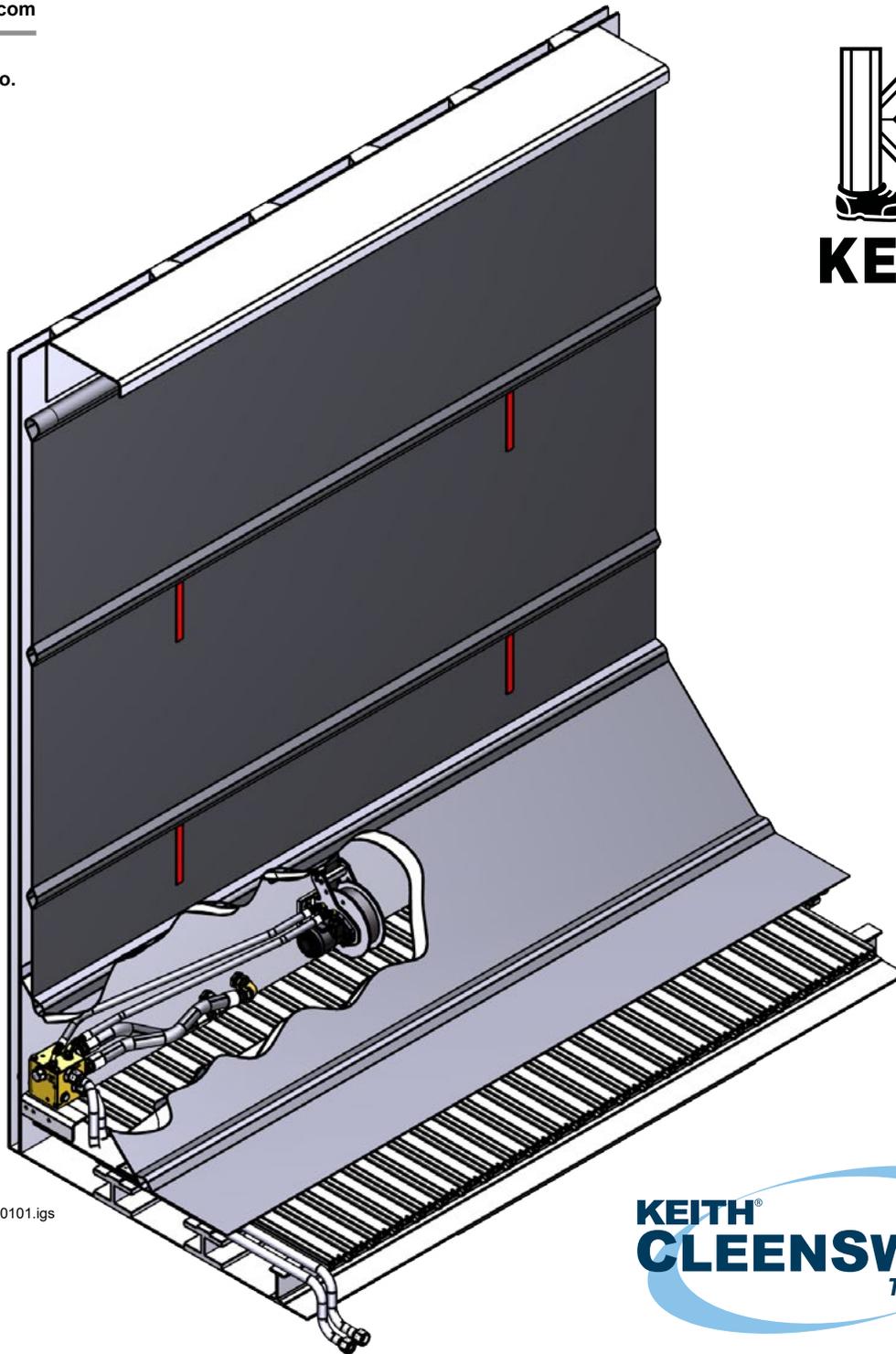


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KEITH® CleanSweep® Tarp System INSTALLATION & OPERATION MANUAL Original Instructions

www.keithwalkingfloor.com

Revised: 1/8/18



WARRANTY

This CleanSweep® Tarp System is warranted to the original purchaser to be free from defects in material and workmanship under normal use for a period of one year from the date of purchase. During the warranty period, and upon proof of purchase, the CleanSweep® Tarp System will be repaired or replaced with the same or similar model.

IT IS EXPRESSLY AGREED THAT THIS SHALL BE THE SOLE AND EXCLUSIVE REMEDY OF THE BUYER. UNDER NO CIRCUMSTANCES SHALL KEITH MFG. CO. BE LIABLE FOR ANY COSTS, LOSS, EXPENSE, DAMAGE, SPECIAL DAMAGES, INCIDENTAL DAMAGES, OR CONSEQUENTIAL DAMAGES ARISING DIRECTLY OR INDIRECTLY FROM THE USE OF THE CLENSWEEP TARP SYSTEM. WHETHER BASED UPON WARRANTY, CONTRACT NEGLIGENCE OR STRICT LIABILITY.

THE WARRANTY AND LIMITS OF LIABILITY CONTAINED HEREIN ARE IN PLACE OF ALL OTHER WARRANTIES AND LIABILITIES, EXPRESSED OR IMPLIED. ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED BY KEITH MFG. CO. AND EXCLUDED FROM THIS WARRANTY. FURTHER, KEITH MFG. CO. DOES NOT WARRANT THAT THE CLENSWEEP TARP SYSTEM COMPLIES WITH LOCAL, MUNICIPAL, STATE OR FEDERAL CODES, IF ANY AND THE BUYER ALONE IS RESPONSIBLE FOR ANY KNOWLEDGE OF ANY COMPLIANCE WITH ANY SUCH CODES.

This warranty shall not apply to any parts that; (a) have been repaired or altered outside of the CleanSweep® Tarp System; (b) have been subjected to misuse, negligence or accident; or (c) have been used or installed in a manner contrary to CleanSweep® Tarp System instructions.

In certain circumstances some states do not allow the exclusion or limitation of incidental damages, some or all of the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may have other rights that vary from state to state.

If this warranty violates law: To the extent any provision of this warranty contravenes the law of any jurisdiction, that provision shall be inapplicable in such jurisdiction and the remainder of the warranty shall not be affected thereby.

Notice: To validate all warranties, a warranty registration card must be completed and returned to KEITH Mfg. Co. within ten days of purchase. If you did not receive a warranty registration card, contact your dealer immediately.

WARRANTY CARD

CleanSweep® Tarp System Warranty Registration Card

Purchaser: _____
 Address: _____
 State/Prov: _____ Country: _____
 Postal Code: _____
 Original Purchase Date of System: _____ System Serial Number: _____
 Dealer Name & Location: _____
 Type of Material Unloaded: _____

I have fully read the CleanSweep® Tarp System warranty information and I/we fully understand and agree to the terms of the warranty.

SIGNATURE: _____

Note: To validate the warranty, this registration card must be filled out completely and returned to KEITH Mfg. Co. / KEITH WALKING FLOOR Europe within ten (10) days of purchase and/or installation.

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1.0 INTRODUCTION

This manual explains procedures for installing and operating the KEITH® Hydraulic CleanSweep® Tarp System and the KEITH Pneumatic CleanSweep® Tarp System. Many variables affect the installation, but the general process remains constant. Details of the installation vary, according to trailer features and installer preferences.

An efficient installation requires appropriate tools and accessible materials. A list of tools is found in Appendix A. This kit does not include any hoses - Appendix B lists required materials not supplied. Appendix C contains a list of parts supplied with this kit.

It is strongly recommended that the installers and operators read this entire manual before beginning the installation or operating of the system.

Please direct any questions to KEITH Manufacturing Co. or one of our international offices listed on our website.

WARNING: Always disconnect hydraulic power to the trailer before entering the trailer or working on the CleanSweep® Tarp System components. Failure to do so may result in serious injury or death due to the large forces involved with the CleanSweep® Tarp System.

IMPORTANT: Installing the CleanSweep® Tarp System requires some alterations to your trailer. Changes made without the approval of the trailer manufacturer may void the trailer's warranty.

2.0 Hydraulic CleanSweep® Installation

WARNING: Always disconnect hydraulic power to the trailer before entering the trailer or working on the CleanSweep® Tarp System components. Failure to do so may result in serious injury or death due to the large forces involved with the CleanSweep® Tarp System.

2.1 Tools

Gather tools listed in Appendix A.

2.2 Materials

Refer to the part list in Appendix C and verify that all KEITH®-supplied parts are present. A list of parts and materials not supplied by KEITH is found in Appendix B.

Hose lengths and tubing bends and lengths will vary depending on the manifold and winch mounting locations and therefore should not be produced until the winch and manifold are mounted and measurements can be taken. Additional fittings (elbows, reducers, adapters, etc...) may be required depending on the particular installation.

2.3 Hydraulic Winch Installation

Option 1: Winch mounted below front shield (low-mount)

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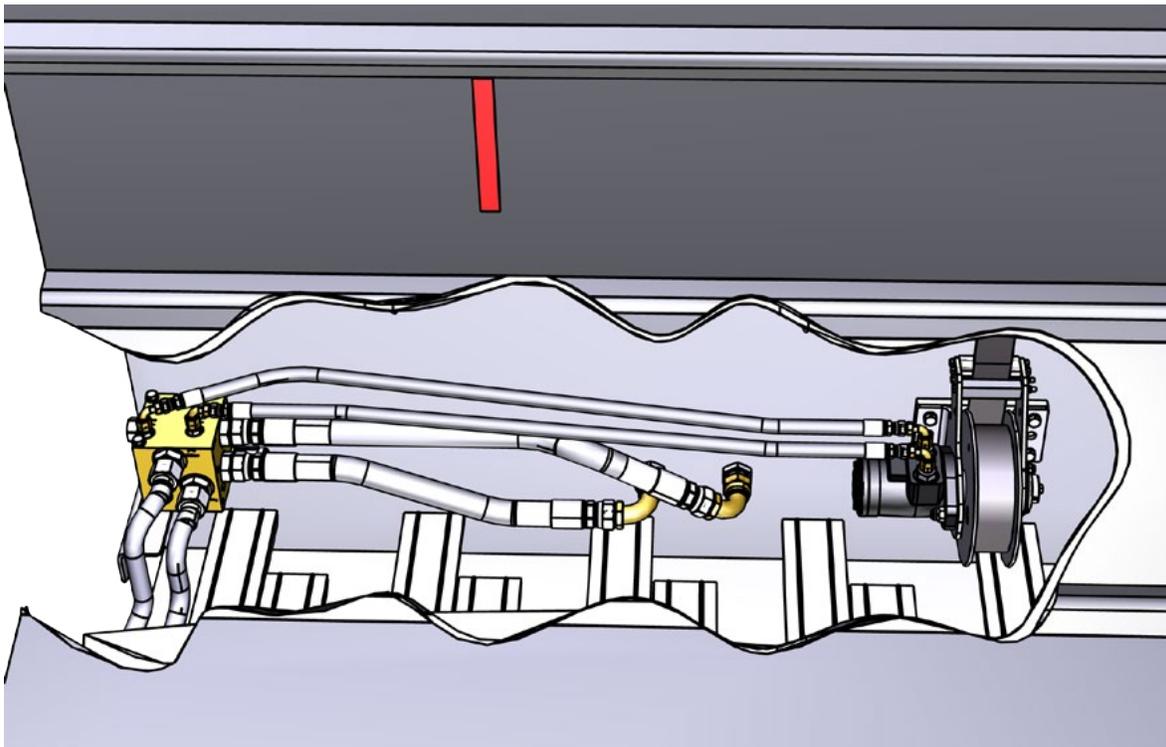


Figure 1: Winch and manifold mounted below the front shield (low-mount).

Mount the winch to the lower center of the front wall of the trailer. The winch should be under the front shield and must not interfere with the operation of the floor slats – maintain at least 1" (25 mm) clearance between the winch and floor slats. The winch should be mounted with the strap guide up. Ensure all moving parts of the winch have adequate clearance.

Note: Front wall may need to be reinforced to withstand the forces created by the winch.

Option 1 requires the use of the strap roller assembly mounted at the top center of the front wall or top rail – see section 2.4 for installation instructions.

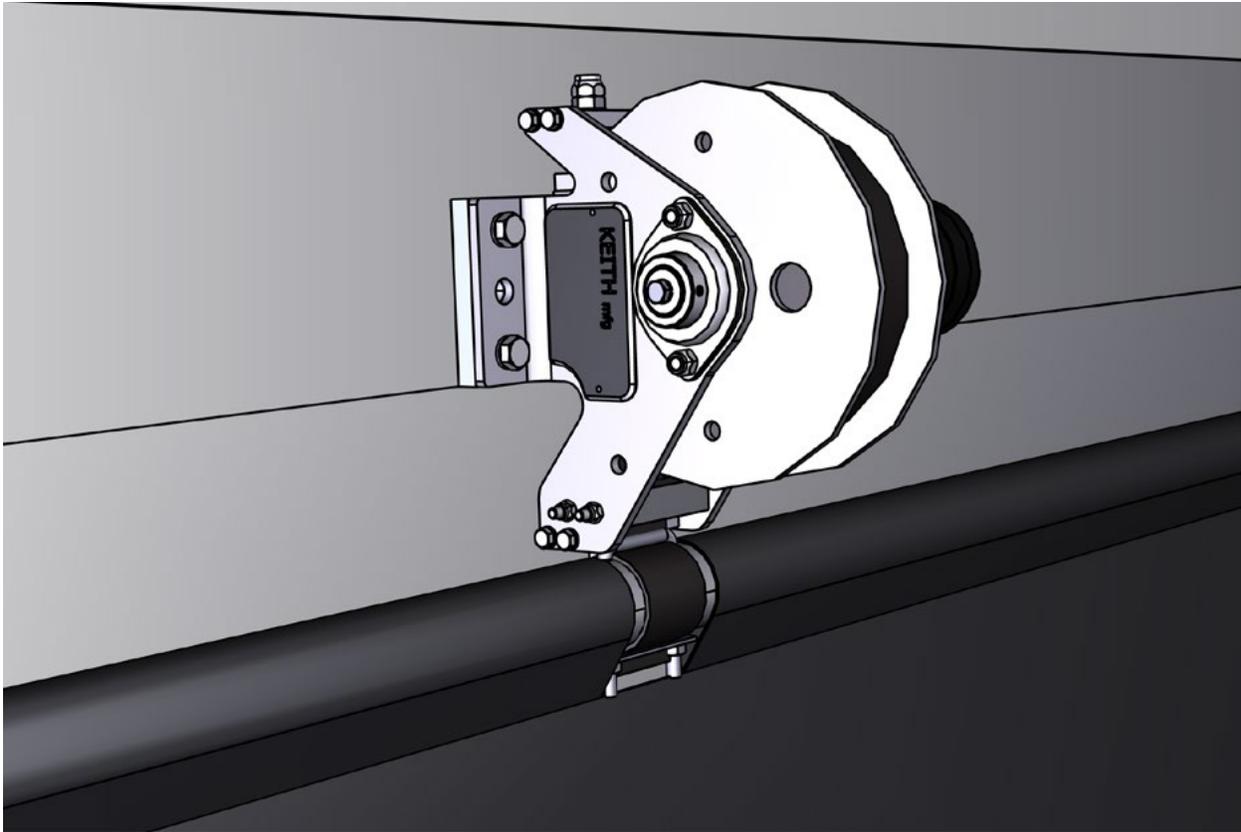
Step 1: Front shield modification: It is recommended that the front shield be hinged or fitted with a door/panel to gain access to the winch after it is installed to facilitate adjustment, inspection and maintenance.

Step 2: A slot must be cut through the front shield for the strap to pass through. The slot must be centered along the path of the strap, from the winch to the strap roller assembly and all sharp edges removed or covered to prevent damage to the strap. Maintain at least 1/2" (13 mm) clearance all around the strap.

Step 3: Locate the center of the front wall of the trailer. Please note that it is crucial that the winch is mounted in the absolute center of the trailer and at a 90-degree angle. If the winch is not mounted square, it will put uneven pressure on the tarp strap.

Step 4: Measure 3 1/2" (89 mm) up from the top of the floor slats to locate the bottom of the base plate. Transfer the winch base plate bolt pattern to the wall and drill two 17/32" (13mm) bolt clearance holes (or four 7/16" (11 mm) bolt clearance holes if installing the SAE mounting version with the 3/8"-16 threaded base plate).

Step 5: Attach the winch to the front wall using 1/2" grade 8+ (M12 class 10.9+) locking fasteners (or appropriate length 3/8" -16 bolts if installing the SAE mounting version with the 3/8" -16 threaded base plate).

Option 2: Winch mounted at top of trailer front wall (high-mount)**Figure 2: Winch mounted at top of front wall.**

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Mount the winch to the top center of the front wall of the trailer. The winch should be mounted with the strap guide down. Ensure all moving parts of the winch have adequate clearance.

Note: Front wall may need to be reinforced to withstand the forces created by the winch.

Option 2 does not require the strap roller assembly because the winch structure with strap guide is designed to locate the tarp at the front wall and stop the tarp when it is fully retracted.

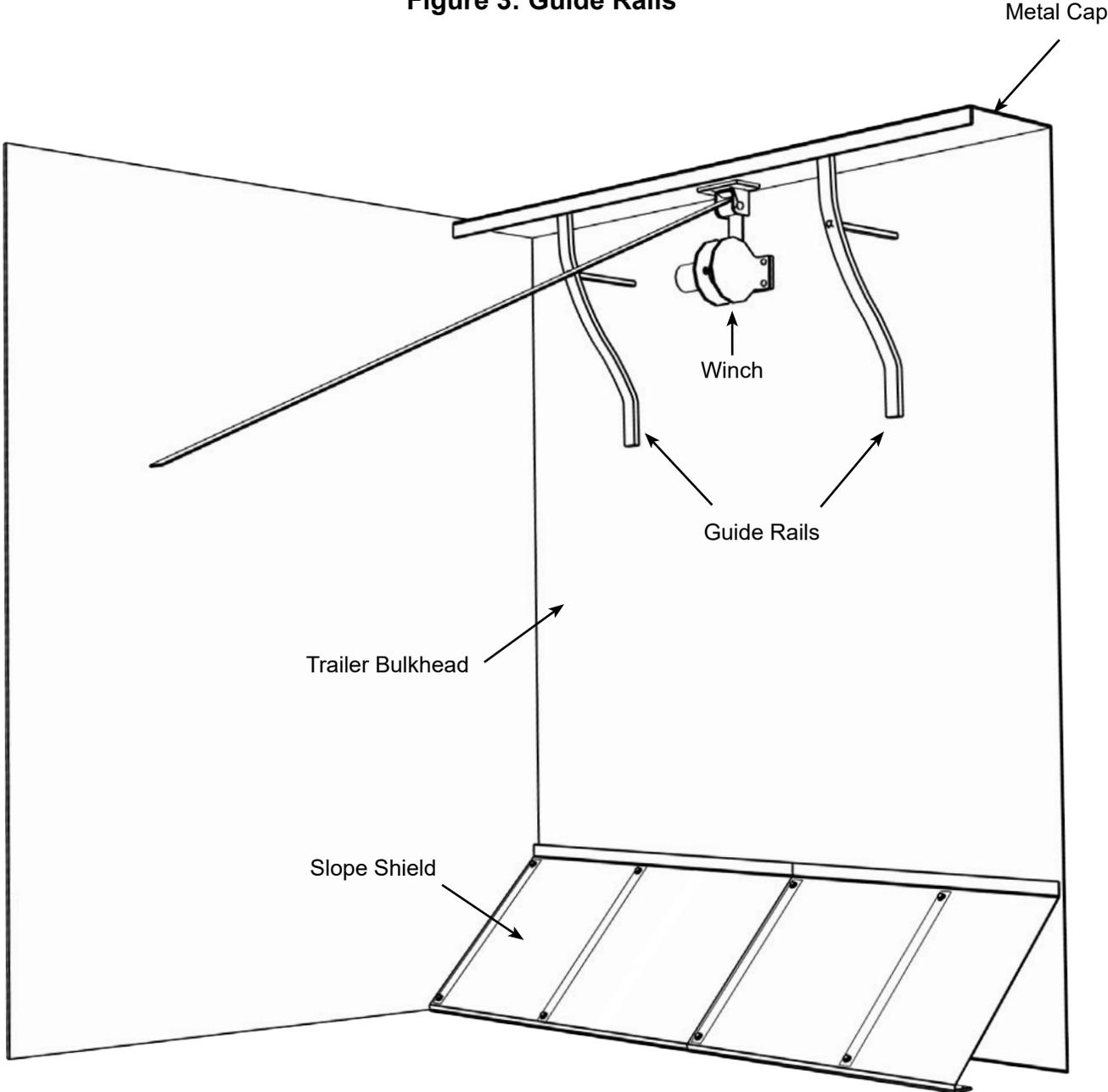
Step 1: Locate the center of the front wall of the trailer. Please note that it is crucial that the winch is mounted in the absolute center of the trailer and at a 90-degree angle. If the winch is not mounted square, it will put uneven pressure on the strap.

Step 2: Transfer the winch base plate bolt pattern to the wall and drill two 17/32" (13 mm) bolt clearance holes (or four 7/16" (11 mm) bolt clearance holes if installing the SAE mounting version with the 3/8"-16 threaded base plate).

Step 3: Attach the winch to the front wall using 1/2" grade 8+ (M12 class 10.9+) locking fasteners (or appropriate length 3/8"-16 bolts if installing the SAE mounting version with the 3/8"-16 threaded base plate).

Note: Guide rails and a cap (not supplied by KEITH Manufacturing Co.) can be installed to allow the tarp to be pulled up higher in the front of the trailer. Doing so will reduce the possibility of material getting behind the tarp.

