



SS90™ HD TMA

(SS90™ HD FRAME TO SS90™ PUMP)

PUMP CONVERSION INSTRUCTIONAL MANUAL

PN 620207

REVISION B FEBRUARY 2023

SS90TMHD TMA

Product Bulletin

Pump Conversion (SS90TMHD Frame to SS90TM Pump)

Instructional Manual



15601 Dallas Parkway
Suite 525
Addison, Texas 75001



Important: These instructions are to be used only in conjunction with the assembly, maintenance, and repair of the SS90TMHD TMA. These instructions are for standard assemblies specified by the appropriate highway authority only. In the event the specified system assembly, maintenance, or repair would require a deviation from standard assembly parameters, contact the appropriate highway authority engineer. This system has been accepted by the Federal Highway Administration for use on the national highway system under strict criteria utilized by that agency. Valtir representatives are available for consultation if required.

This Manual must be available to the worker overseeing and/or assembling the product at all times. For additional copies, contact Valtir at (888) 323-6374 or download from websites below.

Customer Service Contacts

Valtir is committed to the highest level of customer service. Feedback regarding the SS90™ HD TMA system, its assembly procedures, supporting documentation, and performance is always welcome. Additional information can be obtained from the contact information below:

Valtir:

Telephone:	(888) 323-6374 (USA) (214) 589-8140 (International)
E-mail:	www.Valtir.com/Contact
Internet:	www.Valtir.com

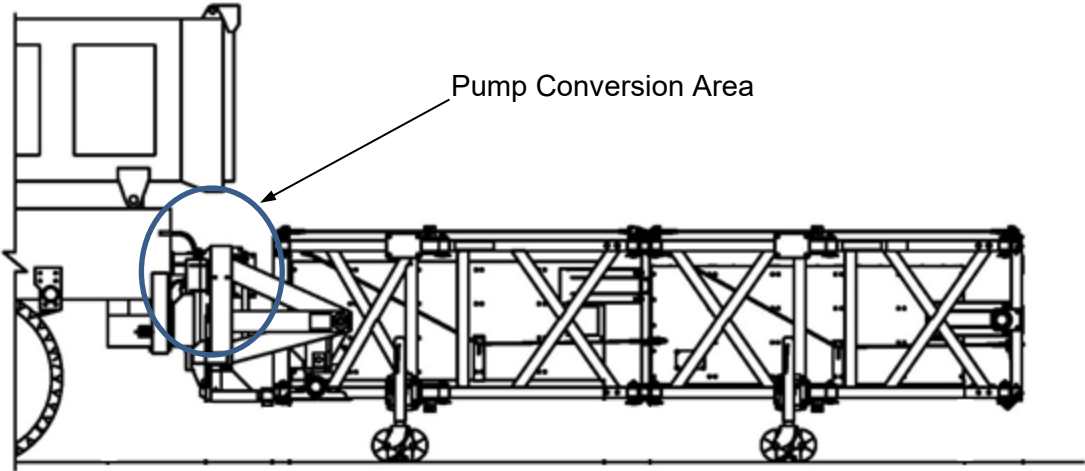


Figure 1

Pump Conversion Instructions

- 1) Measure, mark, and drill $\varnothing 3/8"$ (2) holes on the Support Backup.

