



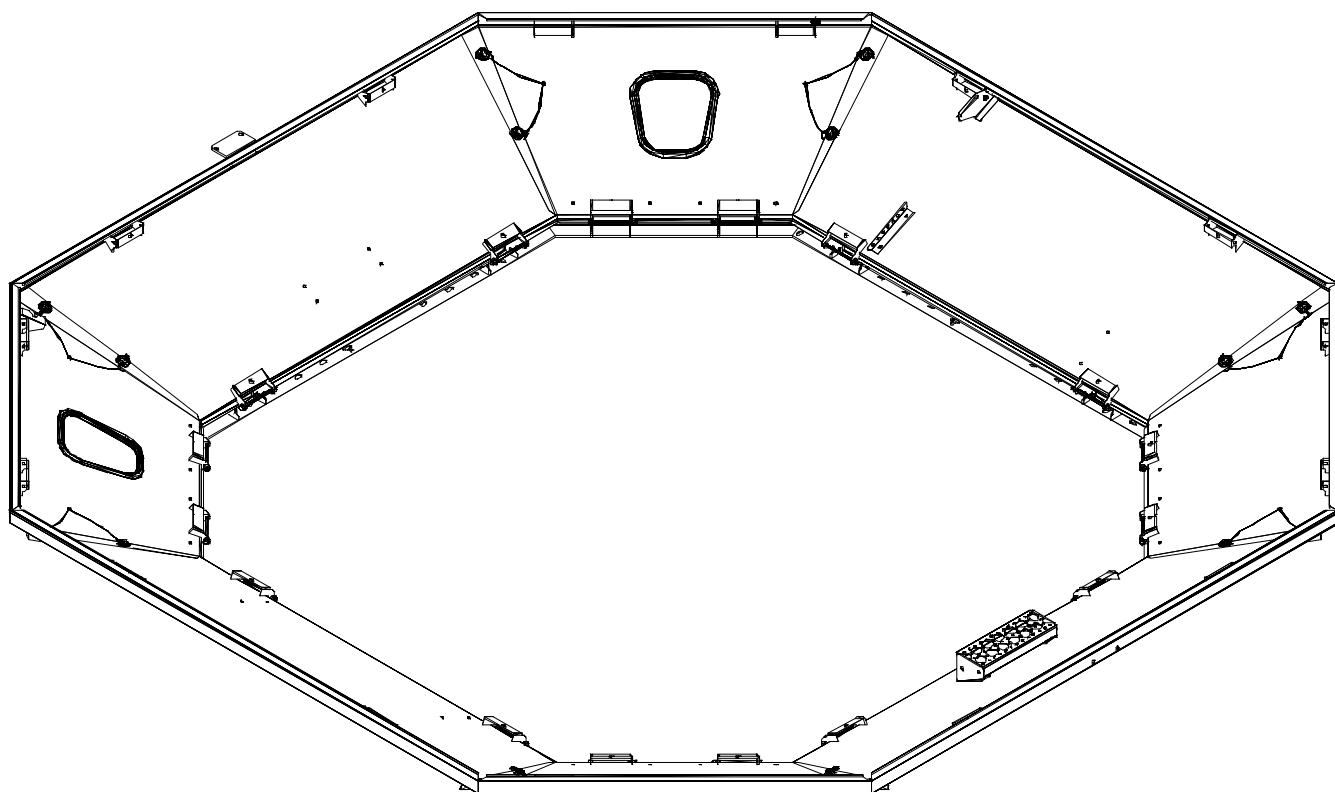
Combine Grain Tank Extension

JOHN DEERE S-SERIES COMBINES

OPERATORS / ASSEMBLY MANUAL

FITS: ALL S660, S670, S680, S690 COMBINES

PLACE IN COMBINE CAB AFTER ASSEMBLY
FOR FUTURE REFERENCE.



ASSEMBLY
OPERATION
REPLACEMENT PARTS

INTRODUCTION

Thank you for purchasing a Maurer grain tank extension. Proper care and use will result in many years of service.



WARNING: TO AVOID PERSONAL INJURY OR DEATH, OBSERVE THE FOLLOWING INSTRUCTIONS:

Ensure that anyone present is clear before applying power to any machinery used in conjunction with a Maurer grain tank extension.

Never allow anyone in or near the grain tank of a combine during loading or unloading of grain. The accumulation of grain is dangerous and can cause entrapment, resulting in serious injury or death by suffocation.

Adding a Maurer Bin Extension or Tip-Up increases the overall height of your combine. Use caution when operating around trees, buildings, power lines, and when approaching bridges and over passes. Pay attention to height restrictions.

Do not exceed advertised maximum capacity of a Maurer grain tank extension.

GENERAL INFORMATION

1. Read assembly instructions carefully. Study assembly procedures and all illustrations before you begin assembly. Note which parts are used in each step. This unit must be assembled in proper sequence or complications will result.
2. When placing a parts order, refer to this manual for proper part numbers and place order by **PART NO. and DESCRIPTION.**
3. Whenever terms "**LEFT**" and "**RIGHT**" are used in this manual it means from a position behind combine and facing forward.

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SAFETY

TAKE NOTE! THIS SAFETY ALERT SYMBOL FOUND THROUGHOUT THIS MANUAL IS USED TO CALL YOUR ATTENTION TO INSTRUCTIONS INVOLVING YOUR PERSONAL SAFETY AND SAFETY OF OTHERS. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN INJURY OR DEATH!



**THIS SYMBOL MEANS
ATTENTION
BECOME ALERT
YOUR SAFETY IS INVOLVED!**

SIGNAL WORDS

Note use of following signal words **DANGER**, **WARNING**, and **CAUTION** with safety messages. The appropriate signal word for each has been selected using the following guidelines:

DANGER: Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to most extreme situations typically for machine components which, for functional purposes, cannot be guarded.

WARNING: Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

CAUTION: Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

If you have questions not answered in this manual, require additional copies, or if your manual is damaged, please contact your dealer or Maurer Manufacturing, P.O. Box 160, 1300 38th Ave. West, Spencer, Iowa 51301, Ph: (712) 262-2992 Fax: (712) 262-1022 www.maurermfg.com



EQUIPMENT SAFETY GUIDELINES

Every year many accidents occur which could have been avoided by a few seconds of thought and a more careful approach to handling equipment. You, the operator, can avoid many accidents by observing the following precautions in this section. To avoid personal injury, study the following precautions and insist those working with you, or you yourself, follow them.

Replace any caution, warning, danger or instruction safety decal that is not readable or is missing. Location of such decals is indicated in this booklet.

Review safety instructions with all users annually.

Operator should be a responsible adult. **DO NOT ALLOW PERSONS TO OPERATE OR ASSEMBLE THIS UNIT UNTIL THEY HAVE DEVELOPED A THOROUGH UNDERSTANDING OF SAFETY PRECAUTIONS AND HOW IT WORKS.**

Do not paint over, remove, or deface any safety signs or warning decals on your equipment. Observe all safety signs and practice instructions on them.

Never exceed limits of a piece of machinery. If it's ability to do a job, or to do so safely is in question **DON'T TRY IT.**

Adding a Maurer Bin Extension or Tip-Up increases the overall height of your combine. Use caution when operating around trees, buildings, power lines, and when approaching bridges and over passes. Pay attention to height restrictions.

Fold and secure (if needed) the grain tank extension panels when transporting or hauling the combine to avoid contact with low power lines and other obstructions.

Use the panel safety step to safely enter and exit the grain tank.

Ensure that any additional bracing and safety equipment have been installed according to this manual. (Some models do not require additional bracing or safety equipment)

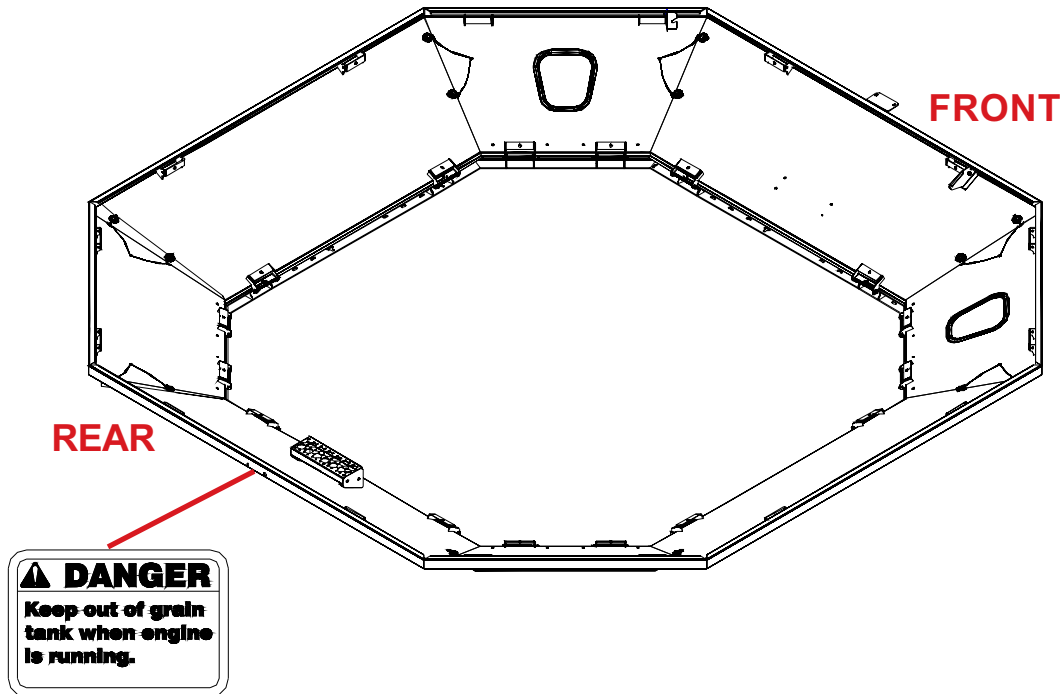
Ensure that the grain tank extension frame has been properly mounted to the combine according to this manual.

