

Farm King

OPERATOR AND PARTS MANUAL

1700 Liquid Supply Trailer



1700 Liquid Supply Trailer

TO THE OWNER

Thank you for purchasing a Farm King 1700 Liquid Supply Trailer. This machine is designed to be a heavy-duty unit for liquid handling.

This trailer features

- 1600 gallon liquid tank
- 4 wheel steering
- Choice of adjustable axle from 120" to 144" or a 120" fixed axle.
- Optional hydraulic centrifugal pump
- Optional Raven controller and plumbing
- Optional service platform
- 2" full port quick fill and related plumbing

Farm King Liquid Supply Trailers have been designed to provide many years of profitable and dependable service. To assure maximum performance of your Liquid Supply Trailer, it is mandatory that you thoroughly study the operator's manual and follow its recommendations. Proper operation and maintenance are essential for safety, to maintain performance, and to maximize the life of the liquid supply trailer.

It is the owner's responsibility to:

- Operate and maintain this Liquid Supply Trailer in a safe manner and in accordance with all applicable local, state, and federal codes and/or laws; and in compliance with labeling instructions furnished by the supplier of the chemical being used.
- Make sure each and every operator has read the operator's manual and thoroughly understands safe and correct operating procedures.
- Make sure unauthorized people do not operate or are not in the vicinity of the Liquid Supply Trailer while it is in operation.
- Maintain the Liquid Supply Trailer in accordance with the maintenance schedule in this manual. Furthermore, as additional technology becomes available, the owner is responsible for improving the safety and reliability of the system.
- Fulfill all warranty obligations so as not to void the warranties. Verify the unit is warranty registered prior to making any warranty claims. The warranty section at the back of this manual outlines the warranty policy of Farm King.

Abuse or modifications to the liquid supply trailer that change the performance other than original factory specifications void the warranty.

Farm King reserves the right to make product improvements to the equipment at any time. It shall not be obligated to make such changes to machines already in service.

*The owner, manager and/or operator is responsible for safe, accurate operation and maintenance of the Farm King 1700 Liquid Supply Trailer.

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NOTES:

Safety Instruction

Section A

Safety First

Accidents can be prevented by recognizing the causes or hazards before an accident occurs..... and doing something about them.

Regardless of the care used in the design and construction of this equipment, there are some areas that cannot be completely safeguarded without interfering with the accessibility and efficiency of operation.



THIS MESSAGE ALERT SYMBOL IDENTIFIES IMPORTANT MESSAGES IN THIS MANUAL. WHEN YOU SEE THIS SYMBOL, BE ALERT TO THE POSSIBILITY OF PERSONAL INJURY AND CAREFULLY READ THE MESSAGE THAT FOLLOWS.

In this manual and on labels used on the machine the words "DANGER", "WARNING", and "CAUTION", are used to indicate the following:

- DANGER:** Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury.
- WARNING:** Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury.
- CAUTION:** Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury.




THIS MESSAGE ALERT SYMBOL IDENTIFIES INFORMATION THAT MUST BE HEEDED FOR PROPER OPERATION OF EQUIPMENT AND TO PREVENT DAMAGE OR DETERIORATION OF THE EQUIPMENT.



In this manual the words "IMPORTANT" and "NOTE" are used to indicate the following:




- IMPORTANT:** Highlights information that must be heeded.
- NOTE:** A reminder of other related information that needs to be considered.


Safety Instructions for Operation

1. DO NOT ALLOW ANYONE TO OPERATE THIS FARM KING LIQUID SUPPLY TRAILER UNTIL HE OR SHE HAS READ THIS MANUAL AND IS COMPLETELY FAMILIAR WITH ALL SAFETY AND OPERATION PROCEDURES.

	<u>WARNING</u>	Observe the IMPORTANT SAFETY INSTRUCTIONS listed below at all times! THE BEST KIND OF SAFETY IS A CAREFUL OPERATOR.
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	<u>CAUTION</u>	Always wear protective clothing, goggles, respirator and gloves when handling chemicals. 
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	<u>DANGER</u>	Always wear protective clothing, goggles, respirator and gloves when handling chemicals.  
--	----------------------	--

	<u>WARNING</u>	Observe all Federal and State EPA regulations and all Local, State and Federal codes and / or laws regarding licensing, handling, storage, transportation, application and waste disposal of chemicals.
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2. Do not allow the following people to operate or repair this equipment.
 - Children
 - Irresponsible persons
 - People under the influence of alcohol, medications or other drugs that can cause drowsiness or impaired judgement.
 - Persons unfamiliar with equipment or people who are careless or unfamiliar with safe operating procedures. People who are allergic to any of the chemicals used must never be allowed in or near the liquid supply trailer.
3. Always park the liquid supply trailer on a level surface, and lock the tractor brakes, or block the tires, before making adjustments or repairs.

4. Before operating this equipment, thoroughly inspect the unit to ensure it is in good working order.
5. Do not operate this unit if any defect or malfunction exists. Pay particular attention to safety features such as safety chains.
6. Stopping distance increases as the square of the speed. For example: It will take twice as much distance to stop a unit traveling 15 mph as one going 10 mph; and four times the distance at 20 mph (more than eight times the distance at 25 mph)! Road surface will influence stopping distance. Dry pavement is usually considerably better than gravel road. Materials (such as ice, snow, water, oil or mud) on the surface can greatly increase stopping distance.

Road slope has a significant impact on stopping distance and can greatly magnify the other factors mentioned above. Under some downhill conditions stopping can be very difficult or impossible.

7. Do not replace components or parts with those other than genuine Farm King Factory Service Parts. To do so may reduce the effectiveness of safety features or decrease the accuracy of the unit.
8. Read the Operation Instructions section of this manual for further necessary information relating to the safe operation of the applicator.



WARNING

Certain chemicals can be very corrosive and may oxidize steel over a period of time. This weakens steel parts and can cause failure to perform as intended, resulting in possible safety hazards. Periodically check all safety shields and structural members for corrosion. Replace or repair anything that could cause a potential safety hazard.

This machine must be **in two-wheel mode** before transporting on public roads.

9. Shut off tractor and put in park, engage the parking brake, and disengage hydraulic power before servicing or making adjustments to the equipment.
10. Keep all guards in place during operation. Keep all safety decals clean and legible. Contact Versatile, for replacement decals if they are illegible.
11. Equipment is to be operated by qualified personnel only. A full understanding of the operation, maintenance, and safety requirements is mandatory before use.
12. Follow all tractor operating procedures and safety information.
13. Absolutely no riders on the implement. A fall will cause severe injury and possible death.

14. Hydraulic oil escaping under pressure has sufficient force to penetrate the skin, causing personal injury or death. Depending on the type of tractor hydraulic system, relieve pressure when attaching or disconnecting the implement by either placing the corresponding hydraulic lever in float position and shutting the tractor off, or shutting the tractor off and moving the hydraulic lever both directions. Be sure all hydraulic connections are tight and hoses are not damaged before operating the machinery. Escaping hydraulic oil from a small hole can be almost invisible. Do not use your hands to search for a hydraulic leak. Use a piece of cardboard or wood to look for leak spray. **IF INJURED BY ESCAPING HYDRAULIC OIL, SEE A DOCTOR AT ONCE. SERIOUS REACTION AND INFECTION CAN DEVELOP IF PROPER MEDICAL TREATMENT IS NOT ADMINISTERED IMMEDIATELY.**
15. Before operating the equipment, thoroughly inspect the unit to ensure it is in good working order.



Safety Decals on a Farm King
1700 Liquid Supply Trailer

1



SX013761

2



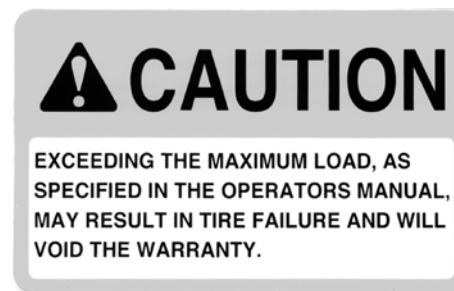
SX013762

3



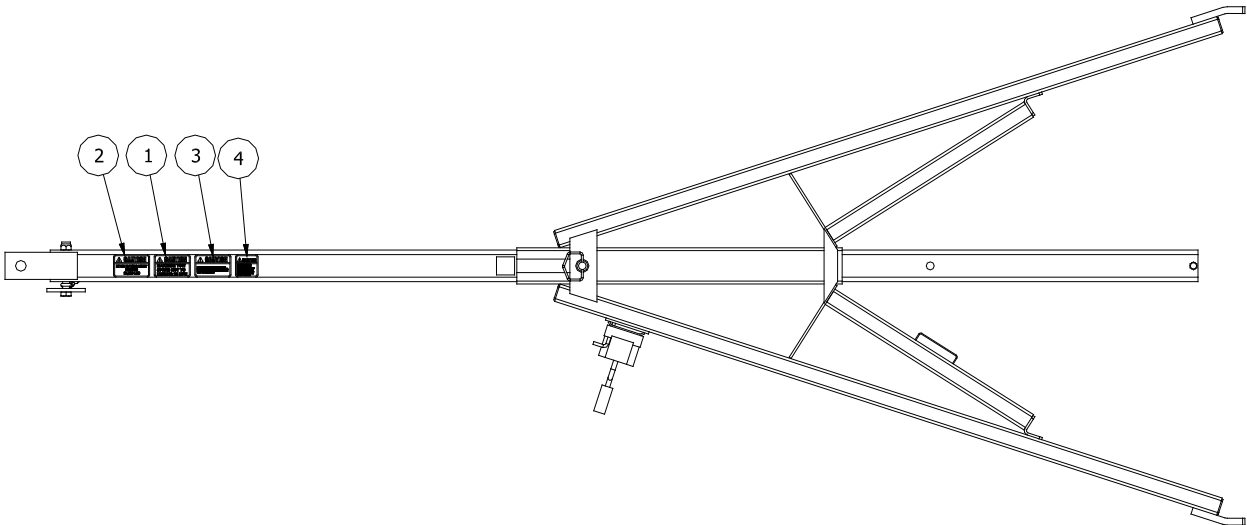
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SAFETY DECAL PLACEMENT