Figure 3: Guide Rails



2.4 Strap Roller Assembly Installation

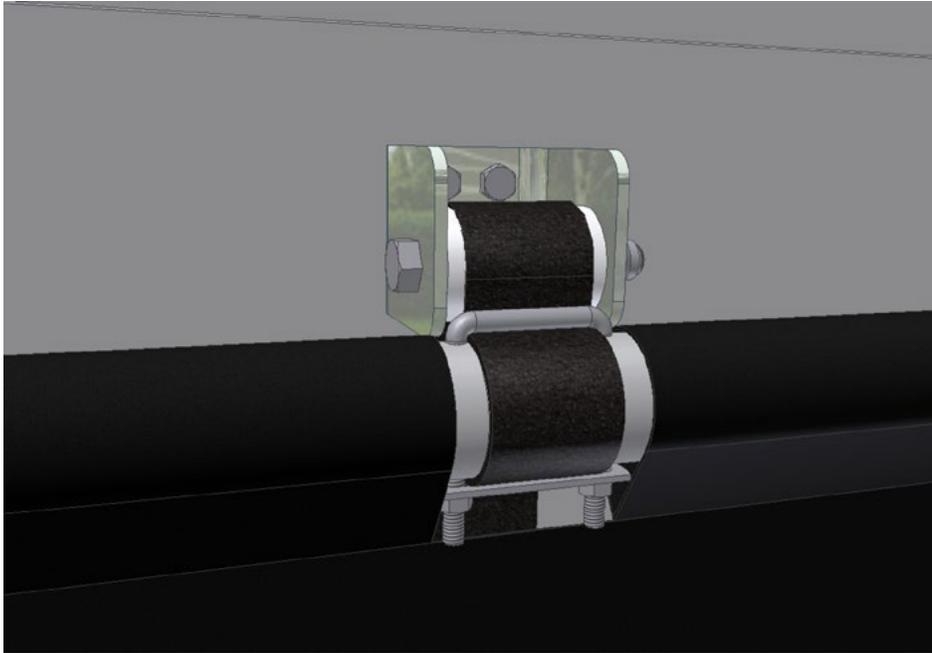


Figure 4: Strap roller assembly mounted at top of front wall.

The strap roller assembly is only required for low-mount winch installations.

The strap roller assembly may be mounted at the top of the front wall or to the top rail at the front of the trailer. Please note that it is crucial that the strap roller assembly is mounted in the absolute center of the trailer and at a 90-degree angle. If the strap roller assembly is not mounted square, it will put uneven pressure on the tarp strap.

Note: Front wall may need to be reinforced to withstand the forces created by the winch.

Step 1: Locate the top center of the trailer front wall or the center of the top rail.

Step 2: Measure 1 1/2" from the front (if mounting to the top rail) or from the top rail downward to locate the strap roller base mounting location.

Step 3: Transfer the strap roller bracket bolt pattern to the wall or top rail and drill two 7/16" (11 mm) bolt clearance holes (or four 7/16" (11 mm) bolt clearance holes if installing the SAE mounting version with the 3/8"-16 threaded base plate).

Step 4: Attach the strap roller to the front wall using 3/8" grade 5+ (M10 class 8.8+) locking fasteners (or appropriate length 3/8"-16 bolts if installing the SAE mounting version with the 3/8"-16 threaded base plate).

2.5 Manifold Installation

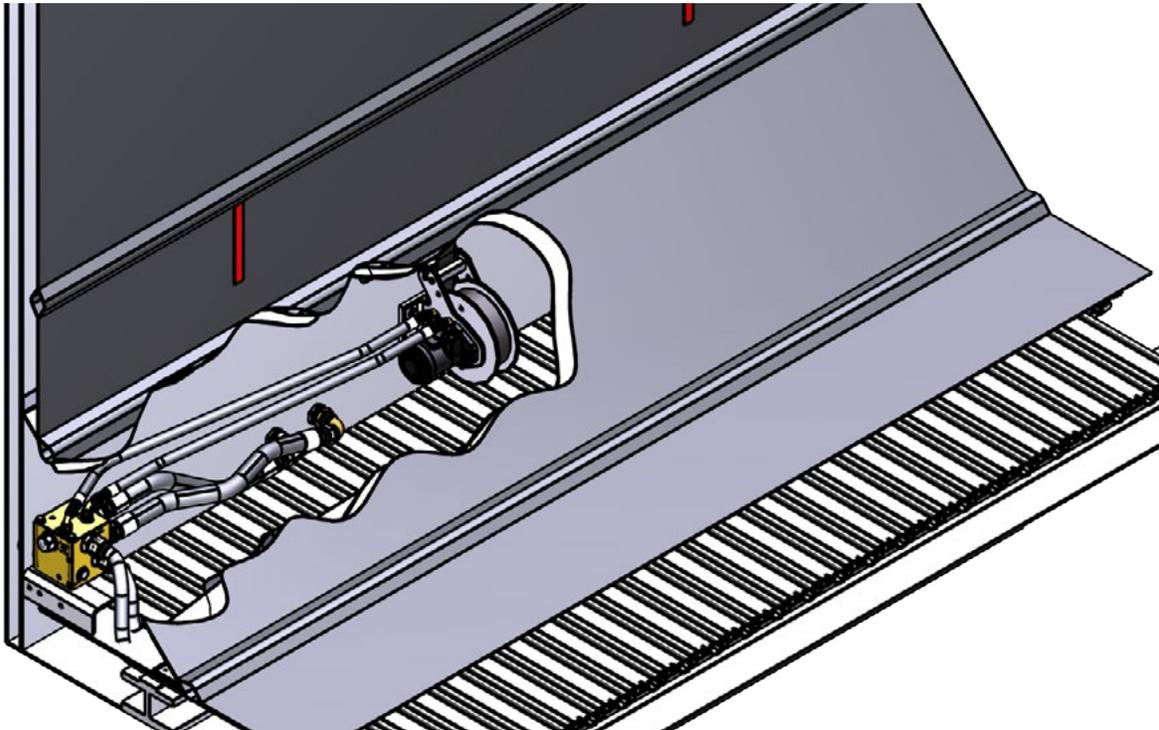
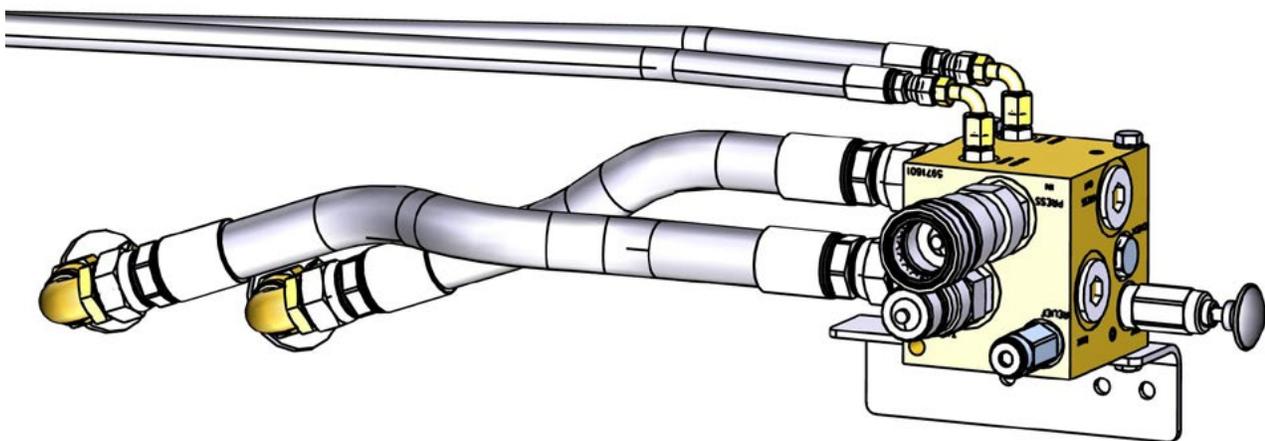


Figure 5: Manifold mounted below front shield.

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Figure 6: Manifold mounted to exterior front wall on driver's side.

The manifold can be mounted in several locations based on installer preference, trailer construction and other installed equipment. The most common mounting locations are under the front shield, on the driver's side of the exterior front wall or on the driver's side landing gear.

See Section 2.6 for hydraulic plumbing installation considerations before choosing a location and installing the manifold.

Step 1: If the manifold is mounted below the front shield it is recommended that the front shield and/or trailer wall be hinged or fitted with a door/panel to gain access to the manifold after it is installed to facilitate adjustment, inspection and maintenance.

Step 2: Determine the orientation and location of the manifold and manifold fittings based on hose/tube routing requirements, clearance requirements and valve access.

- When mounting the manifold under the front shield position, the manifold and manifold mounting bracket must be installed so that hydraulic hoses cannot interfere with the operation of the floor slats. A manifold distance of 2 1/2" to 3" above the top of the slats works well.
- Maintain at least 1" (25 mm) clearance between any part of the CleanSweep® system assembly and the floor slats.

Step 3: Attach the manifold mounting bracket to the trailer by welding or using 3/8" (10 mm) nuts, washers, locking washers and bolts of appropriate length (not supplied).

Step 4: The manual override knob on electric systems and the manual valve knob on manual systems must be accessible from the outside of the trailer. This will require a hole through the wall of the trailer or an appropriate access panel in the wall of the trailer, if the manifold is mounted below the front shield.

- For manual systems, the knob may be removed temporarily and reattached on the opposite side of the wall after mounting the manifold with the valve body inserted through a 1 1/4" (32 mm) hole in the trailer wall.
- An extension (not supplied) may be fitted to the manual valve stem if necessary. The valve stem knob may be removed and the valve stem is threaded 1/4"-20 UNC.

Step 5: Attach the manifold to the manifold mounting bracket using the supplied M10 x 1.5 x 150mm bolts, locking nuts and washers.

2.6 Hydraulic Plumbing Installation

The manifold is plumbed into the hydraulic system, between the pump and the *WALKING FLOOR*® drive. All fluid traveling to and from the drive goes through the CleanSweep® system manifold first -this requires rerouting some of the existing trailer hydraulic plumbing. Careful planning is necessary before making any modifications to the existing trailer plumbing. Due to the wide variety of existing plumbing configurations and possible CleanSweep® system manifold installation options, specific plumbing details including hose/tube lengths, etc. are not provided.

All ports on the manifold are labeled. There are two ports each for the winch pressure, winch return, pressure out to floor, return from floor, and return to tank to allow several mounting/plumbing options. The manifold is shipped with one of the paired ports plugged but it may be necessary to swap plugs/fittings for certain installations.

- All components, lines and fittings must be kept absolutely clean to prevent contamination of the hydraulic system.
- Keep bends and fittings to a minimum.
- Ensure all hoses and tubes are adequately protected from moving parts and possible damage from material loading by providing at least 1" clearance from moving parts, firmly clamping hoses and tubing in place and using shields or guards where applicable. Use rubber grommets or equivalent protection when routing through cross-members, walls or other structures.
- All hoses, tubes and fittings must be suitable for a working pressure of at least 3000 PSI (207 bar).
- The fittings supplied on the winch motor and manifold for the winch pressure and return lines are male -6 (3/8") 37° JIC (ISO 8434-2).
- The fittings supplied on the manifold for the Pump-Pressure-In, Pressure-Out-To-Drive, Tank-Return-From-Drive and Return-To-Tank are male -16 (1") 37° JIC (ISO 8434-2).
- Manifold ports are SAE O-ring ports of the same size as the hose/tube fitting.
- The manifold is connected to the winch and the trailer hydraulic system according to Table 1.

Table 1: Manifold plumbing

MANIFOLD FITTING:	CONNECTS TO:
WINCH PRESSURE Male -6 (3/8") 37° JIC (ISO 8434-2)	Winch motor pressure port (pressure port is the one that will cause counter clockwise spool rotation when viewing winch from motor side) Male -6 (3/8") 37° JIC (ISO 8434-2)
WINCH RETURN Male -6 (3/8") 37° JIC (ISO 8434-2)	Winch return port Male -6 (3/8") 37° JIC (ISO 8434-2)
PRESSURE IN Male -16 (1") 37° JIC (ISO 8434-2)	Pressure line in from pump
PRESSURE OUT Male -16 (1") 37° JIC (ISO 8434-2)	Pressure line out to floor drive
TANK Male -16 (1") 37° JIC (ISO 8434-2)	Tank return line from floor drive
TANK Male -16 (1") 37° JIC (ISO 8434-2)	Return line to tank

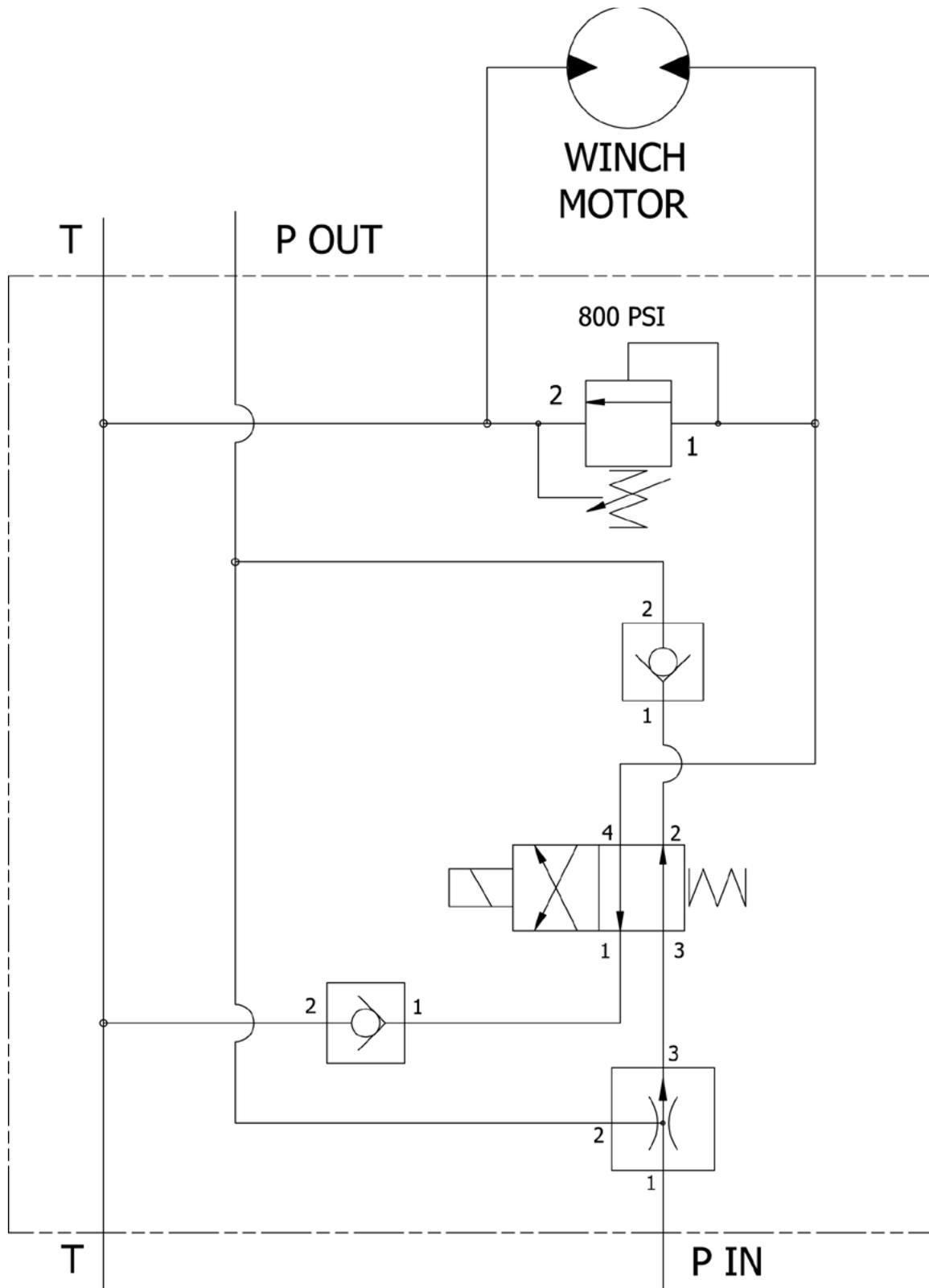


Figure 7: Control manifold hydraulic schematic.

2.7 Tarp Installation

Please note that tarp poles are not supplied by KEITH Manufacturing Co. For the top pole, located at the top of the tarp, one 2" (50 mm) lightweight metal pipe is recommended. For all other poles, use three 1 ½" (40 mm) pipes.

Step 1: Thread the strap through the strap guide on the winch, through the slot in the front shield (if winch is low-mounted) and through the strap roller (if used).

Step 2: Cut the tarp poles approximately 2" (50 mm) shorter than the inside width of the trailer. Take this measurement just above the trailer floor, at the trailer's narrowest point.

Step 3: If the tarp is wider than the width of the trailer, cut the tarp to the same width as the inside of the trailer. Use the vertical stitching as a guide and remove half of the material from each side of the tarp.

Note: If you are installing a CleanSweep® into a trailer with a V-FLOOR® system, the tarp will need to be wider than the inside of the trailer because the tarp will conform to the ridges on the floor. For a V-9 system, the tarp should be 6" wider than the inside of the trailer. For a V-18 system, the tarp should be 7" wider.

Step 4: Center the tarp poles in the tarp pockets. The 2" (50 mm) pole should be inserted into the top pocket with the notch in the center. The smaller diameter poles go into the next two pockets down from the top. UHMW strips, similar to what is installed on the bottom of the front slope shield, can also be used as other poles.

Step 5: Keep the tarp poles in place by pop riveting the tarp to the poles—two rivets on each end (not supplied).

Step 6: Find the center of the top tarp pole. Drill 3/8" (9.5 mm) holes through the top pole to attach the U-Bolt. It must be centered and installed so that when the tarp is hanging from the winch, the threads of the U-Bolt are facing downward. If necessary, you can make the notch in the middle of the tarp wider to accommodate the U-Bolt.

Step 7: Place the tarp in the trailer, with the handles facing upward and the 2" (50 mm) top tarp pole towards the front of the trailer.

Step 8: Making sure that the strap is not twisted, wrap it around the pole tightly at least twice and tighten the U-Bolt.

Note: Systems are available in 2.5 or 5 GPM versions. If a galvanized steel pole is used, it is recommended to use the 2.5 GPM version. Either the 2.5 or 5 GPM version may be used if a lightweight metal pole is used.

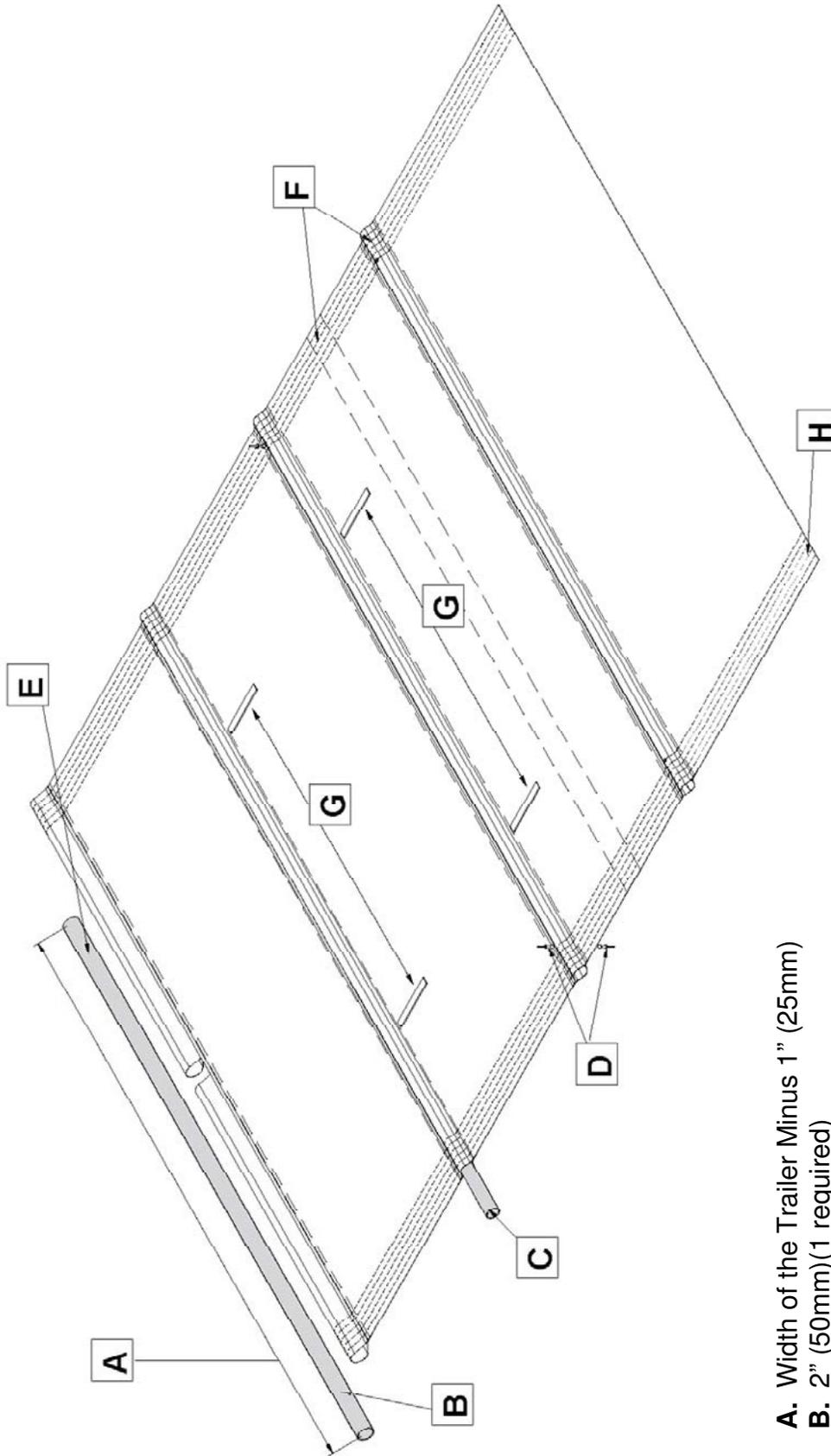


Figure 8

- A. Width of the Trailer Minus 1" (25mm)
- B. 2" (50mm)(1 required)
- C. 1 1/2" (38mm)(3 required)
- D. Rivet the Tarp to the Pipe (4 Places Per Pipe)
- E. Center the Pipes in the Middle of the Tarp
- F. For Shorter Trailers, the Third Pipe May Be Moved to the Upper Pocket
- G. Tarp Handles
- H. Use Stitching Lines as a Guideline to Cut the Width of the Tarp to fit the Trailer