Never exceed the maximum advertised capacity of the grain tank extension. By doing so you risk damage to the grain tank extension.



SAFETY SIGN LOCATIONS

Types of safety sign and locations on equipment are shown in illustration below. Good safety requires that you familiarize yourself with various safety signs, type of warning, and area or particular function related to that area, that requires your SAFETY AWARENESS.



SAFETY SIGN CARE

- Keep safety signs clean and legible at all times.
- Replace safety signs that are missing or have become illegible.
- Replacement parts that displayed a safety sign should also display current sign.
- Safety signs are available from the Spencer plant.

PRODUCT DISCLAIMER

Increasing the grain tank capacity of any combine by use of this product is at the discretion of the owner. Increasing the grain holding capacity of any combine may affect the structural aspects of the combine as well as drive line components and tires. Although Maurer Mfg. has included additional support bracing on selected models, it does not assume liabilities, or make any warranties pertaining to the structural stability or performance of any combine. See the combine owners/operators manual for additional combine specifications and safety information not listed in this manual.

Grain Tank Extension Breakdown

John Deere S-Series Grain Tank Extension

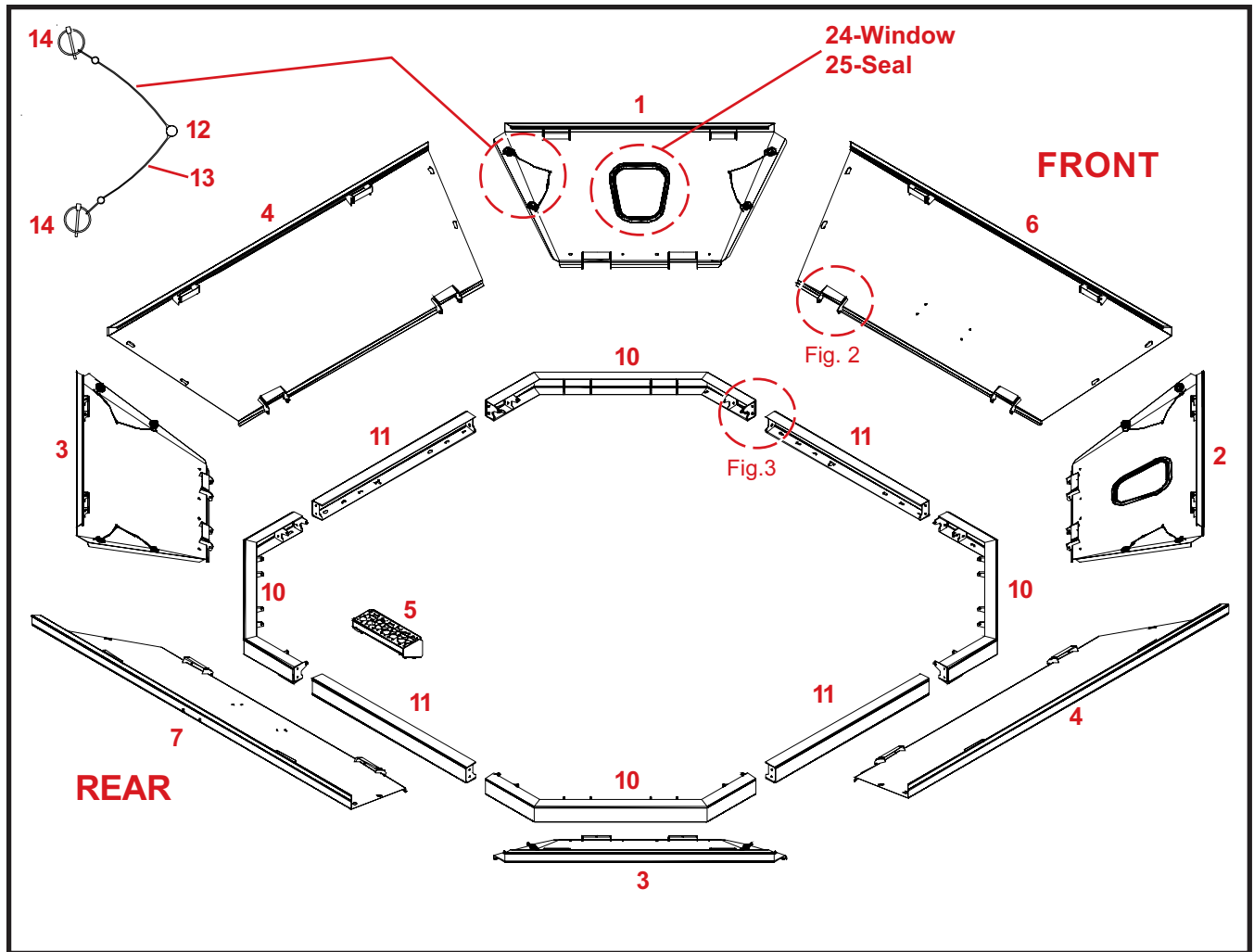


Figure 1

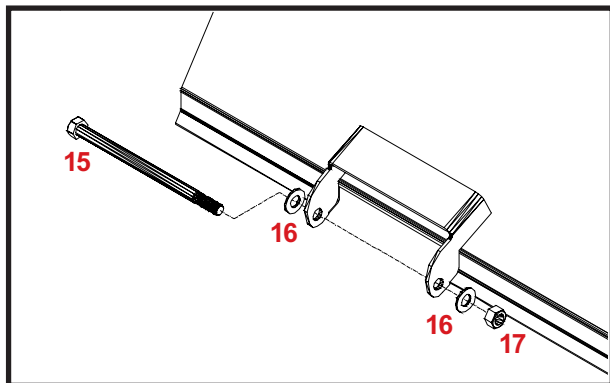


Figure 2

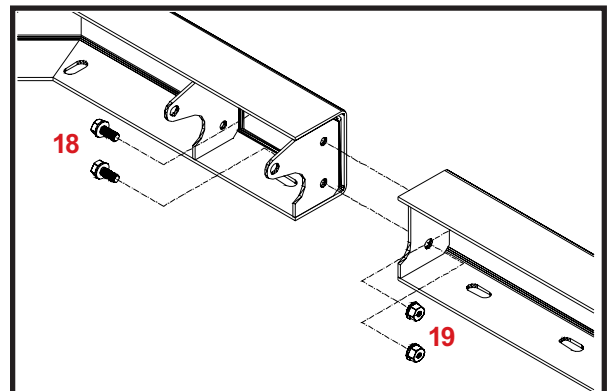


Figure 3

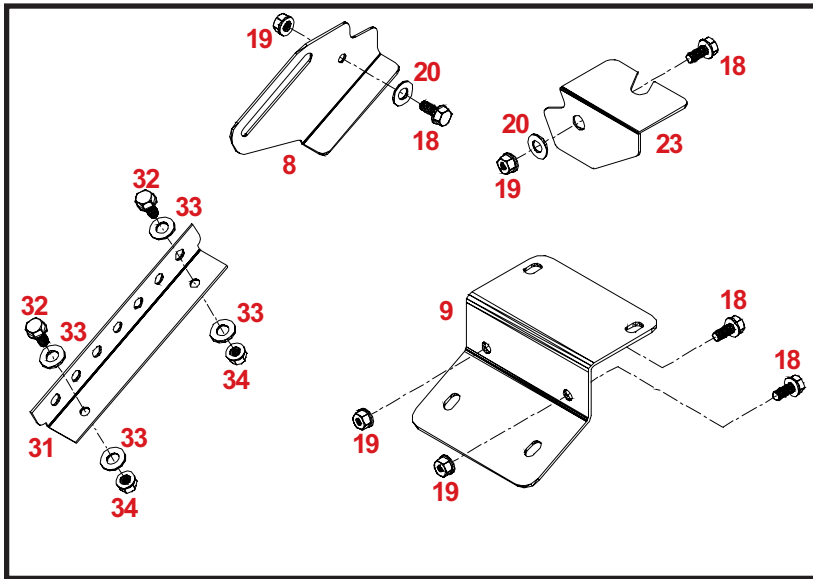


Figure 4

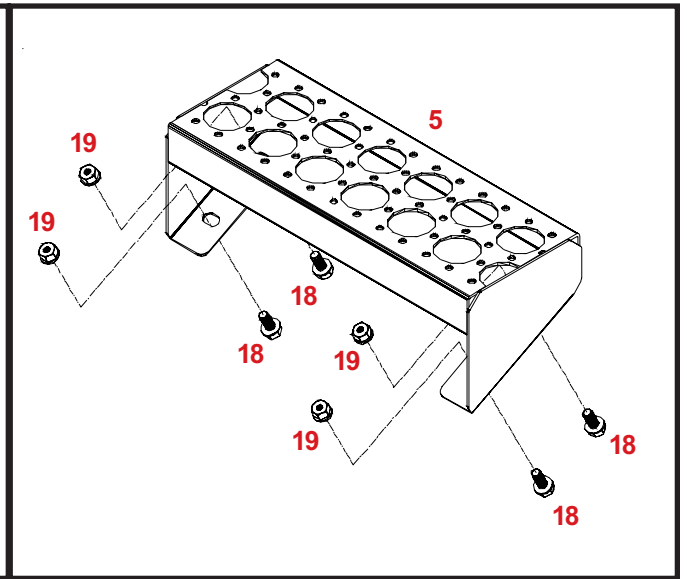


Figure 5

PARTS LIST

Please order replacement parts by PART NO. and DESCRIPTION.

