar installed. So make sure there isn't anything that will be damaged before drilling. Drill two 5/8" holes through the center of the flat bar and truck frame in the location shown on **Figure 1.0** . Install and tighten bolts.



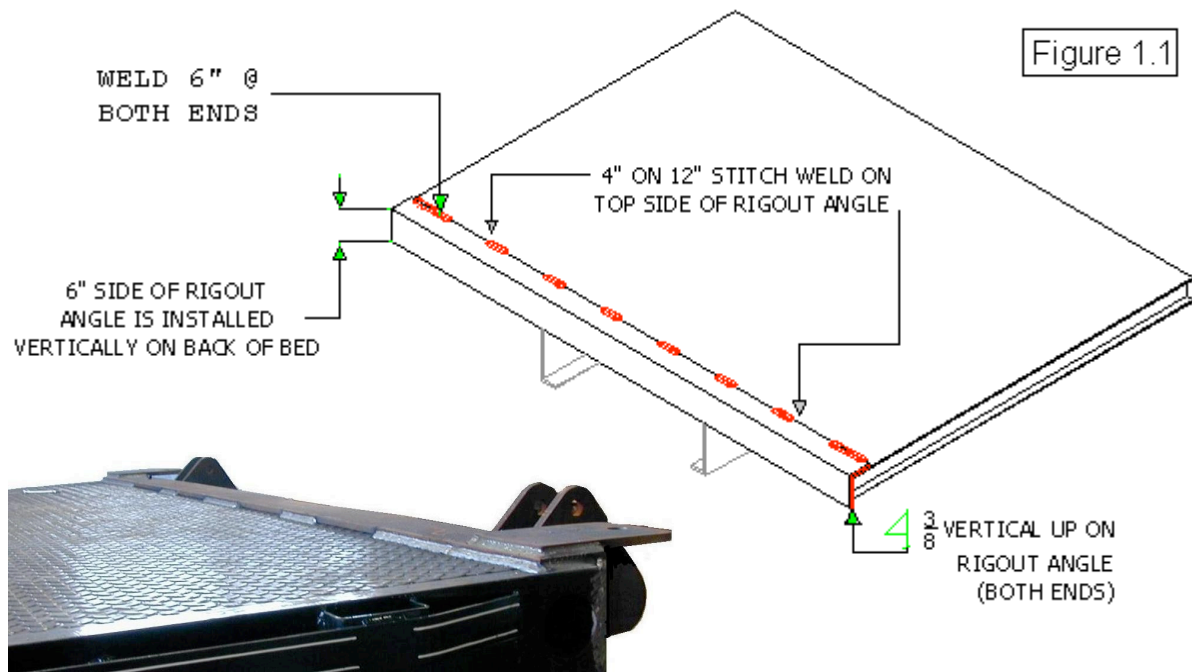
RECEIVER INSTALLATION

Parts Needed		
Qty.	Description	Part Number
2	Receiver hitch*	
	Standard Receiver	12-0005
	Nav-Reach Receiver	12-0024
	Dump Bed Receiver	12-0025
1	Angle 4"x6"x96"	12-0007
4	Gusset 6"x3"x16"	12-0006
2	Safety Chain Lug	12-0016
4	Tail Light Housing(optional)	12-0017

* See the parts diagram section III for illustrations and descriptions on the different receivers and to verify that you have the correct receivers for your application.