Note: Cut Half of the Material Off From Each Side

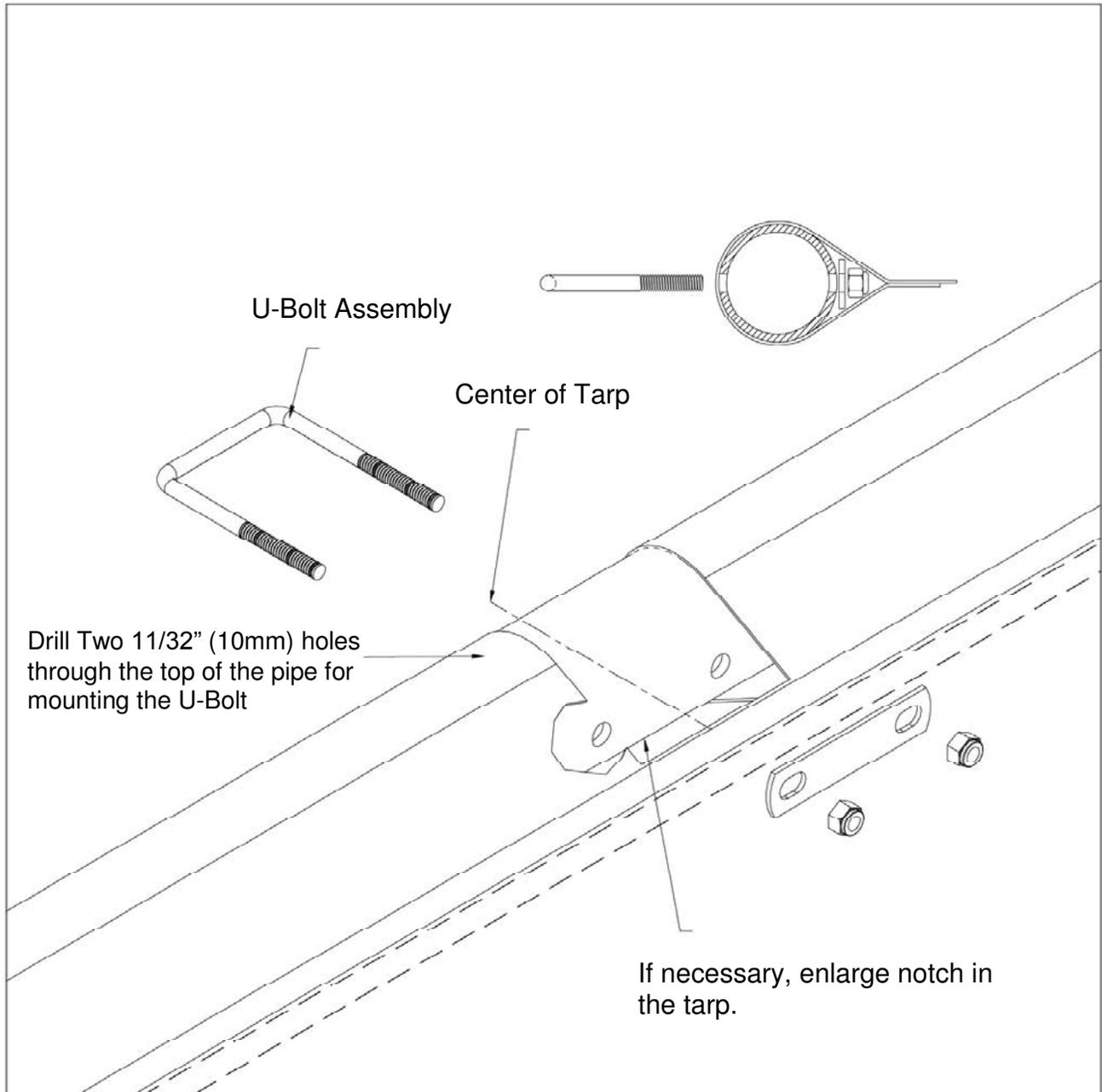


Figure 9

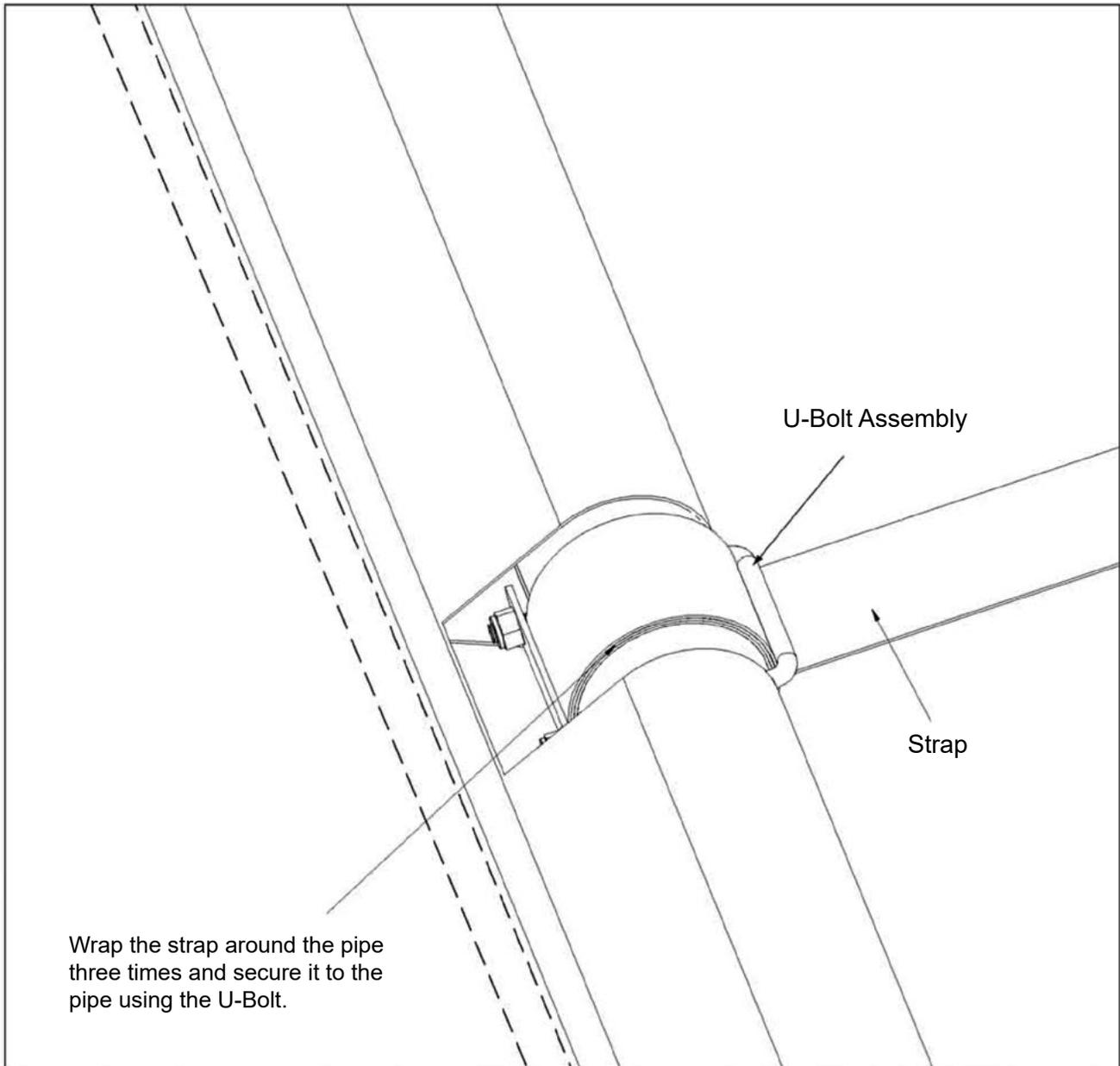
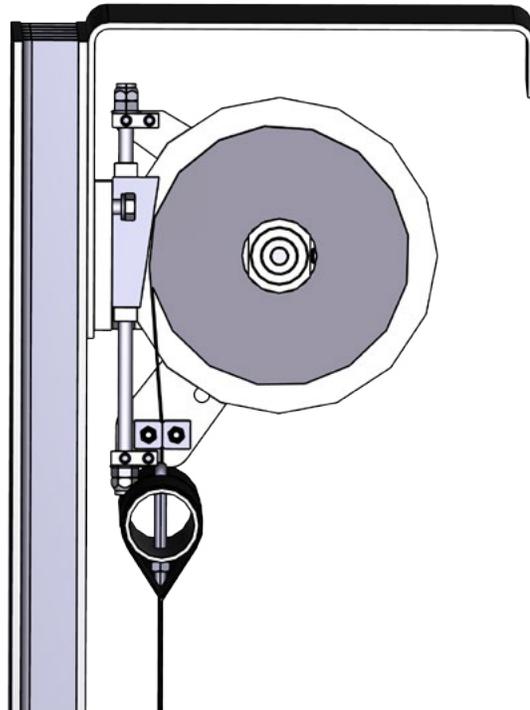


Figure 10

2.8 Winch Brake Adjustment



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Figure 11: Winch brake

The winch brake retains the tarp in the retracted position at the top of the front wall during loading, transport and the beginning of the unloading cycle.

Step 1: Retract the tarp to the top of the front wall.

Step 2: Tighten the brake against the strap until it takes approximately 10lbs to pull the CleanSweep® free from the brake.

Step 3: Raise tarp to the parked position. Trim the bottom of the tarp to leave 12" to 14" laying on the floor.

2.9 CleenSweep® Installation and Operation Instructions

Adjusting Tarp Length and Setting Proper Strap Length

1. Attach tarp and retract all the way to the front of the trailer.

2. Cut tarp to length as shown in Fig. A.

3. Unload until top of tarp reaches threshold at rear of trailer (Fig. B).

4. Set strap length by removing "Tarp Out-Stop Bolt." Adjust strap to proper length and reinstall "Tarp Out-Stop Bolt."

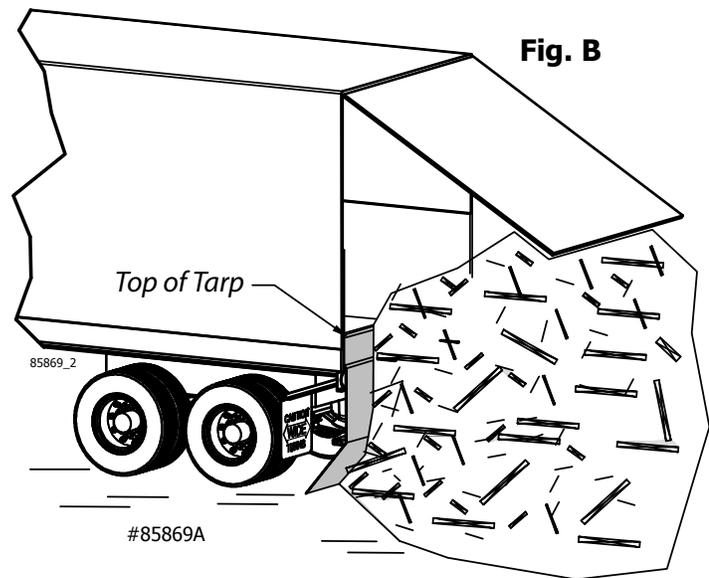
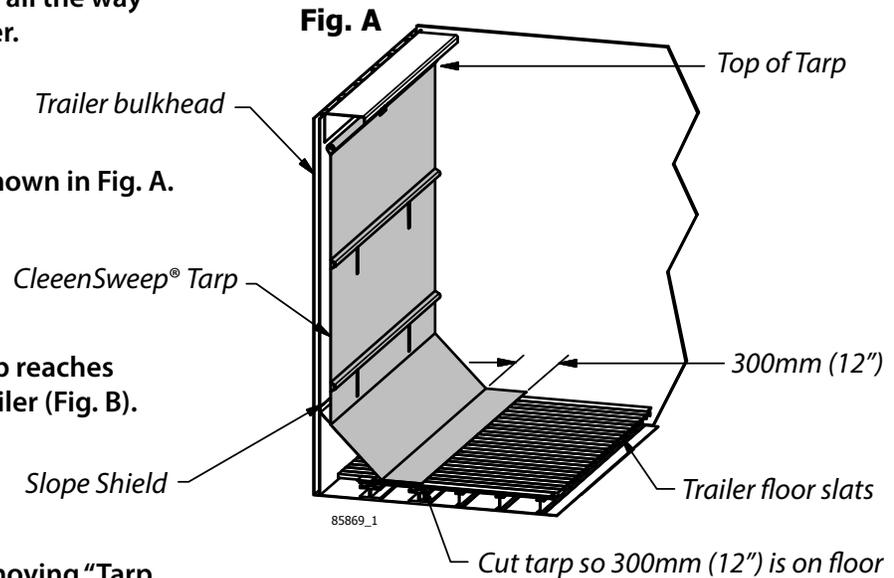
5. Pull forward far enough to get between load and trailer.

6. Pull tarp and shake to clean.

7. Put tarp into trailer and close door.

8. Retract tarp to load position.

(See CleenSweep® Tarp System Installation and Operation Manual at www.keithwalkingfloor.com for more information.)



2.10 System Check

Inspect all fasteners and fittings for proper torque. Ensure there are no leaks and that all lines are secure before putting the trailer in service.

3.0 OPERATION

3.1 Normal Operation

Step 1: Verify that the tarp is fully retracted prior to loading the trailer. It is suggested that a viewing window/port be installed in the top of the front trailer wall so the operator can verify that the tarp is fully retracted from the winch operating position.

Step 2: It is recommended that the trailer is moved forward slightly, near the end of the unloading cycle, to reduce the amount of material unloaded on top of the tarp.

Step 3: After unloading the trailer, dislodge the tarp by hand from underneath any material that may have been unloaded on top of the tarp. Do not attempt to pull the tarp from under a load by using the winch or moving the trailer – this may damage the winch, tarp, strap or trailer.

Step 4: Ensure hydraulic power is supplied to the trailer and engage the winch by activating the power switch (electric systems) or pulling out the manual valve knob (manual systems).

Step 5 : The tarp takes 5-15 seconds to retract and when fully retracted, hydraulic fluid delivered to the winch is redirected through the relief valve in the manifold. Full retraction can be verified through the viewing window/port (if installed), otherwise it is signified by an audible bang as the tarp top pole impacts the strap roller, as well as an audible change in the hydraulic system sound as the fluid is directed through the relief valve. At this point, disengage the winch and verify that the tarp is fully retracted.

3.2 Electric System Manual Override

The electrically-activated valve supplied with electric systems includes a manual override knob that allows the operator to activate the winch without electric power. The manual override is intended for emergency use, not for continuous-duty operation.

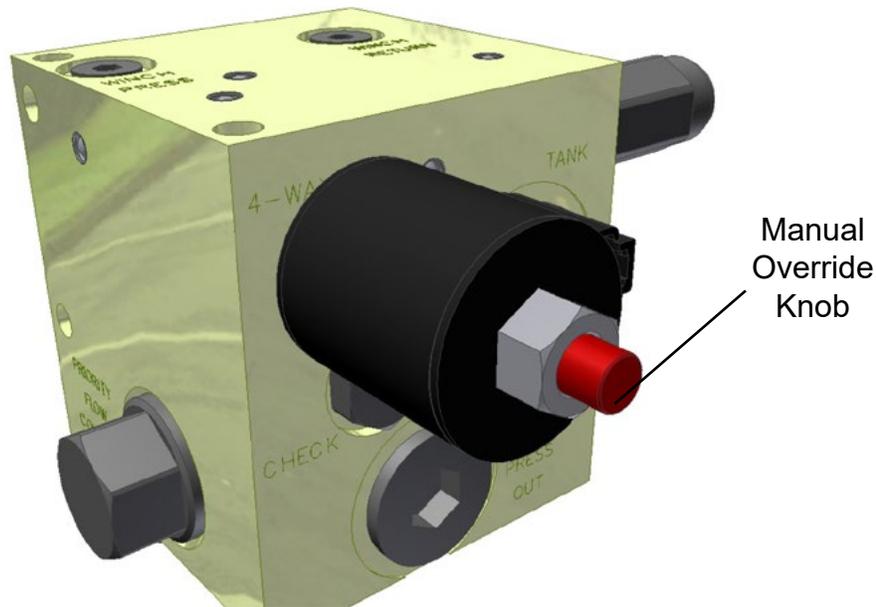
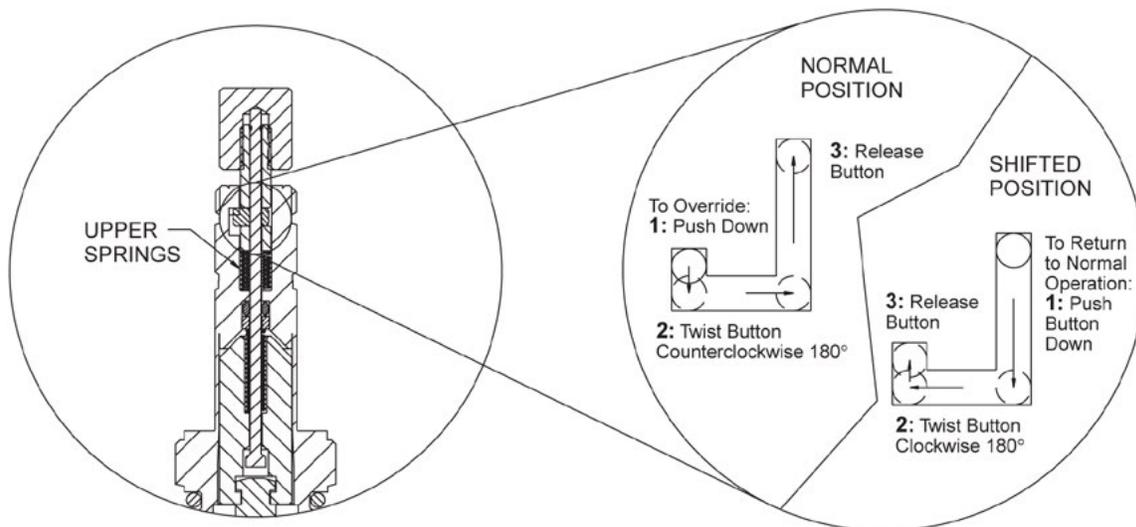


Figure 13: manual override knob on electrically-activated valve.



Exaggerated illustration of operation of Manual Override "M" option

Figure 14: operation of the manual override knob. Ensure the valve is returned to the normal position after the tarp is retracted.