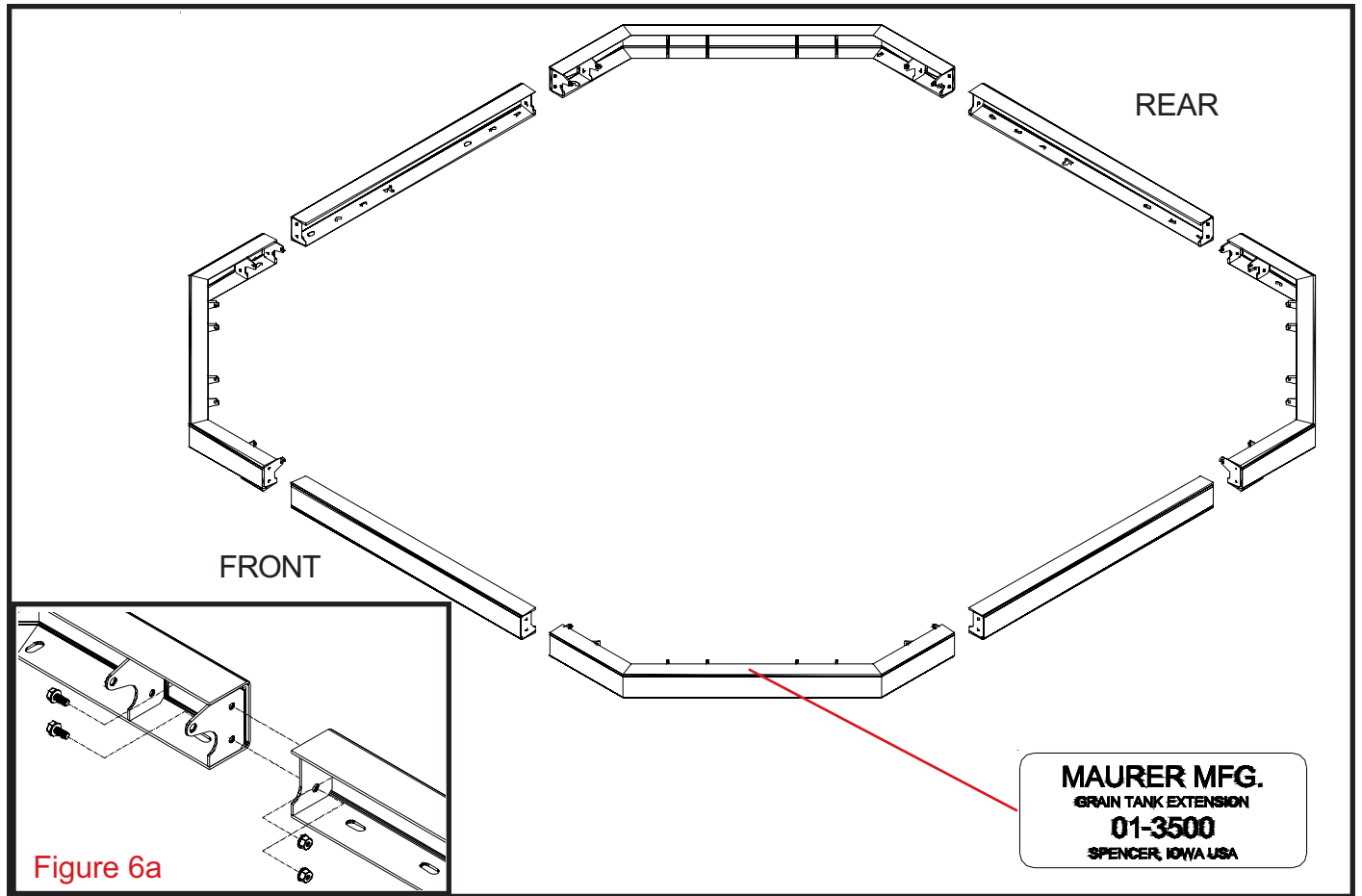
REF. NO.	PART NO.	QTY.	DESCRIPTION
1.	R5E000011P0	1	Front Left Corner Panel
2.	R5E000003P0	1	Front Right Corner Panel
3.	R5E000005P0	2	Rear Corner Panel
4.	R5E000009P0	2	Side Panel (STS Series)
5.	R5E000006P0	1	Extension Safety Step
6.	R5E000004P0	1	Front Panel (STS Series)
7.	R5E000010P0	1	Rear Panel (STS Series)
8.	R3E000019P0	1	Base Sensor Bracket
9.	R3E000022P0	1	Base GPS Bracket
10.	R5E000007P0	4	Frame Corner Assembly
11.	R5E000008P0	4	Frame Splice Assembly (STS Series)
12.	1AF032D0000	8	Press Rivet
13.	1AF031DKA00	16	Nylon Lanyard
14.	1AF034CAA10	16	3/16" x 1-9/16" Lynch Pin
15.	1AFC12FFA05	16	3/8" x 6.00 Hex Bolt
16.	1AF009F000C	32	3/8" SAE Flat Washer
17.	1AFC18F0000	16	3/8" Nylon Lock Nut
18.	1AFC37E00L0	32	5/16" x 3/4" Serrated Flange Bolt
19.	1AFC08E0000	40	5/16" Serrated Flange Nut
20.	1AF046EAAD0	2	5/16" x 1-1/4" x .120 Washer
21.	*****	0	*****
*22.	1AFC37EAA05	19	5/16" x 1" Serrated Flange Bolt
23.	R3E000003P0	1	Base Light Bracket
24.	1AWALACKAMC	2	Window
25.	R3E000026P0	2	Window Seal
26.	R3E000188P0	2	Right Front & Rear Tank Cap
27.	R3E000189P0	1	Left Front Tank Cap
28.	R3E000190P0	1	Left Rear Tank Cap
*29.	1AEX0015241	2	Deere Wire Harness
*30.	1AFC35CAA00	14	#12 X 1" Self Tapping Screw
31.	R3E000143P0	1	M60 Additional Sensor Bracket
32.	1AFC12DAA05	2	1/4" x 1" Hex Bolt
33.	1AF009D0000	4	1/4" Flat Washer
34.	1AFC05D0000	2	1/4" Center Lock Nut

* Indicates items not shown in illustrations

NOTE: In order to simplify the assembly process, we recommend that the grain tank extension be assembled on the ground and hoisted to the top of the combine.

FRAME ASSEMBLY

Arrange the frame components as shown in figure 6. The frame corner with the serial number decal is the left front frame corner. Fasten the frame joints together with two 5/16" x 3/4" serrated flange bolts and two 5/16" serrated flange nuts per joint. See figure 6a.



PANEL ASSEMBLY

STEP 1:

Using one 3/8" x 6" hex bolt, two 5/16" washers and one 3/8" nylon lock nut per hinge point, attach the extension corner panels to the frame of the grain tank extension. See figure 7a.

NOTE: DO NOT over tighten nuts and distort hinge component, but ensure nylon lock nut fully engages bolt threads.

STEP 2:

Assemble all four corner panels to the frame (panels with windows are to be fastened to the front) and slowly fold the panels outward to accept the front, rear, and side panels. The corner panel with the Maurer logo on the back side is the left front corner. See figure 7.



ATTENTION: DAMAGE TO CORNER PANEL CAN OCCUR IF NOT FOLDED OUTWARD SLOWLY!

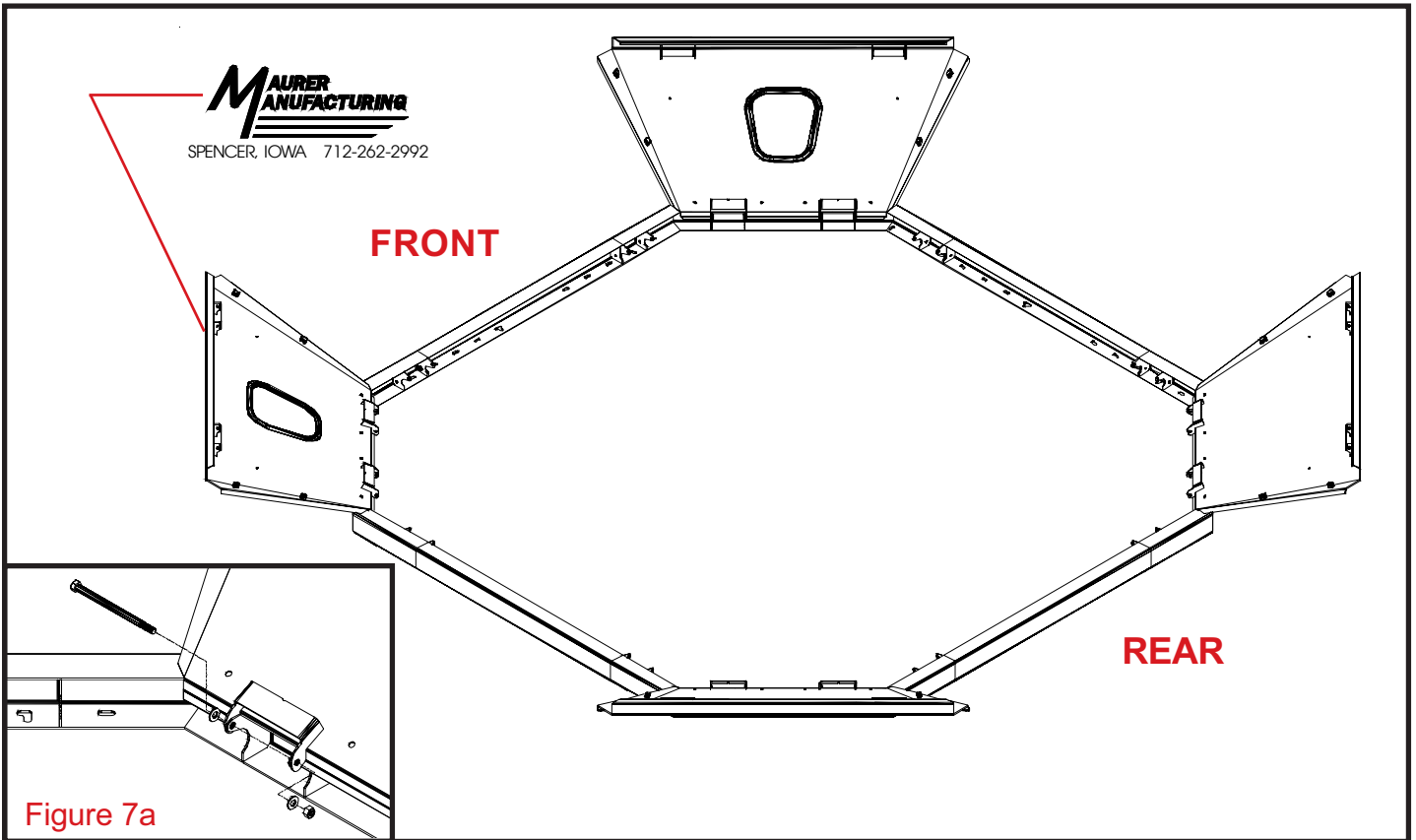


Figure 7

STEP 3:

Assemble the front, rear, and side panels the same as the corner panels. Please ensure that the panel with DANGER decal is the rear panel. This panel will also receive the safety step.

