AMERICAN TARP

AMERICAN TARP™

OWNERS MANUAL

-INSTALLATION INSTRUCTIONS

-USER INSTRUCTIONS

-MAINTENANCE

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Contents

Specifications

Installed Weight: 1020 lbs.

Width: 108 inches

Maximum Container Length: 24’

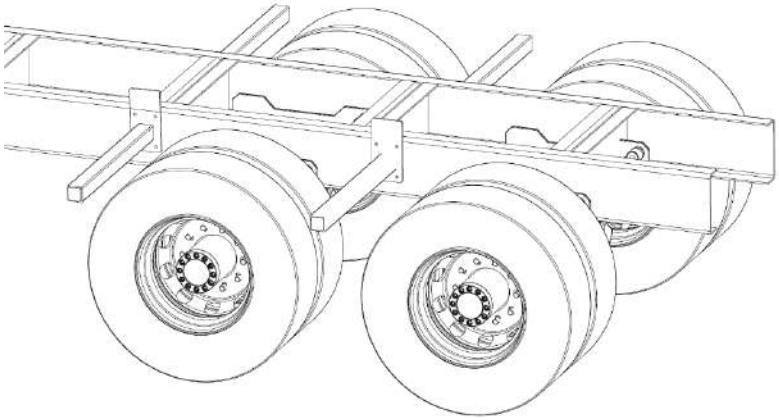
Hydraulic System:

Pressure: 1600-2000 psi

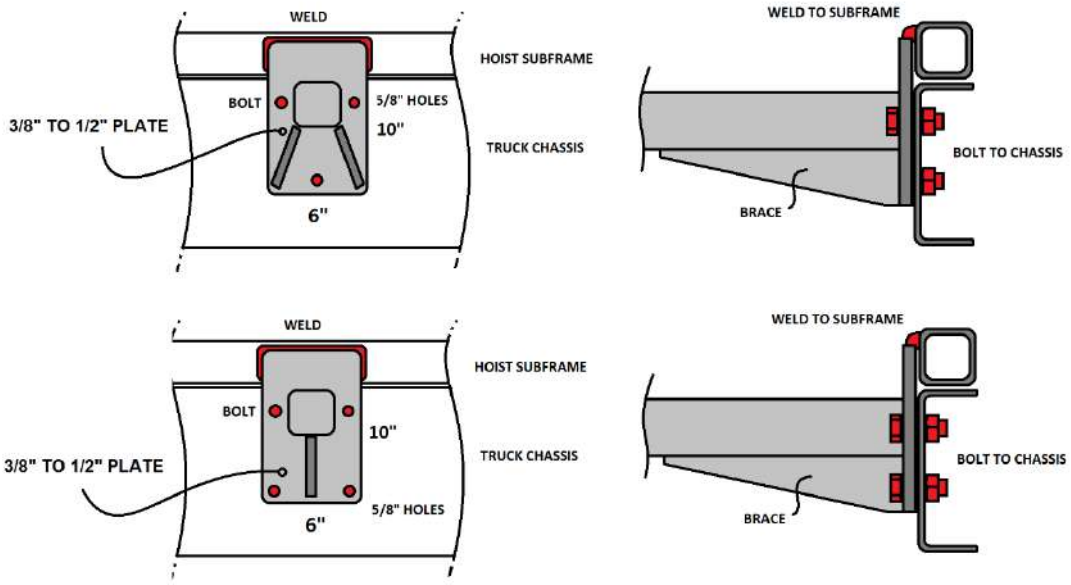
Flow: 2-3 GPM

Installation

Step 1: The tarp is installed by positioning the rear supports above the rear axles. Use the plates provided by the hoist to weld the horizontal tubing. Alternatively you can fabricate plates according to your requirements. Use the figure below for recommendations. A minimum of 3 bolts of 5/8” size (not provided) must be used to anchor each plate to the frame. These brackets bolt the hoist subframe to the truck chassis. There is one positioned between the rear axles and one in front of the axles.

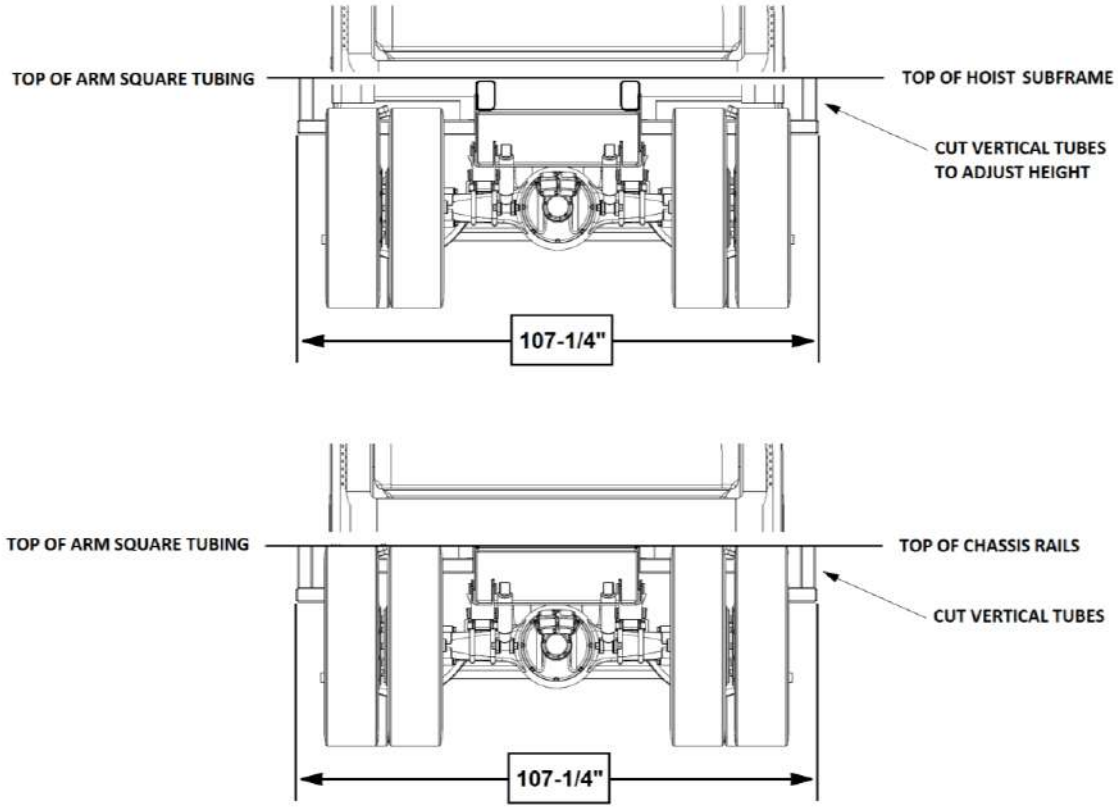


Note: Suitable plates can be manufactured shown below to match the other mounting plates. Use correct thickness to ensure strength of the system. These plates must be BOLTED to the chassis, cannot be welded.