TOOL:	WHERE USED:
End wrenches: Metric	
Ratcheting driver with Metric	
Hex (Allen) wrenches: Metric	
Power drill and the following bits:	
3/8" (9.5 mm)	Tarp top pole for U-bolt attachment
7/16" (11 mm)	Mounting winch, strap roller, manifold bracket (opt. – may be welded on)
1 1/4" (32 mm) hole saw (optional)	Manual valve clearance through trailer wall (opt. - if manifold is mounted below front shield)
Welding equipment (optional)	Mounting manifold bracket (opt. – may be bolted on)
Cutting tools (optional)	Cutting access panels in trailer wall or front shield (opt. - if necessary)

MATERIAL:	WHERE USED:
Hoses/tubing:*	*Hose/tube lengths will vary depending on installation
-6 (3/8") (10 mm) hose/tube with Female -6 (3/8") 37° JIC (ISO 8434-2) each end	MANIFOLD – TO – WINCH MOTOR: PRES- SURE WINCH MOTOR – TO – MANIFOLD: RETURN
-16 (1") (25 mm) hose/tube with female -16 (1") 37° JIC (ISO 8434-2) fitting on manifold end	PUMP – TO – MANIFOLD MANIFOLD – TO – DRIVE: PRESSURE DRIVE – TO – MANIFOLD: RETURN MANIFOLD – TO – TANK
Fittings:*	*Required fittings will vary depending on installation
Hose/tube clamps:*	*Required clamps will vary depending on installation
Fasteners:*	*Fastener lengths and required quantities will vary depending on installation
3/8" (M10) bolts, nuts, washers, locking nuts (or plain nuts w/locking washers)	Mounting strap roller (2 each) and manifold bracket (2 each); use grade 5 (class 8.8) or stronger fasteners.
1/2" (M12) bolts, nuts, washers, locking nuts (or plain nuts w/locking wash- ers)	Mounting winch (2 each); use grade 8 (class 10.9) or stronger fasteners.
rivets	Securing tarp poles to tarp
Pipe:	
2" (50 mm)	Top tarp pole (1); Length: 1" (25 mm) shorter than trailer interior width
1 1/2" (40 mm)	Middle tarp poles (3);Length: 1" (25 mm) shorter than trailer interior width
Wiring	Wiring length will vary depending on installation
14 AWG 2-conductor	Electric-controlled systems

KITS (INCLUDE ALL REQUIRED PARTS- EXCLUDING TARPS AS NOTED):		
DESCRIPTION	PART #	
MANUAL ASSEMBLY WITH TARP		Please call a KEITH dealer for a quote.
MANUAL ASSEMBLY WITHOUT TARP		
ELECTRIC 12VOLT ASSEMBLY WITH TARP		
ELECTRIC 24VOLT ASSEMBLY WITH TARP		
ELECTRIC 12VOLT ASSEMBLY WITHOUT TARP		
ELECTRIC 24VOLT ASSEMBLY WITHOUT TARP		
PARTS (INCLUDED IN KITS AS REQUIRED):		
E = FOR ELECTRIC KITS ONLY		

ID#	QTY	DESCRIPTION	PART #
1	1	Hydraulic Winch Assembly	08387701
2	1	WINCH BASE PLATE, UNIVERSAL MOUNT	08551301
3	1	Brake for Winch	09095201
4	2	Brake Holding Nut for Winch	08418801
5	4	Roll Pin 1/4 x 1	86651425
6	2	Brake Holding Mount	08418901
8	4	Lock Washer - M10	87076500
9	4	Hex Bolt - M10 x 1.5 x 20	87008470
10	8	Hex Bolt - M6 x 1 x 20	87002500
11	8	Lock Washer - M6	87075500
12	1	BOLT HEX GR5 ZN 1/4-20 X 3.25	86421500
13	1	WASHER LOCK 1/4"	86551500
14	1	SHAFT EXTENSION, V-SWEEP WINCH	06932001
15	2	NUT HEX NYLOCK 8mm	87101000
16	1	BEARING FLANGE ABEC-1 2-BOLT	85818617
17	1	Support Plate for Winch	08418601
18	2	Hex Socket Countersunk Head Cap Screw - M8x20	87701599
19	1	SHOULDER SCREW, BOLT-ON WINCH SPOOL	06175401
20	3	Flat Washer	96550552
21	3	Hex Socket Head Cap Screw - M6x1 x 10	87009009
22	1	WINCH SPOOL WELDMENT, BOLT-ON	08549601
23	1	Motor Mount Winch	08418501
24	2	BOLT FLOOR 12MMX40MM	87703060
25	2	NUT HEX NYLOCK 12mm	87102500
26	1	CHAR-LYNN HYD MOTOR, H SERIES	85819475
27	2	06-10 F5OX-S STRAIGHT THREAD CONNECTOR MJIC X M O-RING	84684100
28	2	Hex Bolt - M6 x 1 x 110	87005101
29	3	NUT HEX NYLOCK 6mm	87100500
30	1	Hex Bolt - M6 x 1 x 70	87004570

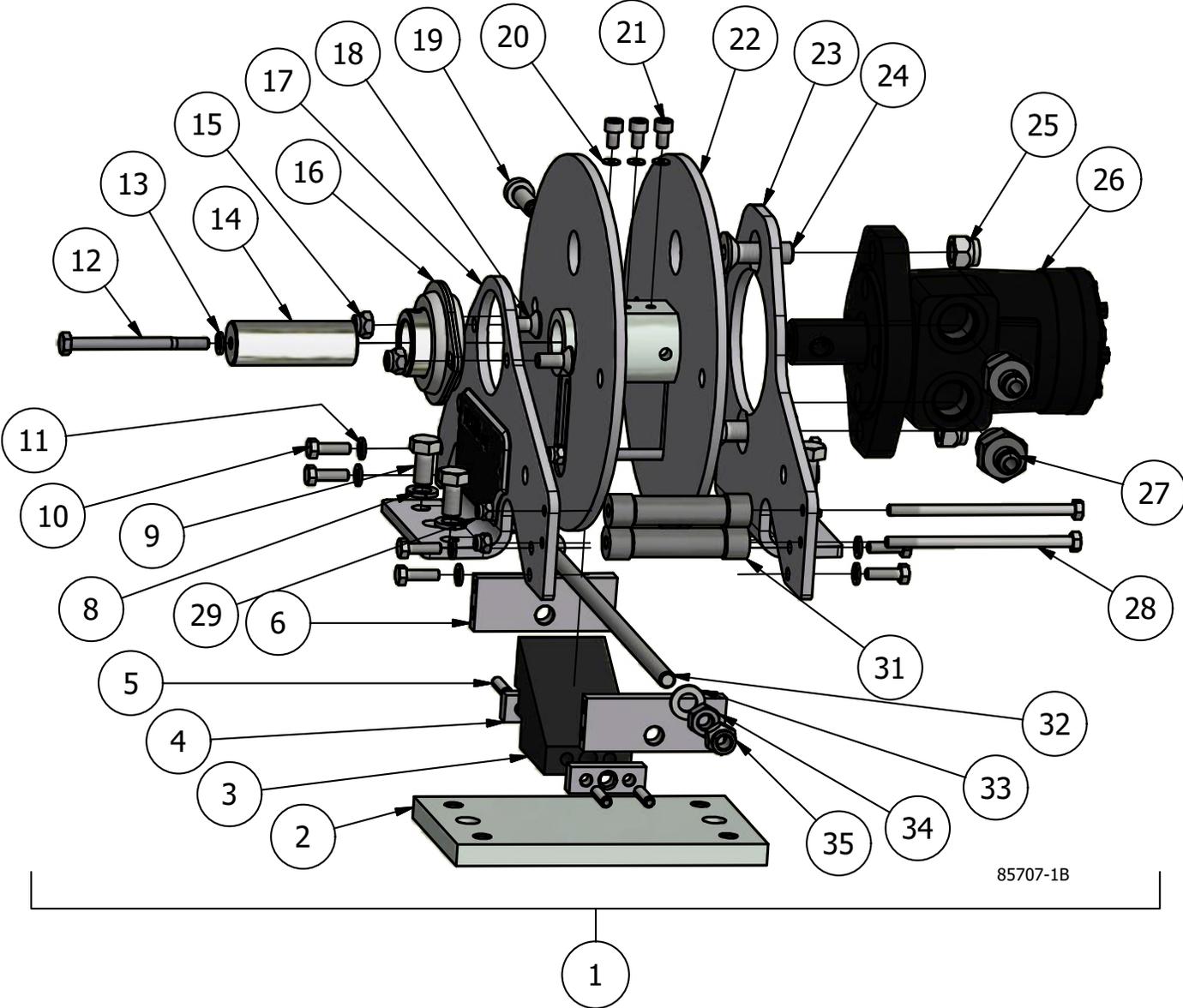
31	2	Strap Guide for Winch #08387701	08419101
32	1	M10 Allthread x 281mm 11-1/16"	08553901
33	2	Flat Washer	87076000
34	2	NUT HEX 10MM	87101500
35	2	NUT HEX NYLOCK 10mm	87102000
36	1	2" STRAP FOR 6117201/02	85811075

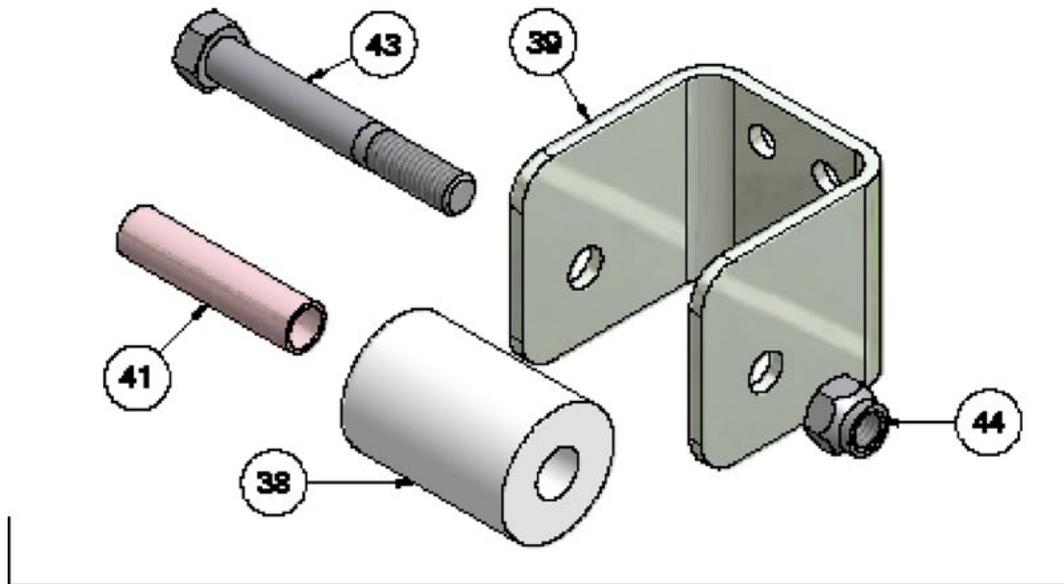
37	1	STRAP ROLLER ASSEMBLY	06250301
		INCLUDES ITEMS 38-44	
38	1	STRAP ROLLER	05795501
39	1	STRAP ROLLER BRACKET	06250401
40	1	STRAP ROLLER BRACKET BASE PLATE	NOT REQ.
41	1	STRAP ROLLER BUSHING	05813401
43	1	BOLT HEX M12 x 1.75 x 90mm	87013400
44	1	NUT HEX NYLOCK M12 x 1.75	87102500
45	1	HYDRAULIC MANIFOLD ASSEMBLY (ELECTRIC) ^E ***** OR ***** HYDRAULIC MANIFOLD ASSEMBLY (MANUAL)	05973301 ***** 05973304
		INCLUDES ITEMS 46-55	
46	1	MANIFOLD BODY	05971601
47	4	HEX UNION, -16 37° JIC X -16 SAE O-RING	84685400

APPENDIX C: Parts list (continued)

Hydraulic CleanSweep®

48	2	HEX UNION,-6 37° JIC X -6 SAE O-RING	84684000
49	7	8 mm EXPANDER PLUG MB 800-080	85101130
50	2	PLUG, HEX SOCKET,-16 SAE O-RING	84687900
51	2	PLUG, HEX SOCKET,-6 SAE O-RING	84687400
52	1	PRIORITY FLOW CONTROL (5 GPM), FREA-XAN-5.0	85101045
53	2	CHECK VALVE CV08-20-0-N-25	85103601
54	1	RELIEF VALVE RV08-20H-0-N-18/800	85107555
55	1	CART. VALVE SV10-40M-0-N-0 (ELECTRIC) ^E ***** OR ***** CART. VALVE, 4-WAY PULL MP10-40K-0-N (MANUAL)	85108800 ***** 85104949
56	1	TARP, 18 OZ. VINYL, STANDARD TRIM-TO-FIT (NOT PICTURED)	85811120
57	1	U-Bolt Assembly Metric (Not Pictured)	86671112
58	1 ^E	COIL 12V WEATHERPROOF 4303712 (NOT PICTURED) *****OR***** COIL 24V WEATHERPROOF 4303724 (NOT PICTURED)	85601805 ***** 85600250
59	1 ^E	Connector Kit: Deutch DT06-25 (NOT PICTURED)	06714701
62	1 ^E	BUTTON START W/BOX XALD101 (NOT PICTURED)	85791635
63	1	MANIFOLD MOUNTING BRACKET, STEEL (NOT PICTURED)	06033101
64	1	MANIFOLD MOUNTING BRACKET, ALUMINUM (NOT PICTURED)	06033102
65	2	BOLT HEX 10.9 M10 x 150mm (NOT PICTURED)	87011602
66	2	WASHER FLAT M10 (NOT PICTURED)	87076000
67	2	NUT HEX NYLOCK M10 (NOT PICTURED)	87102000

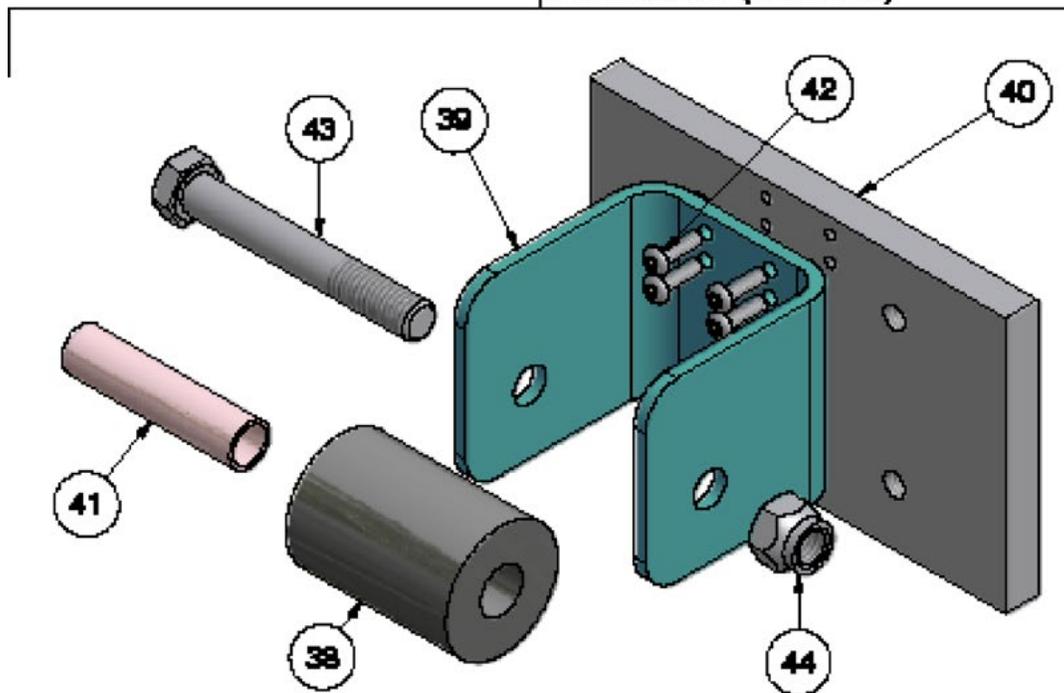


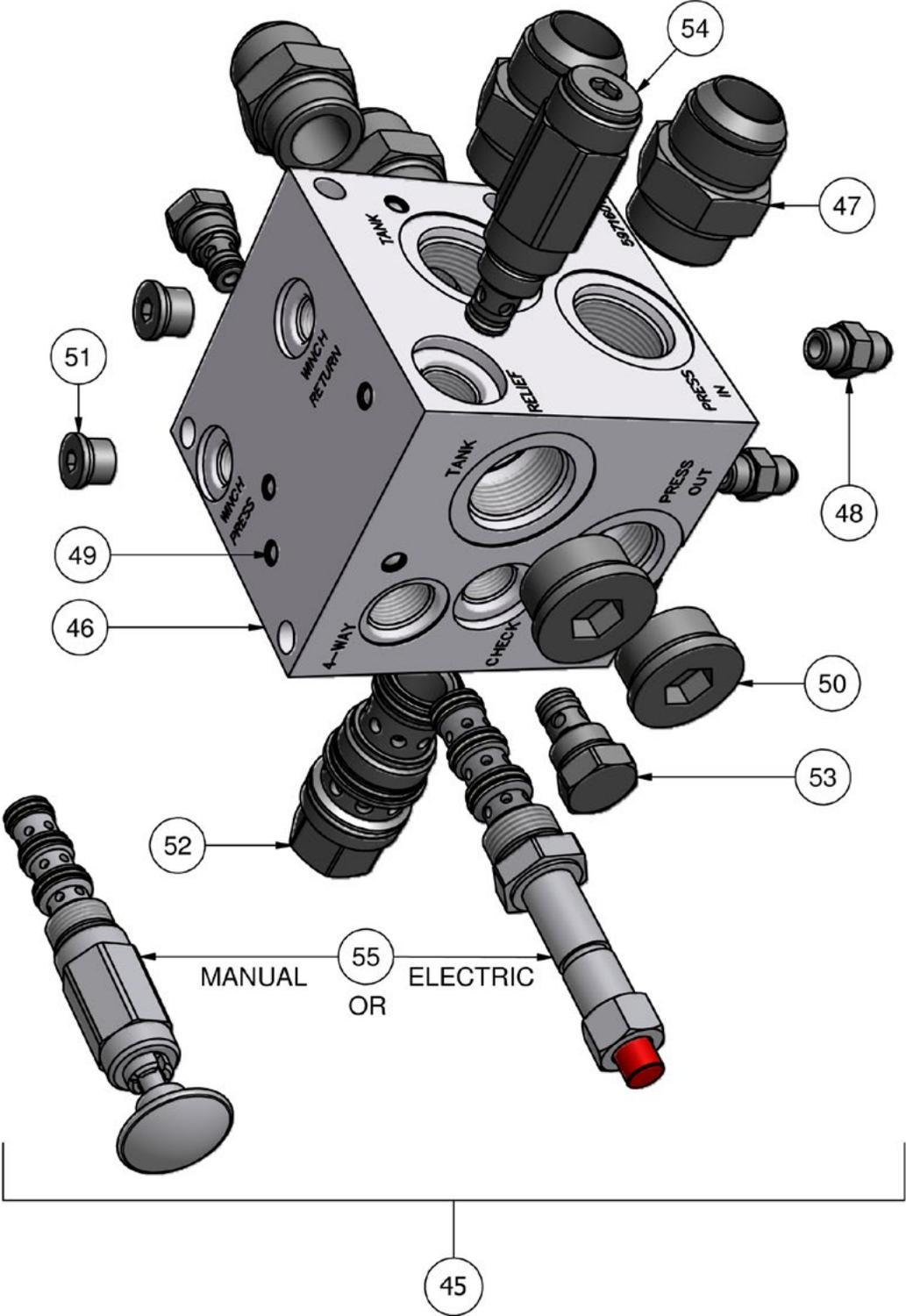


UNIVERSAL MOUNT (06250301)

37 OR

SAE MOUNT (05943001)

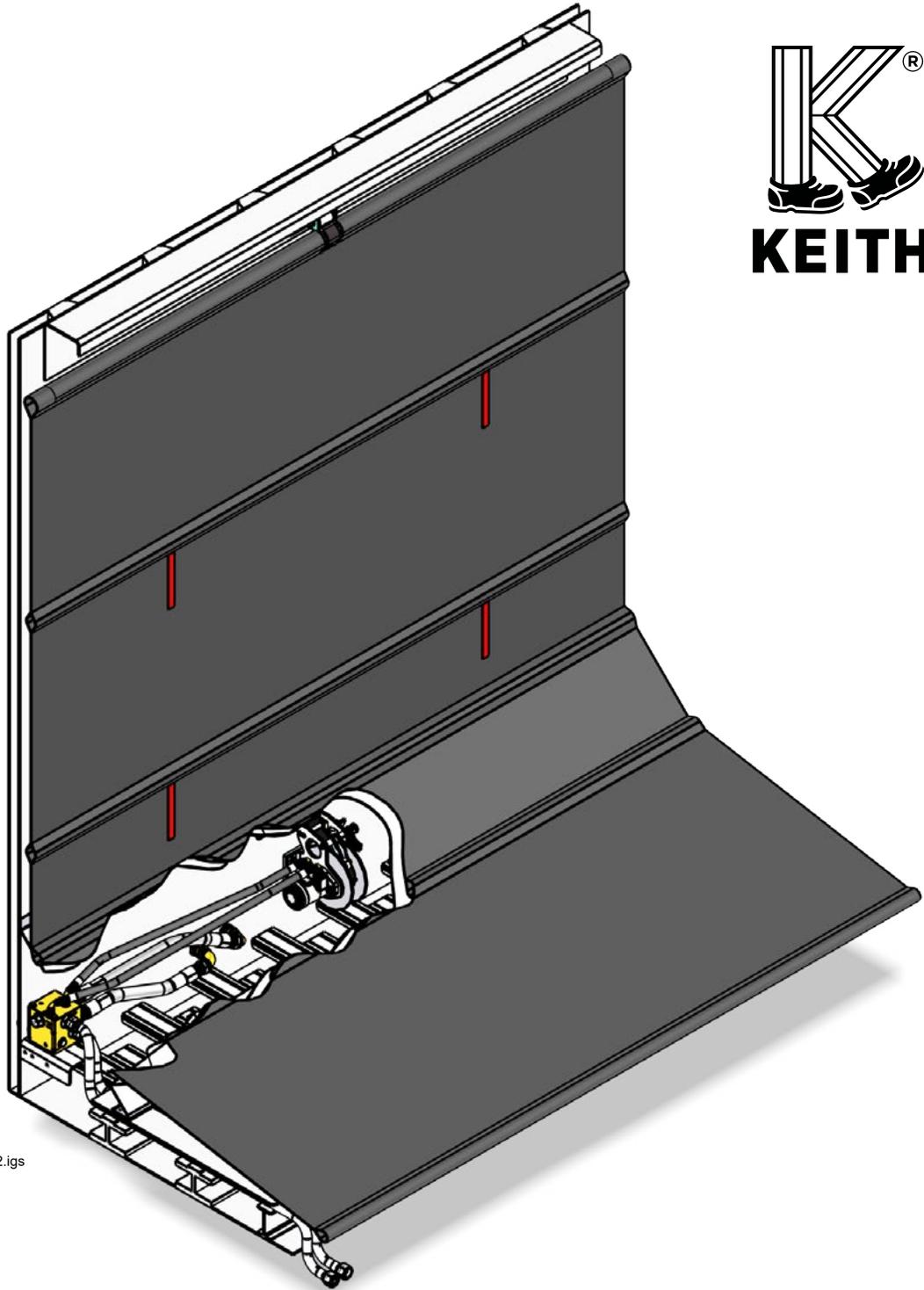




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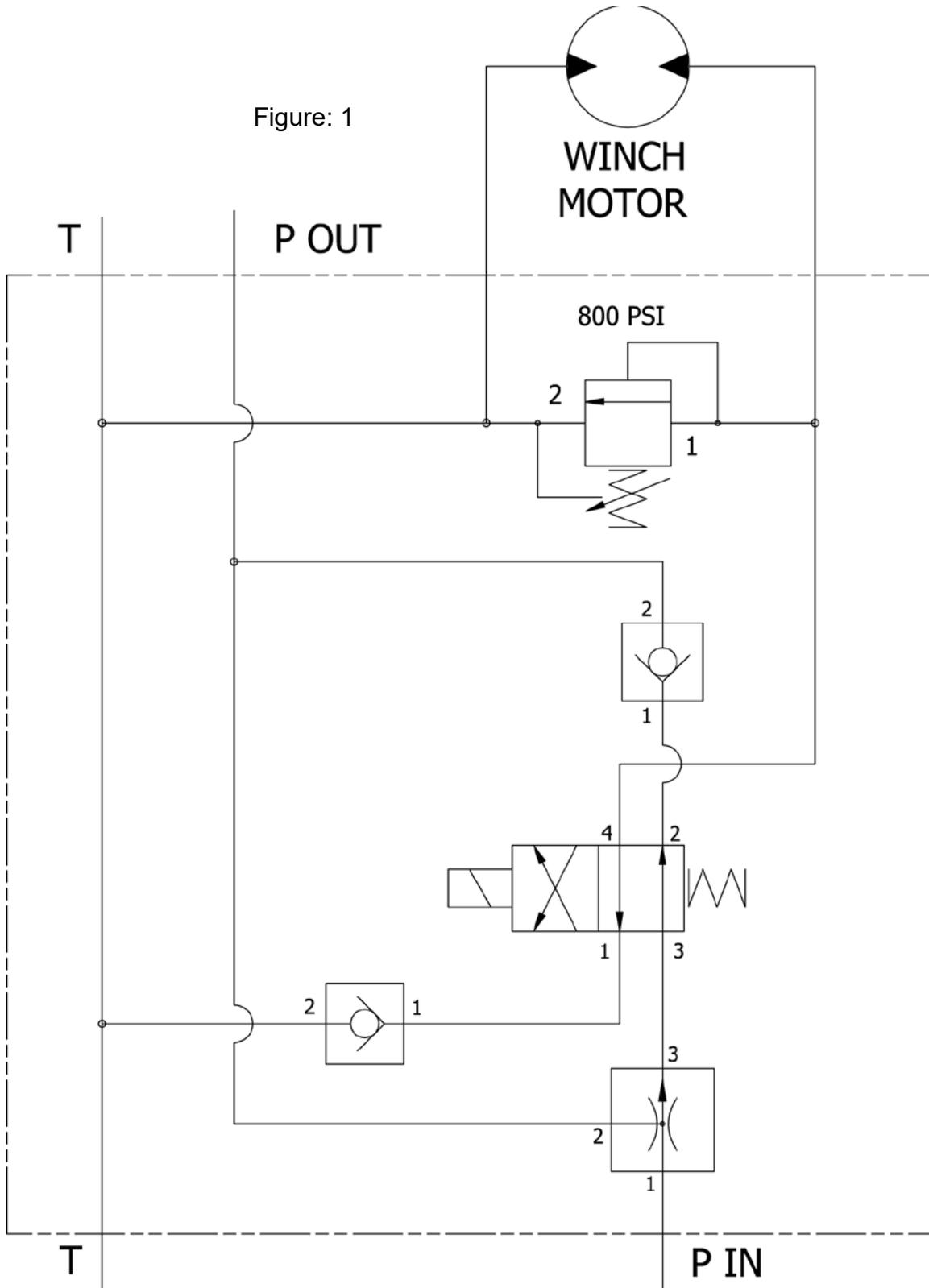