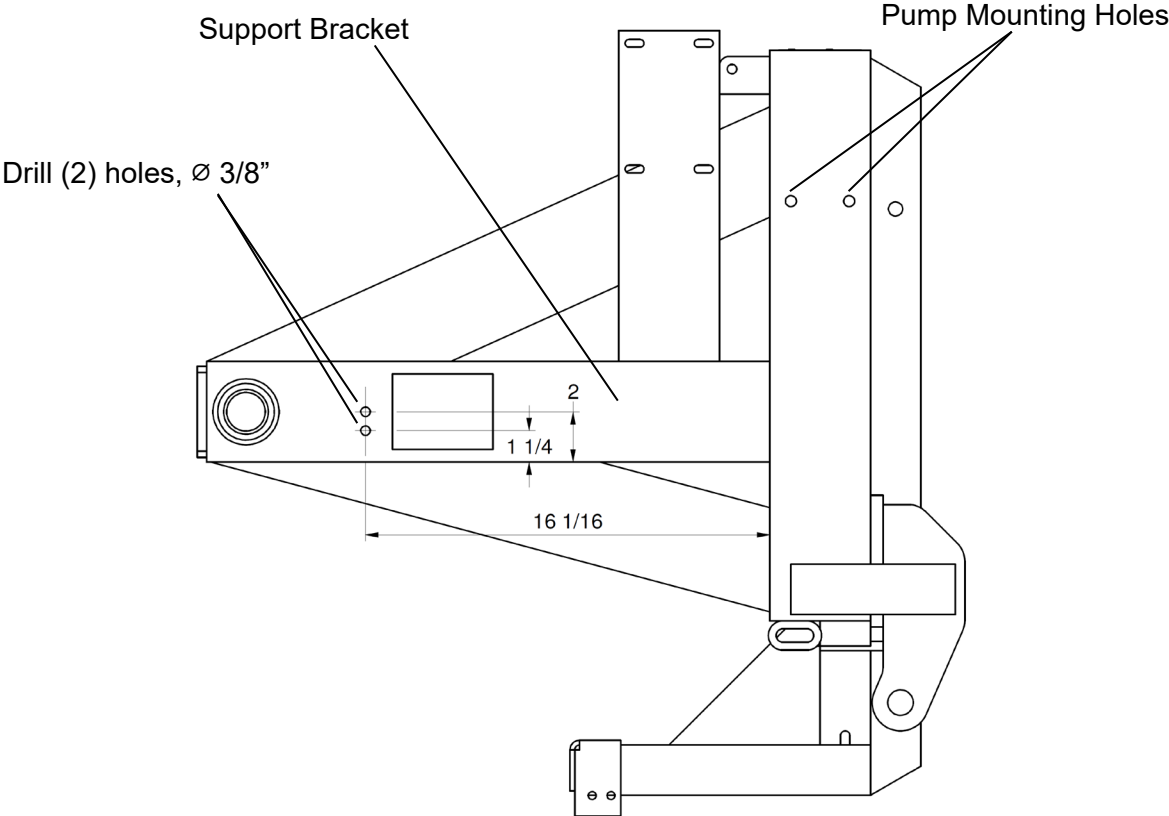


Figure 2

2) Measure, mark, and drill $\varnothing 3/8$ " (2) holes on the Front Frame.