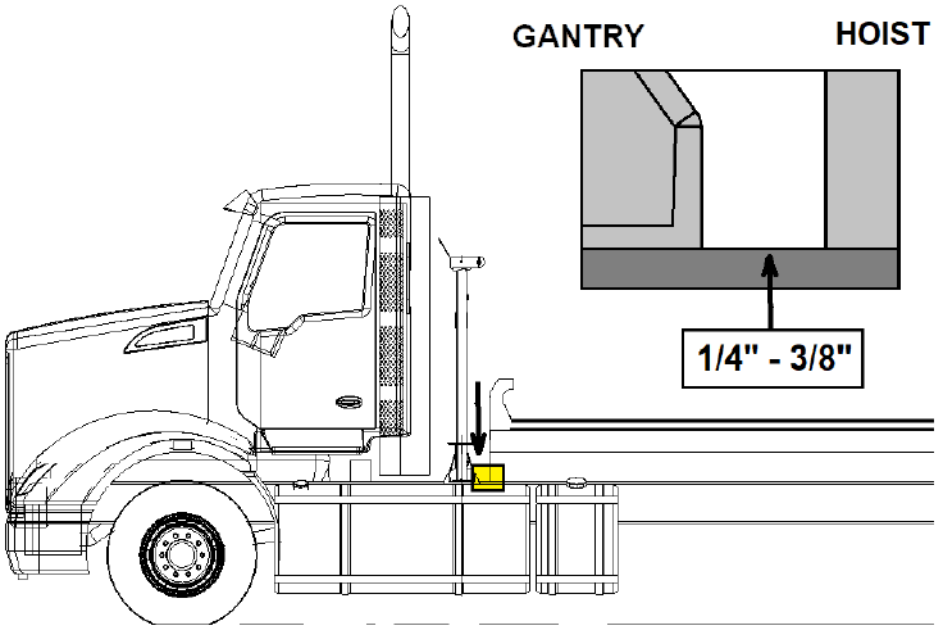


Step 2: Adjust the height of the arm square tubing by cutting the four vertical 2-1/2" square tubing pieces to length. Run a straight edge across the hoist rails over the rear axles. The top of the square tubing should match. Try to get the tube level in all directions. Use a laser level to ensure the four posts are all symmetrical.

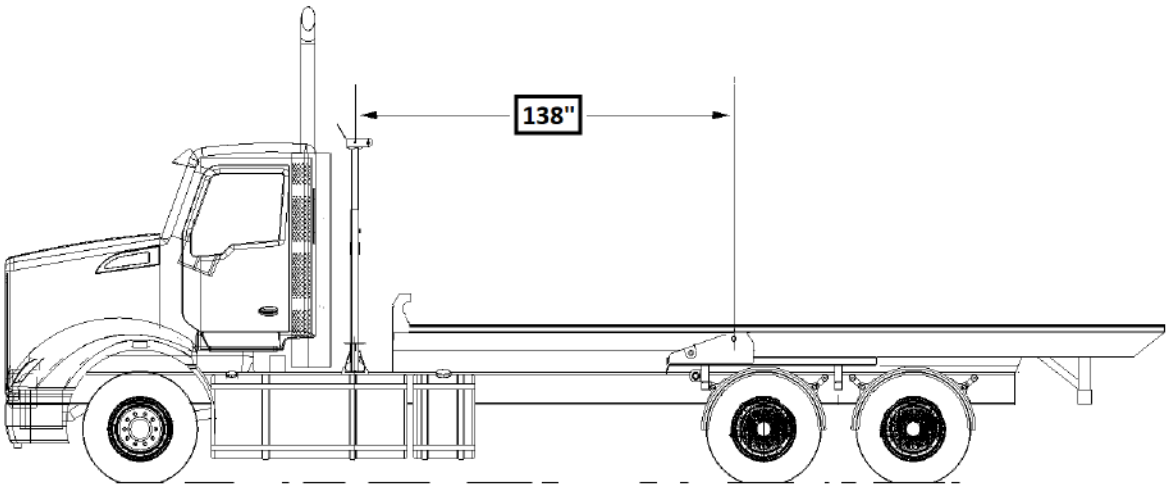
Note: It may be necessary to cut the horizontal arms shorter to achieve the 107-1/4" maximum width.



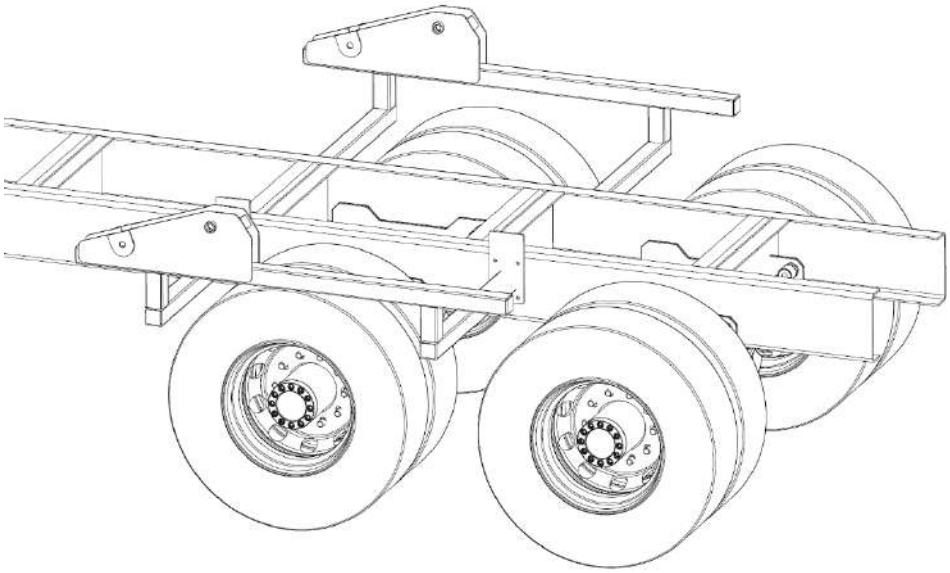
Step 3: Place the gantry in front of the hoist as close as possible. This ensures the arms can extend fully to cover a long or tall container. Drill four holes on each plate for 5/8” bolts to secure the side plates to the chassis, using existing holes if possible. Weld these plates to the channel to secure the gantry. Ensure the gantry is square with the truck frame.



Step 4: Measure the distance from the gantry center to a point near the forward rear axle. The distance should be 138” (+/- 1”). This is the position of the main pivot pin from the center of the gantry. It is critical to get both pivot points to match otherwise the arms will be offset when the tarp is collapsed or extended.



STEP 5: Weld the square tubing of the top rail in position after squaring it up with the gantry. Measure from the driver side of the gantry center to the center of the main pivot on both sides. This should match within ¼". Measure diagonal across the truck to the same positions. This value should match within ½". Make any adjustments needed to square the arms to the gantry. Otherwise during operation, the arms may not extend correctly.

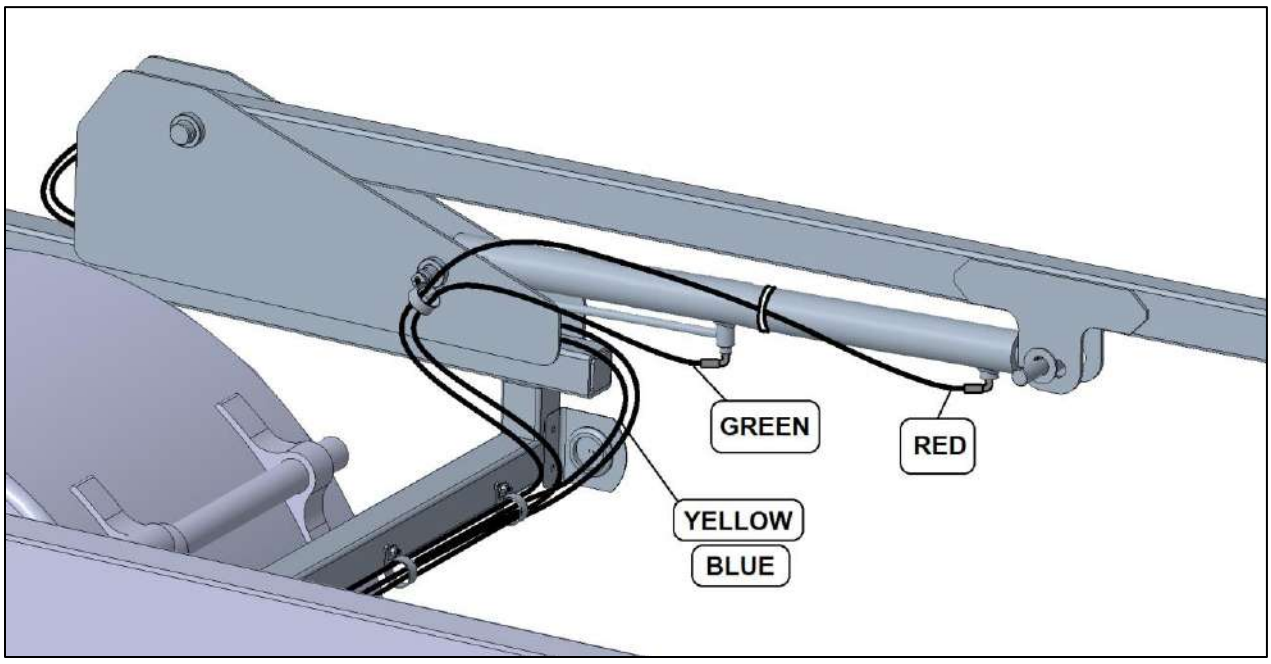


Step 6: Install the arms by inserting the pivot pins and washers with cotter pins. The main pivot pin can be greased before installation. The upper extending portion of the arm can inserted into the lower arm. Be sure to grease the tubing before inserting. Refer to Appendix A to help identify hardware.