6169902.igs

Section:2 Pre-2015 CleanSweep® Tarp System

WARNING: Always disconnect hydraulic power to the trailer before entering the trailer or working on the CleanSweep® Tarp System components. Failure to do so may result in serious injury or death due to the large forces involved with the CleanSweep® Tarp System.

4.1 Control manifold hydraulic schematic.



4.2 Pre-2015 Winch Brake Adjustment

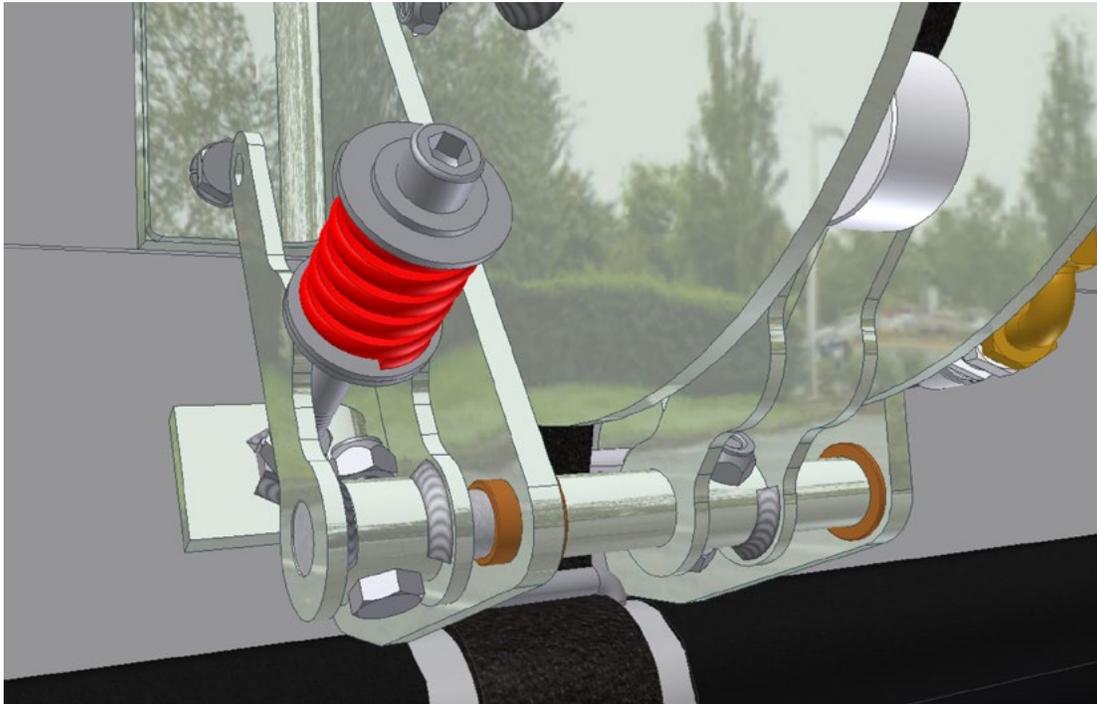


Figure 2: Winch brake

The winch brake retains the tarp in the retracted position at the top of the front wall during loading, transport and the beginning of the unloading cycle.

During loading, the tarp must conform to the load and the front wall of the trailer. The brake must release a short length - usually less than 12" (305 mm) – of strap from the spool while maintaining sufficient (but not excessive) tension on the strap. Excessive tension may cause the tarp pole to bend or restrict the tarp from coming out with the load.

Do not tighten the spring bolt more than 2 turns between testing.

Step 1: Begin adjustment by pulling the tarp out so that it is approximately 15 feet (4600 mm) from being fully retracted and adjust the 5/16"-18 spring bolt so the roller just touches the strap roll – this will ensure the spring bolt is not initially over-tightened which may cause damage.

Step 2: Retract the tarp and verify that the tarp will stay in the retracted position. Test by hanging a 10 lb (7 kg) object from the top pole at the strap.

Step 3: Adjust as necessary to achieve sufficient strap tension and tighten the jam-nut before operating the winch.

Step 4: Raise tarp to the parked position. Trim the bottom of the tarp to leave 12" to 14" laying on the floor.

4.3 Tarp Out-Stop Installation

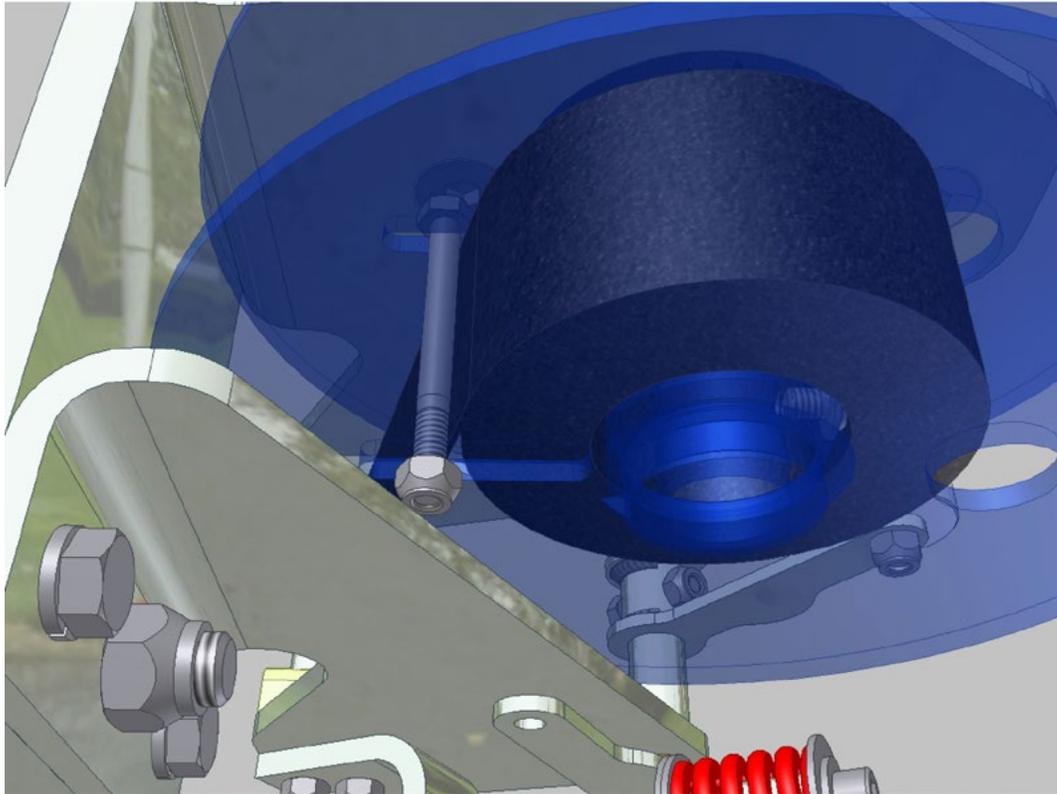


Figure 3: Tarp out-stop installation.

The tarp out-stop prevents the tarp from coming completely out the back of the trailer during unloading.

Step 1: Pull the tarp out the back of the trailer until it touches the ground with the strap pulled tight.

Step 2: At the winch, install a 1/4"-20 X 2 3/4" bolt through the slot in the spool. Holding the bolt tight against the strap roll, tighten the bolt with a 1/4"-20 low-profile locking nut.

Step 3: After tightening the bolt, tap it down against the strap roll with a hammer or mallet – this recesses the bolt so there is not a bump in the strap roll.

Step 4: Verify that the tarp stops when it touches the ground with the strap pulled tight. Small adjustments can be made by wrapping more or less strap around the top pole under the U-Bolt.

4.4 System Check

Inspect all fasteners and fittings for proper torque. Ensure there are no leaks and that all lines are secure before putting the trailer in service.

4.5 Normal Operation

Step 1: Verify that the tarp is fully retracted prior to loading the trailer. It is suggested that a viewing window/port be installed in the top of the front trailer wall so the operator can verify that the tarp is fully retracted from the winch operating position.

Step 2: It is recommended that the trailer is moved forward slightly, near the end of the unloading cycle, to reduce the amount of material unloaded on top of the tarp.

Step 3: After unloading the trailer, dislodge the tarp by hand from underneath any material that may have been unloaded on top of the tarp. Do not attempt to pull the tarp from under a load by using the winch or moving the trailer – this may damage the winch, tarp, strap or trailer.

Step 4: Ensure hydraulic power is supplied to the trailer and engage the winch by activating the power switch (electric systems) or pulling out the manual valve knob (manual systems).

Step 5 : The tarp takes 5-15 seconds to retract and when fully retracted, hydraulic fluid delivered to the winch is redirected through the relief valve in the manifold. Full retraction can be verified through the viewing window/port (if installed), otherwise it is signified by an audible bang as the tarp top pole impacts the strap roller, as well as an audible change in the hydraulic system sound as the fluid is directed through the relief valve. At this point, disengage the winch and verify that the tarp is fully retracted.

4.6 Electric System Manual Override

The electrically-activated valve supplied with electric systems includes a manual override knob that allows the operator to activate the winch without electric power. The manual override is intended for emergency use, not for continuous-duty operation.

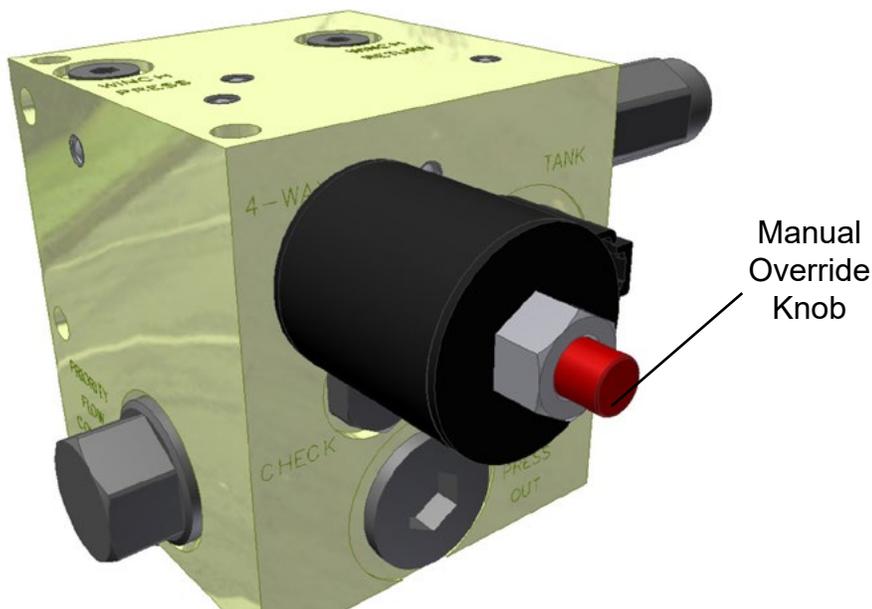
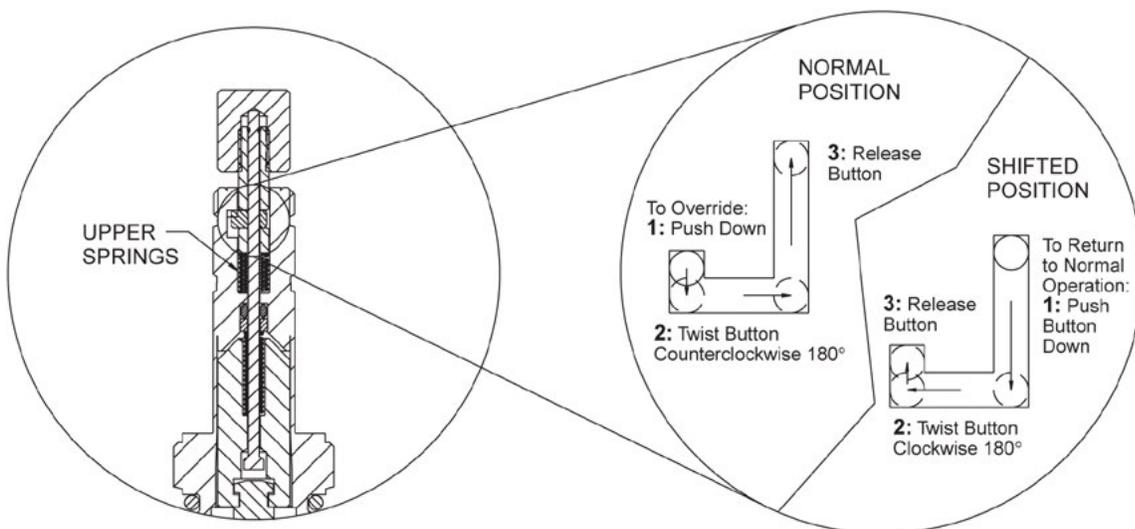


Figure 4: manual override knob on electrically-activated valve.



Exaggerated illustration of operation of Manual Override "M" option

Figure 5: operation of the manual override knob. Ensure the valve is returned to the normal position after the tarp is retracted.

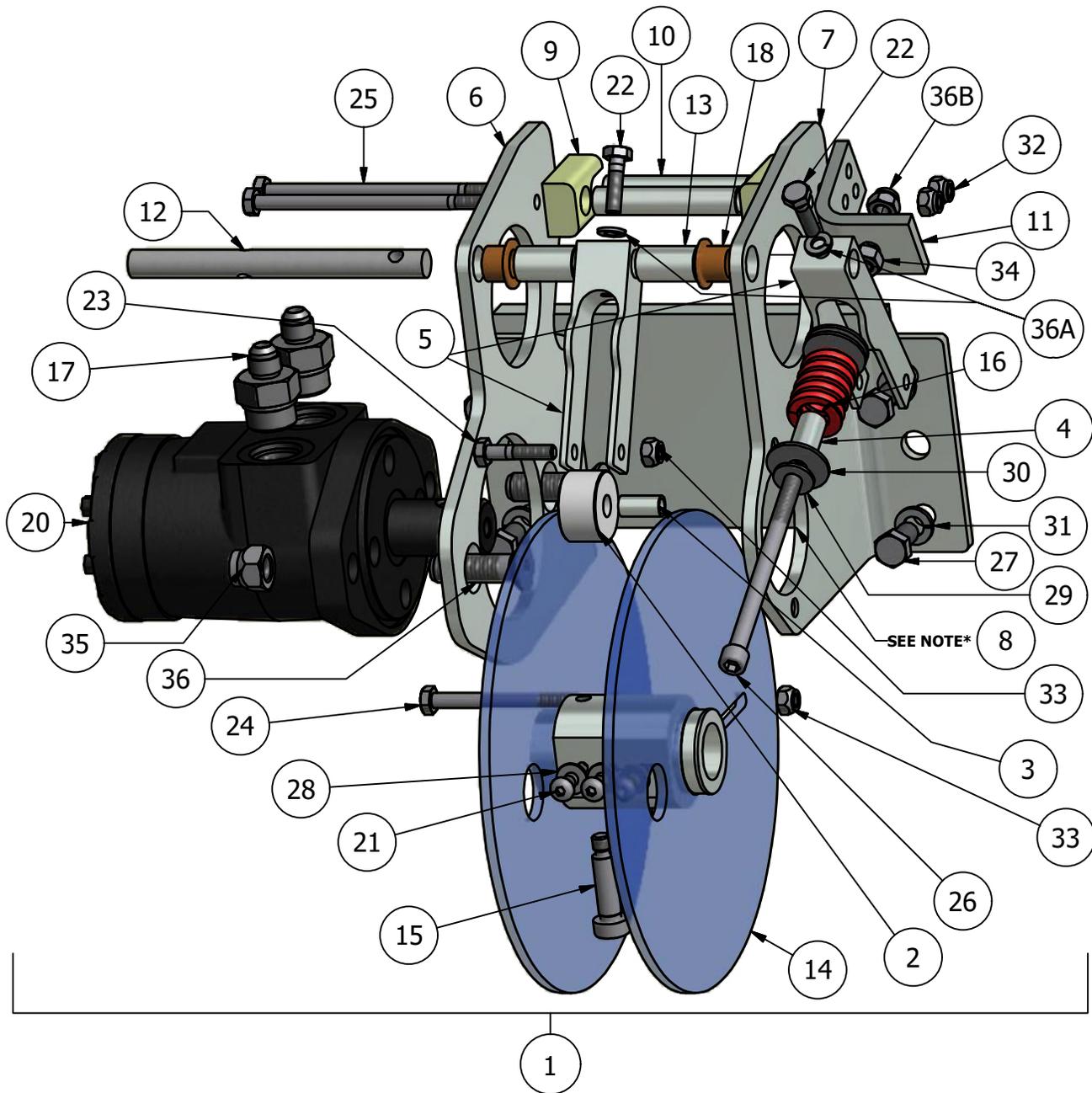
TOOL:	WHERE USED:
End wrenches:	
7/16"	1/4"-20 nuts & bolts (Tarp out-stop)
1/2"	5/16"-18 nuts (Spring bolt jam-nut, U-bolt nuts)
9/16"	3/8"-16 nuts & bolts (Base plates, manifold bracket)
5/8"	-6 (3/8") port/hose/tube fittings
11/16"	-6 (3/8") port/hose/tube fittings
3/4"	1/2"-13 nuts & bolts (Strap roller nut & bolt, motor nuts)
1"	Control valve, relief valve
1 3/8"	-16 (1") port/hose/tube fittings
1 1/2"	-16 (1") port/hose/tube fittings
Ratcheting driver with the following sockets:	
7/16"	1/4"-20 nuts & bolts (Tarp out-stop)
1/2"	5/16"-18 nuts (Spring bolt jam-nut, U-bolt nuts)
9/16"	3/8"-16 nuts & bolts (Strap Roller, manifold bracket)
3/4"	1/2"-13 nuts & bolts (Strap roller nut & bolt, motor nuts, mounting winch)
Hex (Allen) wrenches:	
1/8"	#10-24 button head socket screws (SAE strap roller bracket)
5/32"	1/4" button head socket screws (strap/spool attach)
1/4"	-6 port plugs, 5/16"-18 socket head cap screw (spring bolt)
5/16"	1/2"-13 countersunk bolts (motor bolts)
5/8"	-16 port plugs
Power drill and the following bits:	
3/8" (9.5 mm)	Tarp top pole for U-bolt attachment
7/16" (11 mm)	Mounting winch, strap roller, manifold bracket (opt. – may be welded on)
1 1/4" (32 mm) hole saw (optional)	Manual valve clearance through trailer wall (opt. - if manifold is mounted below front shield)
Welding equipment (optional)	Mounting manifold bracket (opt. – may be bolted on)
Cutting tools (optional)	Cutting access panels in trailer wall or front shield (opt. - if necessary)