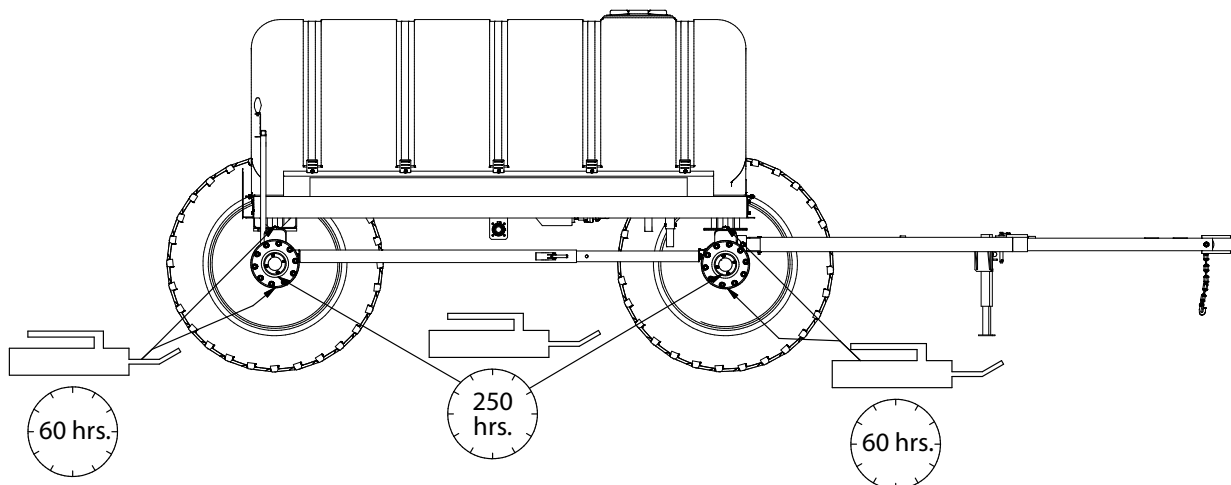


NOTES:

Maintenance, Service & Troubleshooting Section B

Lubrication

1. Always lubricate the 1700 Liquid Trailer before bringing the machine to the field.
2. Stop the tractor, set the parking brake and turn off the engine before performing maintenance or lubricating the machine.
3. Grease fittings according to the schedule in the drawing below.
 - Grease bolster plates and axles every 60 hours of use
 - Grease hubs every 250 hours of use
4. Clean grease fittings before lubricating.
5. If grease fittings are missing or damaged, replace the fittings to ensure lubrication.
6. Use a high quality lubricating grease per the intervals shown on the drawing.
7. Optional equipment may require additional greasing. Refer to the specific equipment manual for instructions.



Preventative Maintenance



DANGER

Block the machine securely before performing any maintenance on the machine. Do not let the machine fall.



Wheel Bearings

Repack wheel bearings every 500 hours.

1. Remove hubs and bearings from machine.
2. Clean bearings and hubs of old grease.
3. Inspect hub, bearings, and seal for damage. Replace if necessary.
4. Repack cones and fill hub cavities with a lithium based wheel bearing grease (use an EP [Extreme Pressure] grease when re-packing hubs.).

Pre-Season Startup Check

1. Review this manual for proper operation of the machine.
2. Check that all bolts are tight. Re-tighten bolts to proper spec listed in the torque table on page 17 of Section B.
3. Inspect tank straps and replace components if they are worn.
4. Check tires for proper inflation. Inflate tires to manufacturer's specifications.
5. Check wheel lug nuts. Torque according to the torque table in the proper pattern.
6. Inspect hoses and hydraulic hoses for fraying. Do not use hands to check leaks on hydraulic hoses.
7. Check all light bulbs and visibility decals. Replace faded decals and burnt out bulbs.

Post-Season Storage

1. The liquid held by the 1700 could be very corrosive. Thoroughly clean the machine before placing it in storage. Flush all liquid lines with RV antifreeze.
2. Inspect machine for worn parts. Note parts for replacement during the off-season.
3. Repaint all areas where paint has worn off.
4. Lubricate the machine.
5. Store the machine inside to increase the life of plastic and rubber components.



Failure to check and maintain the proper lug nut torque could result in elongation of rim and/or broken lug bolts. We recommend checking lug nut torque periodically to insure proper wheel tightness on your Farm King 1700 Liquid Supply Trailer.

Wheel Lug Nut Torque

When receiving your equipment or replacing a tire, follow these steps for insuring proper lug nut torque:



DO NOT lubricate threads.

1. Tighten lug nuts to correct torque specifications using a criss-cross pattern.

Size	Torque ft./lbs.
3/4-16 UNF	420

2. After tightening, pull the Farm King 1700 Liquid Supply Trailer approximately one (1) mile.
3. Check and retighten lug nuts to correct torque specifications as required.
4. At regular maintenance intervals recheck lug nut tightness.



DO NOT use undersized tires. Use the right size tires for the job and properly match tires to wheels.

Bolt Torque Data

The chart provided contains information concerning standard hardware used on this machine. It is recommended that all fasteners be tightened to the torque values specified. The grade of the bolt is identified by the markings on the head of the bolt.

GENERAL BOLT TORQUE DATA IN FT./LB.				
BOLT SIZE	SAE - GRADE 5		SAE - GRADE 8	
	DRY	LUB	DRY	LUB
1/4-20	8	6	12	9
1/4-28	9	7	13	10
5/16-18	17	13	25	18
5/16-24	19	14	25	20
3/8-16	30	23	45	35
3/8-24	35	25	50	40
1/2-13	78	55	110	80
1/2-20	90	65	120	90
5/8-11	150	110	220	170
5/8-18	170	130	240	180
3/4-10	260	200	380	280
3/4-16	300	220	420	320
7/8-9	430	320	600	460
7/8-14	470	350	660	500
1-14	700	530	1000	740



WARNING

Do Not use values in place of those specified in other sections of this manual or contained in information published by the manufacturer of the components in question.



WARNING

Mechanical fasteners must be torqued to recommended specifications during repair to prevent personal injury or equipment damage.

Winterization

Proper winterization is an important step in extending the life of your trailer investment and preparing it for operation next season. The following steps are a guideline to assist in the winterization of your liquid supply trailer.



DANGER

All chemical contaminated rinse material must be collected and disposed of according to product label instructions and in accordance with all local, state, and federal laws.



CAUTION

During the winterization process, maintain a minimum amount of solution in the plumbing system. Running the pump dry may cause severe damage to the pump seals.

1. Essential to optimum winterization is to thoroughly clean and rinse the interior of the tank and flush out the plumbing. This process can be completed with the aid of a tank-cleaning compound available from most farm and spray equipment centers. Fill with an adequate amount of cleaning solution to allow for circulation through the plumbing while maintaining the solution level above the bulkhead fitting in the sump of the tank. This cleaning will remove any residual chemical left in the system.
2. The success of the winterization process is dependent upon the amount of water removed from the system. Excessive water left in the system will dilute the antifreeze solution and reduce its effectiveness.
 - a. Open all valves.
 - b. Drain out any remaining solution from the main tank.
 - c. Remove inline strainer bowls and dump out water; reinstall the strainers (if equipped).
 - d. Remove the plug from the bottom of the pump, drain and reinstall the plug.
3. Begin the process of protecting the plumbing with the addition of RV antifreeze.
 - a. Close all of the valves in the system, including the solution tank valve located between the tank and the pump.
 - b. Add a minimum of 10 gallons of RV antifreeze to the tank.
 - c. Open the tank valve to let the antifreeze solution flow from the tank to the pump. Make sure that the pump is charged with solution. The line out of the top of the pump should fill with antifreeze.
4. Verify that the antifreeze solution has been circulated through the whole system.
5. Disconnect the electrical connections. Apply a coating of dielectric grease to the terminals to help prevent corrosion.
6. Inspect the complete machine for necessary repairs, grease all fittings and lubricate moving parts.

Operating Instructions

Section C

Operation

Daily start-up check list:

1. Check to be sure SMV sign is visible and legible; if missing or illegible it must be replaced.
2. Check tension of product tank hold down straps, tighten as needed.
3. Inspect safety chain for damaged links, replace chain if links are damaged.
4. Verify light functions.
5. Check lug torque, should be 450-500 ft-lb.
6. Verify that the 1700 is in 2-wheel steer mode before use on public roads.
7. Check tire pressure:
 - 320/85R38 recommended pressure: 41 p.s.i.g.
 - 18.4-26 recommended pressure: 32 p.s.i.g.



This unit must be in 2-wheel steer mode before traveling on public roads.

Tire Weight Capacities - 15 MPH Transport Speed



Use this chart as a guide to determine the maximum amount of various solutions your applicator tires are rated for. 8 MPH is the service or field speed for this liquid supply trailer. 15 MPH is used here to demonstrate a speed used to transport the liquid supply trailer, NOT as a service or field speed. Only the operator can determine the maximum safe operating speed of the applicator.