Step 7: Install the tarp roller and crash bar to join the driver and passenger arms. Refer to Appendix B for assistance in identifying correct hardware.

Step 8: Allow the roller to rest on the gantry top plate with no tarp on the roller. This allows the roller to be in its natural position when the arms are fully retracted.

Step 9: Connect and route the hydraulic hoses according to the diagram in Appendix E. **Be sure to route and clamp the hoses as shown in the diagram below to allow them to move freely. Hose clamps should be used to fasten the hoses to the cylinder and the frame structure. Route the hoses through the clamp on the pivot pin. Failure to do so may result in hose damage.**



Step 10: Bleed the air from the system with the following process:

- **CAUTION! The system may move suddenly with air contained in the cylinders and hoses. When first moving the arms move them as slowly as possible to avoid damage to the system, personal injury, or death.**
    - Close the flow control valves* all the way, and open 1 turn.
    - Cycle the arms through their half the range of motion 2 to 3 times.
    - Cycle the arms through their full range of motion 2 to 3 times.
    - Continue to cycle through full motion until the arms work smoothly.

NOTE: It is advised to adjust the flow control valves to allow the operator to use the full lever position when covering the container. Ensure the tarp motion is slow and controlled. Avoid increased speed as this will cause damage and shorten the life of the tarp system. The arms should not jump or suddenly move at any point in the operation.

***refer to Appendix E – Hydraulic System for location of flow control valves**

Step 11: Once the tarp can cycle through its entire range of motion with no air in the system, adjust the flow control valves to 3 turns out and ensure this is the desired speed for the arms. Adjust as needed.

Step 12: Install the tarp:

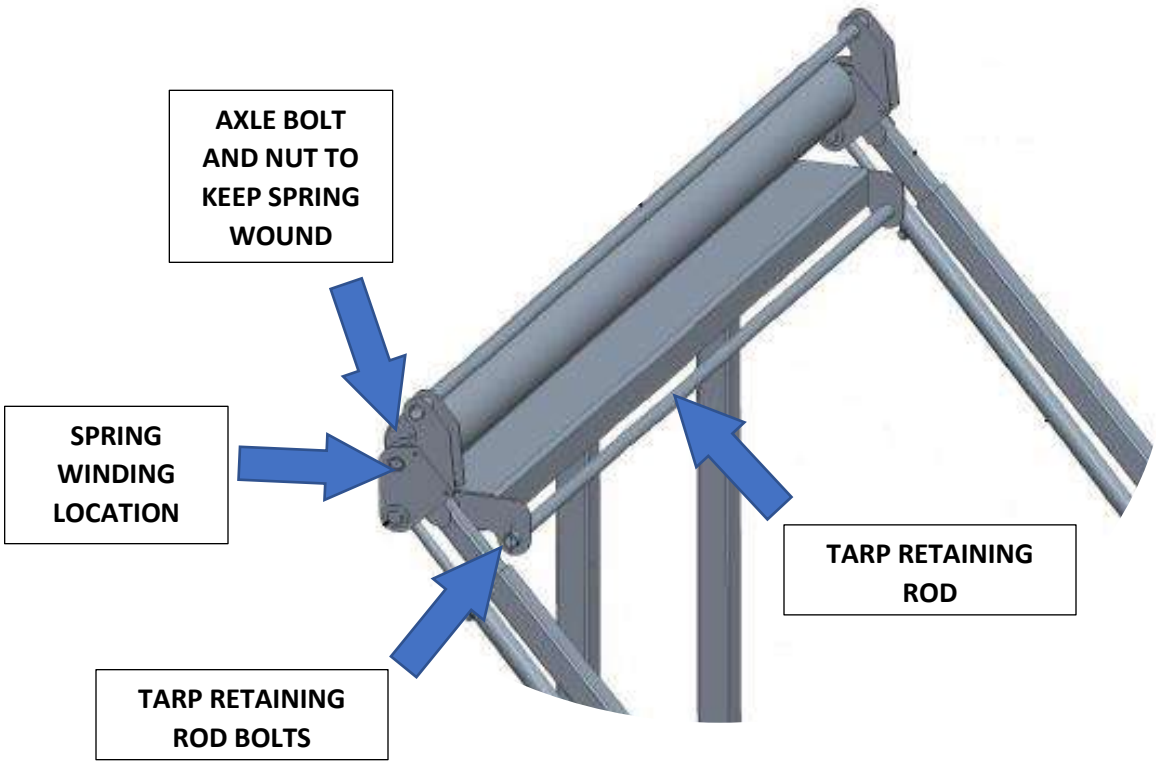
Step 12a: Start by inserting the tarp onto the tarp retaining rod at the gantry. Use the bolt and nut on each end to keep the rod in position (102-27 and 102-28). Rotate the arms to the back of the truck.

Step 12b: Stretch the tarp towards the back of the truck and secure it to a roller. Be sure to use the correct bolts and washers and center the tarp on the roller (QTY 5, 100-18A and 100-18B). Insert the roller shaft into the arms without the bolt which prevents rotation.

Step 12c: Return the arms to the gantry with 6 inches space underneath the roller. Roll the tarp by hand ensuring the tarp is neatly rolled and straight. Take up all the slack using pipe wrenches if needed.

Step 12d: Using a socket on the end of the roller axle, wind the spring 7 turns. When 7 turns is obtained, insert the bolt and nut through the axle and bar to lock the rotation (109-4A and 109-4B).

NOTE: The number of turns should be 7. Adding more turns can damage the spring. Too few turns can result in a loose tarp unable to roll itself up.



Step 13: Retract the arms and ensure the tarp rolls correctly and is stored neatly on the gantry top rest. The tarp system is now ready for operation.

Operation

The tarp is operated by using the two hydraulic levers located behind the driver's compartment. These are positioned roughly chest height. Begin by engaging the PTO to provide hydraulic power to the hoist and the gantry, as they share a supply. The assignment of levers may not be universal, proceed with caution when utilizing an unfamiliar tarp system until the correct lever assignments are understood. Refer to the hydraulic schematic for typical lever assignments.

Covering a container

With a container on the hoist, raise the arms to roll the tarp over the container.

If the tarp roller will hit the front of the container, the arms should be extended. Use the last lever to extend the arms until the roller clears the front corner of the container.

With the tarp free to clear the container, continue rotating the arms until the crash bar contacts the top rail of the container. It may be necessary to approach this point slowly to avoid heavy impact.

Extend the arms until the crash bar is almost at the rear edge of the container. Do not let the tarp touch the rear edge of the container as this will tear it.

The upper arm extend/retract cylinders can be used to put the tarp closer to short containers. Allow the arms to fully rotate back before using this adjustment.

The tarp is now fully covering the load and is ready for transport.

Uncovering a container and storing tarp

The tarp can be stored by first retracting the arms fully. This drags the crash bar across the top of the tarp. The arms should be retracted to make the raise/lower function easier.

Next the arms should be rotated back towards the driver's cab. Be careful when approaching the gantry as the arms may land forcefully.

As the roller approaches the top edge of the container, it may be required to use the arm extension. The roller should clear the front edge of the container and not drag across it. Once cleared, the arms should be retracted to allow the roller to sit properly on the gantry.

The system can be left in this position for transport to the next job site. If many containers of this size are to be covered, a paint line may be placed on the arm extensions to provide quick reference to placement.