MATERIAL:	WHERE USED:
Hoses/tubing:*	*Hose/tube lengths will vary depending on installation
-6 (3/8") (10 mm) hose/tube with Female -6 (3/8") 37° JIC (ISO 8434-2) each end	MANIFOLD – TO – WINCH MOTOR: PRES- SURE WINCH MOTOR – TO – MANIFOLD: RETURN
-16 (1") (25 mm) hose/tube with female -16 (1") 37° JIC (ISO 8434-2) fitting on manifold end	PUMP – TO – MANIFOLD MANIFOLD – TO – DRIVE: PRESSURE DRIVE – TO – MANIFOLD: RETURN MANIFOLD – TO – TANK
Fittings:*	*Required fittings will vary depending on installa- tion
Hose/tube clamps:*	*Required clamps will vary depending on instal- lation
Fasteners:*	*Fastener lengths and required quantities will vary depending on installation
3/8" (M10) bolts, nuts, washers, locking nuts (or plain nuts w/locking washers)	Mounting strap roller (2 each) and manifold bracket (2 each); use grade 5 (class 8.8) or stronger fasteners.
1/2" (M12) bolts, nuts, washers, locking nuts (or plain nuts w/locking wash- ers)	Mounting winch (2 each); use grade 8 (class 10.9) or stronger fasteners.
rivets	Securing tarp poles to tarp
Pipe:	
2" (50 mm)	Top tarp pole (1); Length: 1" (25 mm) shorter than trailer interior width
1 1/2" (40 mm)	Middle tarp poles (3);Length: 1" (25 mm) shorter than trailer interior width
Wiring	Wiring length will vary depending on installation
14 AWG 2-conductor	Electric-controlled systems

KITS (INCLUDE ALL REQUIRED PARTS- EXCLUDING TARPS AS NOTED):				
DESCRIPTION			PART #	
MANUAL ASSEMBLY WITH TARP			Please call a KEITH dealer for a quote.	
MANUAL ASSEMBLY WITHOUT TARP				
ELECTRIC 12VOLT ASSEMBLY WITH TARP				
ELECTRIC 24VOLT ASSEMBLY WITH TARP				
ELECTRIC 12VOLT ASSEMBLY WITHOUT TARP				
ELECTRIC 24VOLT ASSEMBLY WITHOUT TARP				
PARTS (INCLUDED IN KITS AS REQUIRED):				
E = FOR ELECTRIC KITS ONLY				
ID #	QTY	DESCRIPTION	PART #	
			*SAE MOUNTING	UNIVERSAL MOUNTING
1	1	HYDRAULIC WINCH ASSEMBLY	05942301	06250201
		INCLUDES ITEMS 2-36		
2	1	ROLLER, BRAKE	06049201	06049201
3	1	ROLLER AXLE, BRAKE	06093401	06093401
4	1	SPRING SPACER, BRAKE	06117101	06117101
5	2	SWING ARM WELDMENT, BRAKE	06119201	06119201
6	1	WINCH MOTOR MOUNT	06126701	06126701
7	1	SUPPORT, WINCH STRAP GUIDE AND BRAKE	06126801	06126801
8	1	WINCH BASE PLATE	06126901	06250501
9	2	WINCH STRAP GUIDE	06127301	06127301
10	2	SPACER, WINCH STRAP GUIDE	06127401	06127401
11	1	SPRING MOUNT, BRAKE	06127510	06127510
12	1	SWING ARM SHAFT, BRAKE	06127601	06127601
13	2	SHAFT SPACER, BRAKE	06127701	06127701
14	1	WINCH SPOOL WELDMENT, BOLT-ON	06175301	06175301
15	1	SHOULDER SCREW, BOLT-ON WINCH SPOOL	06175401	06175401
16	1	SPRING 105-505	84452610	84452610
17	2	6400-06-10 ST THREAD CONNECTOR MJIC X M ORING	84684100	84684100
18	2	BUSHING SINTERED SF-1620-8	85811020	85811020
19	1	STRAP NYLON CSW 2"X75' (NOT PICTURED)	85811075	85811075

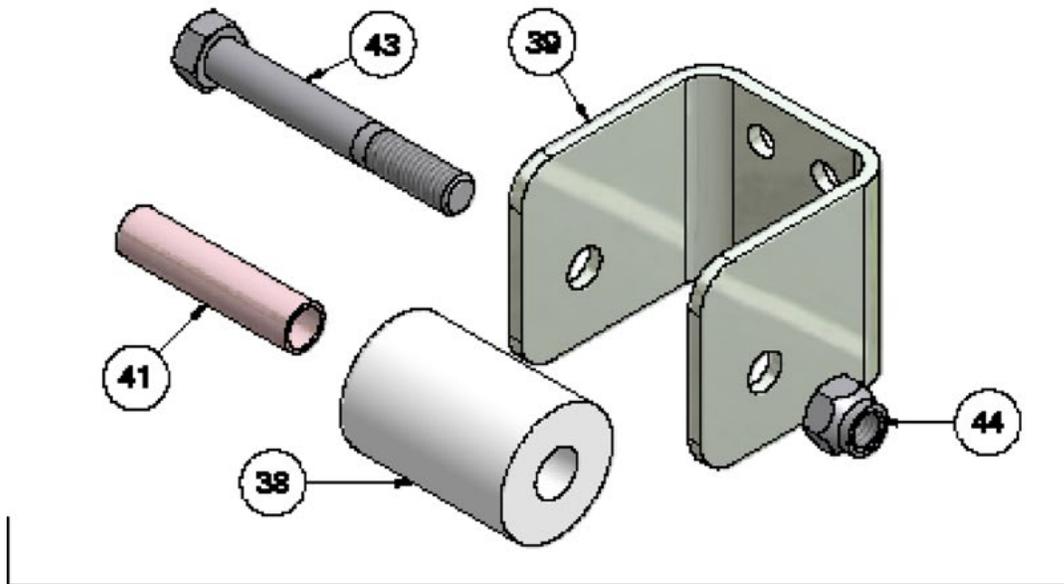
20	1	CHAR-LYN HYDRAULIC MOTOR 101-1820-009 H-SERIES	85819475	85819475
21	3	SCREW BUTTON ZN 1/4"-20 X 3/8"	86404312	86404312
22	2	BOLT HEX GR5 ZN 1/4"-20 X 1"	86414050	86414050
23	1	BOLT HEX GR5 ZN 1/4"-20 X 1-1/4"	86415500	86415500
24	1	BOLT HEX GR5 ZN 1/4"-20 X 2-3/4"	86420500	86420500
25	2	BOLT HEX GR5 ZN 1/4"-20 X 4-1/2"	86424000	86424000
26	1	BOLT SOCKET HEAD ZN 5/16"-18 X 4.5"	86432511	86432511
27	4	BOLT HEX GR5 ZN 3/8"X3/4"	86437000	86437000
28	3	WASHER FLAT #12 SAE	86550552	86550552
29	1	WASHER FLAT 1/4"	86551000	86551000
30	3	WASHER FENDER 5/16" X 1-1/4"	86552530	86552530
31	4	WASHER LOCK 3/8"	86555000	86555000
32	2	NUT HEX NYLOCK 1/4"-20	86626000	86626000
33	4	NUT HEX NYLOCK JAM NUT 1/4"-20	86626030	86626030
34	1	NUT HEX 5/16"-18	86627000	86627000
35	2	NUT HEX NYLOCK 1/2"	86629500	86629500
36	2	BOLT FLOOR GR8 1/2" X 1-3/4"	87420100	87420100
36A	2	WASHER LOCK 1/4"	86551500	86551500
36B	1	HEX NUT - NYLON LOCK - 5/16 - 18 TOP INSERT TYPE	86627500	86627500
37	1	STRAP ROLLER ASSEMBLY	05943001	06250301
		INCLUDES ITEMS 38-44		
38	1	STRAP ROLLER	05795501	05795501
39	1	STRAP ROLLER BRACKET	05796201	06250401
40	1	STRAP ROLLER BRACKET BASE PLATE	05797701	NOT REQ.
41	1	STRAP ROLLER BUSHING	05813401	05813401
42	4	SCREW BUTTON #10-24 X 5/8"	86404350	NOT REQ.
43	1	BOLT HEX GR8 1/2"-13 X 3 1/2"	86456500	86457000
44	1	NUT HEX NYLOCK 1/2"-13	86629500	86629500
45	1	HYDRAULIC MANIFOLD ASSEMBLY (ELECTRIC) ^E ***** OR ***** HYDRAULIC MANIFOLD ASSEMBLY (MANUAL)	05973301 ***** 05973304	05973301 ***** 05973304
		INCLUDES ITEMS 46-55		
46	1	MANIFOLD BODY	05971601	05971601
47	4	HEX UNION, -16 37° JIC X -16 SAE O-RING	84685400	84685400

48	2	HEX UNION,-6 37° JIC X -6 SAE O-RING	84684000	84684000
49	7	8 mm EXPANDER PLUG MB 800-080	85101130	85101130
50	2	PLUG, HEX SOCKET,-16 SAE O-RING	84687900	84687900
51	2	PLUG, HEX SOCKET,-6 SAE O-RING	84687400	84687400
52	1	PRIORITY FLOW CONTROL (5 GPM), FREA-XAN-5.0	85101045	85101045
53	2	CHECK VALVE CV08-20-0-N-25	85103601	85103601
54	1	RELIEF VALVE RV08-20H-0-N-18/800	85107555	85107555
55	1	CART. VALVE SV10-40M-0-N-0 (ELECTRIC) ^E ***** OR ***** CART. VALVE, 4-WAY PULL MP10-40K-0-N (MANUAL)	85108800 ***** 85104949	85108800 ***** 85104949
56	1	TARP, 18 OZ. VINYL, STANDARD TRIM-TO-FIT (NOT PICTURED)	85811120	85811120
57	1	U-BOLT ASSEMBLY (NOT PICTURED)	86671100	86671100
58	1 ^E	COIL 12V WEATHERPROOF 4303712 (NOT PICTURED) *****OR***** COIL 24V WEATHERPROOF 4303724 (NOT PICTURED)	85601805 ***** 85600250	85601805 ***** 85600250
59	1 ^E	Connector Kit: Deutch DT06-25 (NOT PICTURED)	06714701	06714701
62	1 ^E	BUTTON START W/BOX XALD101 (NOT PICTURED)	85791635	85791635
63	1	MANIFOLD MOUNTING BRACKET, STEEL (NOT PICTURED)	06033101	06033101
64	1	MANIFOLD MOUNTING BRACKET, ALUMINUM (NOT PICTURED)	06033102	06033102
65	2	BOLT HEX GR5 ZN 3/8" X 5 3/4" (NOT PIC- TURED)	86446012	86446012
66	2	WASHER FLAT 3/8" (NOT PICTURED)	86554000	86554000
67	2	NUT HEX NYLOCK 3/8" (NOT PICTURED)	86626000	86626000



NOTE: WINCH ASSEMBLIES (ITEM 1) **5942301** & **6250201** ARE IDENTICAL EXCEPT FOR THEIR MOUNTING METHODS:

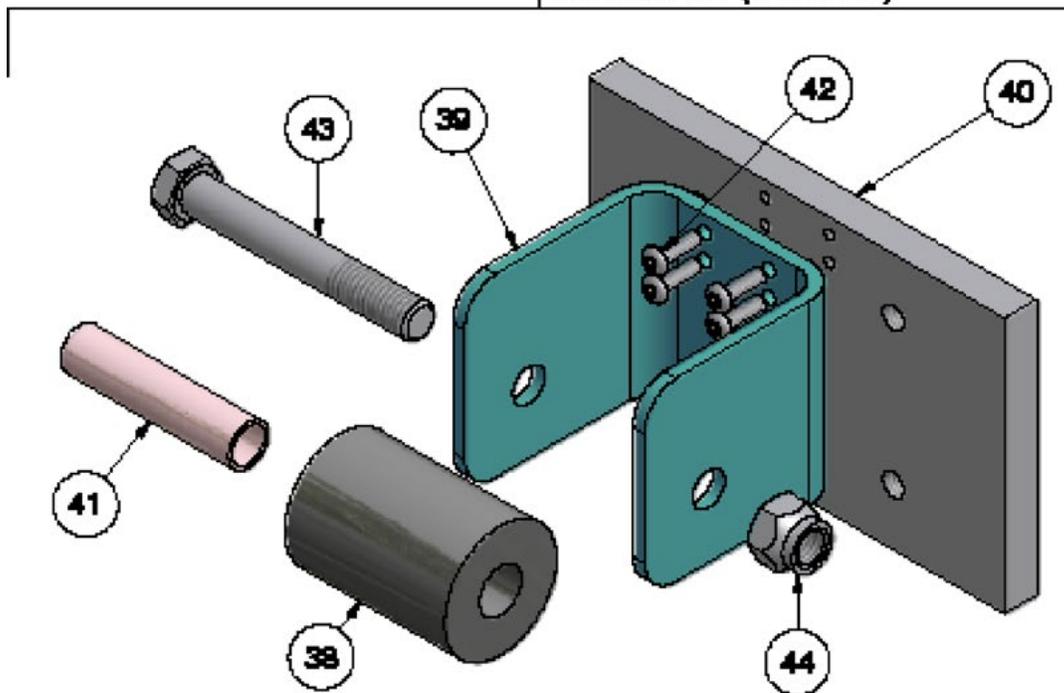
- ASSEMBLY **5942301** CONTAINS BASE PLATE (ITEM 8) **6126901** WHICH HAS FOUR 3/8"-16 TAPPED MOUNTING HOLES;
- ASSEMBLY **6250201** CONTAINS BASE PLATE (ITEM 8) **6250501** WHICH HAS TWO CLEARANCE HOLES FOR 1/2" (M12) MOUNTING BOLTS;
- ALL OTHER PARTS ARE INTERCHANGEABLE.



UNIVERSAL MOUNT (06250301)

37 OR

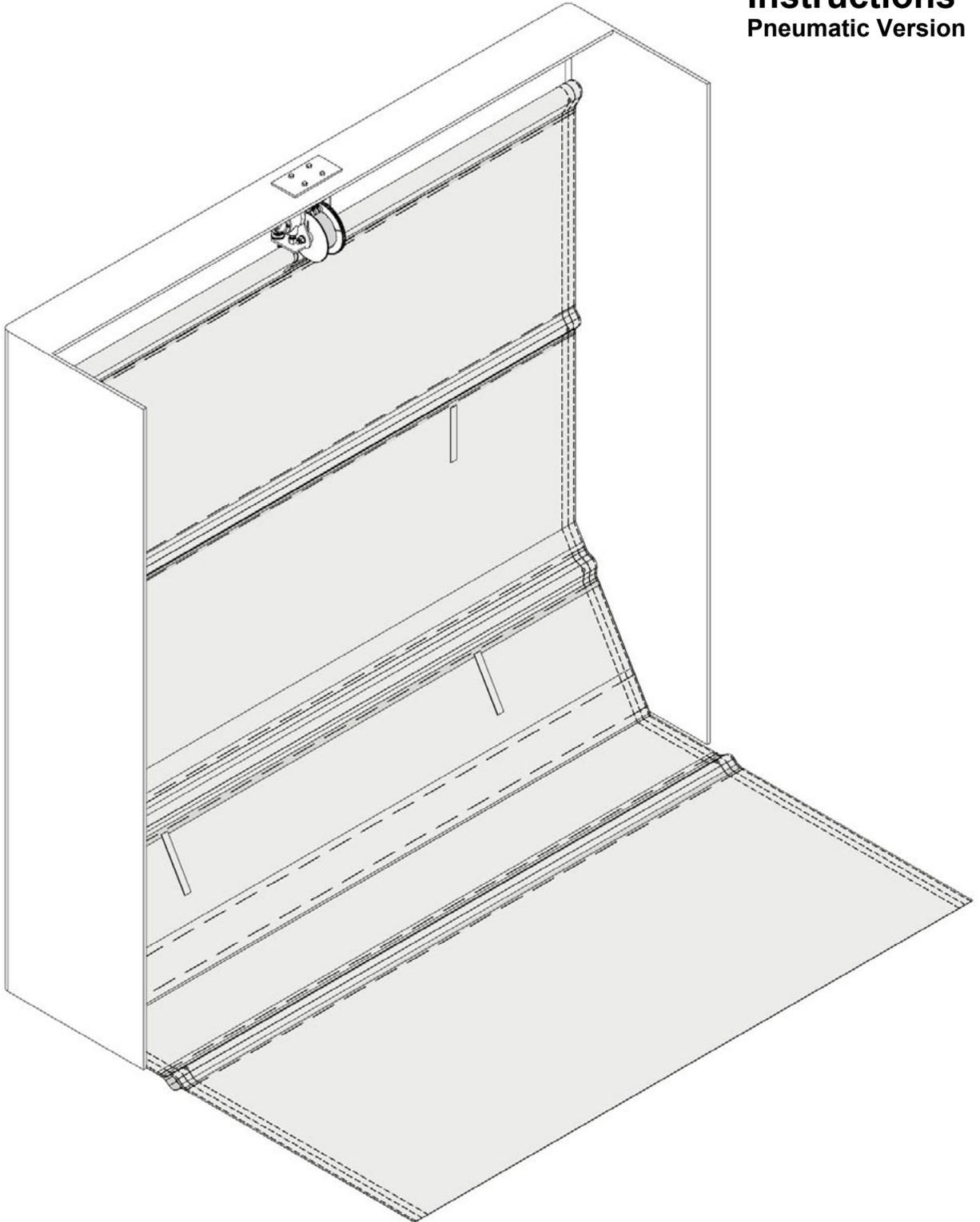
SAE MOUNT (05943001)



KEITH® *CleenSweep® Installation*

Instructions
Pneumatic Version

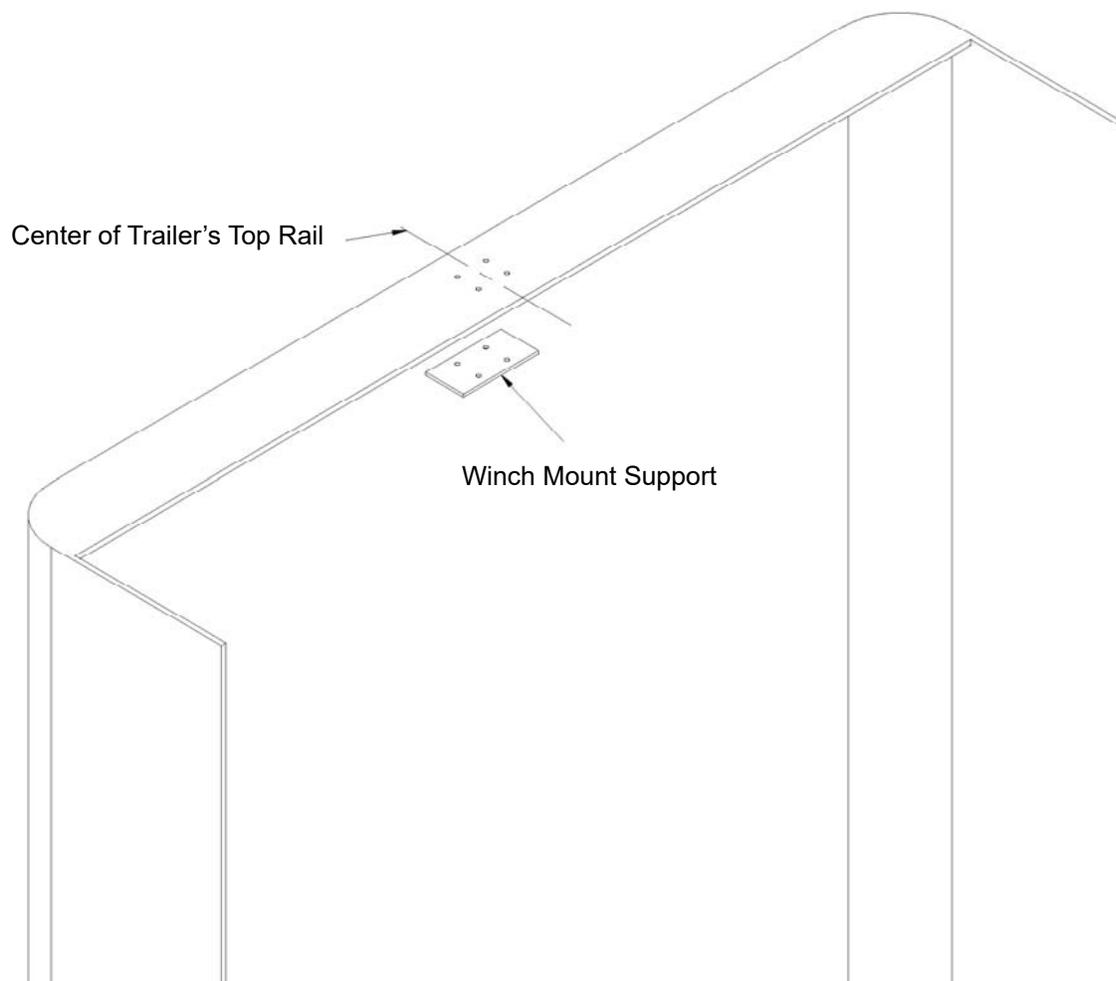
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5.1 Step 1: Mounting of Winch Frame/Backing Plate

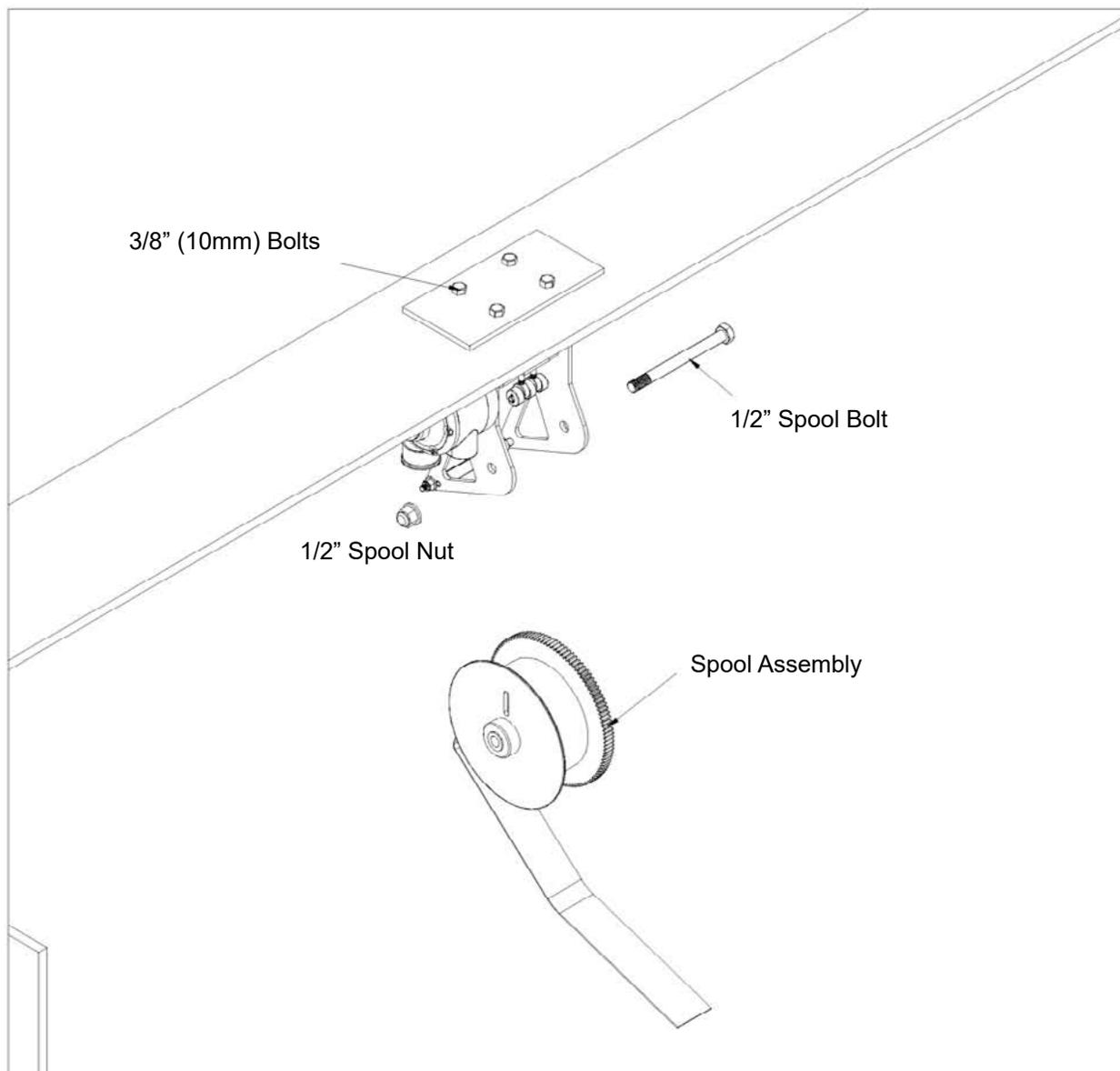
Mount winch frame to the underside of the top rail channel at the front of the trailer. If trailer does not have a top rail, a mounting box will need to be constructed and attached to the trailer.