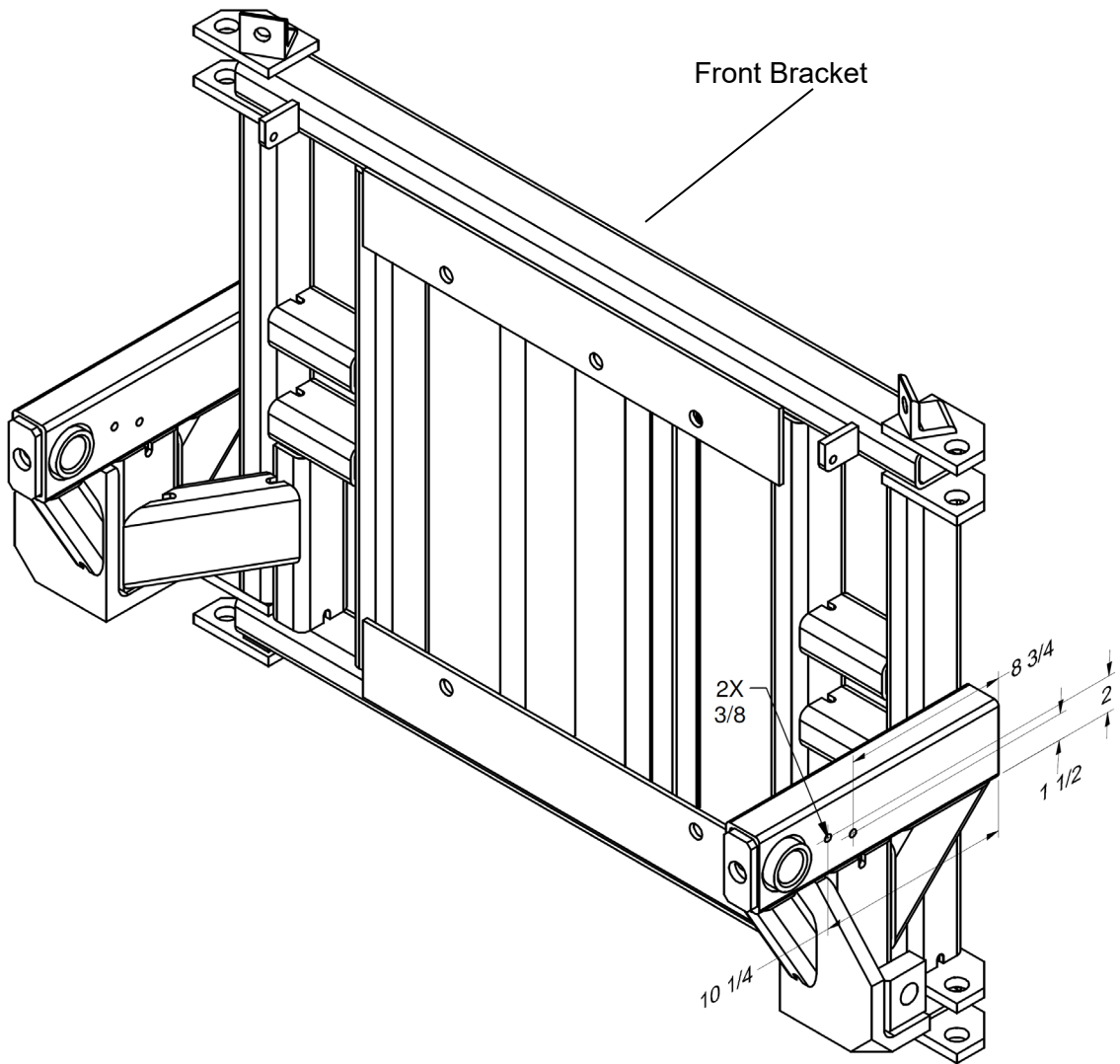


Figure 3

- 3) Mount Pump Adapter Bracket to SS90™HD Pump mounting holes (See Figure 1).
- 4) Mount Pump to Adapter Bracket using existing hardware.

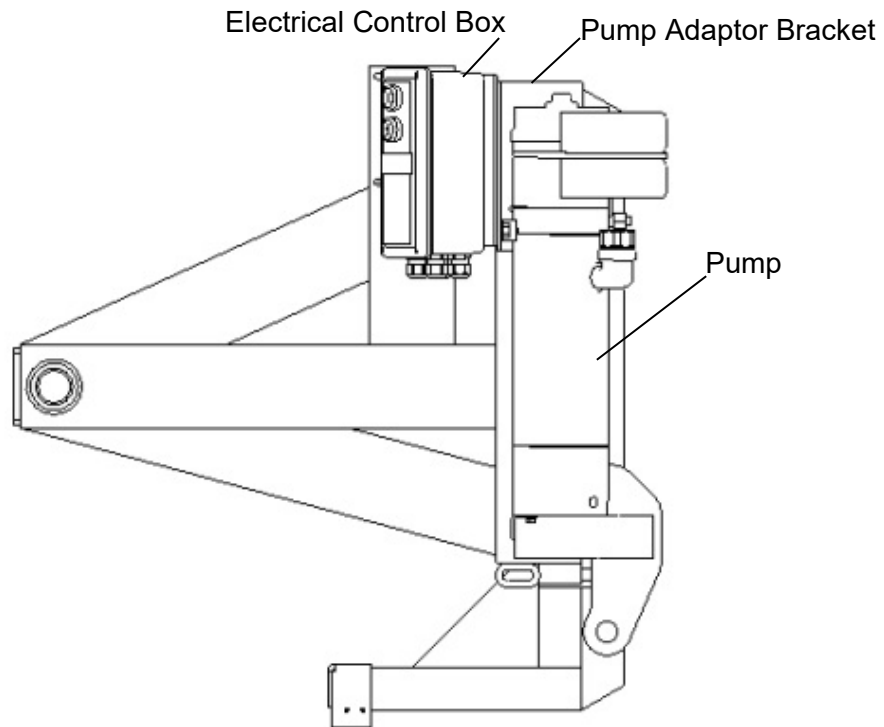


Figure 4

- 5) Mount Electrical Controller Box to Adapter Bracket using existing Bracket and hardware on Electrical Box.