The raise/lower function should be used to simply rest the tarp roller onto the gantry. Continuing to power the arms down may damage or stress the system.

Spare Parts

Spare parts are available for your tarp system. Use the diagram below to locate the portion to be replaced or corrected. The detailed exploded views are available in an Appendix at the end of this user manual. Refer to the correct Appendix to locate detailed information on the parts.

Hardware such as pins, bolts, washers, etc., are all available in bags for each specific area. Refer to Appendix B for detailed spare parts bag contents.

TARP SYSTEM SPARE PARTS

ITEM	APPENDIX	DESCRIPTION
1	A	PIVOT AND SUPPORT
2	B	ARMS
3	C	TARP, ROLLER, CRASH BAR
4	D	GANTRY

Appendices

A – Tarp System

B - Arm Parts

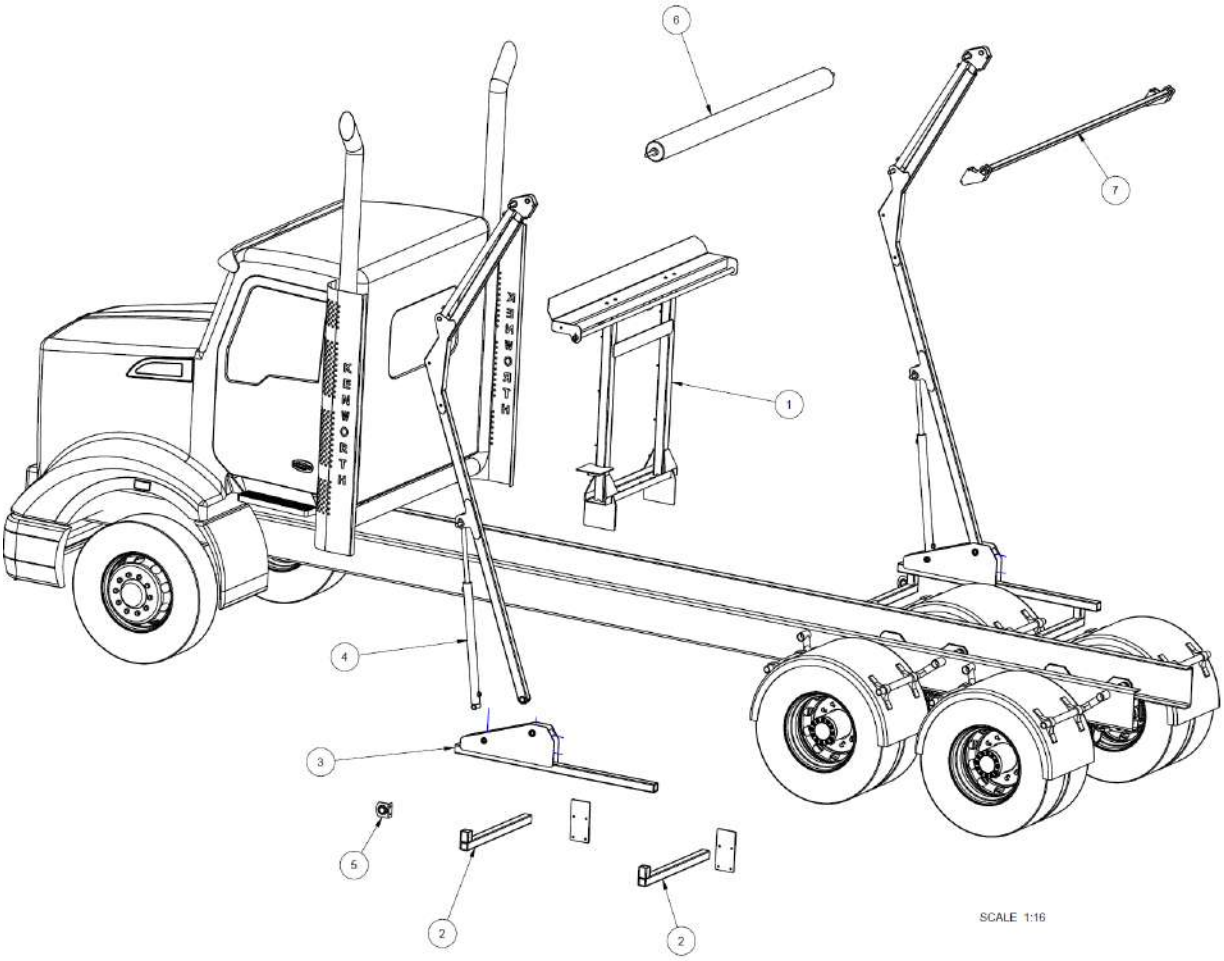
C– Roller and Crash Bar

D – Gantry Spare Parts

E – Hydraulic Schematic

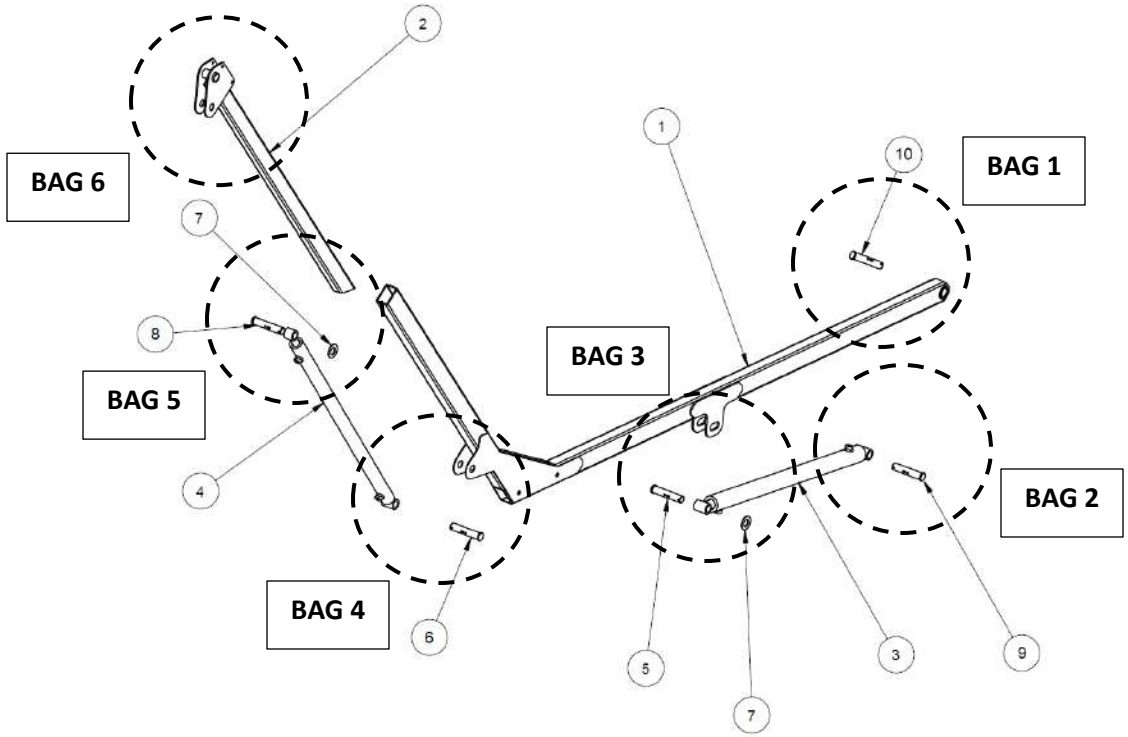
F – Maintenance

Appendix A – Tarp System



ITEM	PART NUMBER	QUANTITY	DESCRIPTION
1	113	1	GANTRY ASSEMBLY
2	100	4	SIDE HANGER ASSEMBLY
3	101	2	ARM PIVOT ASSEMBLY
4	110	2	ARM, COMPLETE
5	100-17	2	SIDE MARKER LAMP
6	100-18	1	TARP ROLLER, UNIVERSAL
7	111	1	CRASH BAR ASSEMBLY