- Locate the center of the top rail. Please note that it is crucial that the winch is mounted in the absolute center of the trailer and at a 90 degree angle. If the winch is not mounted square, it will put uneven pressure on the tarp strap.
- Measure 1 ¼" back from the front bulkhead and use the winch mount support as a template to drill bolt holes.



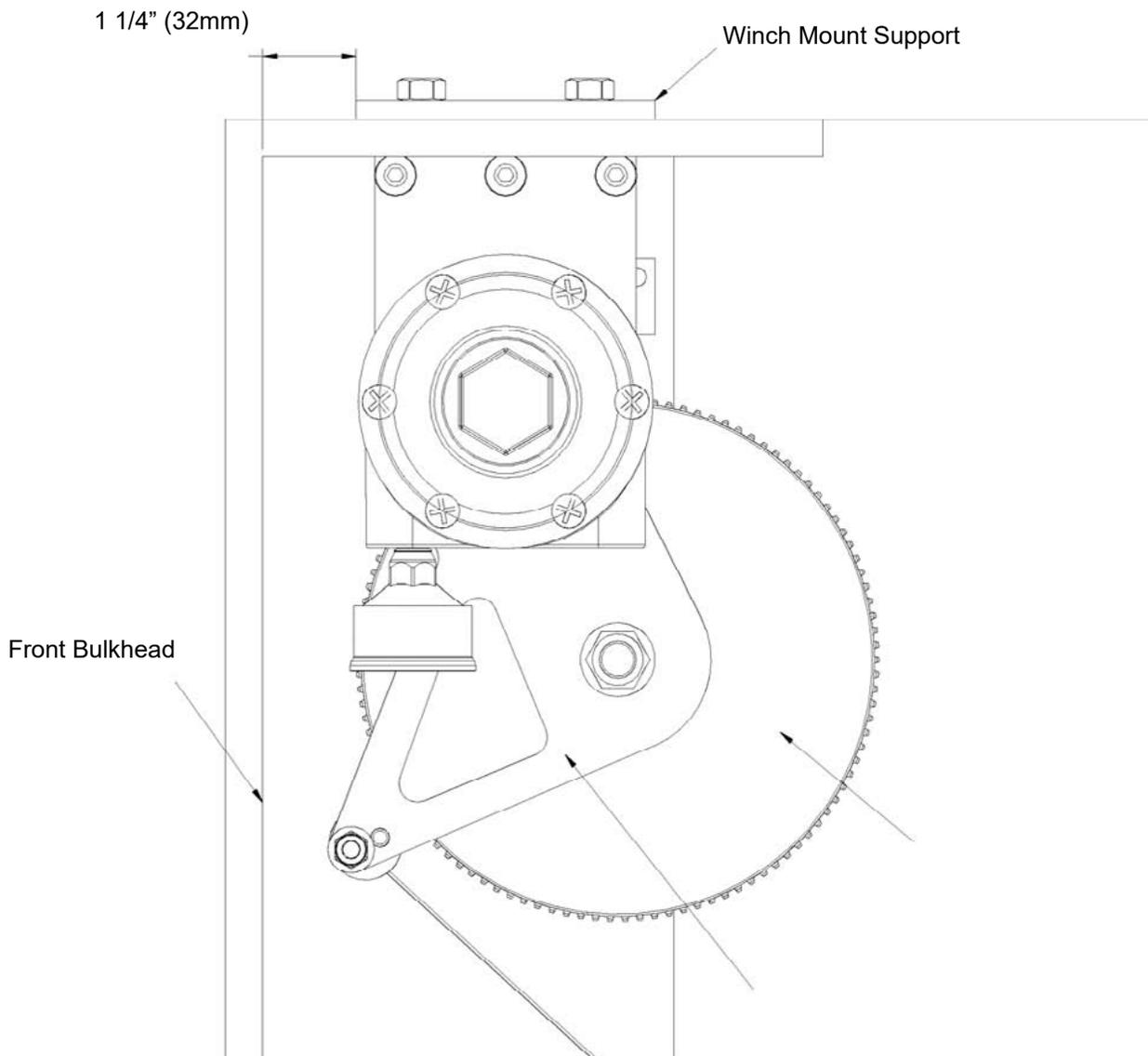
Step 2:

- Bolt winch to winch mount support using the 3/8" (10mm) bolts, double checking that it is centered and square in the trailer. Washers are not needed because both the winch mount support and winch frame are steel.
- Use a 3/4" wrench to remove strap spool, providing access to tighten mounting bolts with socket wrench.



5.2 Step 3:

- Bolt winch to winch mount support using the 3/8" (10mm) bolts, double checking that it is centered and square in the trailer. Washers are not needed because both the winch mount support and winch frame are steel.
- Use a 3/4" wrench to remove strap spool, providing access to tighten mounting bolts with socket wrench.

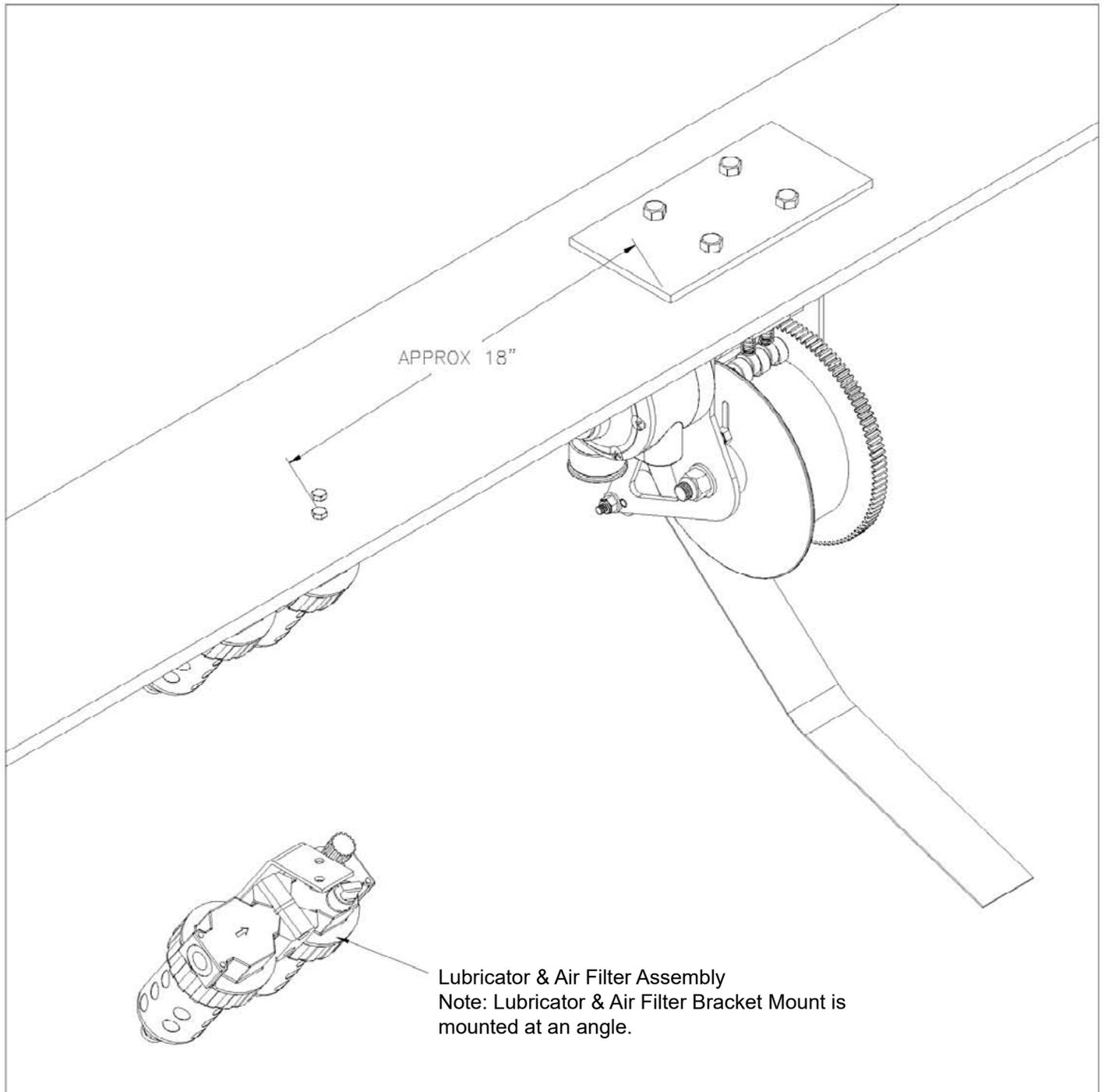


5.3 Step 4:

- Install bracket mount to the top rail or mounting box approximately 18" to the left of the CleanSweep® winch. Make sure the air hose will still be easily accessible. Note that the bracket design is tilted for easy filling of lubricator.
- Drill a $\frac{3}{4}$ " hole in the top portion of the trailer wall near the bracket mount. If the trailer has front ribs, it is easiest to drill the hole in one of the ribs and thread the air hose through to the bottom of the trailer. If trailer walls do not have ribs, run the air hose through one of the corner braces and attach with hose clamps.
- Install grommet into hole in trailer wall to protect air hose. Feed air hose through hole leaving approximately 18" remaining at top.
- Decide at what angle you want the air fittings for the air hose. Note that it is easier to tighten the fittings before mounting the lubricator and air filter assembly. Fill lubricator with the lubricant supplied before mounting. Lubricant typically lasts 6 to 8 months, depending upon use. Always regularly check the lubricant and use ATL004 or equivalent.
- Bolt lubricator and air filter assembly to bracket mount, making sure that the bottom of the lubricator is not lower than the winch. Also make sure that lubricator and air filter assembly is not installed more than four-feet away from the winch's air motor to ensure proper lubrication.

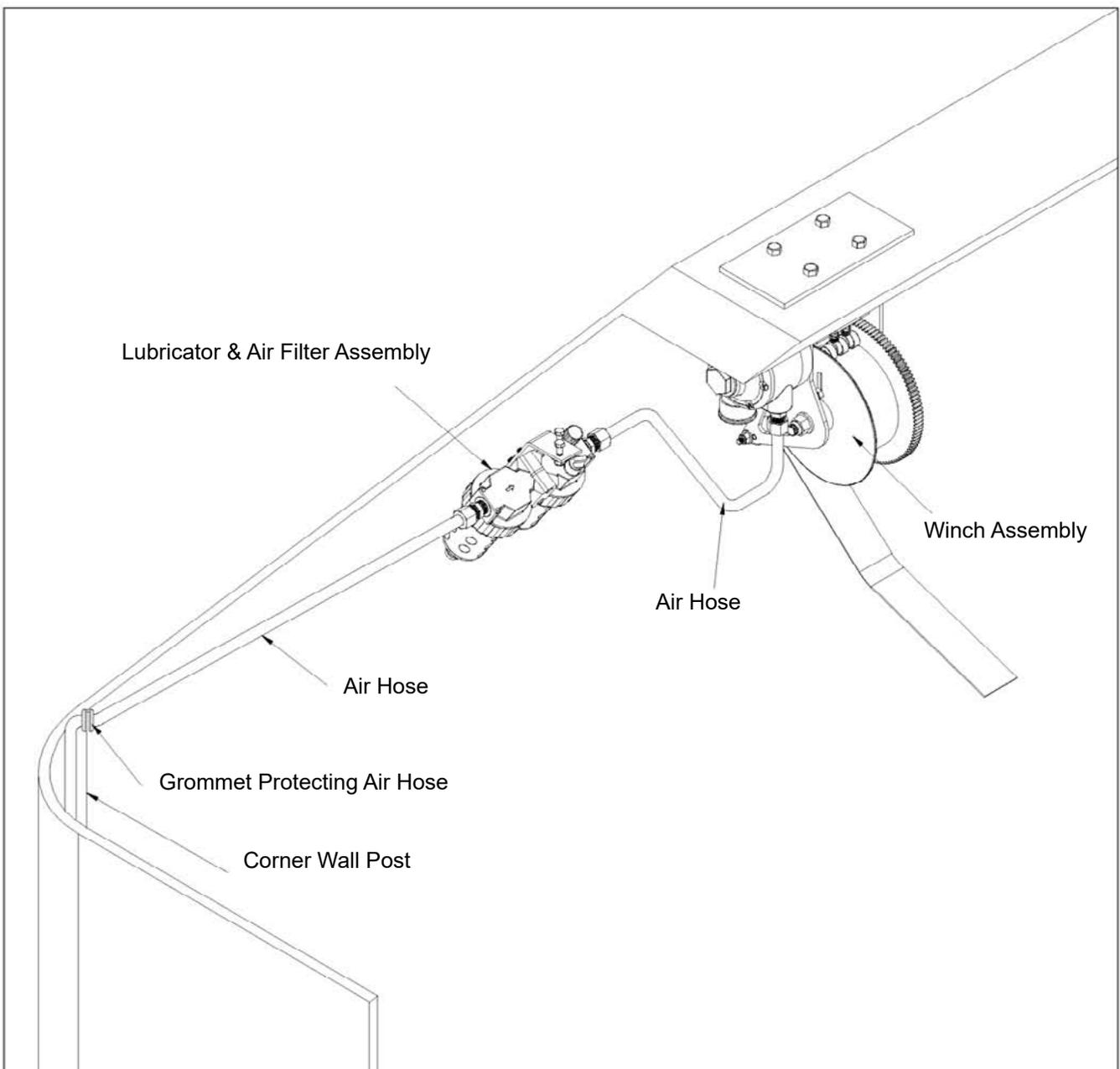
Set lubricant regulator by opening the lubricator valve completely ($3\frac{1}{2}$ to $4\frac{1}{2}$ turns counter-clockwise.) The valve is located on the top of the lubricator. See diagram 5.8 page 56.

Note: See figure on next page



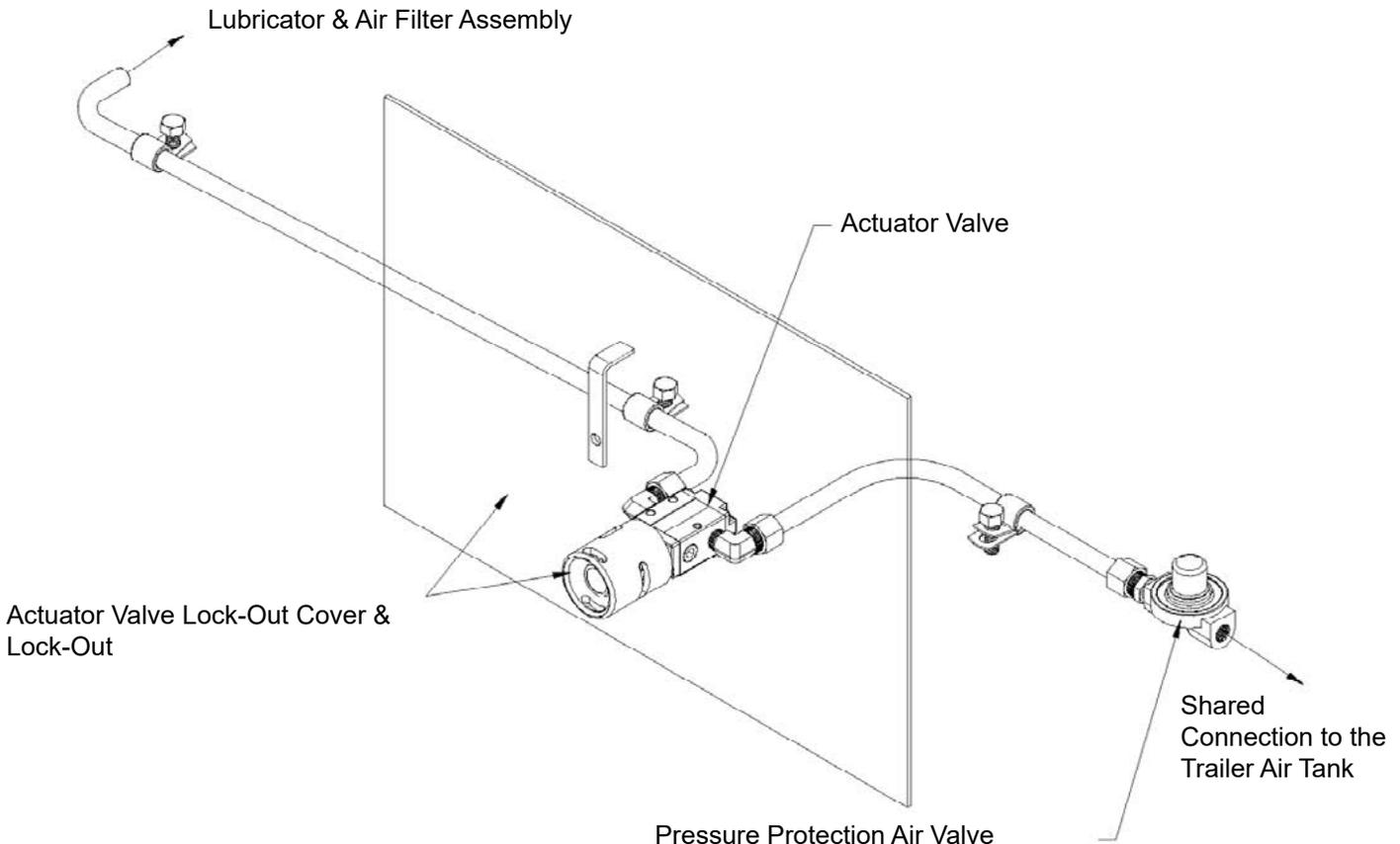
5.4 Step 5:

- Cut air hose and attach it to inlet side of the air filter.
- Measure area between fitting on lubricator and fitting on the winch's air motor. Cut air hose to the appropriate length. Place approximately 20-30 drops of lubricant into the air hose. Attach the air hose to the fittings from the lubricator to the air motor.



5.5 Step 6:

- Determine location of actuator valve. Installation is recommended at one of two locations:
 - It can be installed on the driver's side, near the front of the trailer. If this location is chosen, it is a good idea to have a sight hole so that you can see the CleanSweep® system as it works to ensure it is properly set.
 - It can be installed at rear of trailer, allowing you to watch the CleanSweep® system properly retract to the ready-position before closing the trailer door.
- Drill $\frac{3}{4}$ " hole to accommodate the actuator valve. If it is located at the front of the trailer, drill the hole under the slope shield. Install the lock-out system over the threads before installing the nut. The lock-out system prevents anyone from activating the actuator button when conducting maintenance on the winch system. Make sure the horizontal slot on the actuator valve lock-out is located at the top of the button to ensure the lock-out does not fall out.