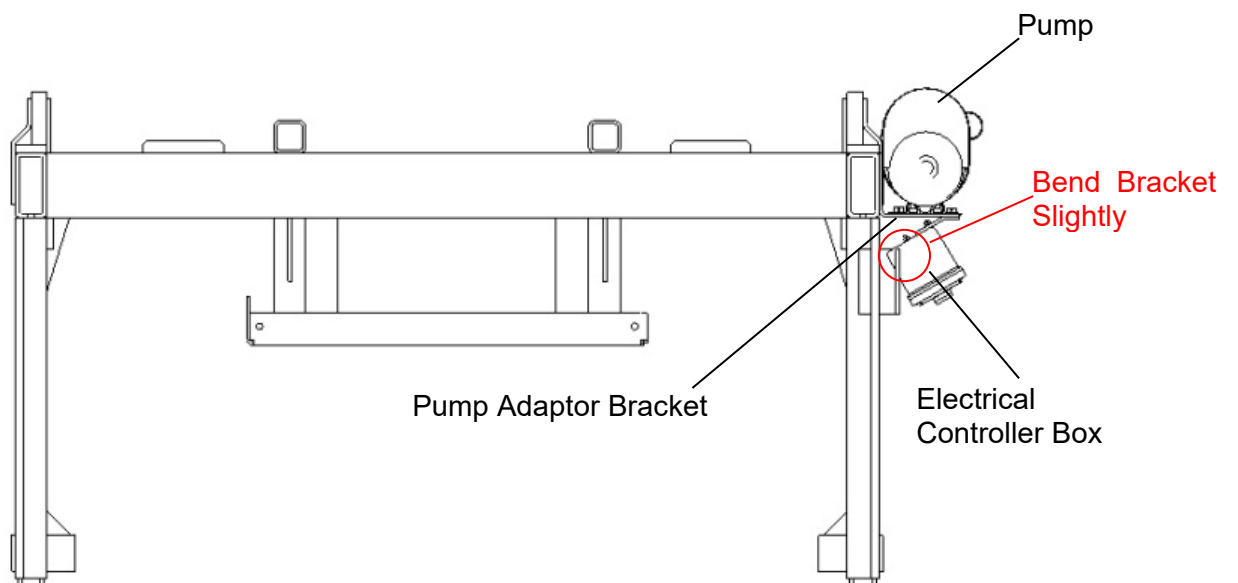


Figure 5

6) Reconnect hydraulic hoses and wiring.

Bend Bracket Slightly

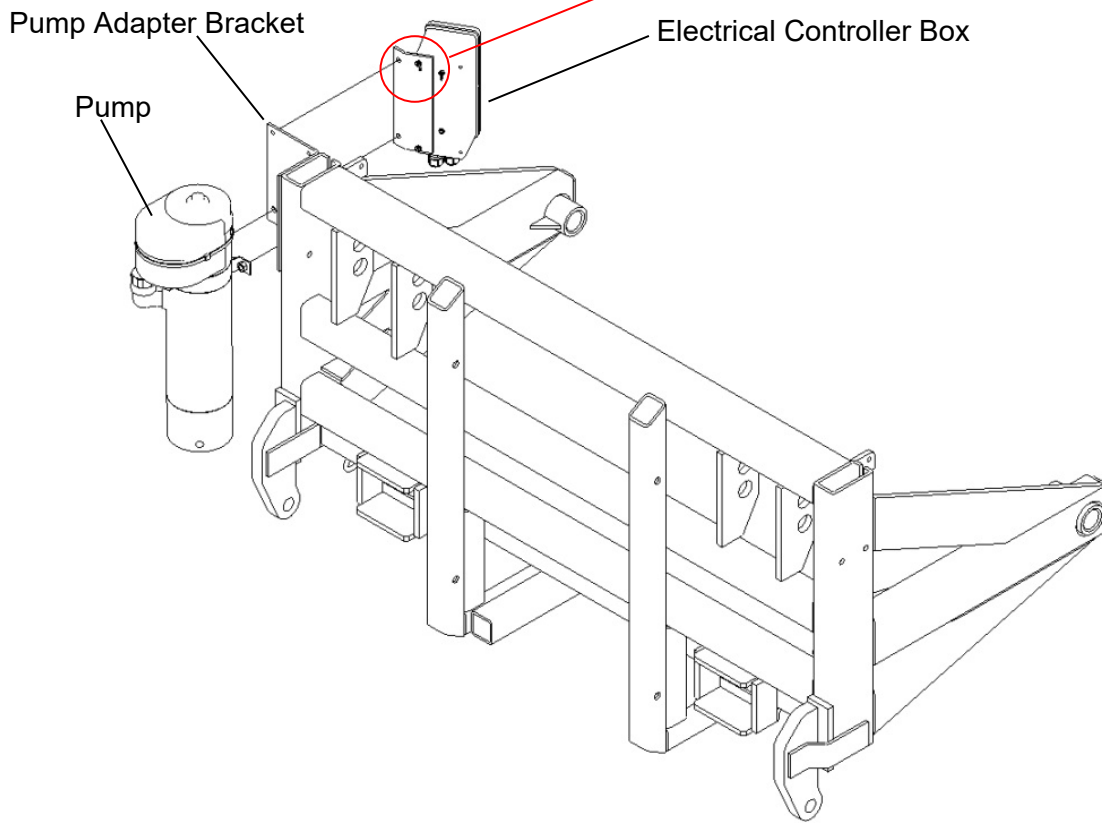


Figure 6

7) Adjust Proximity Actuator as described on drawing 620234B.