Appendix B – Arm Parts



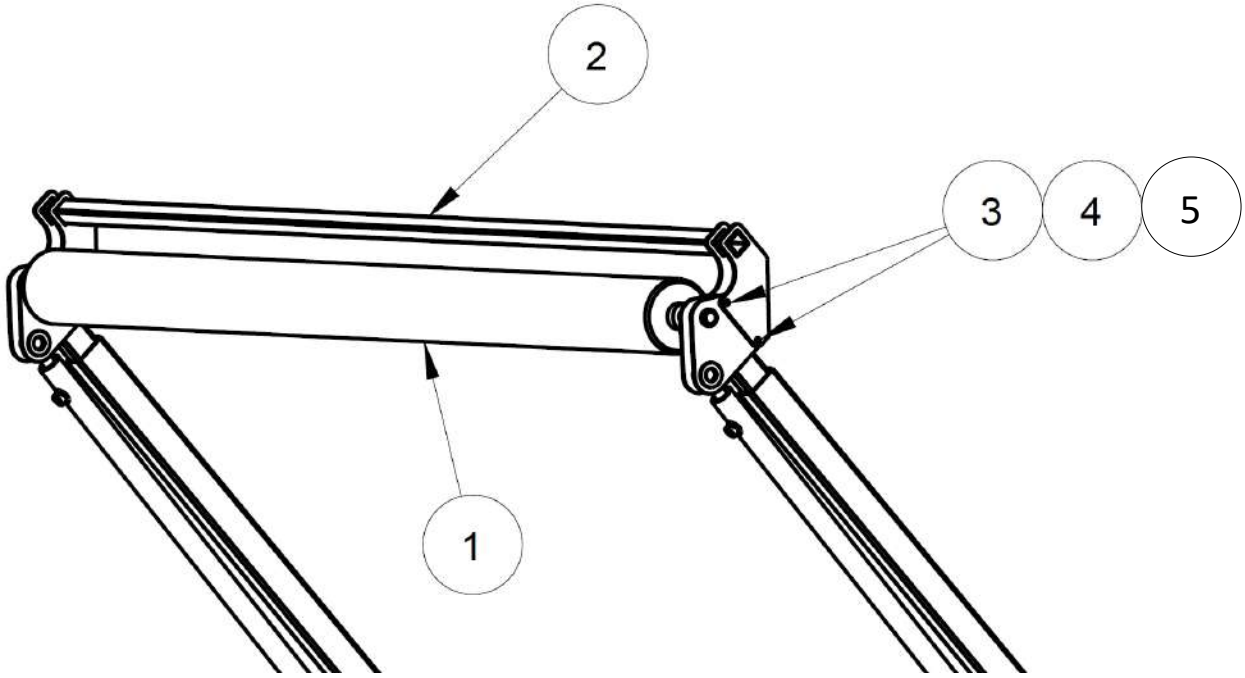
SPARE PARTS FOR ARM

ITEM	PART NUMBER	QUANTITY	DESCRIPTION
1	108D	1	LOWER ARM WELDMENT
2	109	1	UPPER ARM WELDMENT
3	110-1	1	CYLINDER, 2” X 30”, RAISE
4	110-2	1	CYLINDER, 1.5” X 36”, EXTEND
5	120-1	1	CLEVIS PIN, 1” X 3-3/8”
6	120-1	1	CLEVIS PIN, 1” X 3-1/16”
7	110-5	3	WASHER 1” X 2”
8	120-1	1	CLEVIS PIN, 1” X 2-5/8”
9	120-1W	1	CLEVIS PIN, 1” X 4-5/8”
10	100-26	1	PIN, MAIN PIVOT

Hardware Kits: Hardware can be shipped in bags to help assemble the tarp. Bags can also be ordered as spares. Each bag contains the correct amount of hardware for one tarp (driver and passenger side). Refer to the table below for bag number and contents.

Bag Number	Contents
1	Main Pivot Pins, washers, cotter pins (item # 10)
2	Raise Cylinder Clevis Pins, washers, cotter pins, hose clamps and nuts (item # 9)
3	Raise Cylinder Clevis Pins, washers, cotter pins (item # 5)
4	Extend Cylinder Clevis Pins, washers, cotter pins (item # 6)
5	Extend Cylinder Clevis Pins, washers, cotter pins (item # 8)
6	Crash Bar bolts and nuts, Tarp Rod retainer hardware, spring axle bolt and nut, Tarp retainer bolts and washers
7	Hose Clamps and nuts for hose routing
8	Work Lamps, Nuts, cable clamps for Gantry

Appendix C – Roller and Crash Bar

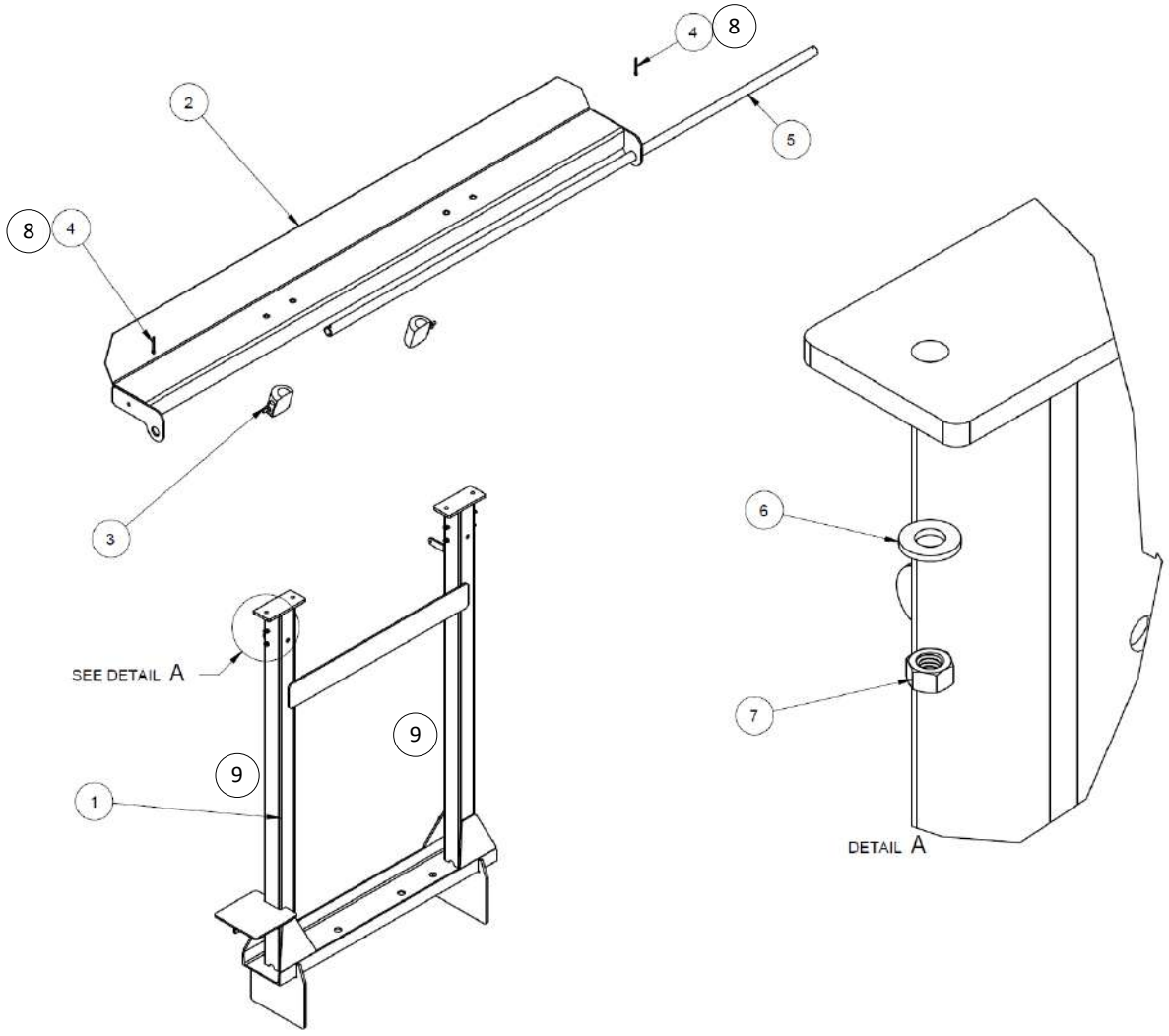


SPARE PARTS FOR ROLLER AND CRASH BAR

ITEM	PART NUMBER	QUANTITY	DESCRIPTION
1	100-18	1	ROLLER WITH TARP
2	111	1	CRASH BAR WELDMENT
3	103-7	8	BOLT, 3/8” X 1” LG*
4	103-8	8	NUT, 3/8”*
5	103-9	8	LOCK WASHER, 3/8”*