Maximum Solution Tank Capacity in Gallons at 15 MPH with 320/85R38 Tires	
Solution Weight Per Gallon	1600 Gallon Tank
8.3 lb/gal (Water)	1600
10.0 lb/gal	1600
12.0 lb/gal	1600
14.0 lb/gal	1378
16.0 lb/gal	1206
Spindle and Hub Assembly: 10-Bolt	

Tire Weight Capacities - 8 MPH Transport Speed



Use this chart as a guide to determine the maximum amount of various solutions your applicator tires are rated for.

Maximum Solution Tank Capacity in Gallons at 8 MPH with 320/85R38 Tires	
Solution Weight Per Gallon	1600 Gallon Tank
8.3 lb/gal (Water)	1600
10.0 lb/gal	1600
12.0 lb/gal	1600
14.0 lb/gal	1600
16.0 lb/gal	1500

Spindle and Hub Assembly: 10-Bolt

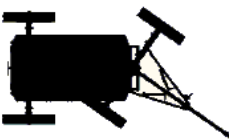


Exceeding the weight capacity of the applicator may result in structural failure and will void the warranty.

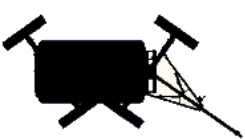
Turning Radius

The minimum turning radius is 22 feet in two wheel steering and 12.5 feet in four wheel steering. Exceeding these values may cause machine damage or other property damage.

⚠ IMPORTANT



**2 WHEEL MINIMUM
CENTERLINE TURNING
RADIUS: 22 FEET**



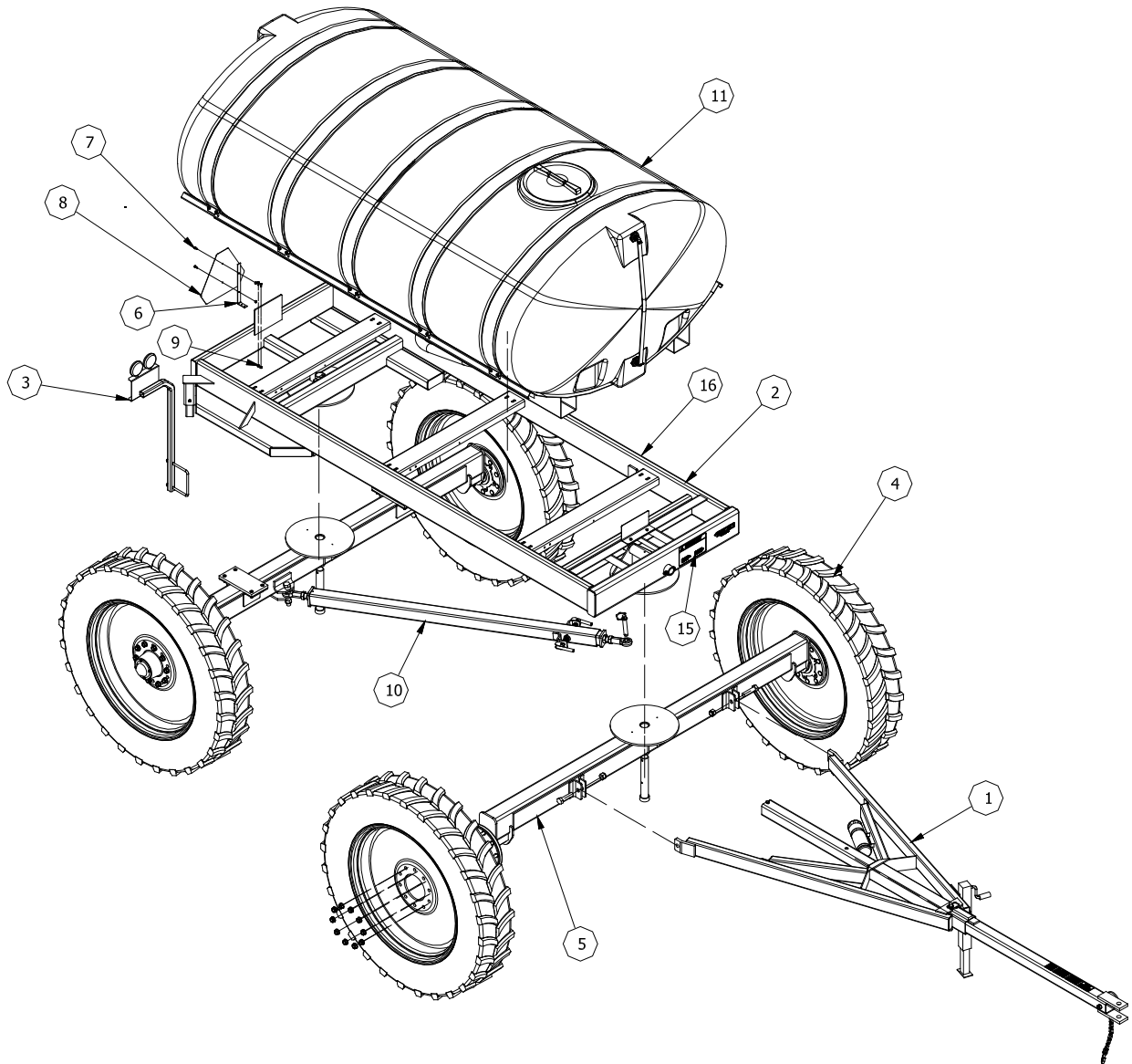
**4 WHEEL MINIMUM
CENTERLINE TURNING
RADIUS: 12.5 FEET**

NOTES:

Parts & Schematics

Section D

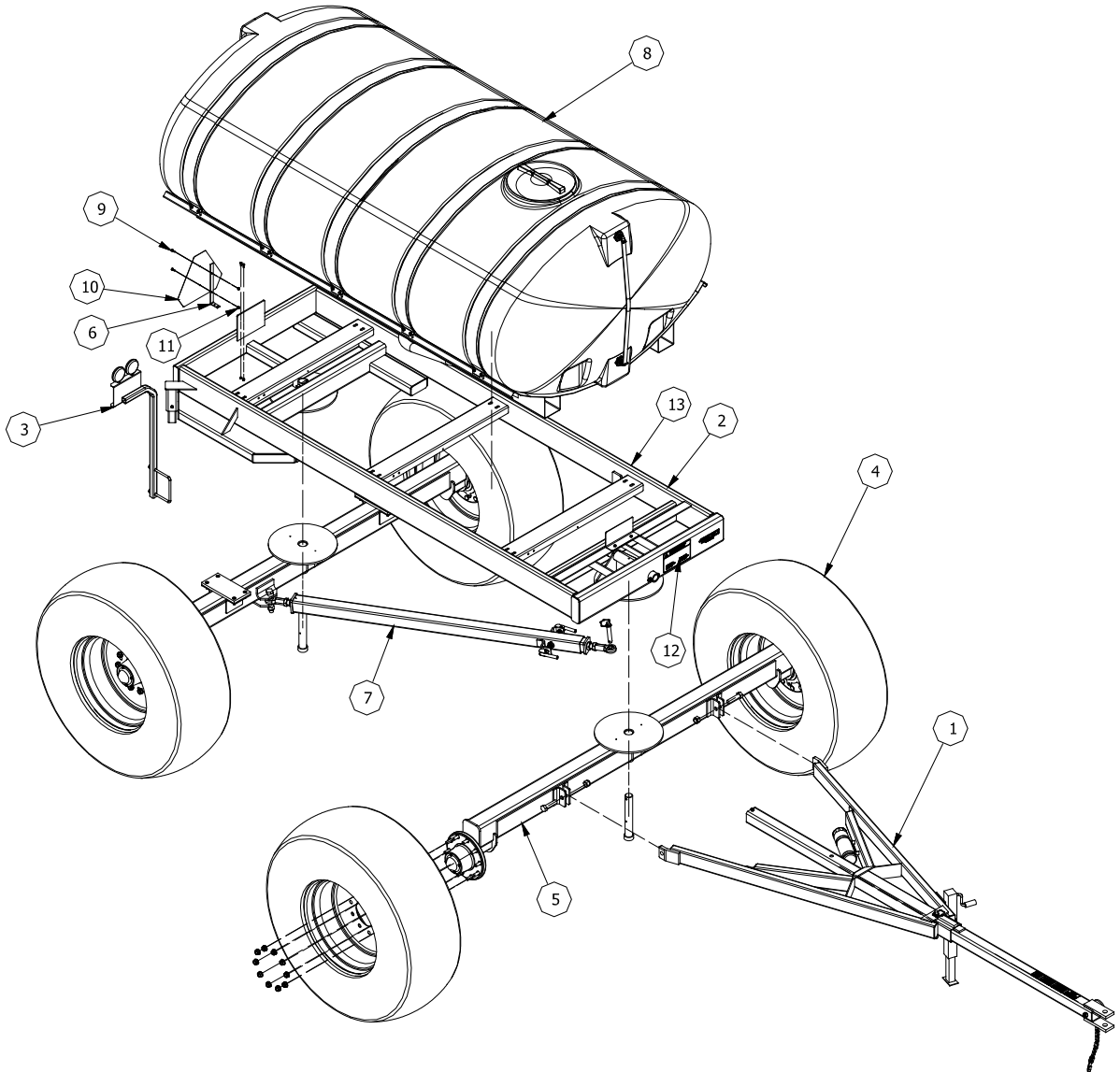
Description: Frame Assembly 32085R38 Tires and Fixed Axles