STEP 4:

Remove the partial cut slugs near the bottom of the rear panel, and fasten the safety step to the rear panel using 5/16" x 3/4" serrated flange bolts and 5/16" serrated flange nuts. When mounting, place the nuts to the inside. See figure 8.

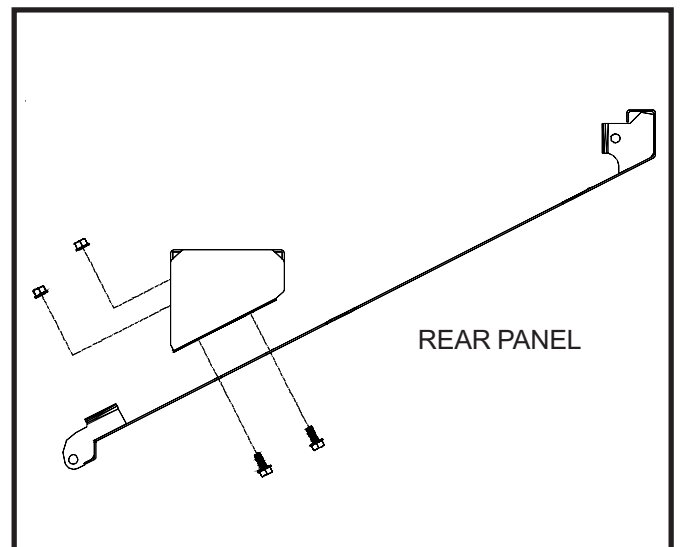


Figure 8



ATTENTION: DANGER decal must be facing the rear of the combine!

STEP 5:

Fasten the M60 additional sensor bracket to the bottom of right side panel using two 1/4" x 1" hex bolt, two 1/4"-20 center lock nuts, and four 1/4" flat washers. Factory sensor will attach to this bracket with original sensor bracket and hardware. See figures 9 and 9a.

STEP 6:

Fasten the tank full sensor bracket to the top of the right side panel using one 5/16" x 3/4" serrated flange bolt, one 5/16" serrated flange nut, and one 5/16" x 1-1/4" x .120 washer. See figure 9.

STEP 7:

Fasten the provided light bracket to the left front corner using one 5/16" x 3/4" serrated flange bolt, one 5/16" serrated flange nut, and one 5/16" x 1-1/4" x .120 washer. See figure 10.

STEP 8:

Remove the partial cut slugs from the vertical leg of the front panel, and mount the base GPS bracket using 5/16" x 3/4" serrated flange bolts and 5/16" serrated flange nuts. See figure 11. (Maurer does not provide a wire harness extension for the GPS receiver.)

STEP 9:

Align two nylon lanyards with one press rivet and fasten together. Loop and lock the ends of the lanyards around one lynch pin each. Fasten the complete assembly to the two small holes located on the corner panels. See figure 12.