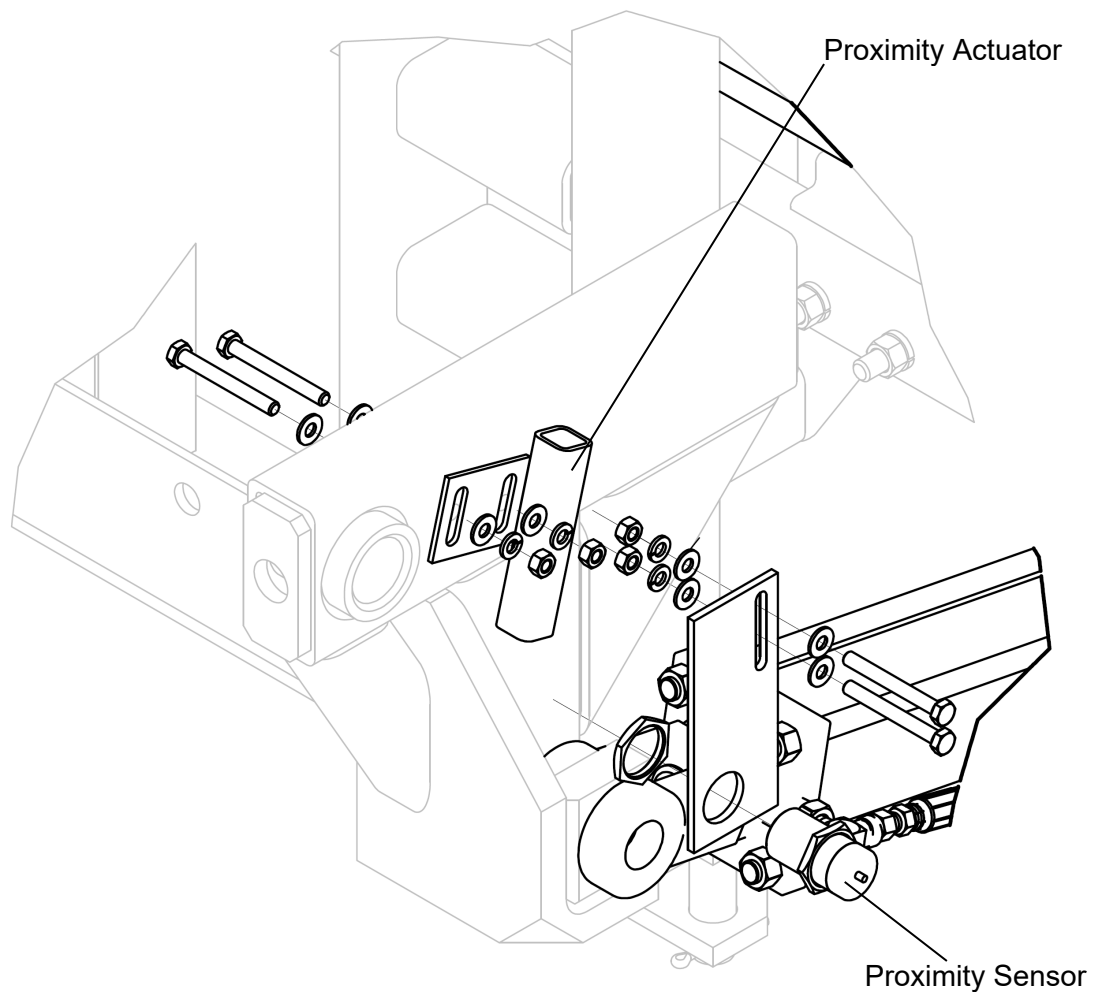
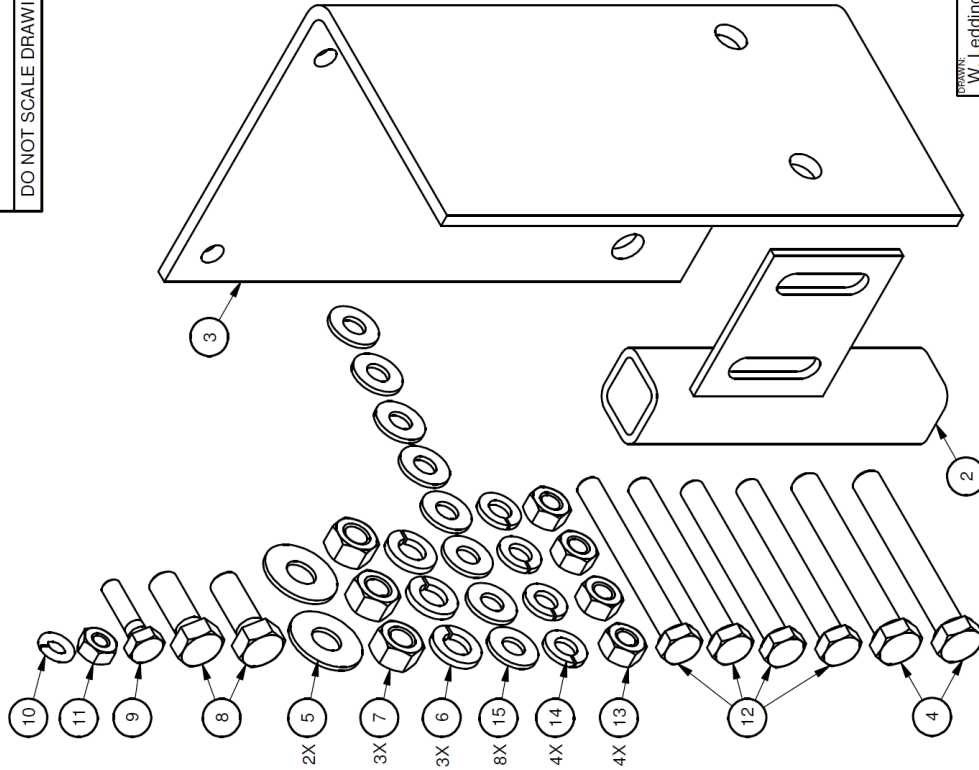