Description: Frame Assembly 32085R38 Tires and Fixed Axles

Item#	Part #	Description	Quantity
1	SX013263	Hitch Assembly; 1700	1
2	SX013294	Frame Group; 1700	1
3	SX013305	Lighting Assembly; 1700	1
4	SX013580	Tire Assembly; 32085R38 w/ 10 Bolt Wheel	4
5	SX013585	1700 Fixed Axle Option	1
6	SX013588	Mount, SMV	1
7	SXBH-025-075-5	Bolt; 1/4" x 0.75" Grade 5	4
8	SXJD5403	Sign, SMV	1
9	SXLN-025-NI	Locknut; 1/4" Nylon Insert	4
10	SX015769	Assembly; Steering Link, 1700	1
11	SX015835	Skid Assembly; 1700	1
15	SX015838	Decal; Minimum Turning Radius, 1700	1
16	SX015839	Decal; Transport Position, 1700	1

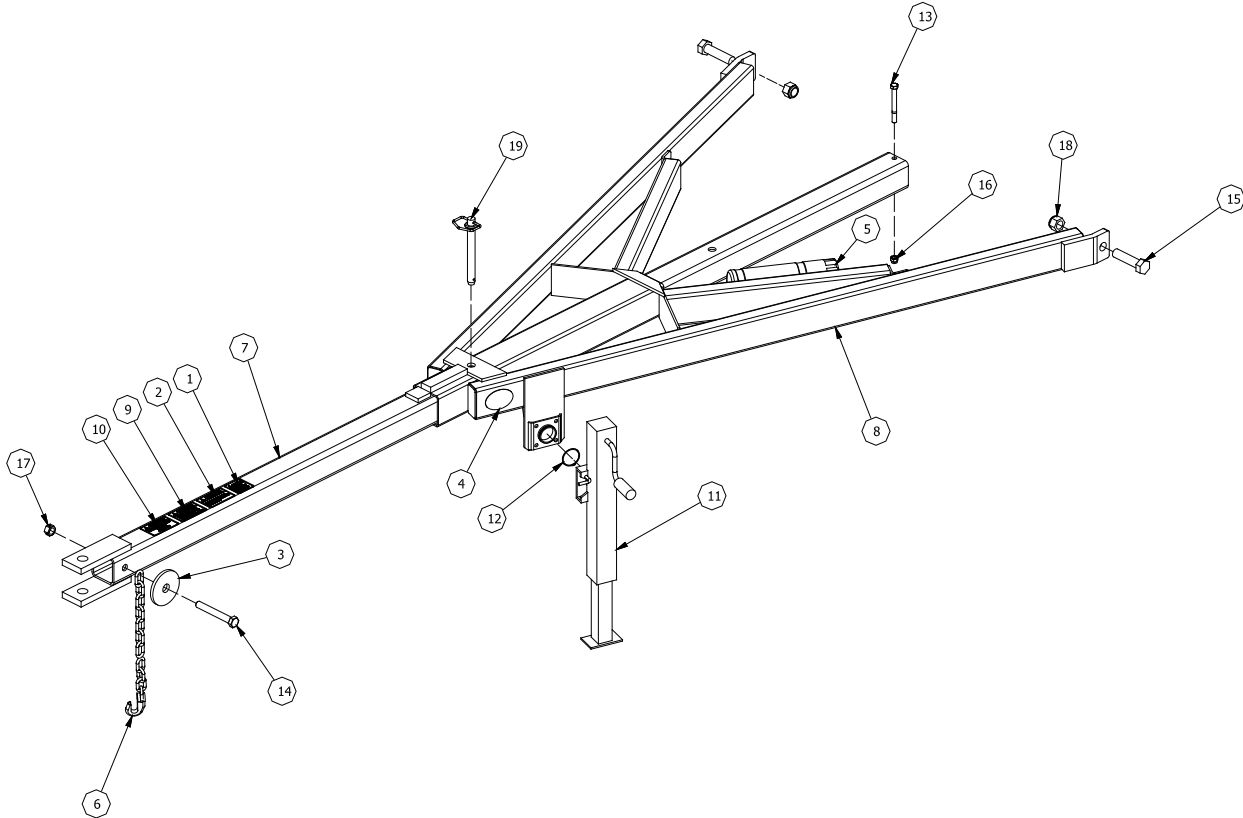
Description: Frame Assembly 18.4x26-10 Tires and Adjustable Axles



Description: Frame Assembly 18.4x26-10 Tires and Adjustable Axles

Item#	Part #	Description	Quantity
1	SX013263	Hitch Assembly; 1700	1
2	SX013294	Frame Group; 1700	1
3	SX013305	Lighting Assembly; 1700	1
4	SX013543	Wheel and Tire Assembly; 10 Bolt, 18.4"x 26-10	4
5	SX017466	1700 Adjustable Axle Option	1
6	SX013588	Mount, SMV	1
7	SX015769	Assembly; Steering Link, 1700	1
8	SX015835	Skid Assembly; 1700	1
9	SXBH-025-075-5	Bolt; 1/4" x 0.75" Grade 5	4
10	SXJD5403	Sign, SMV	1
11	SXLN-025-NI	Locknut; 1/4" Nylon Insert	4
12	SX015838	Decal; Minimum Turning Radius, 1700	1
13	SX015839	Decal; Transport Position, 1700	1

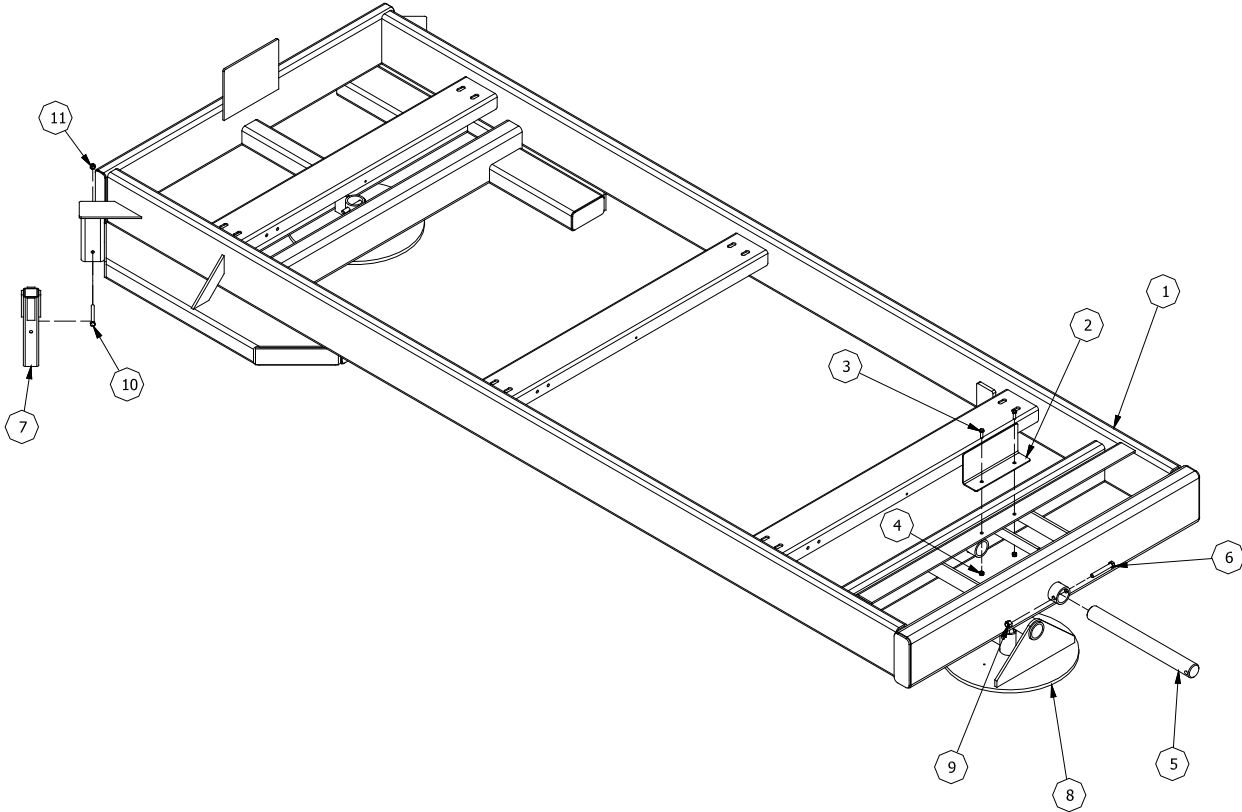
Description: Hitch Assembly



Description: Hitch Assembly

Item#	Part #	Description	Quantity
1	SX004772	Decal; Caution, Read Manual	1
2	SX008553	Decal; Caution, Exceed Max Load	1
3	SX012098	Roller; Boom Fold Over Top	1
4	SX013046	Decal; Made In USA	1
5	SX013049	Plastic Manual-PAK 3 11/16 OD	1
6	SX013239	Safety Chain; 21000#	1
7	SX013250	Weldment; Hitch Tube	1
8	SX013746	Receiver W/A, Tube Hitch	1
9	SX013761	Decal, Max Tow Speed	1
10	SX013762	Decal, Hitch Rating	1
11	SXAC607449	Jack; Swivel, Side Wind, 2000#	1
12	SXAC607451	Snap Ring; Goes W/607449 Jack	1
13	SXBH-050-450-5	Bolt; 1/2" x 4-1/2" Grade 5	1
14	SXBH-075-550-5	Bolt; 3/4" x 5.50" Grade 5	1
15	SXBH-100-400-5	Bolt; 1" x 4" Hex, Gr. 5	2
16	SXLN-050-NI	Locknut, 1/2"; Nylon Insert	1
17	SXLN-075-CL	Locknut; 3/4" Center locknut	1
18	SXLN-100-NI	Locknut, 1" Nylon Insert	2
19	SXPHI-087-750	Pin; Hitch, 7/8" x 7.50"	1