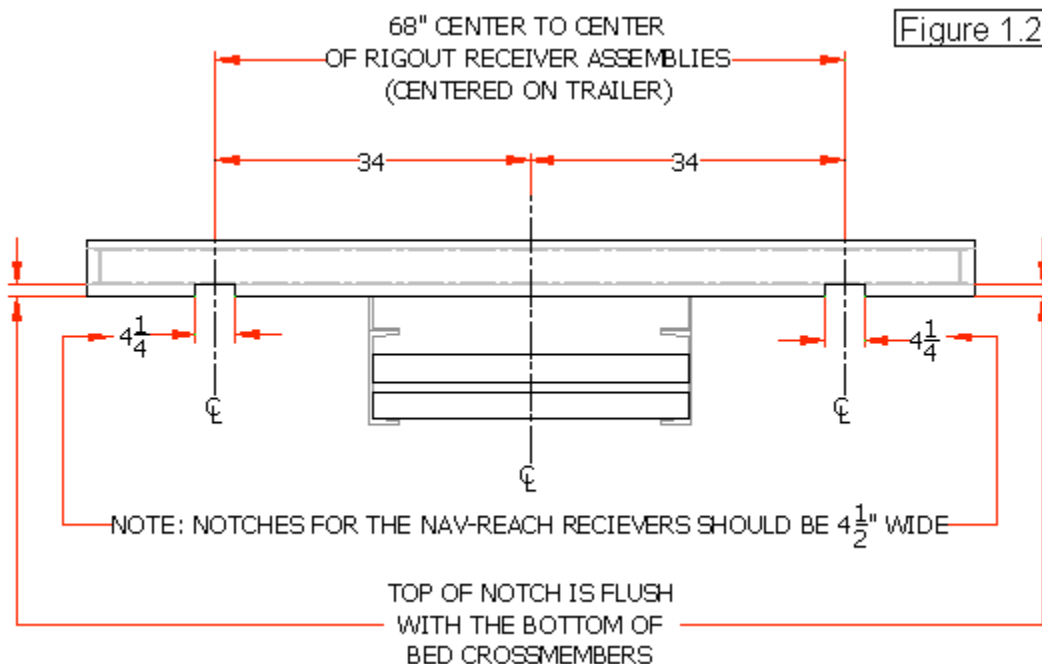
Installation Procedure

Install Angle 4"x6"x96". Cut the 4"x6" angle so it is 1" narrower than the rear cross member. Place the 4" side on top. Center the 4" x 6" angle with the so it is 1/2" shorter on each corner where it meets the rear cross member. Clamp 4"x 6" angle into place. Make sure it is in the correct location and that all weld areas are properly prepped. Weld in place as shown in **Figure 1.1**.



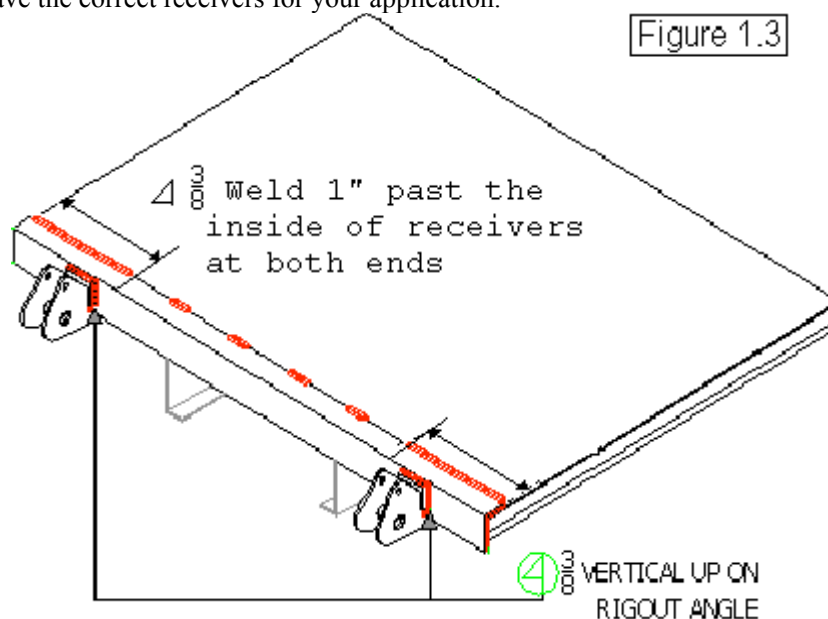
RECEIVER INSTALLATION (continued)

Notch the rear cross member and 4x6 angle to match bed cross members as shown in **Figure 1.2**.