Figure 7

TOLERANCES PER EAS-SF-001, UNLESS OTHERWISE SPECIFIED.		PARTS LIST		
ITEM	STOCK NO.	DESCRIPTION	QTY.	
1	620207B	INSTRUCTIONS,PUMP KIT	1	
2	620205W	ACTUATOR,PROXIMITY SENSOR,PT	1	
3	620206W	BRACKET,ADAPTER,PUMP,PT	1	
4	118511G	BOLT,HX,3/8X2 3/4,G5,P	2	
5	118037G	WASHER,FLAT,3/8X1,P	2	
6	118093G	WASHER,LOCK,3/8,P	3	
7	115963G	NUT,HX,3/8,P	3	
8	113598G	BOLT,HX,3/8X1 G5,P	2	
9	113509G	BOLT,HX,1/4X1 G5,P	1	
10	118086G	WASHER,LOCK,1/4,P	1	
11	115947G	NUT,HX,1/4,P	1	
12	113645G	BOLT,HX,5/16X2 3/4,G5,P	4	
13	115968G	NUT,HX,5/16,P	4	
14	118098G	WASHER,LOCK,5/16,P	4	
15	118045G	WASHER,FLAT,5/16 X 11/16,P	8	

DO NOT SCALE DRAWING



NOTE:
SEE 620207 FOR PROPER INSTRUCTIONS.

DRAWN: W. Leddington		DATE: 11/6/2012	PART NO. 620208B		4.77 lbmass
DESIGNED: R. Brougher		DATE: 11/2/2012			
CHECKED: J. Espinoza		DATE: 11/8/2012			
APPROVED: R. Brougher		DATE: 11/8/2012			
UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE IN INCHES. DIMENSIONS ACCORDING TO ASME Y14.5M-1994 UNLESS OTHERWISE SPECIFIED.					
Revision	ECO	Date	Rev	By	Chk.
KIT,SS90HD FRAME W/ SS90 PUMP & ELECTRICAL CONTROLS			DRAWING: 620208		
			SHEET 1 of 1		

DWG 620208

Safe-Stop TMA Proximity Sensor Adjustment Procedure

CAUTION!

To ensure that the TMA does not pinch the hands, arms, or other parts of the body, always perform adjustment of the proximity sensor with the TMA in the 0° or fully down position.
Never reach into a moving TMA to make adjustments to hardware!

1. To be able to properly adjust the proximity sensor, the Safe-Stop TMA needs to be attached to its support vehicle and the support vehicle needs to be parked on a level surface. Check that the TMA is mounted per the installation instructions, that it is level, and that it is adjusted to the proper height of the ground.
2. Install parts as shown in Fig. 1.
3. Install the sensor by removing the first nut and slipping the sensor through the opening in the sensor support face first as shown in Fig. 1. The cable should be pointing to the outside of the TMA. Reinstall the nut that was just removed so the two nuts sandwich the sensor support (item 5).
4. The TMA needs to be in the fully down, or 0° position, to adjust the proximity sensor. To verify that the system is all the way down, raise it 20°, or so, and let it bleed down, without pressing the "down" button. Once it has stopped moving, quickly depress the "down" button, once or twice to verify that the system is completely down.
5. To properly adjust the sensing distance, the position of the front support frame on the backup support frame will have to be inspected. There is between 1/16" and 3/8" of side-to-side movement possible in the Safe-Stop TMA. Inspect the gaps at the pivot of the frame as shown in Fig. 3 on the quarter inch (see DETAIL B). If the gap on the sensor side of the TMA is larger, make the sensing distance larger. If the gap on the sensor side of the TMA is smaller, make the sensing distance smaller.
6. Adjust the actuator location by sliding the support up or down. The sensor should be located just below the bottom of the actuator as shown in Fig. 2. Tighten the support bolts and the nuts holding the actuator. The installer may place a small amount of Loctite 222 or 242 on the sensor nuts to prevent movement if desired.