***Spare Parts Bag #6**

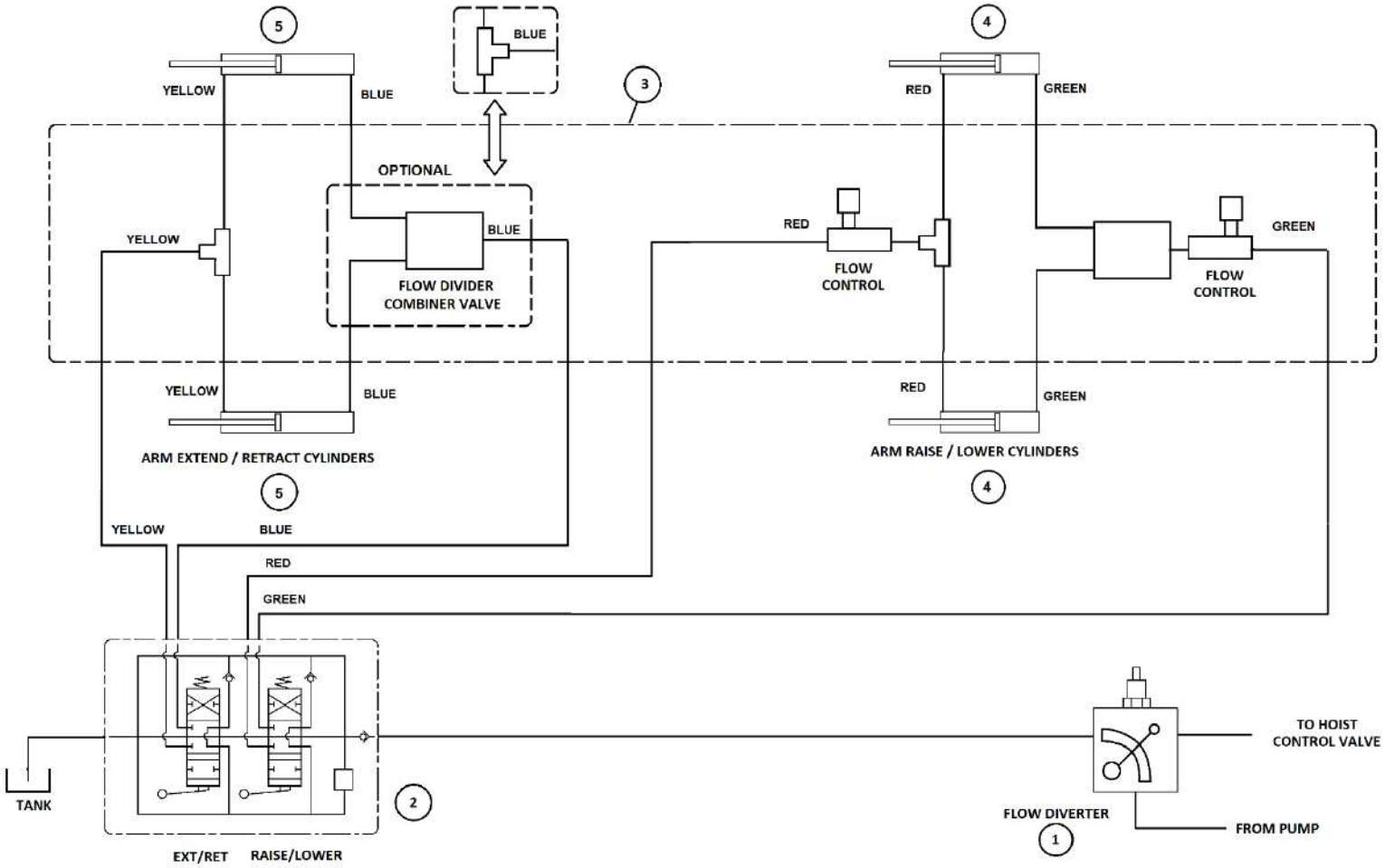
Appendix D – Gantry Spare Parts



***Spare Parts Bag #8**

ITEM	PART NUMBER	QUANTITY	DESCRIPTION
1	113B	1	LOWER GANTRY
2	113A	1	UPPER GANTRY
3	102-10*	2	WORK LIGHT
4	102-27*	2	HEX BOLT, ¼" X 2" LG
5	102-13	1	TARP RETAINER ROD
6	102-25*	4	WASHER 1/2"
7	102-26*	4	HEX NUT 1/2"
8	102-28*	8	HEX NUT, ¼-20, NYLOCK
9	102-29*	6	CABLE CLAMP, 3/8" X ½" WIDE