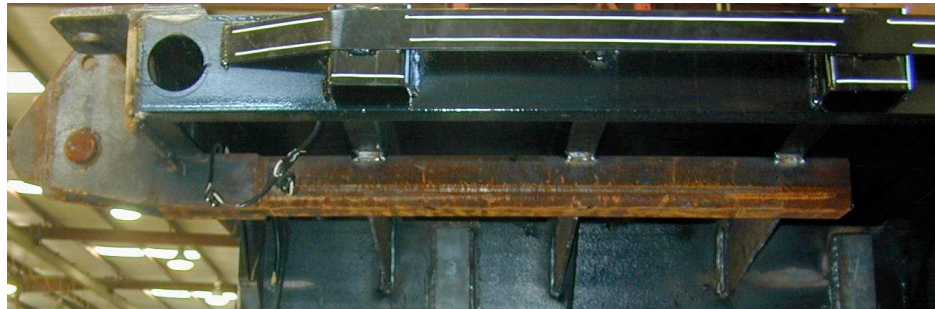
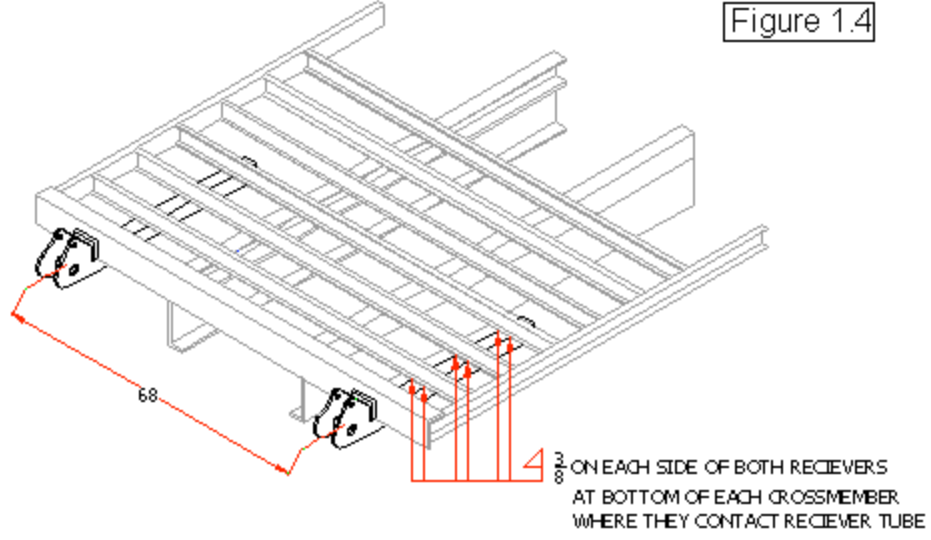
Install Receiver Hitches*. Make sure receivers are in the correct location and square then clamp them in place. Make sure that all weld areas are properly prepped. Weld angle and receivers as shown in **Figure 1.3** & **Figure 1.4**. Note: Receiver tubes must contact bed cross members.

* See the parts diagram on section III for illustrations and descriptions on the different receivers and to verify that you have the correct receivers for your application.



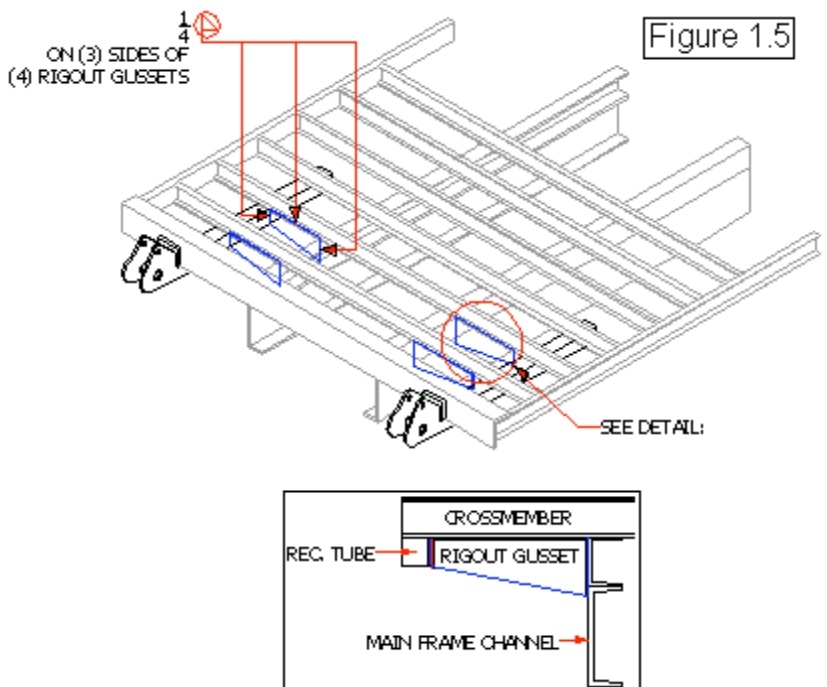
RECEIVER INSTALLATION (continued)