Step7:

- Locate the trailer air tanks. If there is an outlet without a valve, you can plumb into it. If not, you will have to create an outlet, using a T-fitting. Outlet must be a “live” outlet, meaning it will have air pressure at all times.
- Attach the pressure protection air valve to the outlet. Note that it may be necessary to reduce the outlet to accommodate the ¼” fitting of the pressure protection air valve. Properly attach all plumbing valves using Teflon tape.
- Begin threading air hose under trailer frame from actuator valve to air tank. Attach air hose to pressure protection air valve.
- Secure air hose to the trailer frame with zip ties.
- If actuator valve is installed near the front of the trailer, run the air hose under slope shield. Make sure all air hoses are clear of the floor slats when they are in the forward most position. Attach air hose from tank to the inlet on the actuator valve.

Attach air hose from tank to the inlet on the actuator valve. Attach the air hose from the air filter to the actuator valve outlet.

5.6 Step 8: Tarp Installation

Please note that tarp poles are not supplied by KEITH Manufacturing Co. For the top pole, located at the top of the tarp, one 2” (50 mm) lightweight metal pipe, is recommended. For all other poles, use three 1 ½” (40 mm) pipes.

Step 1: Thread the strap through the strap guide on the winch, through the slot in the front shield (if winch is low-mounted) and through the strap roller (if used).

Step 2: Cut the tarp poles approximately 1” (25 mm) shorter than the inside width of the trailer. Take this measurement just above the trailer floor, at the trailer’s narrowest point. If using metal poles, cut them 2” (50 mm) shorter than the inside width of the trailer.

Step 3: If the tarp is more than 3” (75 mm) wider than the width of the trailer, cut the tarp to the same width as the inside of the trailer. Use the vertical stitching as a guide and remove half of the material from each side of the tarp.

Note: If you are installing a CleanSweep® into a trailer with a V-FLOOR® system, the tarp will need to be wider than the inside of the trailer because the tarp will conform to the ridges on the floor. For a V-9 system, the tarp should be 6" wider than the inside of the trailer. For a V-18 system, the tarp should be 7" wider.

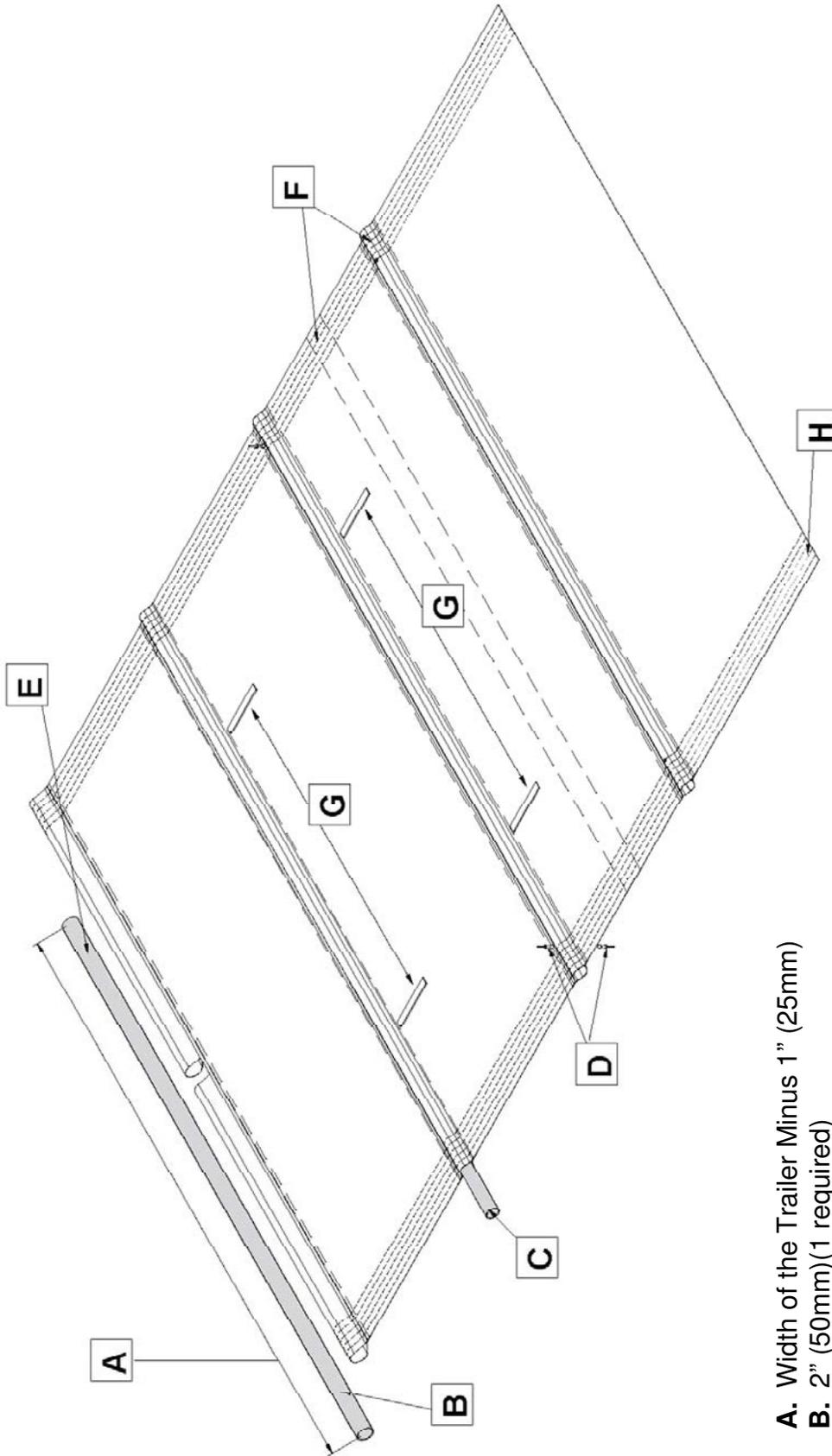
Step 4: Center the tarp poles in the tarp pockets. The 2" (50 mm) pole should be inserted into the top pocket with the notch in the center. The smaller diameter poles go into the next two pockets down from the top and either in the third or fourth pocket down from the top, depending on the height of the trailer. UHMW strips, similar to what is installed on the bottom of the front slope shield, can also be used as other poles.

Step 5: Keep the tarp poles in place by pop riveting the tarp to the poles—two rivets on each end (not supplied).

Step 6: Find the center of the top tarp pole. Drill 3/8" (9.5 mm) holes through the top pole to attach the U-Bolt. It must be centered and installed so that when the tarp is hanging from the winch, the threads of the U-Bolt are facing downward. If necessary, you can make the notch in the middle of the tarp wider to accommodate the U-Bolt.

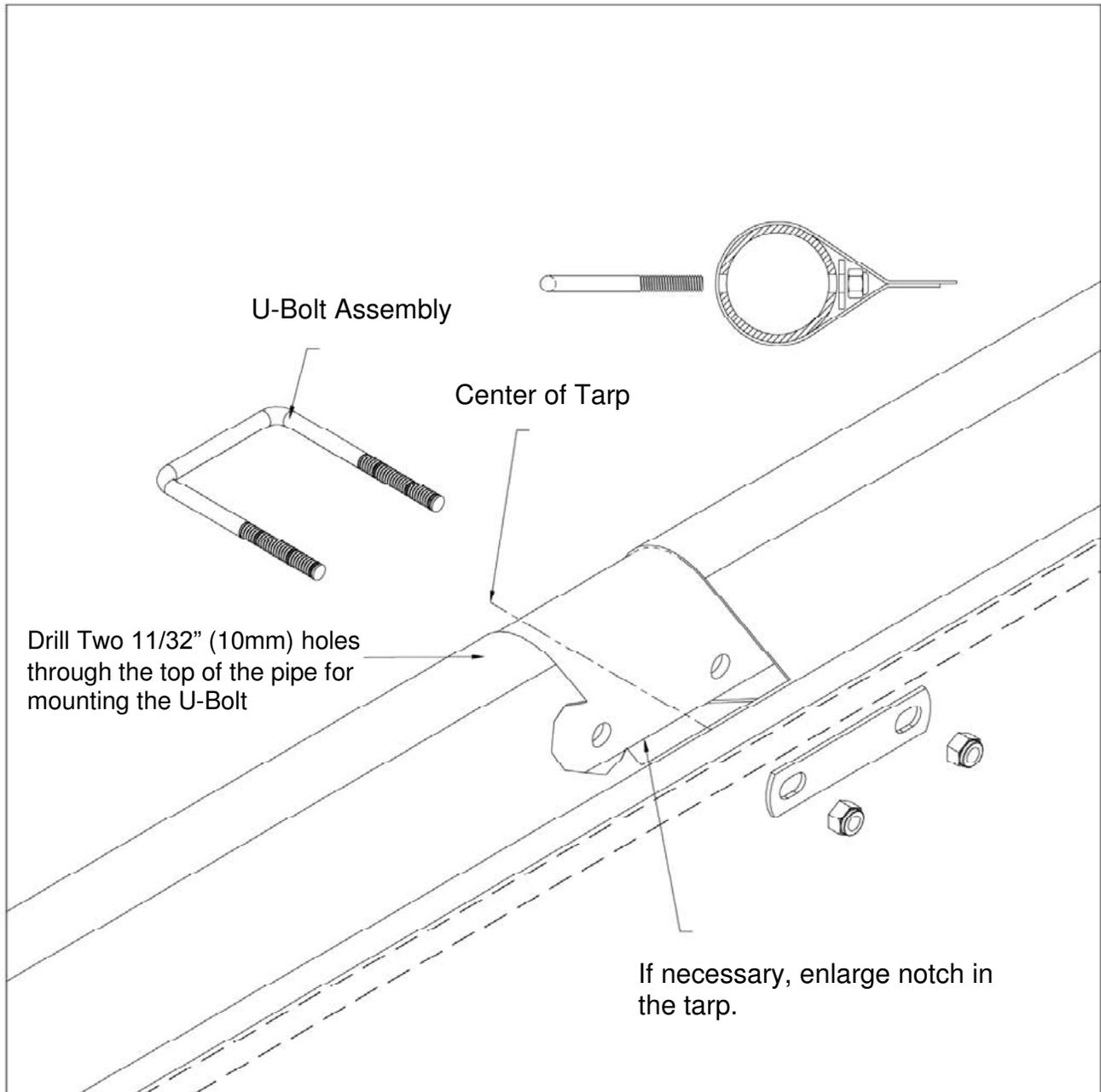
Step 7: Place the tarp in the trailer, with the handles facing upward and the 2" (50 mm) top tarp pole toward the front of the trailer.

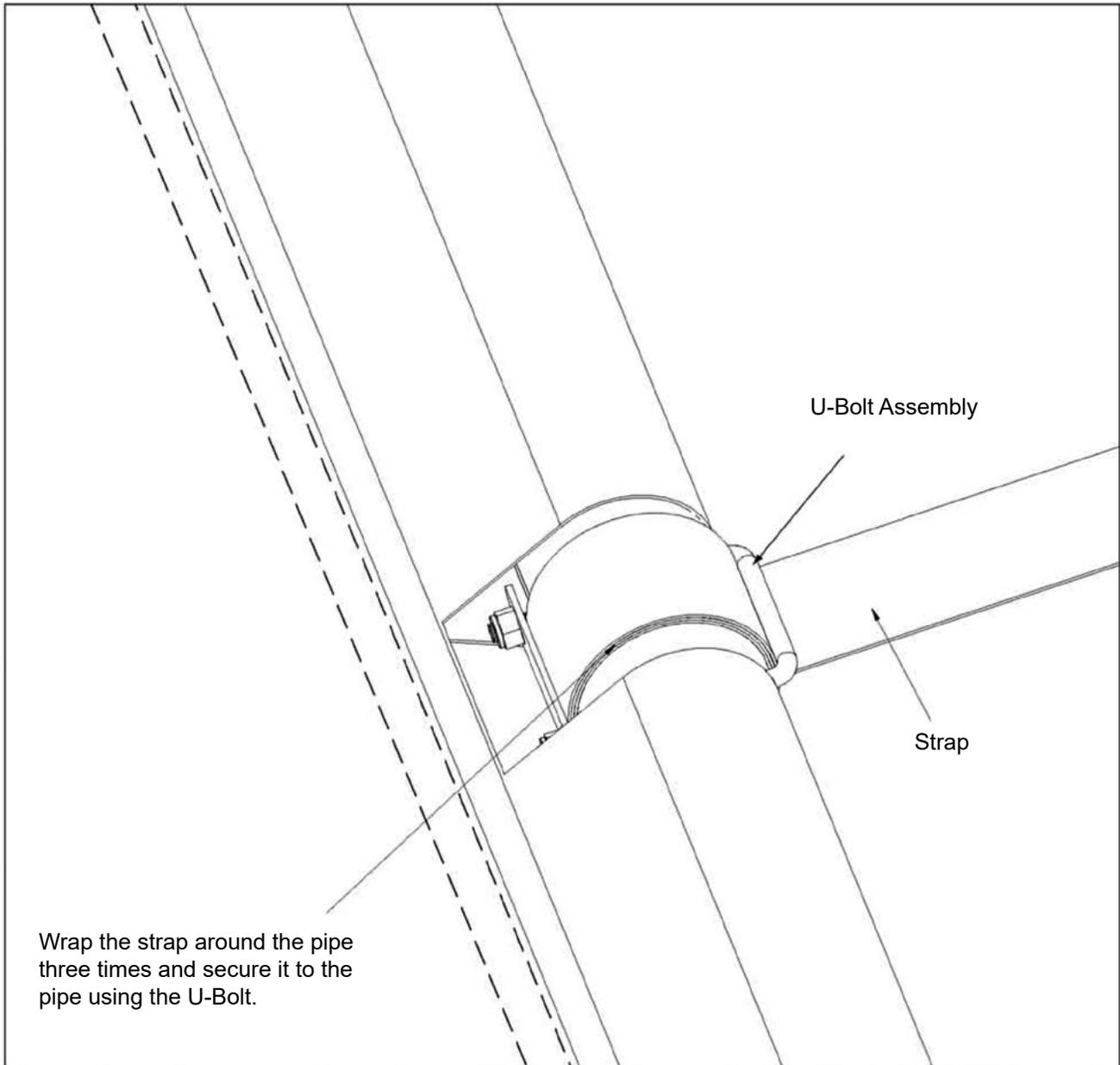
Step 8: Making sure that the strap is not twisted, wrap it around the pole tightly at least twice and tighten the U-Bolt.



- A.** Width of the Trailer Minus 1" (25mm)
- B.** 2" (50mm)(1 required)
- C.** 1 1/2" (38mm)(3 required)
- D.** Rivet the Tarp to the Pipe (4 Places Per Pipe)
- E.** Center the Pipes in the Middle of the Tarp
- F.** For Shorter Trailers, the Third Pipe May Be Moved to the Upper Pocket
- G.** Tarp Handles
- H.** Use Stitching Lines as a Guideline to Cut the Width of the Tarp to fit the Trailer

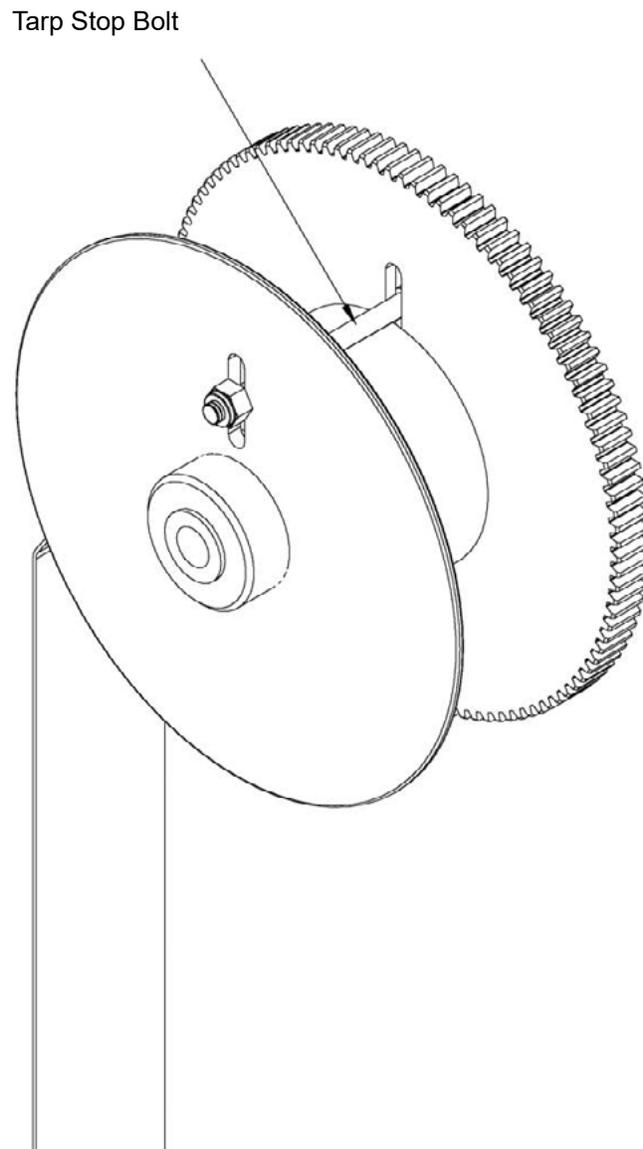
Note: Cut Half of the Material Off From Each Side





5.7

- Pull the tarp out the back of the trailer until approximately 24 inches (610mm) remain inside the trailer.
- At the spool assembly install $\frac{1}{4}$ " (6mm) bolt through the slots on either side of the spool, holding the bolt tight against the roll of strapping. Tighten the bolt. Once the bolt is tight, tap the bolt against the spool with a hammer. This recesses the bolt so that there is no bump in the roll of strapping, which could affect the operation of the brake. The tarp stop prevents the tarp from coming completely out of the trailer during unloading.



5.8

Check that the lubricant bottle has been filled and that the regulator has been fully opened. Refer to instructions on page 46.

To ensure the motor is well lubricated before starting normal operation. Pull the tarp out to the back of the trailer and retract several times by pushing and holding the valve actuator button.



See Figure 11

See Figure 12

See Figure 13



ID #	Quantity	Description	Part Number	Notes
1	1	Winch Assembly	05214401	
-	-	Includes Items 2-3 7	-	
2	1	Winch Frame	05214601	
3	1	Winch Mount Support	05215001	
4	1	Spool Modification	05215501	
5	1	Friction Brake Assembly	05214501	
-		Includes Items 6-14		
6	1	Friction Brake	05216501	
6A	1	Brake Mounting Lug	05985701	
7	2	Nut Hex 1/4" Nylock	86626000	
8	3	Brake Roller	05216701	
9	1	Brake Roller Pin	05216801	
10	2	Eccentric Set Collar	05216901	
11	1	Hinge Pin Brake	05217001	
12	4	Pin Cotter 1/16" x 1/2"	86650100	
13	2	Sliding Shaft Brake	05217101	
14	2	Spring 520	84451900	
15	1	Bolt Socket GR5 1/4"x3"	86421010	
16	4	Nut Hex 1/4" Nylock	86626000	
17	3	Bushing 1/2" ID Sintered	85811020	
18	1	Axle Bolt 1/2"	05216401	
19	1	Nut 1/2" Hex Nylock	86629500	
20	1	Washer Flat 1/2"	86556500	
21	1	Bolt Hex GR5 1/4"x 5"	86424500	
22	2	Washer Flat 1/4"	86551000	
23	1	Bumper Gear-Side	05230101	
24	1	Roller	05215201	
25	1	Bumper Non Gear-Side	05215101	
26	1	Gear Guard Small	05217601	
27	2	Bolt Hex GR5 1/4"x1-1/2"	86416500	
28	3	Bolt Hex GR5 1/4"x1/2"	86409500	
29	3	Washer Lock 1/4"	86551500	
30	1	Shaft Drive/Brake Assembly	05215901	
31	1	Air Motor	85819901	
32	3	Bolt Flat Head 1/4"x1"	87400100	
33	3	Screw Button #10-32 X 3/8"	86404300	
34	1	Strap Nylon 2"x 75'	85811075	
35	4	Bolt Hex GR5 3/8"x1-3/4"	86439000	
36	7	Washer Flat 3/8"	86554000	3 of 7 shipped loose
37	7	Nut Hex Nylock 3/8"	86628000	3 of 7 shipped loose
38	1	U-Bolt Assembly 5/16"x2x3	86671100	

See Figure 11



See Figure 12



See Figure 13



ID #	Quantity	Description	Part Number	Notes:
39	2	Nut Hex Nylock 1/4"	86626000	
40	2	Air Fitting 1/4" Straight	85115020	
41	2	Air Fitting 3/8" Straight	85115060	
42	2	Air Fitting 1/4" 90°Elbow	85115010	
43	100	Air Hose 1/2"	85115030	
44	1	Lubricator & Air Filter Assembly	85811065	
-		Includes Items 45-47		
45	1	Lubricator Air Parker	85811060	
46	1	Air Filter Parker	84004030	
47	1	Air Bracket Mount	85612010	
48	1	Mount Bracket Lubricator & Air Filter	05217201	
49	2	Bolt HWH ROLOCK #10-32 x 1/2"	86404510	
50	1	Bolt Hex 6mmx16mm	87002480	
51	2	Bolt Hex 1/4"x1"	86414050	
52	2	Washer Flat 1/4"	86551000	
53	2	Grommet 1/2" ID	83217520	
54	3	Clamp Hydraulic Tube CL-9	84750244	
55	3	Bolt Hex GR5 3/8"x3/4"	86437000	
56	1	Actuator Valve	85114080	
57	1	Muffler	85114230	
58	1	Actuator Valve Lock-Out Cover	05217301	
59	1	Actuator Valve Lock - Out	05217401	
60	1	Pressure Protection Air Valve	85115050	
61	1	Washer Lock 6mm	87075500	
62	1	Lubricant Air Tool ATL004W	85811080	
63	1	Tarp Woven 108"x98"	85811120	