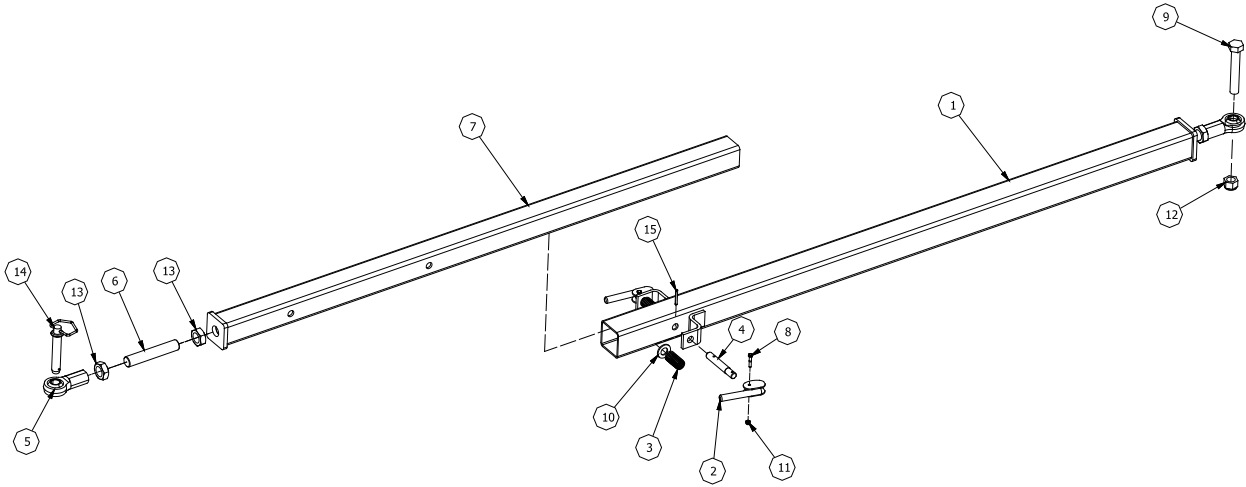
Description: Frame Assembly



Description: Frame Assembly

Item#	Part #	Description	Quantity
1	SX015131	Frame Weldment, 1700	1
2	SX013530	Bracket, Tank Stop	1
3	SXBH-031-100-5	Bolt; 5/16" x 1.00" Grade 5	2
4	SXLN-031-NI	Locknut; 5/16" Nylon Insert	2
5	SX015583	Shaft, 1.97" x 18.75"	1
6	SXBH-050-350-5	Bolt; 1/2" x 3.50" Grade 5	3
7	SX015841	Weldment; Rear Stop	2
8	SX015177	Weldment; Bolster, 1700	1
9	SXLN-050-NI	Locknut; 1/2" Nylon Insert	1
10	SXBH-038-400-5	Bolt; 3/8" x 4" Grade 5	2
11	SXLN-038-NI	Locknut; 3/8" Nylon Insert	2

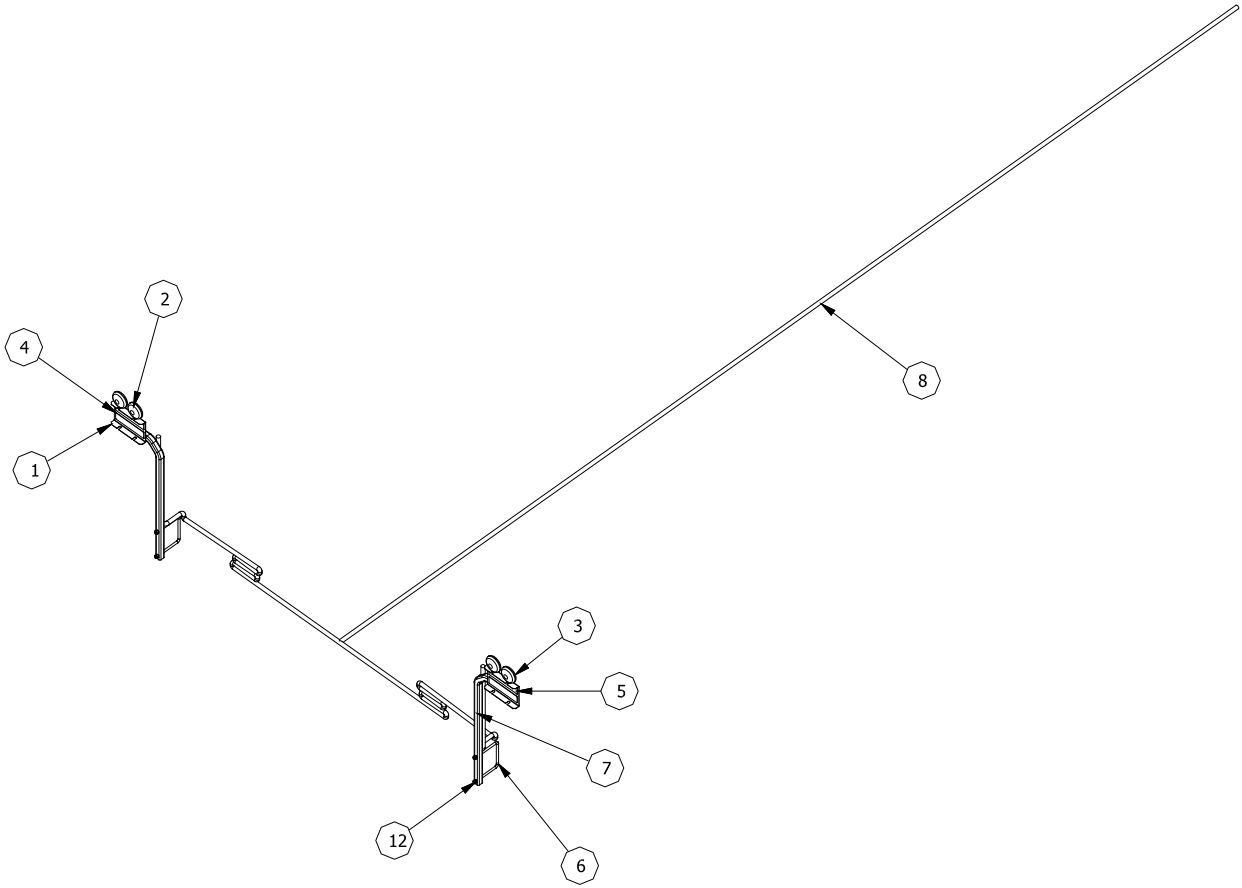
Description: Steering Link Assembly



Description: Steering Link Assembly

Item#	Part #	Description	Quantity
1	SX013456	Link W/A, Steering; Rear	1
2	SX013466	Cam Lever W/A	2
3	SX013469	Spring; Compression, 1.225	2
4	SX014524	Pin, Steering Link	2
5	SX015754	Rod End, Female; 1.25"-12 Thread, 1.875" Ball	2
6	SX015833	1.25"-12 Thread Rod x 7.00"	2
7	SX015834	Link W/A, Steering; Front	1
8	SXBH-025-150-5	Bolt; 1/4" x 1-1/4" Grade 5	2
9	SXBH-100-600-5	Bolt; Hex, 1" x 6" Grade 5	1
10	SXFW-87	Flat washer; 7/8"	2
11	SXLN-025-NI	Locknut, 1/4"; Nylon Insert	2
12	SXLN-100-NI	Locknut; 1" Nylon Insert	1
13	SXNUT-125-JF	Nut; 1/2"-20 Jam Nut Fine Thread	4
14	SXPHI-100-525	Pin; Hitch, 1" x 5-1/4"	1
15	SXPRP025-125	Pin; Roll Pin, 1/4" x 1-1/4" ZN	2