Figure 1.4



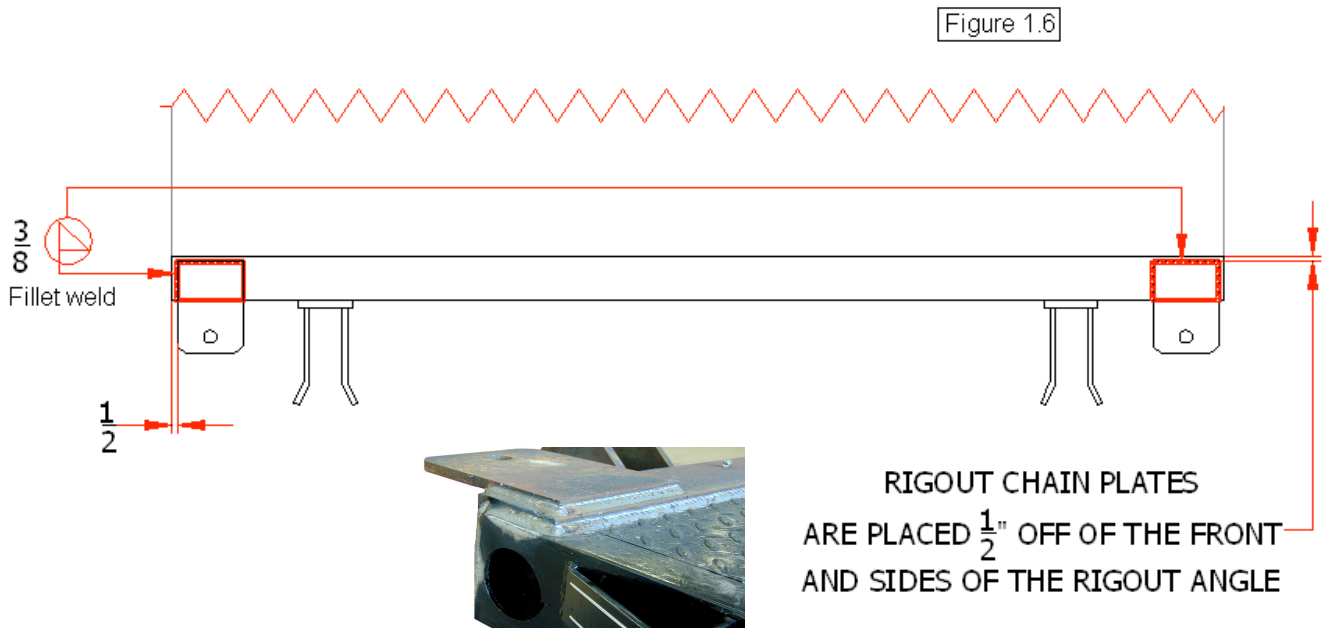
Install all 4 Gussets. To connect the Receiver tube to the main c-channels. Make sure it is in the correct location and that all weld areas are properly prepped. Weld in place as shown in **Figure 1.5**. **Note:** Gussets may require modifying to fit properly.

Figure 1.5

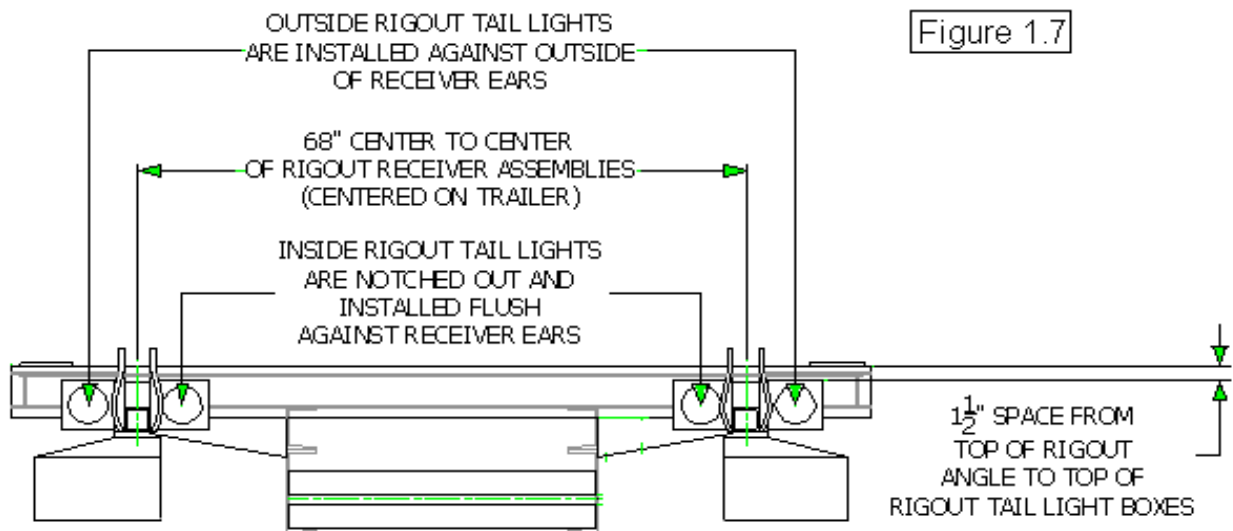


RECEIVER INSTALLATION (continued)