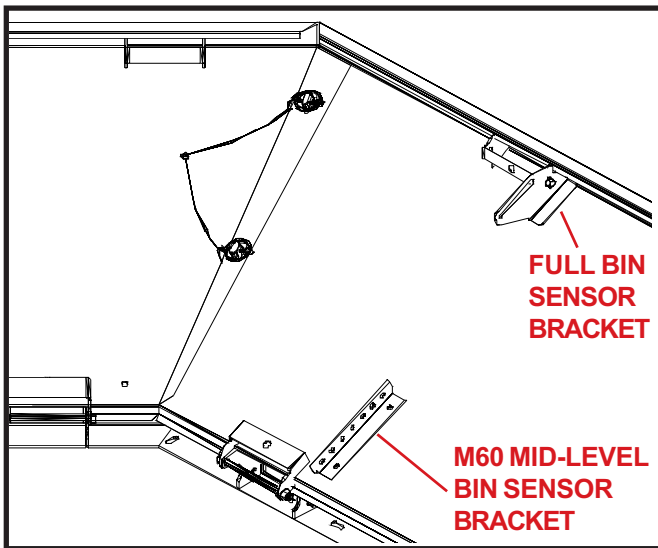


Figure 9

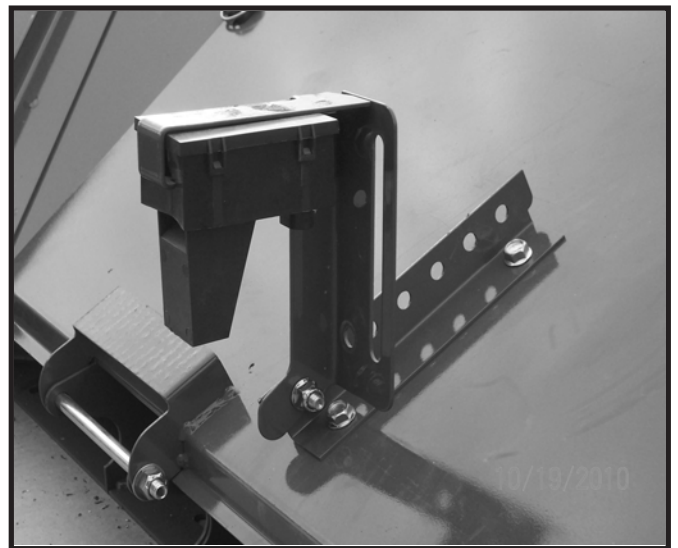


Figure 9a

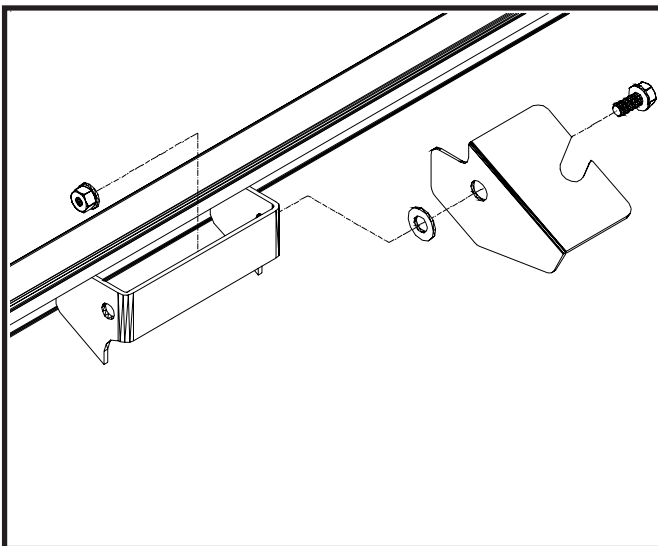


Figure 10

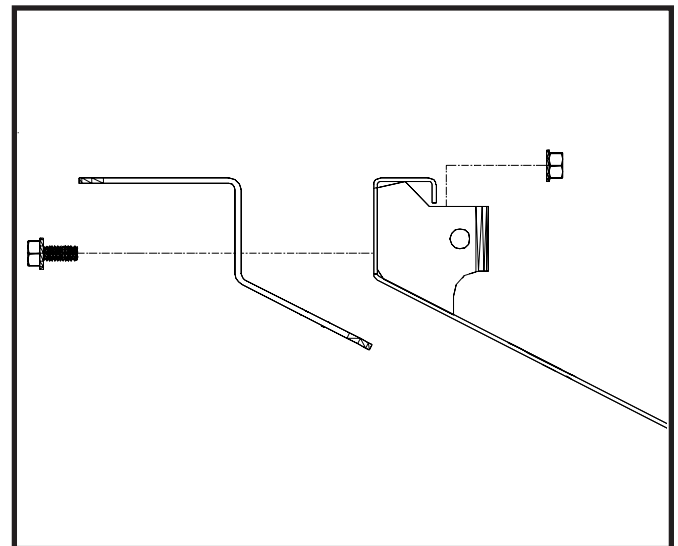


Figure 11

Completed Grain Tank Extension Assembly

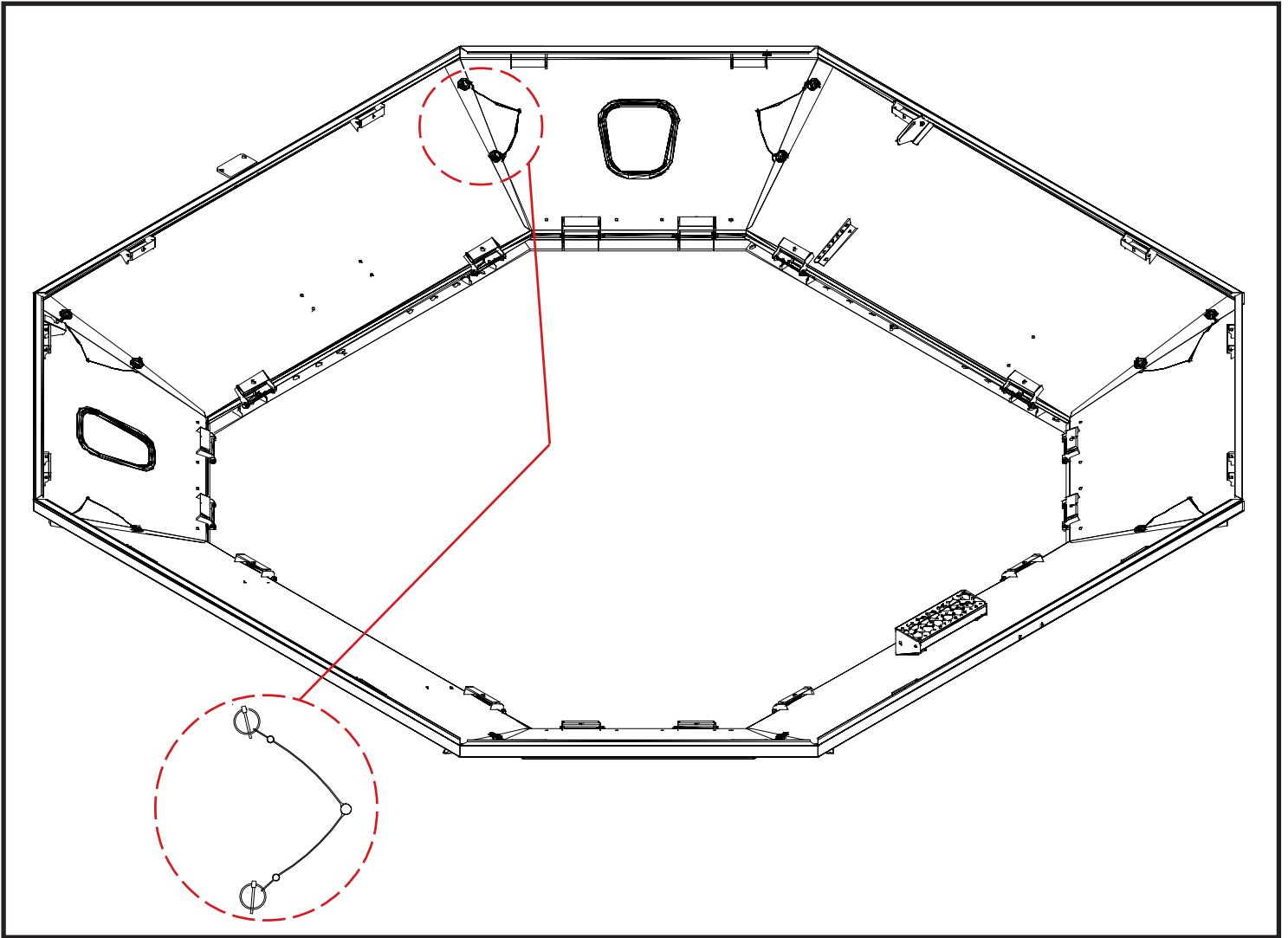


Figure 12

REMOVAL OF JOHN DEERE FACTORY BIN EXTENSIONS

1)

This bin extension is designed to fit the John Deere S660, S670, S680, and S690 combines.

2)

The factory JD (Manual Fold and Auto Fold) bin extensions must be removed from the combine before installing the Maurer bin extension.

3)

Use care when dismantling the JD extension as later in these instructions you will be required to utilize existing JD sensor & brackets, tank light, wiring, and some fasteners.

4)

If your combine came equipped with the Auto folding extension, we recommend removing all panels, panel hinges, and nylon corners.

5)

We also suggest removing the horizontal and vertical linkage arms (See figure A), (Except for the vertical arm that is attached to the clean grain auger.) that connect the panels to the rotating shafts in side of the grain tank.

6)

The rotation shafts and all linkages used to fold the clean grain auger must remain functional. This will allow factory installed safety features to function properly. See figure B.

7)

When transporting combine on road ways the clean grain auger MUST be folded down in order to allow the combine to reach maximum ground speed. The folding functionality of the clean grain auger will still be operable by using the JD bin extension menus and icons on the operator's side console screen in the cab of the combine.

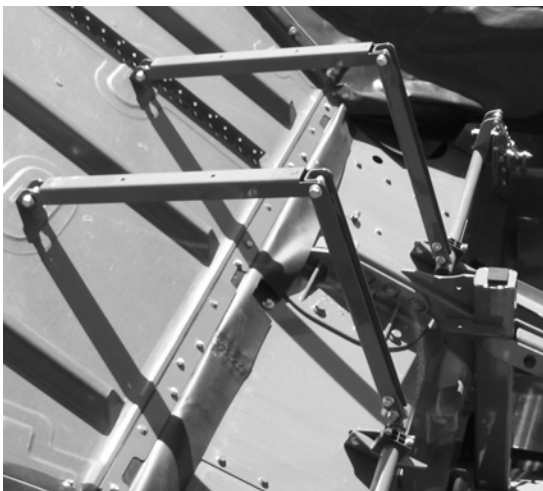


Figure A

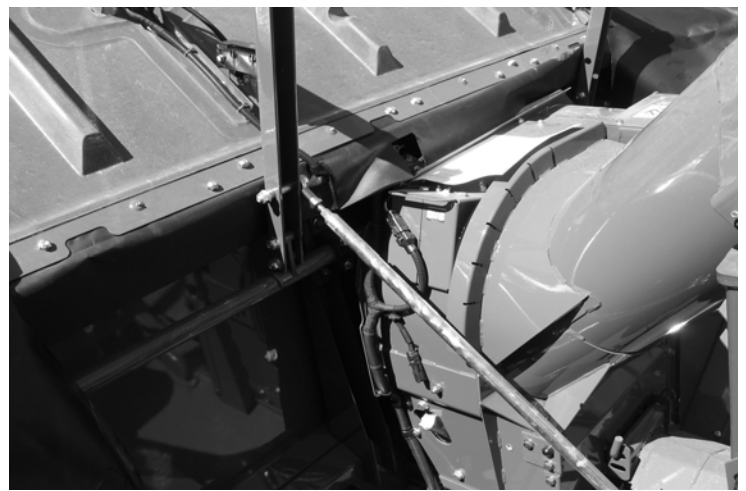


Figure B

John Deere S-Series Main Spacer Plates

Included in the Maurer S-Series (9E000032)
Bin Extension for the S660, S670, S680, S690 STS combines

PARTS LIST

REF.#	PART #	QTY.	DESCRIPTION
1.	R3E000185P0	2	Mounting Plate - Front & Rear
2.	R3E000186P0	2	Front Mounting Bracket
3.	R3E000187P0	2	Rear Mounting Bracket
4.	1AR00000073	1	Front Plastic Spacer Plate
5.	1AR00000074	1	Rear Plastic Spacer Plate
6.	1AR00000075	1	Right Plastic Spacer Plate
7.	1AR00000016	1	Left Plastic Spacer Plate
8.	1AFC37EAAH5	11	5/16" x 1-1/2 Serrated Flange Bolt
9.	1AFC37E00L0	4	5/16" x 3/4" Serrated Flange Bolt
10.	1AFC08E0000	15	5/16" Serrated Flange Nut
11.	R3E000021P0	6	Frame Spacer

Please order replacement parts by PART NO. and DESCRIPTION.