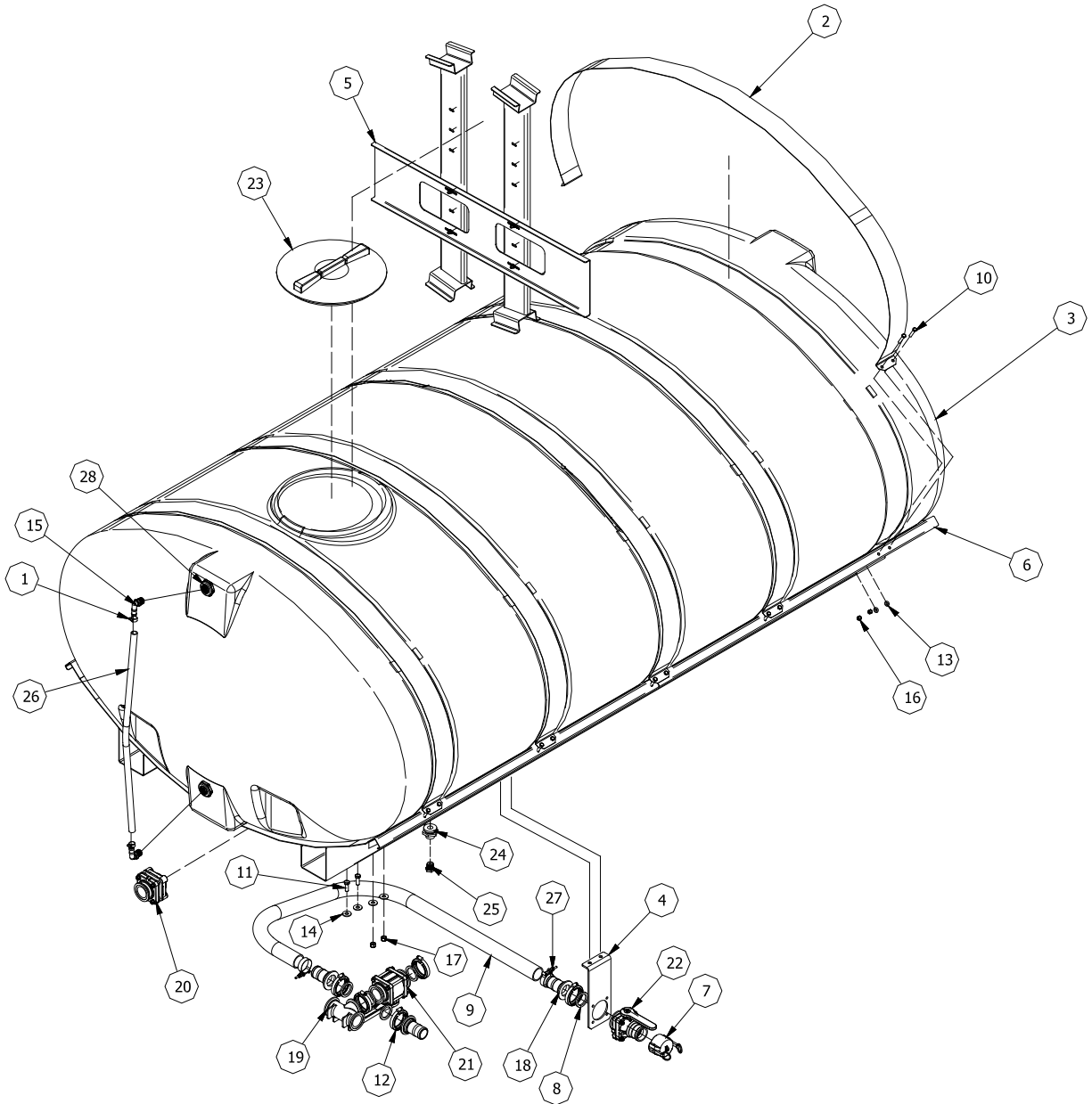
Description: Lighting and Marking



Description: Lighting and Marking

Item#	Part #	Description	Quantity
1	SX013743	Mount, Lighting; LH	1
2	SX004560	Lamp; Turn/Tail	2
3	SX004561	Lamp; Tail, Amber	2
4	SX17-5910	Reflector; Amber 2" x 9"	2
5	SX17-5915	Reflector; Red 2" x 9"	2
6	SXBU050-725-737-2	U-Bolt; 7.375" x 7.25" x 1/2-13"	2
7	SX013459	Mount, Lighting; RH	1
8	SX013521	Harness; Light, L1600	1
12	SXLN-050-NI	Locknut; 1/2" Nylon Insert	4

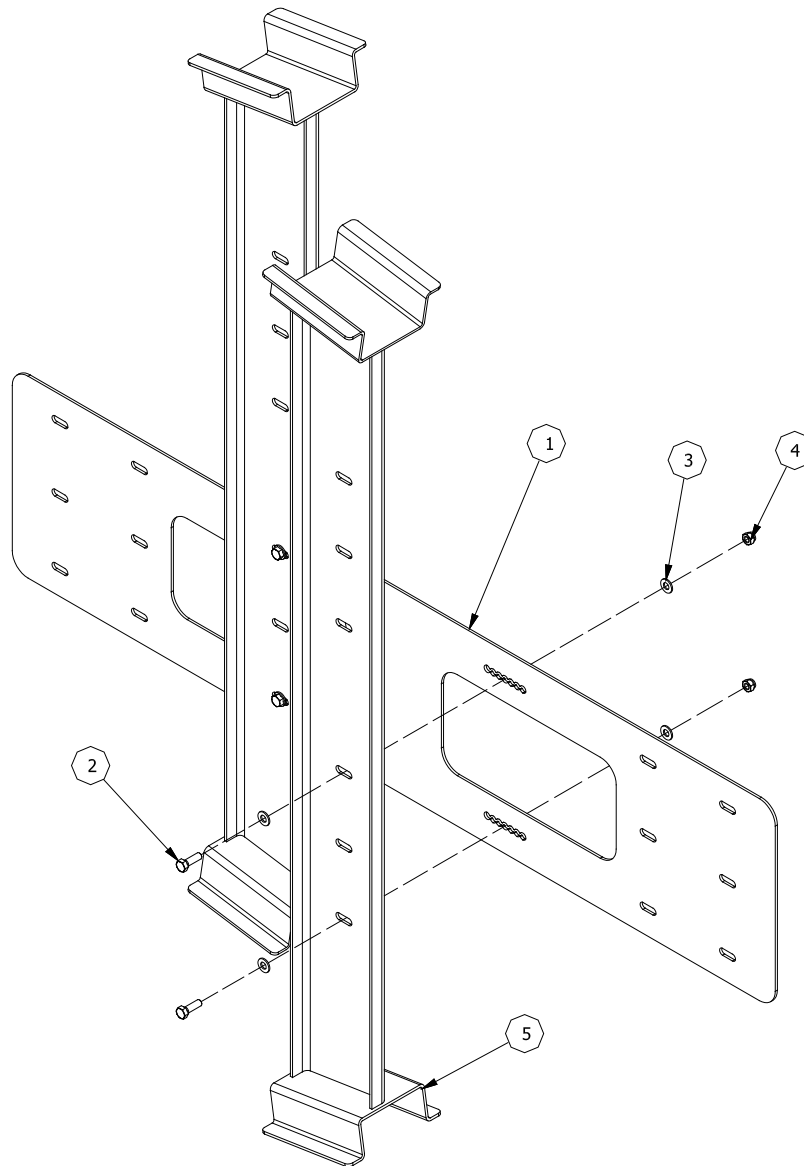
Description: Skid Assembly, Product Tank; 1600 Gallon



Description: Skid Assembly, Product Tank; 1600 Gallon

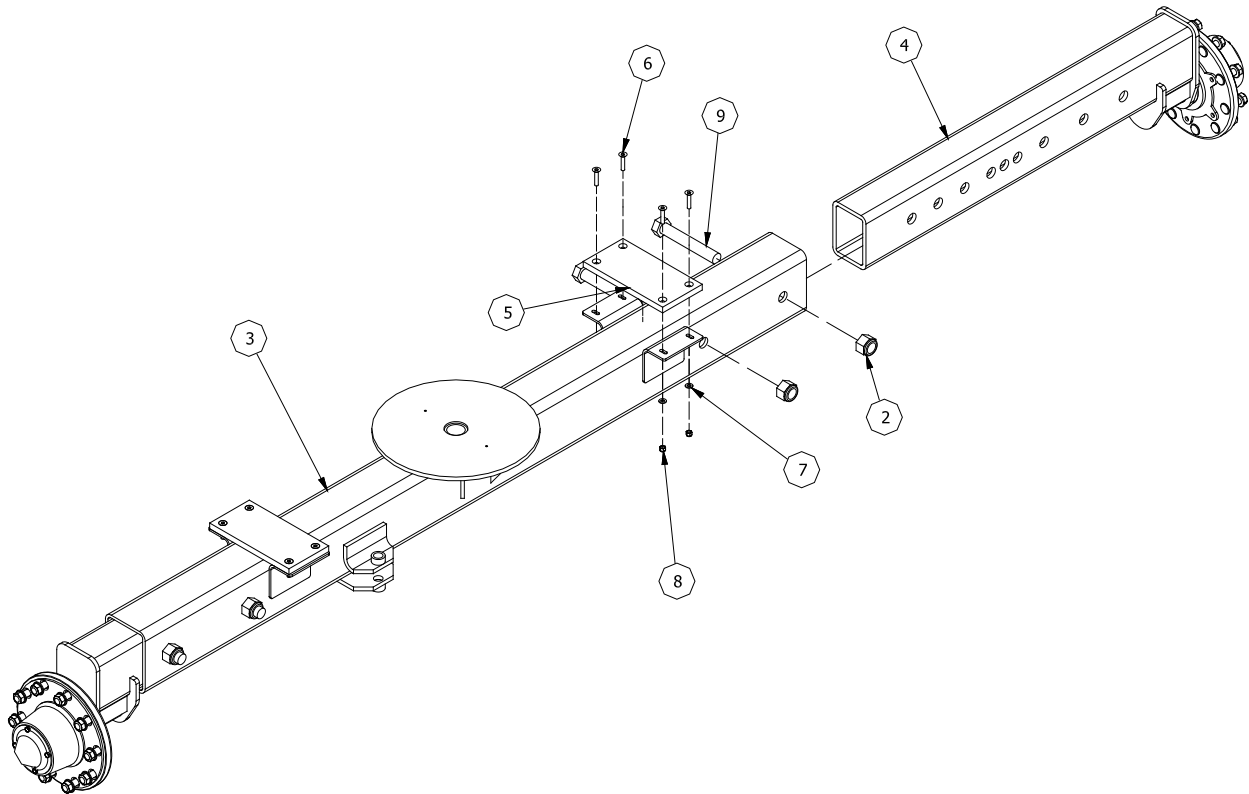
Item#	Part #	Description	Quantity
1	SX#12J	Clamp, 3/4" Hose Worm Screw	2
2	SX008882	Strap; 1000 Gal.	5
3	SX013266	Tank, Product; 1600 Gallon	1
4	SX013578	Bracket, Valve Mount	1
5	SX013799	1600 Gallon Elip. Tank Baffle	1
6	SX014730	Weldment, Saddle, Tank; 1600 Gal.	1
7	SX200CAP	Coupling; 2" Female Cam Lever	1
8	SX200G	Gasket; 2" Coupling EPDM	5
9	SX600432	Hose; 2" Enforcer, Fert. Solution, 5.58'	1
10	SXBH-038-200-5	Bolt; 3/8" x 2.00" Grade 5	20
11	SXBH-050-150-5	Bolt; 1/2" x 1.50" Grade 5	12
12	SXFC220	Clamp; 2" Series Worm Screw	5
13	SXFW-038	Washer, Flat, 3/8"	20
14	SXFW-050	Flat washer; 1/2" - 28 Per #	24
15	SXHB075-90	Hose Barb, 3/4" MPT x 3/4" HB, ELL	2
16	SXLN-038-NI	Locknut; 3/8" Nylon Insert	20
17	SXLN-050-NI	Locknut; 1/2" Nylon Insert	12
18	SXM220BRB	Hose Barb, 2" FP Flange	3
19	SXM220TEE	Tee; 2" Full Port Manifold Tee	1
20	SXMBF220	Manifold, 2" FP Flange, 2" FPT	1
21	SXMV220CF	Valve, 2" FP Flange Banjo	1
22	SXMVSF220FP	2" FP Flange x 2" Male Adapter	1
23	SXNW60011	Lid; 16", With Air Vent (Included with SX013266)	1
24	SXNW60401	Bulkhead, 3/4" Threaded	1
25	SXPLUG075	Plug; 3/4" MPT Poly	1
26	SXSIGHT-100	Hose; 1" Clear Sight Hose, 38"	1
27	SXTBC256	Clamp; T-Bolt 2-11/32"-25/8	2
28	SXTF075	Bulkhead Fitting; 3/4" Poly	2