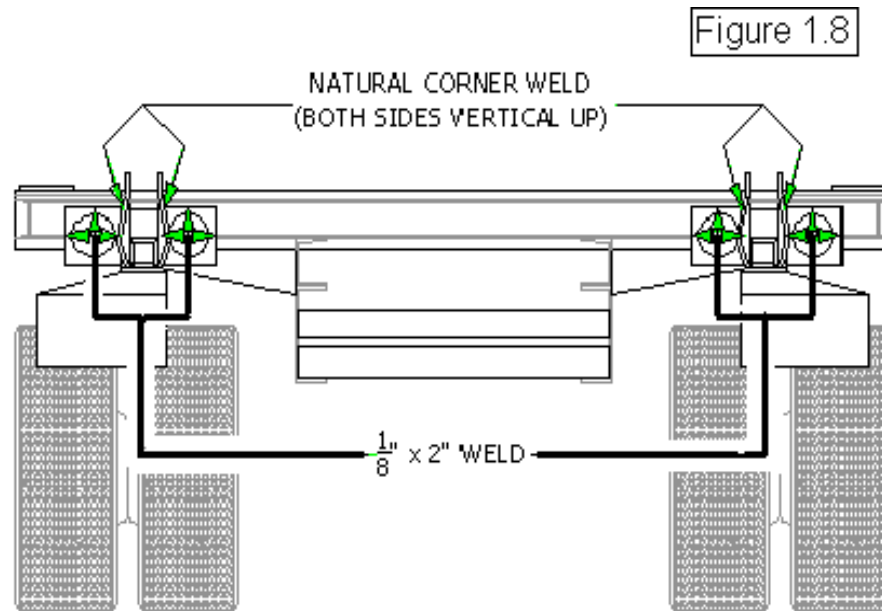
Install Safety Chain Lugs. Make sure it is in the correct location and that all weld areas are properly prepped. Weld in place as shown in **Figure 1.6**.



Install tail light boxes (if needed) in the location shown on **Figure 1.7**. Make sure it is in the correct location and that all weld areas are properly prepped. Weld in place as shown in **figure 1.8**.



RECEIVER INSTALLATION (continued)



NOTE: RIGOUT TAIL LIGHT BOXES ARE
WELDED INSIDE AT (3) LOCATIONS
INSIDE EACH BOX

FORK SUPPORT INSTALLATION

Parts Needed		
Qty.	Description	Part Number
2	Fork Support tube 3"x3"x44"	12-0018

Installation Procedure

Install both fork support tubes as shown in **Figure 2.1** & **Figure 2.2**. Fork support tubes may need to be cut down to fit. Tubes must be placed square with the frame rails and deck. Make sure it is in the correct location and that all weld areas are properly prepped. Weld in place as shown in **Figure 2.3**.
Note: Forks must be at least 40" long.

FORK SUPPORT INSTALLATION (continued)