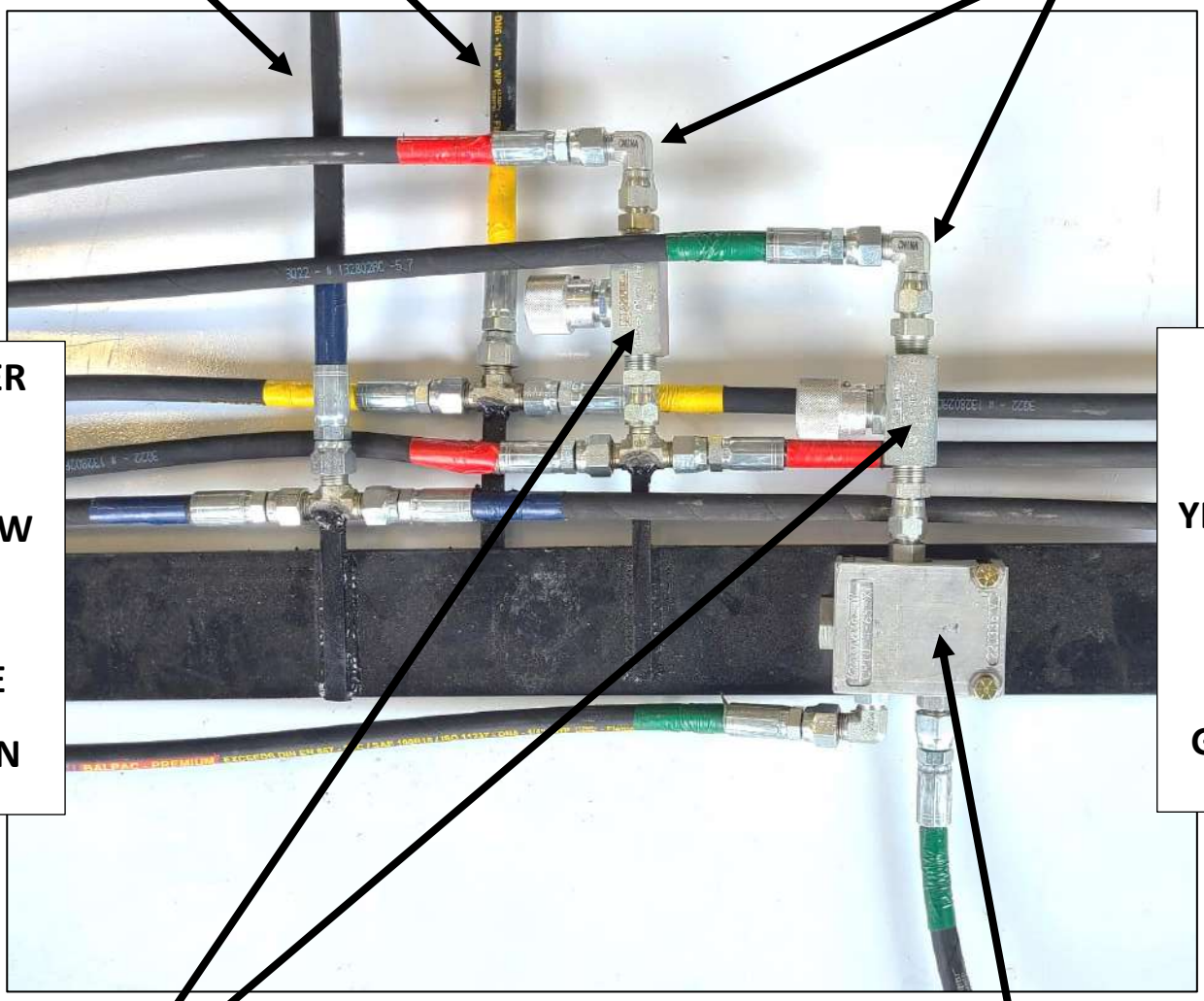
Appendix E – Hydraulic System



HYDRAULIC PARTS LIST

ITEM	PART NUMBER	DESCRIPTION	QTY
1	107-12	FLOW DIVERTER, 0-30 GPM	1
2	107-14	2 SPOOL VALVE	1
3A	107-100	HYDRAULIC ASSEMBLY	-
3B	107-102	HYDRAULIC ASSEMBLY OPTIONAL DIVIDER	-
4	100-23	CYLINDER, 2.5” X 30”	2
5	100-16	CYLINDER, 1.5” X 36”	2

HYDRAULIC SYSTEM EXAMPLE



LOWER CYLINDER HYDRAULIC HOSE LIST

CONNECTION	COLOR	LENGTH, FT	END A	END B	QTY
HOSE, SPOOL VALVE TO DIVIDER	GREEN	13	204-1J-606	204-1J-606	1
HOSE, DIVIDER TO LOWER CYLINDER	GREEN	14	204-1J-606	204-1J-606	2
HOSE, LOWER CYLINDER TO TEE	RED	13	204-1J-606	204-1J-606	2
HOSE, LOWER FLOW CONTROL TO SPOOL VALVE	RED	13	204-1J-606	204-1J-606	1

UPPER CYLINDER HYDRAULIC HOSE LIST

CONNECTION	COLOR	LENGTH, FT	END A	END B	QTY
HOSE, SPOOL VALVE TO DIVIDER	BLUE	13	204-1J-606	204-1J-606	1
HOSE, DIVIDER TO UPPER CYLINDER	BLUE	17	204-1J-606	204-1J-606	2
HOSE, UPPER CYLINDER TO TEE	YELLOW	21	204-1J-606	204-1J-606	2
HOSE, SPOOL VALVE TO TEE	YELLOW	13	204-1J-606	204-1J-606	1

PUMP AND VALVE HYDRAULIC HOSE LIST

(ONLY IF DIVERTER VALVE IS UTILIZED)

CONNECTION	LENGTH, FT	END A	END B	QTY
PUMP TO DIVERTER	6	216-1J-616	216-1J-616	1
DIVERTER TO TANK	3	212-1J-212	212-1J-212	2
DIVERTER TO HOIST CONTROL VALVE	1	212-1J-212	212-1J-212	2
DIVERTER TO SPOOL VALVE	3	208-1J-208	208-1J-208	1

Appendix F – Maintenance

Every Use:

System pressure between 1600 psi and 2000 psi

Oil Level in reservoir

Smooth operation

Alignment / proper range of motion

Tarp tension/roll up

Every Four to Five Weeks (Monthly)

It is recommended to grease all pivot points every four weeks. The main pivot pin has a grease fitting at the rear, and every cylinder has one at its pivot point. Refer to diagram for detailed locations.

Check for missing cotter pins when greasing pivot points.

Hydraulic hoses should be checked for abrasion in areas they move or bend the most.

Tighten any fittings that are leaking oil, and note if they are becoming loose from hose movement. If possible, re-route or adjust hoses to avoid loosening in the future.

Clear drain holes in gantry lower cross member.

Check bolt tightness on gantry frame mounting plates.

If tarp rolls to one side

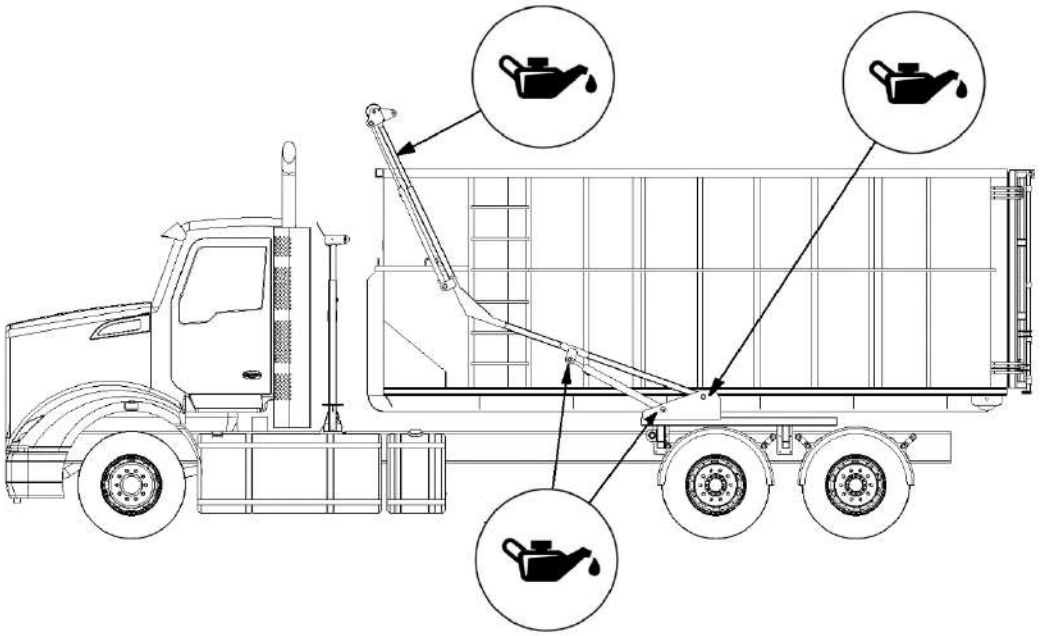
Check mesh tarp for damage

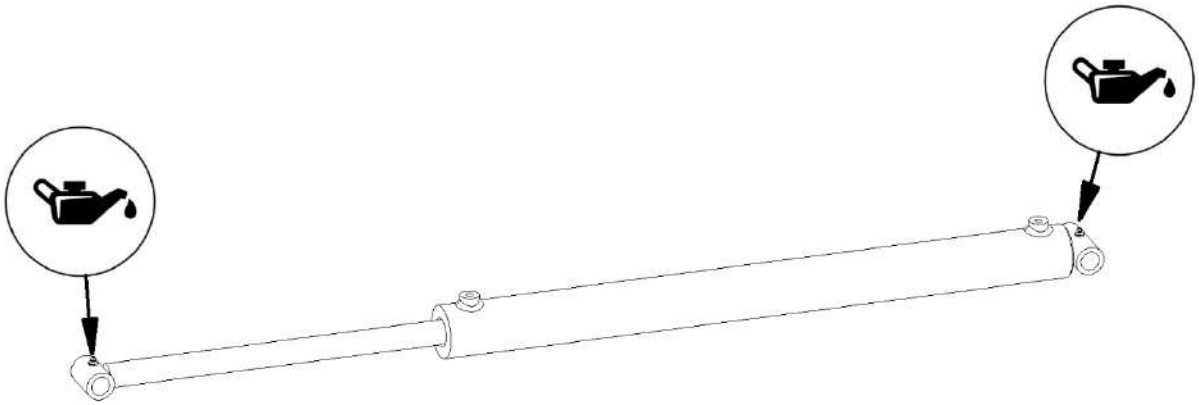
Arms bent – Check square with a measuring tape