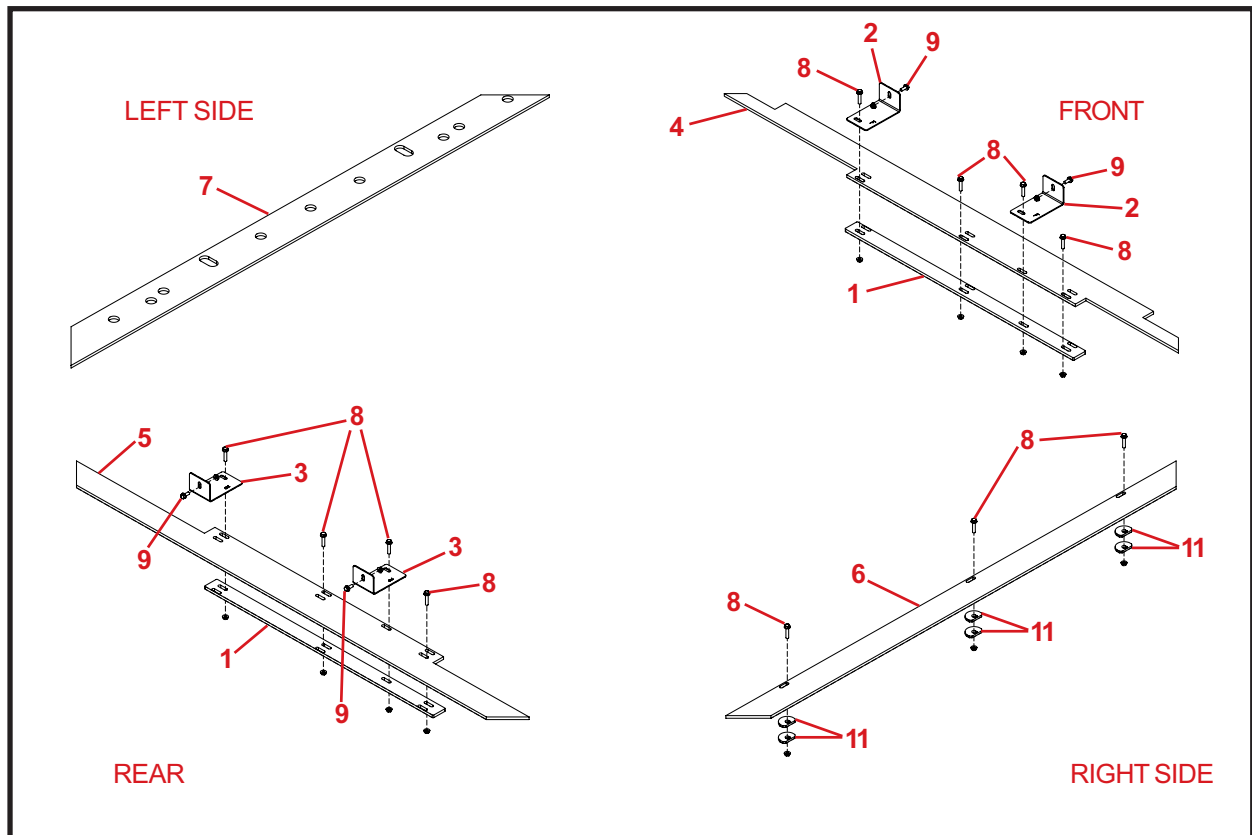


Figure 13

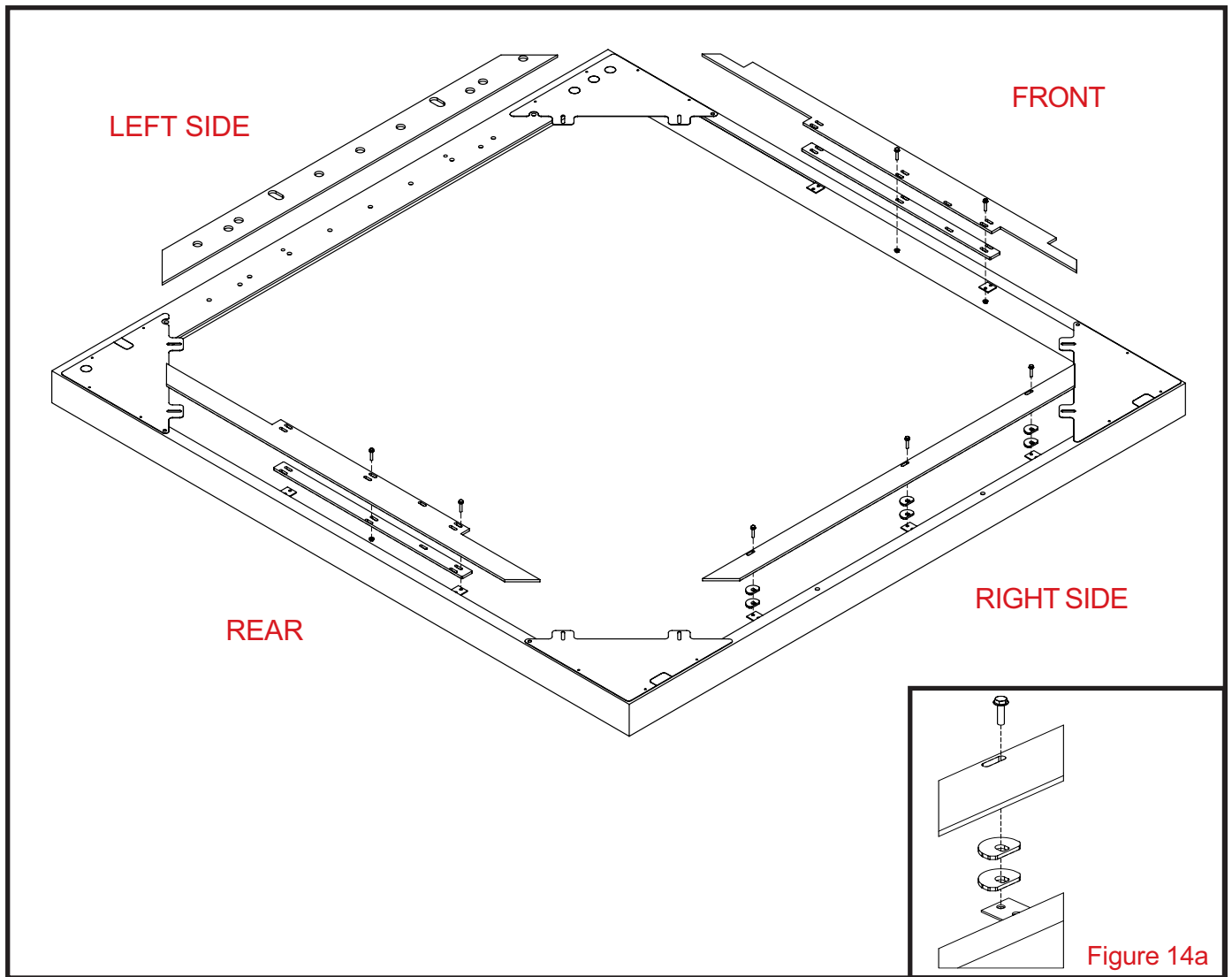


Figure 14

STEP 1:

Place front mounting plate on top of the two existing JD brackets located at the front of the combine tank. Align the holes of the front plastic spacer plate with the mounting plate, and existing JD bracket holes. Fasten these parts together with the 5/16" x 1-1/2" serrated flange bolts, and 5/16" serrated flange nuts. See Figure 14.

STEP 2:

Place rear mounting plate on top of the two existing JD brackets located at the rear of the combine tank. Align the holes of the rear plastic spacer plate with the mounting plate, and existing JD bracket holes. Fasten these parts together with the 5/16" x 1-1/2" serrated flange bolts, and 5/16" serrated flange nuts. See Figure 14.

STEP 3:

Place left plastic spacer plate, over the bolt heads extending above the combine tank on the left side of the tank.

STEP 4:

Position a frame spacer on each of the three existing JD brackets located on the right side of the combine tank. Align the holes of the right plastic spacer plate with the frame spacer, and the existing JD bracket holes. See Figure 14a. Fasten these parts together with 5/16" x 1-1/2" serrated flange bolts, and 5/16" serrated flange nuts.

STEP 5:

Place the Maurer bin extension frame or complete extension on top of the plastic spacer plates. See Figure 15. Fasten the front mounting brackets to the inside of the extension frame using the 5/16" x 3/4" serrated flange bolts and 5/16" serrated flange nuts. Notice that the front mounting bracket is designated with the letter "F".

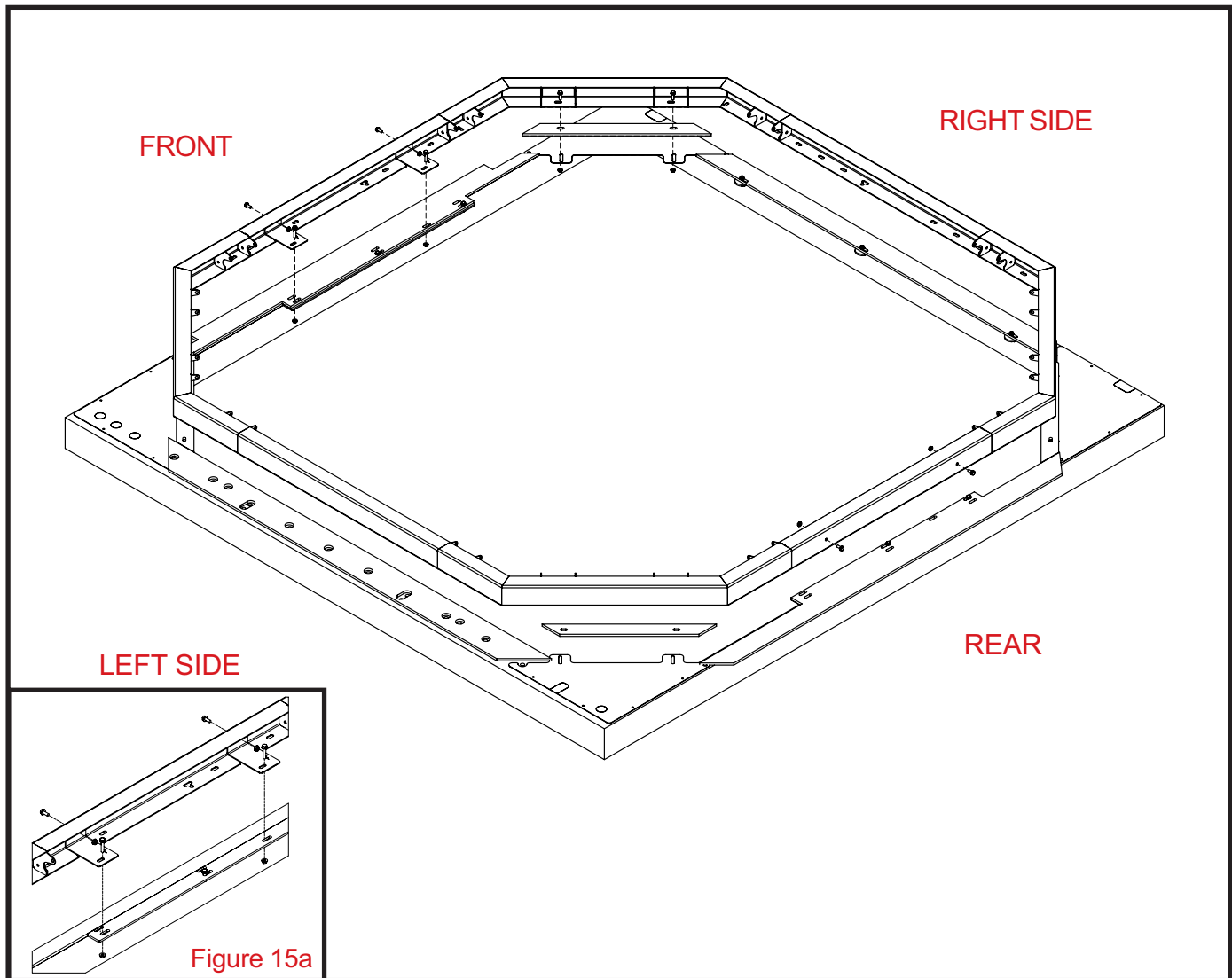


Figure 15

STEP 6:

Fasten the rear mounting brackets to the inside of the extension frame using the 5/16" x 3/4" serrated flange bolts and 5/16" serrated flange nuts. Notice that the rear mounting bracket is designated with the letter "R".