Figure 2.1

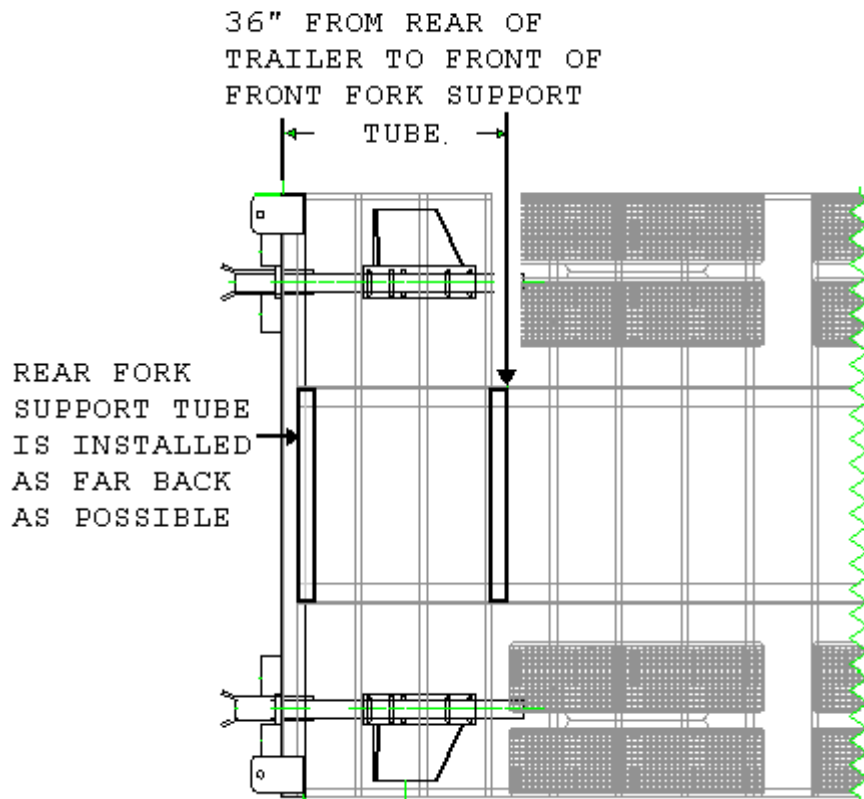
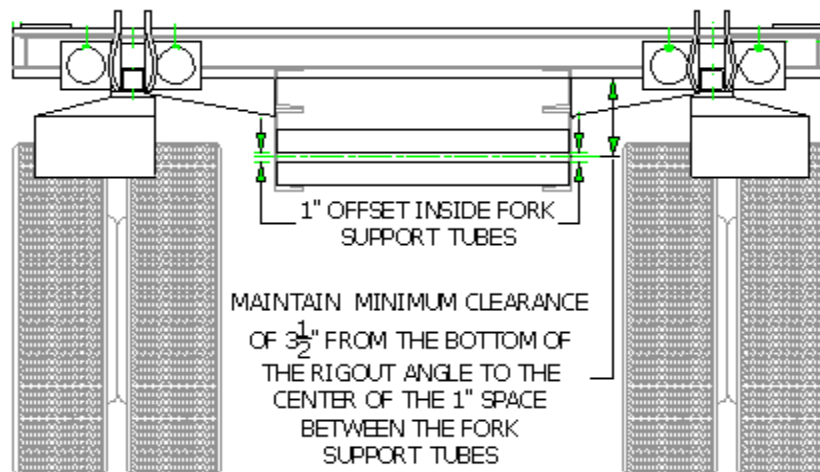
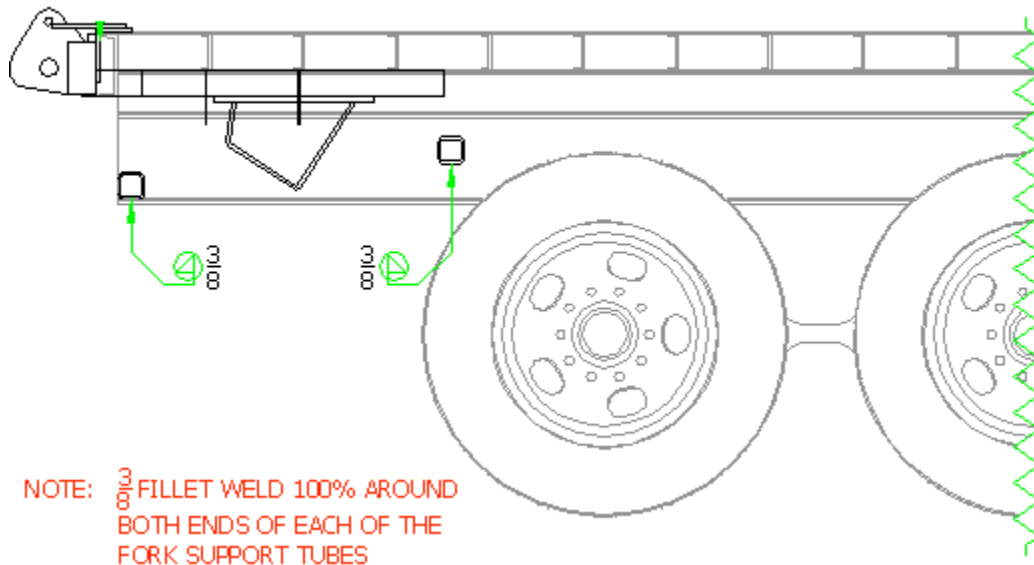


Figure 2.2



FORK SUPPORT INSTALLATION (continued)

Figure 2.3



SAFETY CHAIN INSTALLATION

Parts Needed		
Qty.	Description	Part Number
2	1/2" Shackles	12-0020
2	1/2" Slip Hooks	12-0019
2	Safety Chain	12-0015

Installation Procedure

Install the Safety Chains , 1/2" Shackles and Slip Hooks.