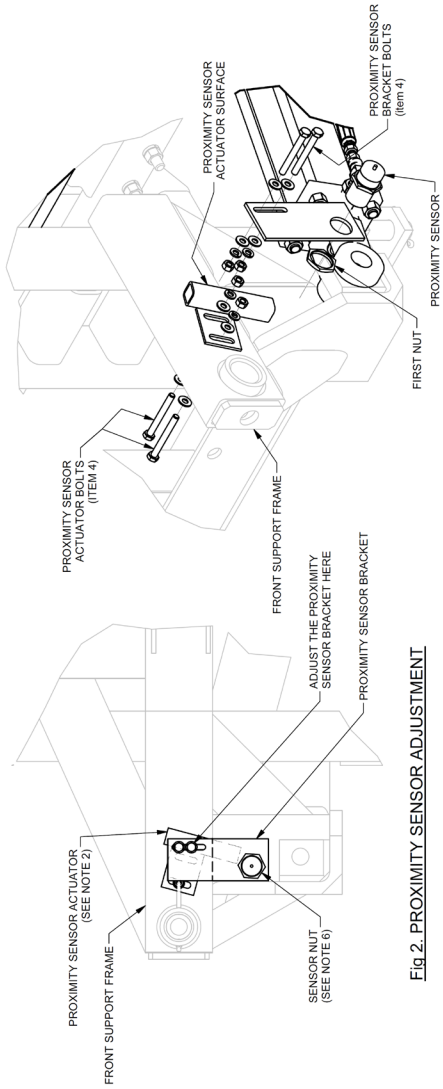


Fig. 1. PROXIMITY SENSOR ASSEMBLY

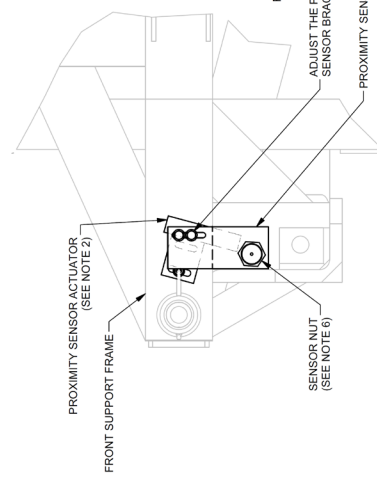
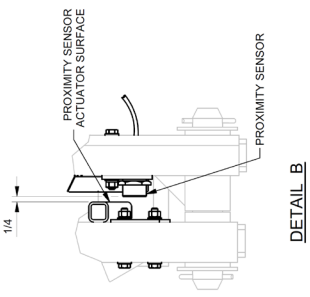