Description: Tank Baffle; 1600 Gallon



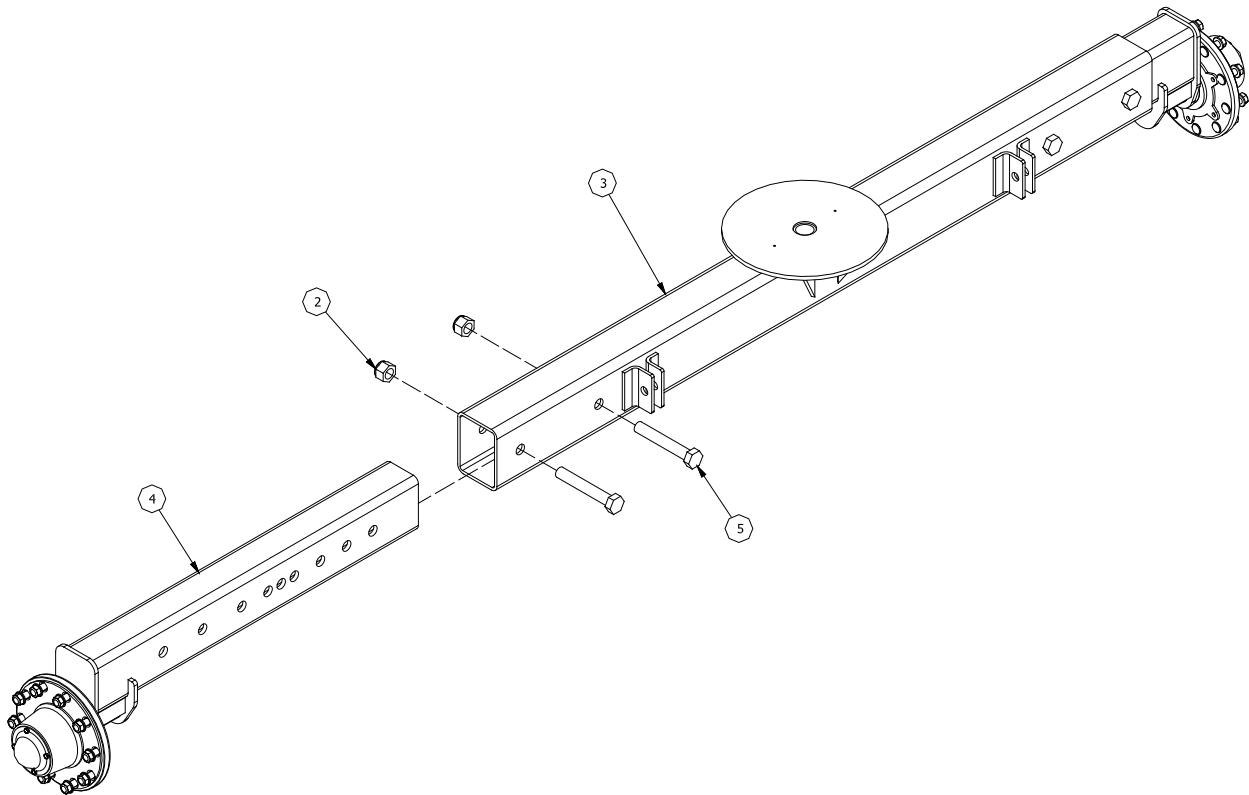
Item#	Part #	Description	Quantity
1	SX013797	Plate, Baffle; 1600 Gallon Ellip Tank	1
2	SXBH-031-100-S	Bolt, S.S.; 5/16" x 1" Grade 5	4
3	SXFW-031-S	Flat washer, S.S.; 5/16"	8
4	SXLN-031-NI-S	Locknut S.S., 5/16"; Nylon Insert	4
5	SX015836	Weldment; Baffle Center Post	2

Description: Axle Assembly, Adjustable; Rear - Optional



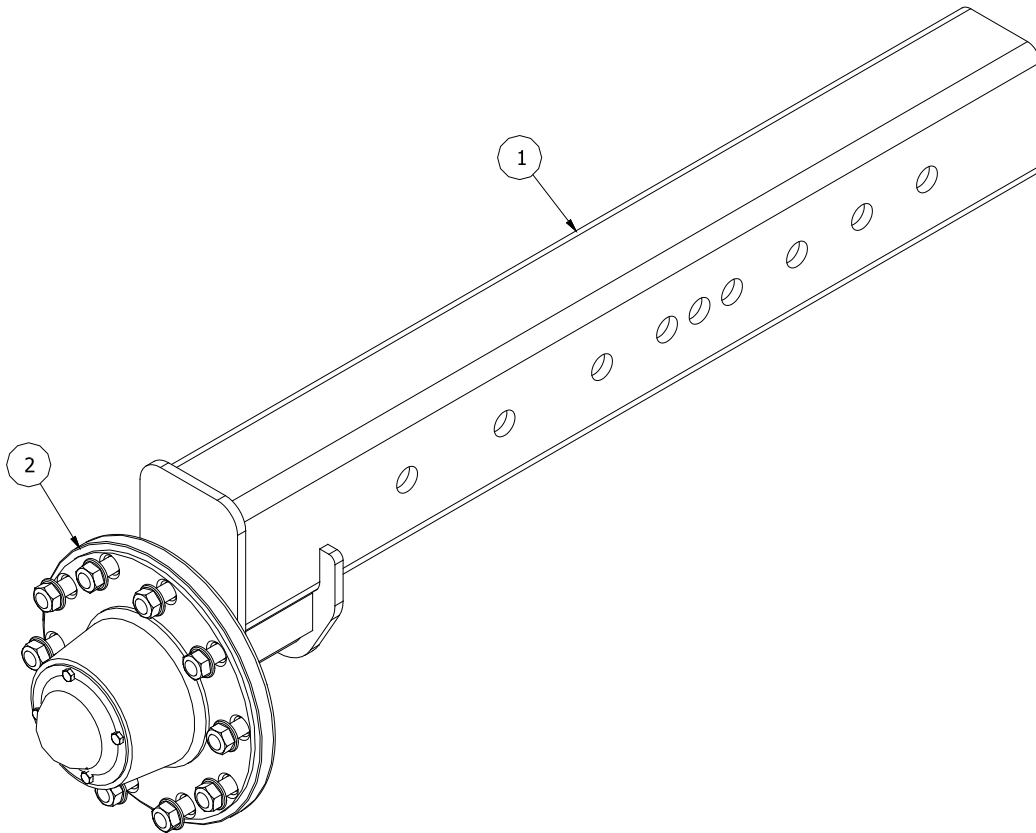
Item#	Part #	Description	Quantity
2	SXLN-125-NI	Locknut, 1" Nylon Insert	4
3	SX015632	Weldment, Adj. Axle Housing; Rear	1
4	SX015178	Assembly, Axle Adjustment	2
5	SX015633	Wear Pad, UHMW; 6.00" x 12.00" x 0.75"	2
6	SXBSC-038-200	Bolt; 3/8" x 2.0" SKTHD CTSINK	8
7	SXFW-038-5	Flat washer; 3/8" Grade 5	8
8	SXLN-038-NI	Locknut; 3/8" Nylon Insert	8
9	SXBH-125-800-5	Bolt; 1-1/4" x 8.00" Grade 5	4