STEP 7:

Align the holes of the mounting brackets, with holes in the previously installed plastics spacer plates and mounting plates. Fasten these parts together with 5/16" x 1-1/2" serrated flange bolts and 5/16" serrated flange nuts. See Figure 15a. Complete this step in the front and rear of the combine tank.

STEP 8:

Locate the plastic corner strips, flange nuts, and flange bolts listed on page 16 and shown in Figures 16 & 17. Place these parts at the appropriate corners of the combine tank. See Figure 16.

STEP 9:

Start at the left front corner. Place part 1AR0000077 under the left frame corner and on top of the left front tank cap. Fasten these three parts together with two of the 5/16" x 1" serrated flange bolts and two of the 5/16" serrated flange nuts. See Figure 17.

STEP 10:

Install the three remaining corner filler strips as indicated in Step 9. Reference Figures 16, 17, & 18.

John Deere S-series Corner Spacer Plates

Included in the Maurer S-series (9E000032) Bin Extension
for the S660, S670, S680, S690 STS combines

PARTS LIST

REF.#	PART #	QTY.	DESCRIPTION	LENGTH
1.	1AR00000076	1	Right Front Corner - Plastic Spacer	26.813"
2.	1AR00000077	1	Left Front Corner - Plastic Spacer	24.563"
3.	1AR00000078	1	Right Rear Corner - Plastic Spacer	27.000"
4.	1AR00000079	1	Left Rear Corner - Plastic Spacer	24.750"
5.	1AFC37EAA05	8	5/16" x 1" Serrated Flange Bolt	
6.	1AFC08E0000	8	5/16" Serrated Flange Nut	

Please order replacement parts by PART NO. and DESCRIPTION.

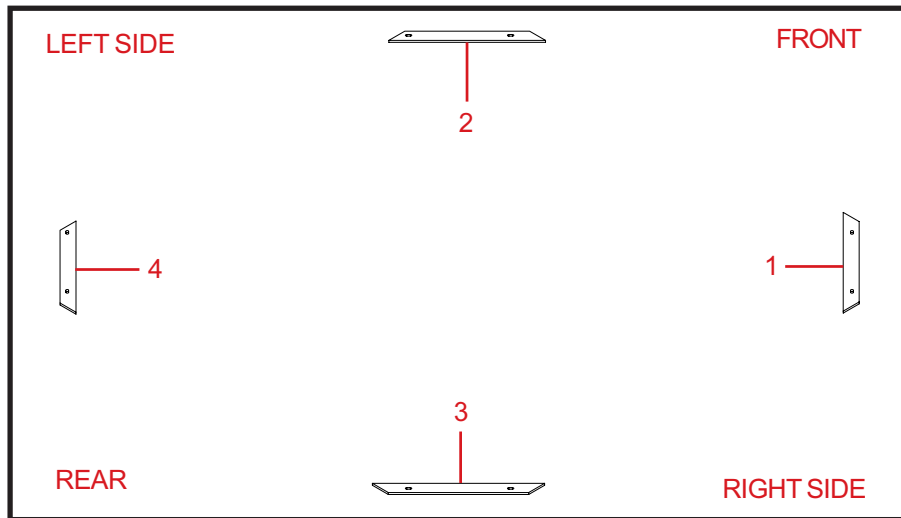


Figure 16

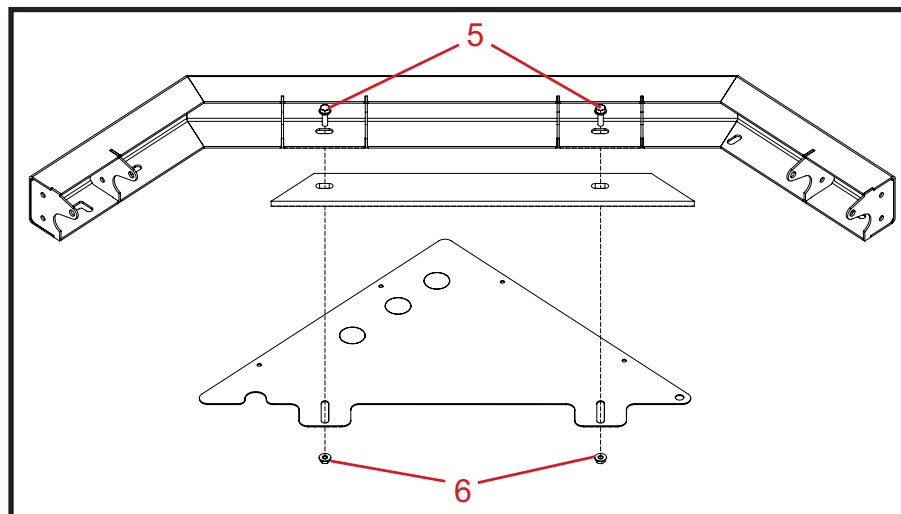


Figure 17

INSTALLATION OF TANK CAPS & PLASTIC SPACERS

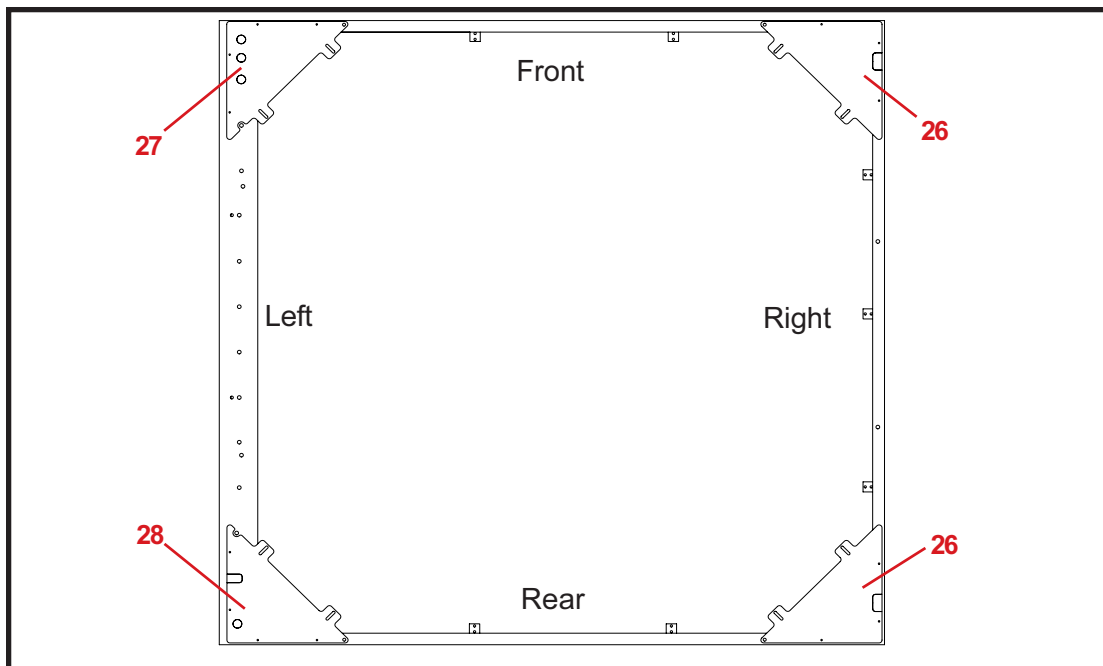


Figure 18

STEP 1:

Layout the Tank Caps according to figure 18.

STEP 2:

Layout Corner Plastic Spacers according to figure 16.

STEP 3:

Fasten Tank Caps and Spacers to the extension frame corners using 5/16" x 1" serrated bolts and nuts. (Tabs will be on the underside of the frame) See figure 17.

STEP 4:

Complete by screwing the Tank Caps to the outer rim of the tank with #12 x 1" self tapping screws.

SENSOR AND LIGHT WIRING

STEP 1:

Mount the OEM light to the previously mounted light bracket on the left front corner. Fasten with the original hardware. Clip and extend the wiring for the grain tank light, including ground wire. (Maurer does not provide a wire harness extension for the grain tank light.)

STEP 2:

Mount the tank full sensor to the slot in the sensor bracket located on the right front corner using the original hardware. Use the provided wire harness to connect the sensor to the OEM wiring.

Corner Filler Angle Installation Instructions

STEP 1:

Locate the right rear corner of your Maurer Bin Extension. Identify the gap located under the tank cap in that corner. See figure 20.

STEP 2:

From inside the tank use the filler angle to cover the gap with the non-slotted leg flush with the corner tube of the combine tank. The slotted leg should be pointed to the inside of the tank.

STEP 3:

Remove slot knock-outs on the tank cap and use the 5/16" x 3/4" flange bolts and 5/16" flange nuts provided to mount the filler angle to the tank cap. See figure 21.