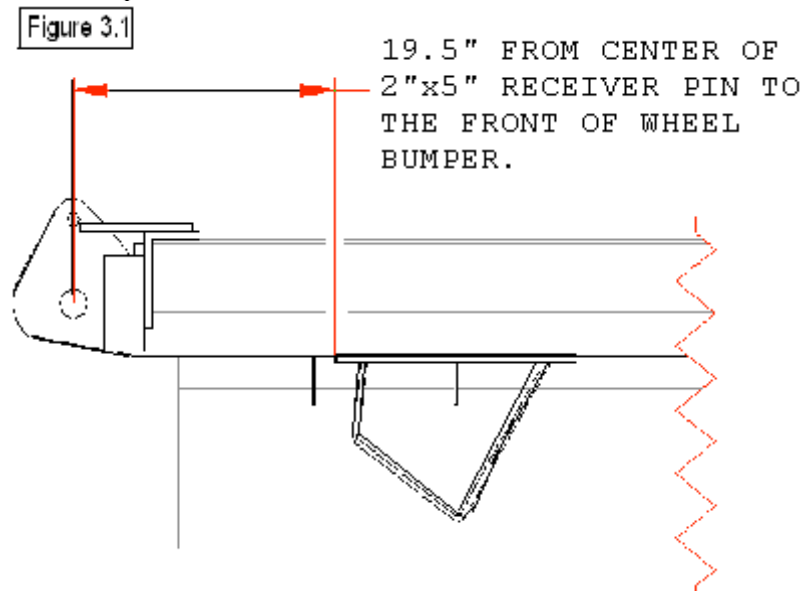
WHEEL BUMPER INSTALLATION

Parts Needed		
Qty.	Description	Part Number
1	Wheel Bumper (left side)	12-0013
1	Wheel Bumper (right side)	12-0014
6	U-bolts With Lock Nuts	12-0021
1	Pigtail Receptical Bracket	106-C
1	Pig Tail Wiring Harness	12-0033

Installation Procedure

Preinstall Wheel Bumpers and U-bolts as shown on **Figure3.1**.

Note: Final adjustment will be preformed towards the end of the installation.



With the Navigator mounted to the truck/trailer, plug the Pig Tail Wiring Harness in to the Pig Tail Receptical located on the left hand side of the Navigator. Stretch the Pig Tail Wiring Harness to determine a safe and convenient location for the Pig Tail Receptical Bracket. Mark the location and weld bracket in place.



Paint

Prep trailer/truck for paint. Prime then paint.

TAIL LIGHTS AND PIGTAIL RECEPTICAL

Parts Needed		
Qty.	Description	Part Number
1	Pig Tail Receptical	12-0034
1	Pig Tail Wiring Harness	12-0033

Installation procedure

Replace all tail lights, side marker lights, license plate lights, license plate, hoses, wiring, etc. Make sure that all of these items are routed properly and will not be damaged with, or without the Navigator mounted. Check for proper operation.

Tap into the truck/trailer tail light electrical harness to transfer power to the pig tail receptical. With the Navigator mounted check for proper operation on all tail lights and side marker lamps.

WHEEL BUMPER ADJUSTMENT

Procedure

Loosen all wheel bumper u-bolts. With the Navigator mounted and the mounting hooks fully engaged to the receiver pins, tilt the mast on the Navigator fully back to tilt the machine as far forward as possible. With the Navigator in this position, adjust both wheel bumpers until there is a 3/4" gap between the tire and the wheel bumper as illustrated on **Figure 3.1**. Remove machine and tighten u-bolts.

Note: Wheel bumpers must be properly adjusted for the specific Navigator that it will transport. When changing tires or machines it is required to check and adjust wheel bumpers accordingly. **Look over and inspect all work that was performed. If everything checks out installation is complete.**