Cylinder bypassing – rebuild or replace with new ones

Air in hydraulic raise cylinders – check for leaking fittings or bleed air from system

Flow Control valves adjustment – open or close to allow flow divider to operate effectively





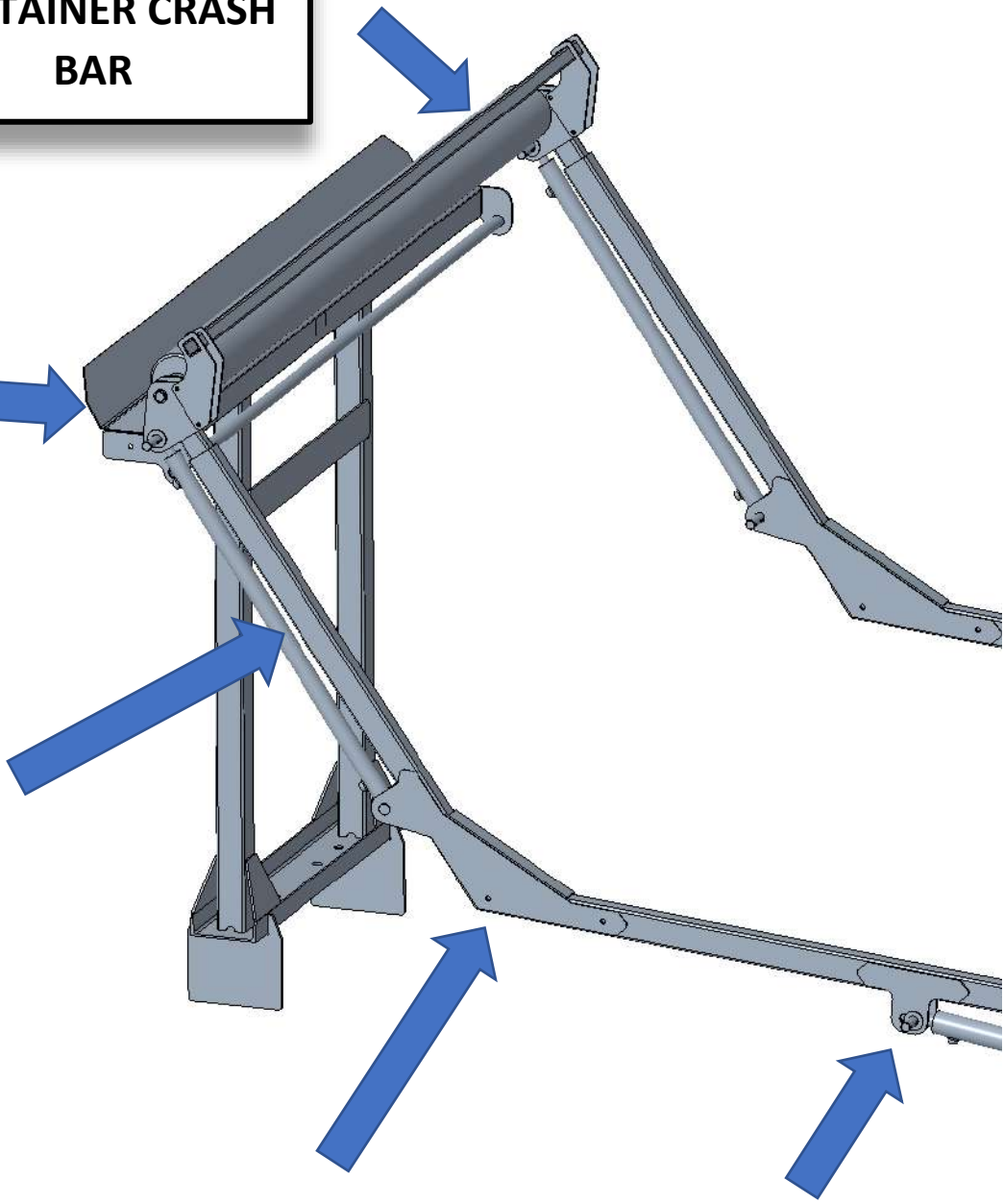
Typical Cylinder grease fitting locations on cylinders.

NOTE: It may be necessary to operate the arm to position the grease fitting in an easier to access orientation. Use extreme caution when performing this activity to prevent maintenance personnel from becoming trapped or injured.

ULTRA STRONG CONTAINER CRASH BAR

HEAVY DUTY UNIQUE FIXED GANTRY

FULLY EXTENDABLE CYLINDER TO COVER ALL SIZE CONTAINERS



JOINTED ARM ALLOWS REDUCED SHIPPING SIZE

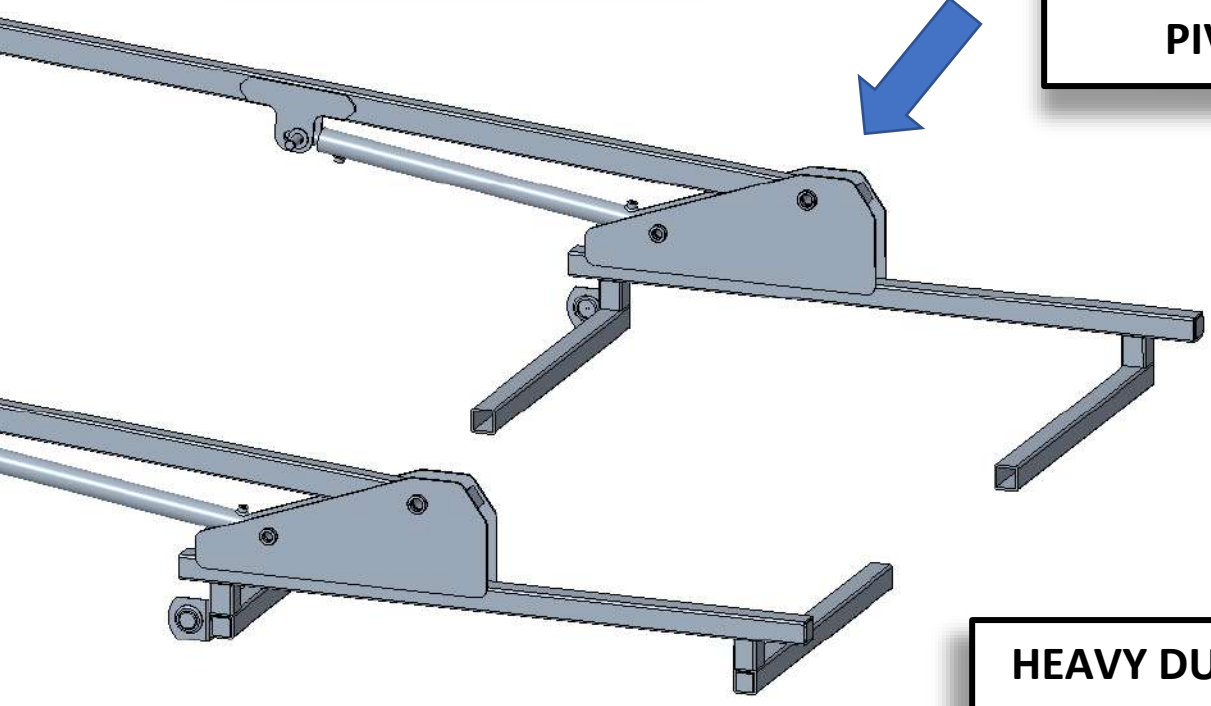
EXTRA HEAVY DUTY CYLINDER PIVOT POINTS

AMERICAN TARP

AMERICAN TARP has been designed to be the strongest tarp system on the market. With heavy duty arm pivots, cylinder brackets, and the critical "elbow" joint, this tarp is built to last where others fall short.

REINFORCED FULLY WELDED DOUBLE SIDE PLATE ELBOW

HEAVY DUTY ARM PIVOT POINTS



HEAVY DUTY BOLT ON TARP SUPPORTS WITH EXTRA GUSSETS

American Tarps are made in Texas, USA using local labor, materials, and facilities.

KEEP AMERICA STRONG, AND BUY AMERICAN!

Proudly Made in USA