PARTS LIST

REF.#	PART #	QTY.	DESCRIPTION
1.	1AFC08E0000	2	5/16" Flange Bolt
2.	1AFC37E00L0	2	5/16" x 3/4" Flange Bolt
3.	R3E000215PO	1	RR Corner Fill Angle

Please order replacement parts by **PART NO.** and **DESCRIPTION.**

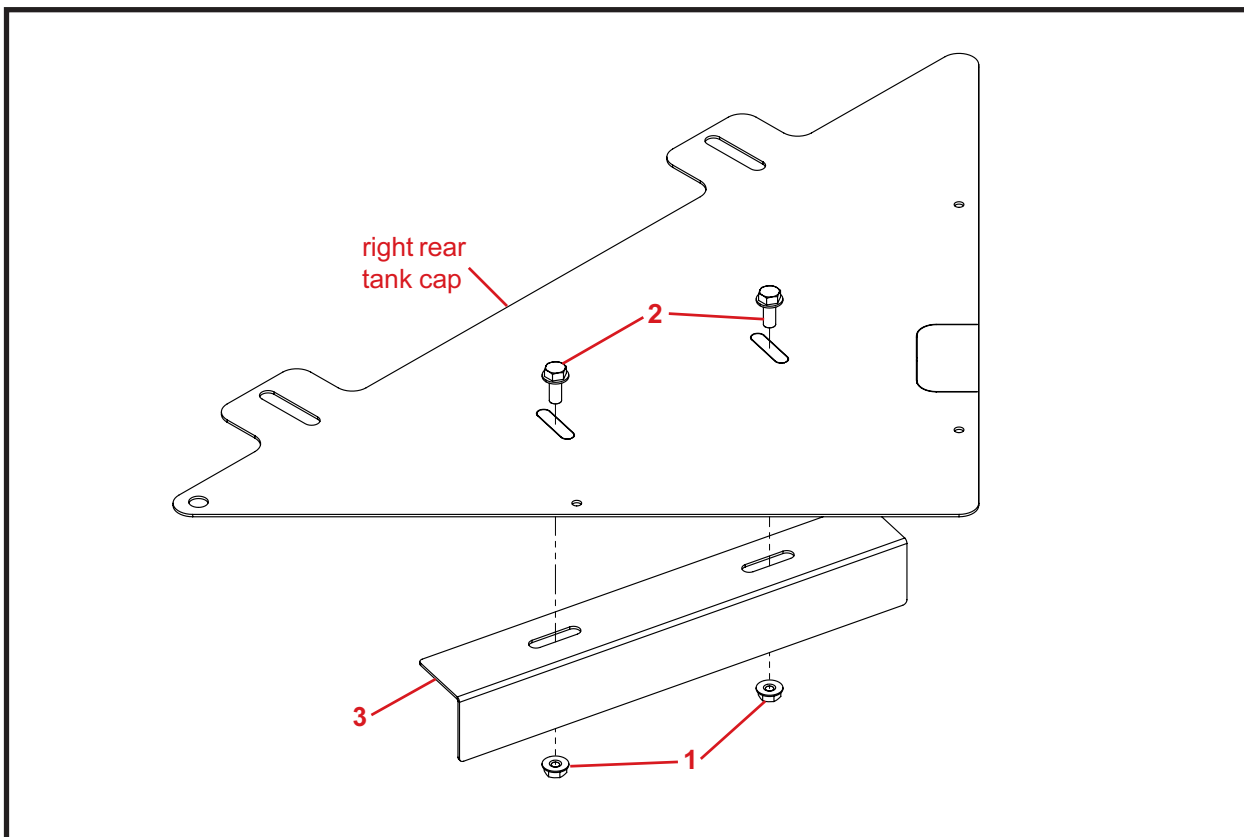


Figure 19

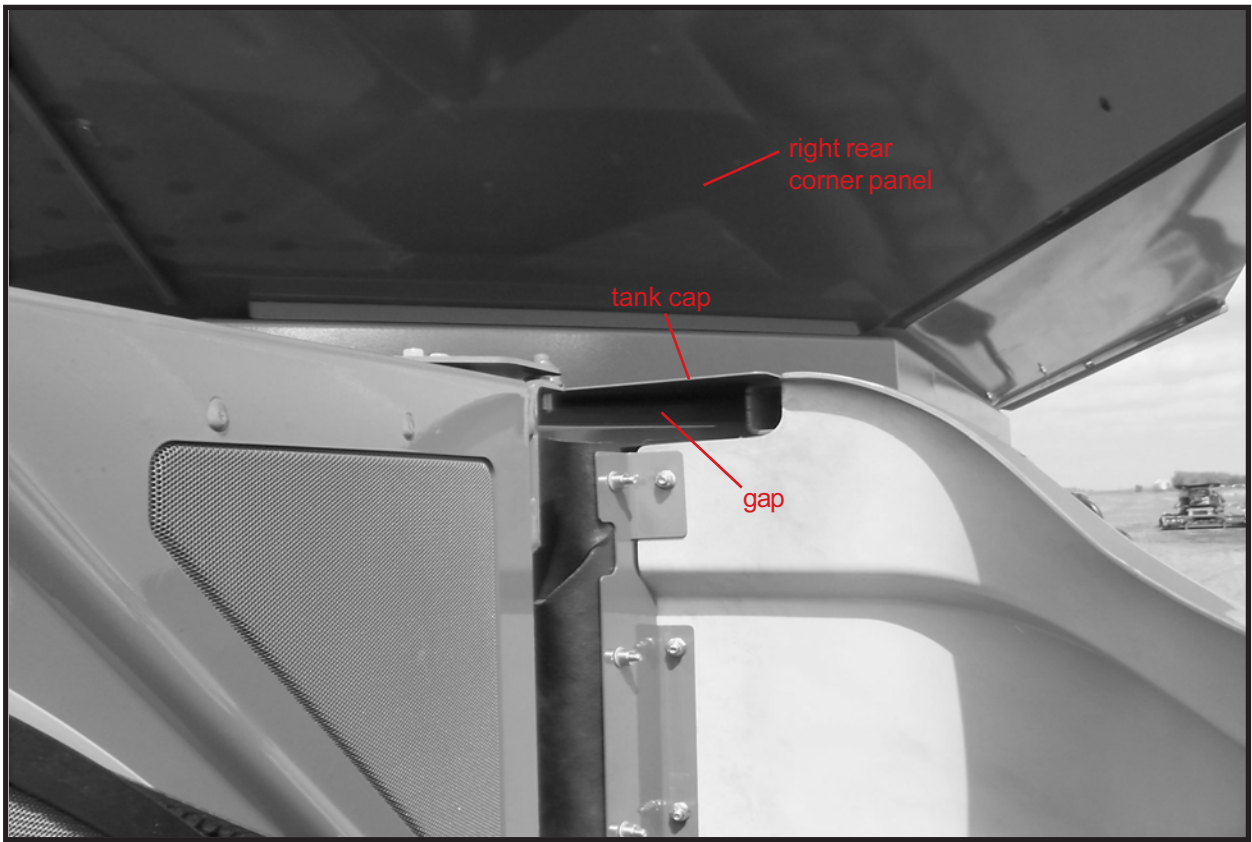


Figure 20

Outside of combine tank

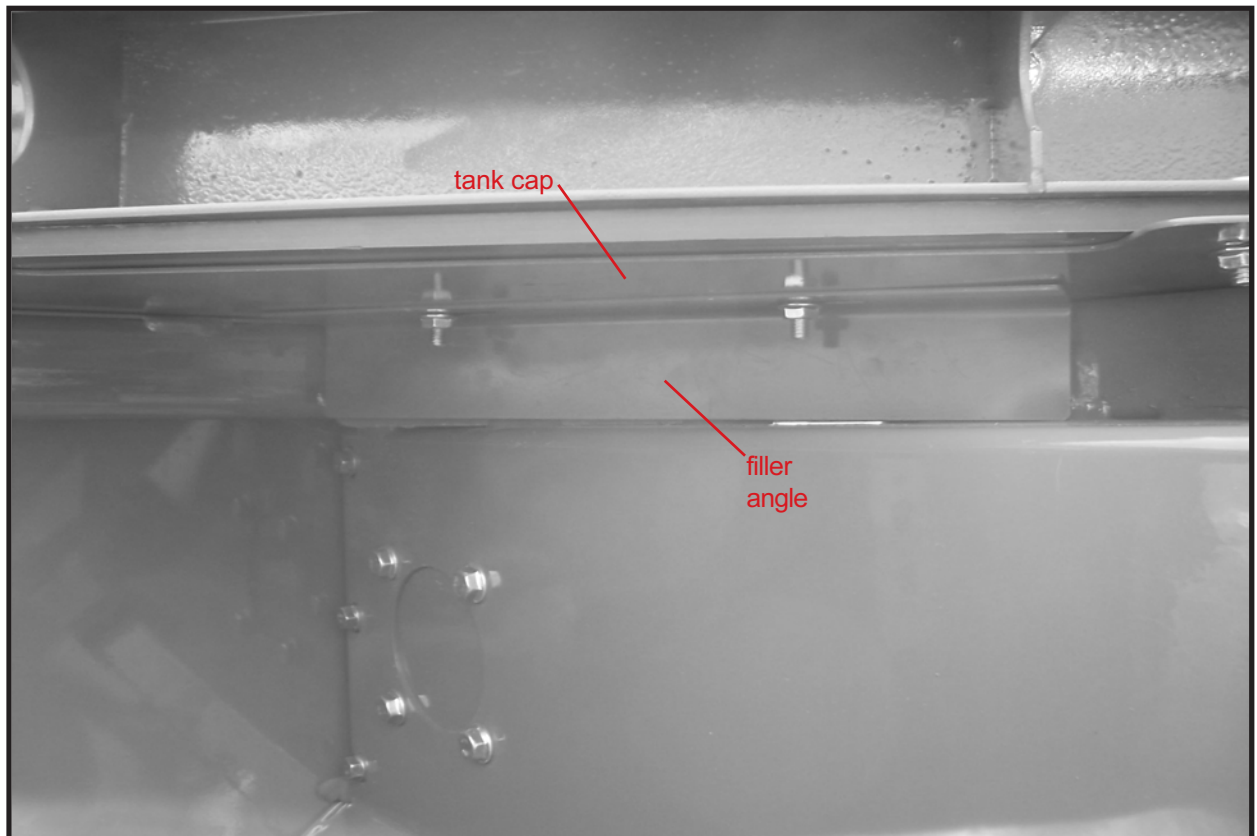


Figure 21

Inside of combine tank