Fig. 2. PROXIMITY SENSOR ADJUSTMENT



DETAIL B

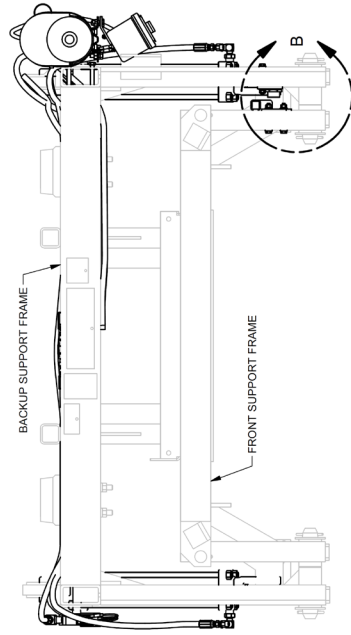
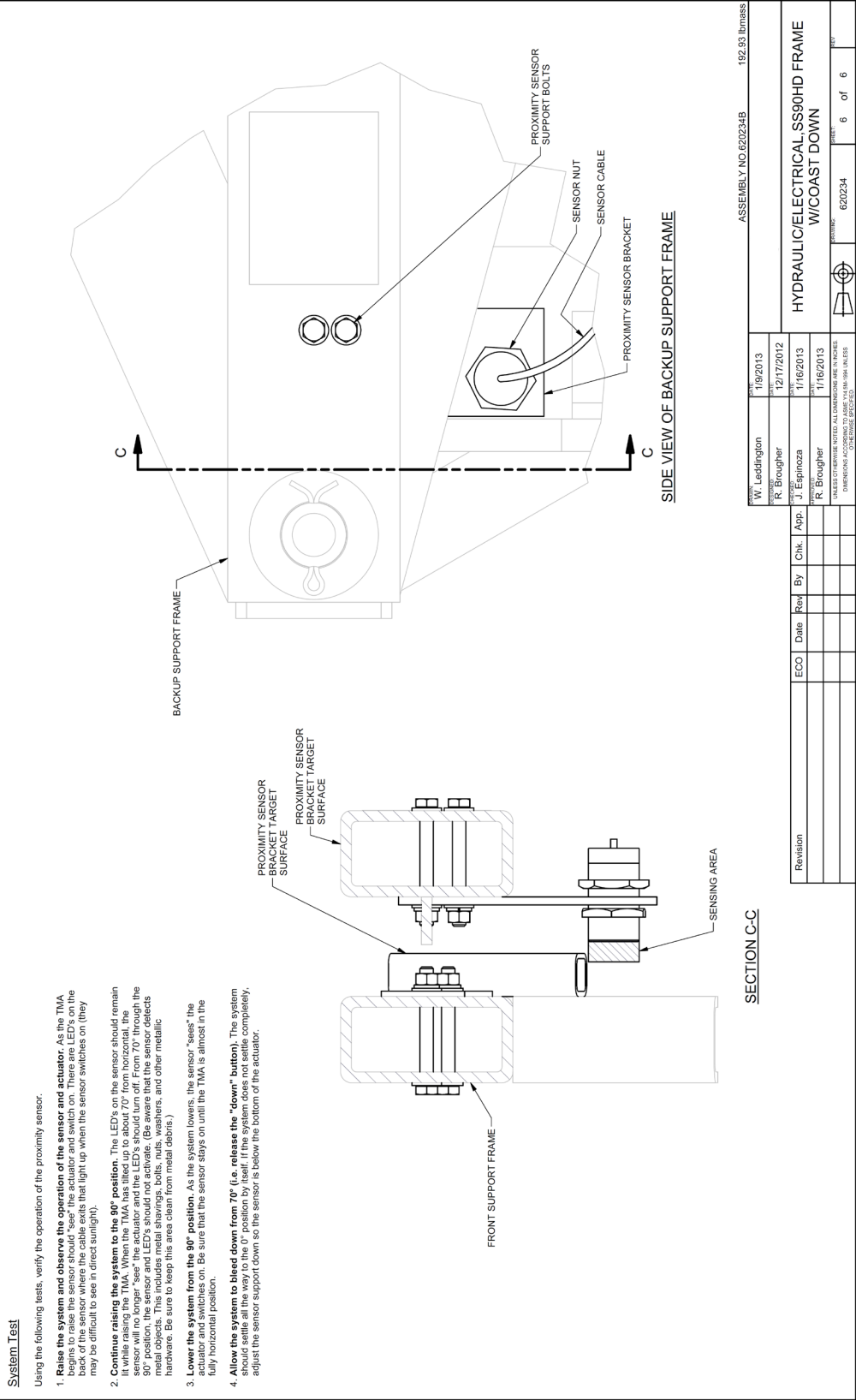


Fig. 3. TOP VIEW OF BACKUP & FRONT SUPPORT FRAME

ASSEMBLY NO. 620234B		192.93 lbmass	
DESIGNED BY	DATE	DESIGNED BY	DATE
W. Laddington	1/9/2013	R. Brougher	12/17/2012
REVIEWED BY	DATE	REVIEWED BY	DATE
J. Espinoza	1/16/2013	R. Brougher	1/16/2013
UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN INCHES			
DIMENSIONS FOR UNIFORMITY ARE IN PARENTHESIS			
HYDRAULIC/ELECTRICAL SS90HD FRAME W/COAST DOWN		FIG. NO.	6 of 6
620234		REV.	

Revision	ECCO	Date	Rev	By	Chk.	App.



DESIGNER	W. Leaddington	DATE	1/9/2013
CHECKER	R. Blougher	DATE	12/17/2012
APPROVER	J. Espinoza	DATE	1/16/2013
DATE	1/16/2013		

UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN INCHES
DIMENSIONS IN PARENTHESES ARE APPROXIMATE

Revision	ECO	Date	Rev	By	Chk.	App.

ASSEMBLY NO. 620234B	192.93 lbmss
HYDRAULIC/ELECTRICAL SS90HD FRAME W/COAST DOWN	
620234	6 of 6

DWG 620234 Sheet 6 of 6



For more complete information on Valtir products and services, visit us on the web at www.valtir.com. Materials and specifications are subject to change without notice. Please contact Valtir to confirm that you are referring to the most current instructions.

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