Description: Adjustable Axle Housing; Front - Optional



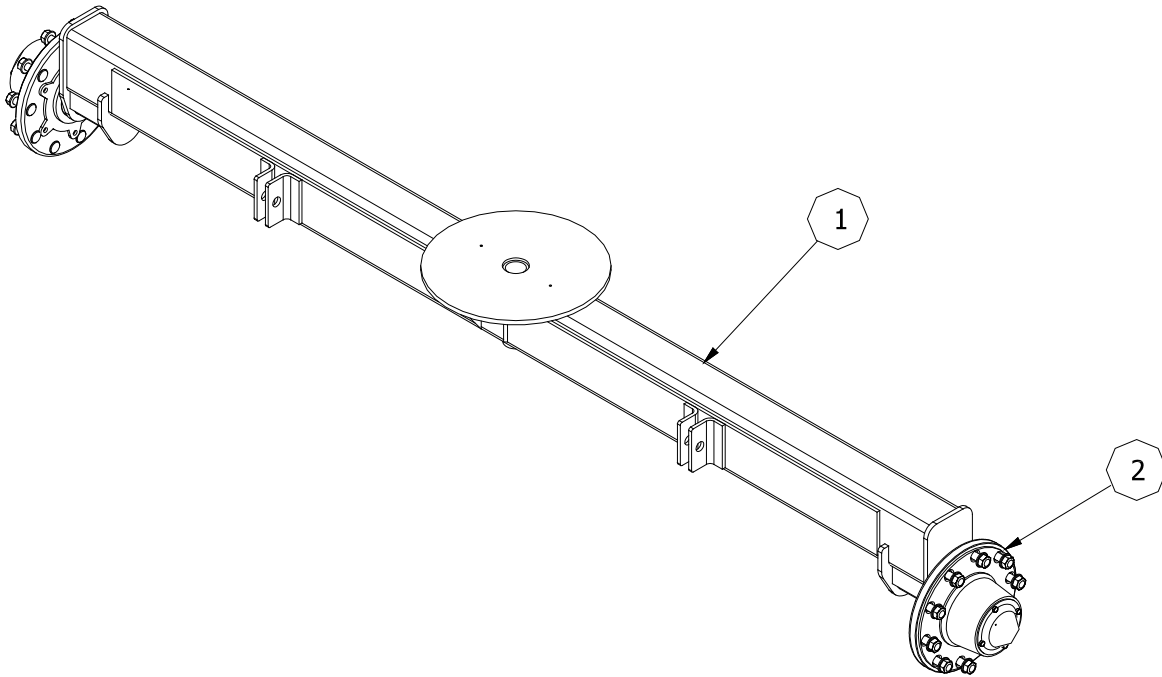
Item#	Part #	Description	Quantity
2	SXLN-125-NI	Locknut, 1 Nylon Insert	4
3	SX015166	Weldment, Adj. Axle Housing; Front	1
4	SX015178	Assembly, Axle Adjustment	2
5	SXBH-125-800-5	Bolt; 1-1/4" x 8.00" Grade 5	4

Description: Adjustable Axle Assembly



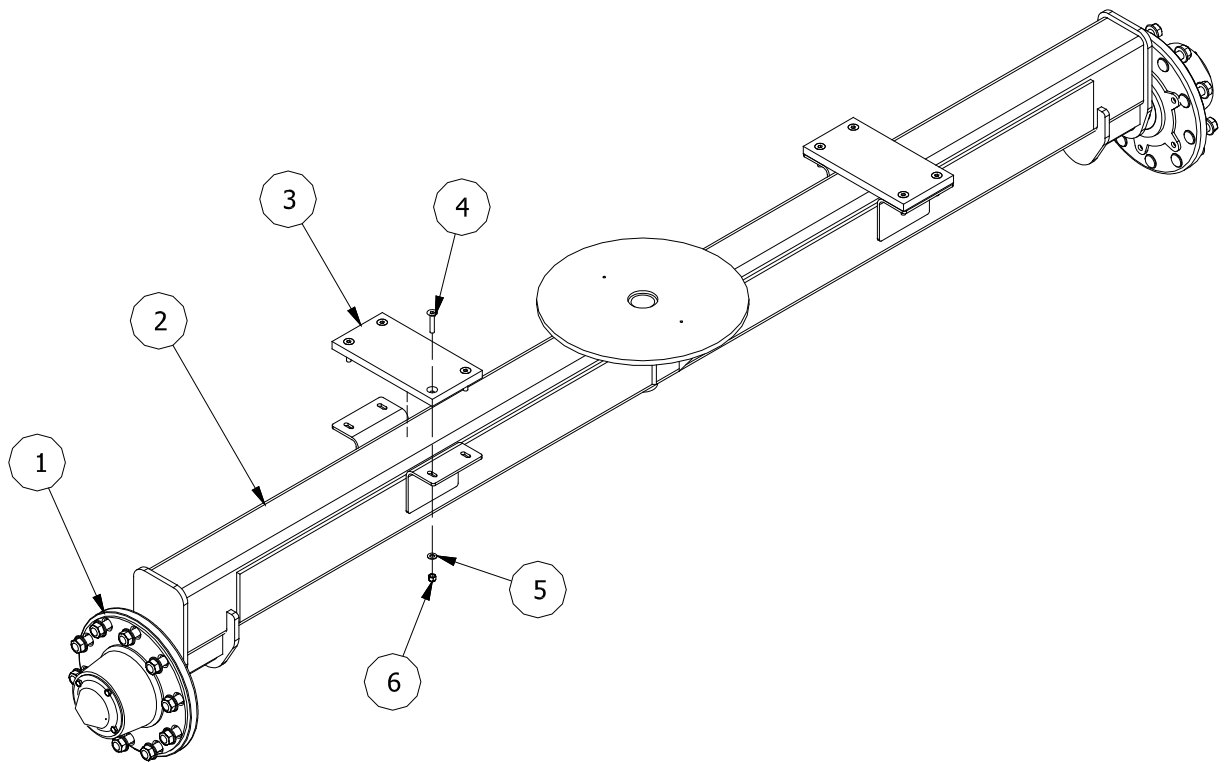
Item#	Part #	Description	Quantity
1	SX015168	Axle, Sliding; 120"-160"	1
2	SX2891300	Hub, 10 Bolt	1

Description: Fixed Axle Assembly; Front



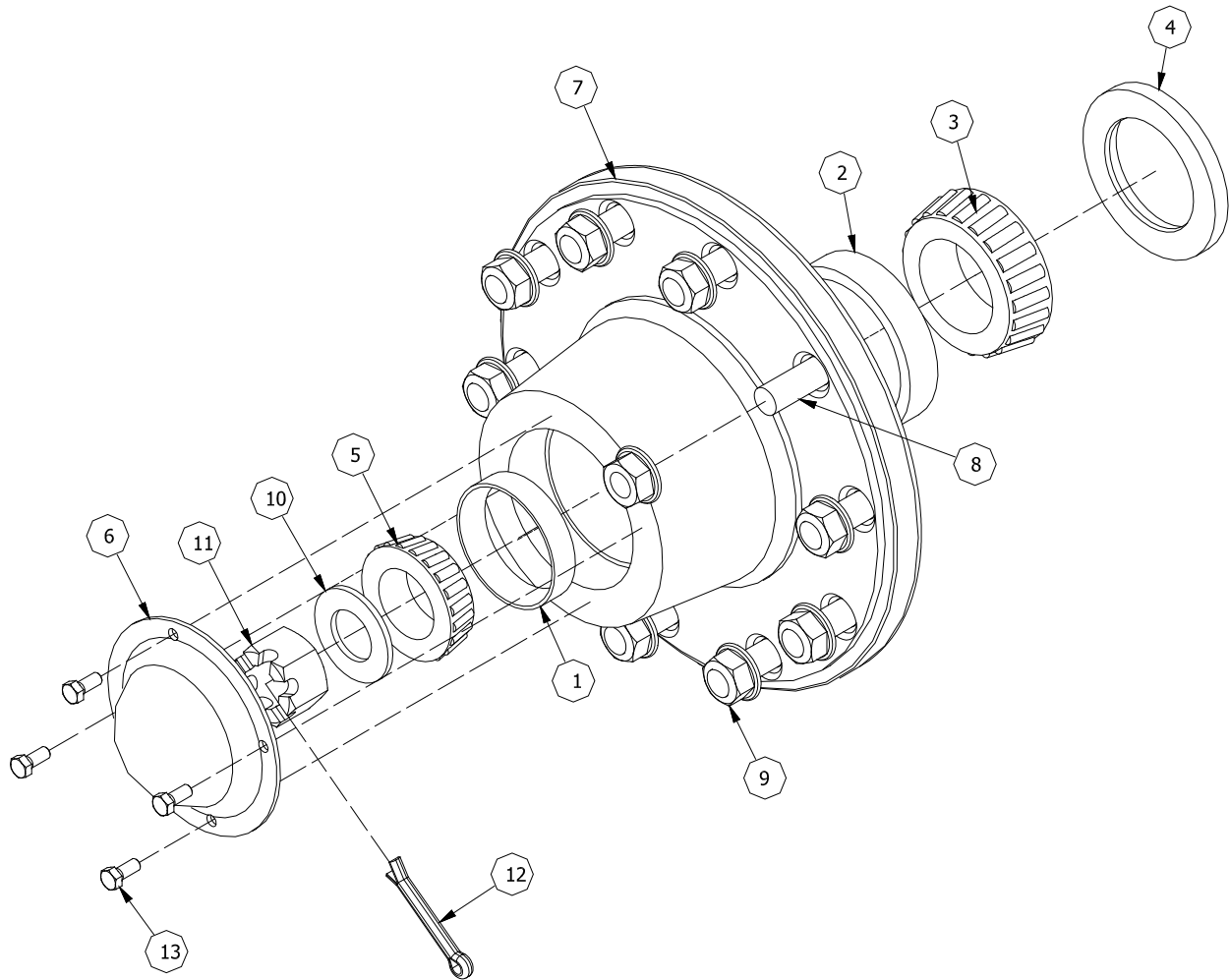
Item#	Part #	Description	Quantity
1	SX015686	Weldment, Front Axle, 120" Fixed	1
2	SX2891300	Hub, 10 Bolt	2

Description: Fixed Axle Assembly; Rear



Item#	Part #	Description	Quantity
1	SX2891300	Hub, 10 Bolt	2
2	SX015687	Axle, Rear; 120" Fixed	1
3	SX015633	Wear Pad, UHMW; 6.00" x 12.00" x 0.75"	2
4	SXBSC-038-200	Bolt; 3/8" x 2.0" SKTHD CTSINK	8
5	SXFW-038-5	Flat washer; 3/8" Grade 5	8
6	SXLN-038-NI	Locknut; 3/8" Nylon Insert	8

Description: Hub, 10 Bolt



Description: Hub, 10 Bolt

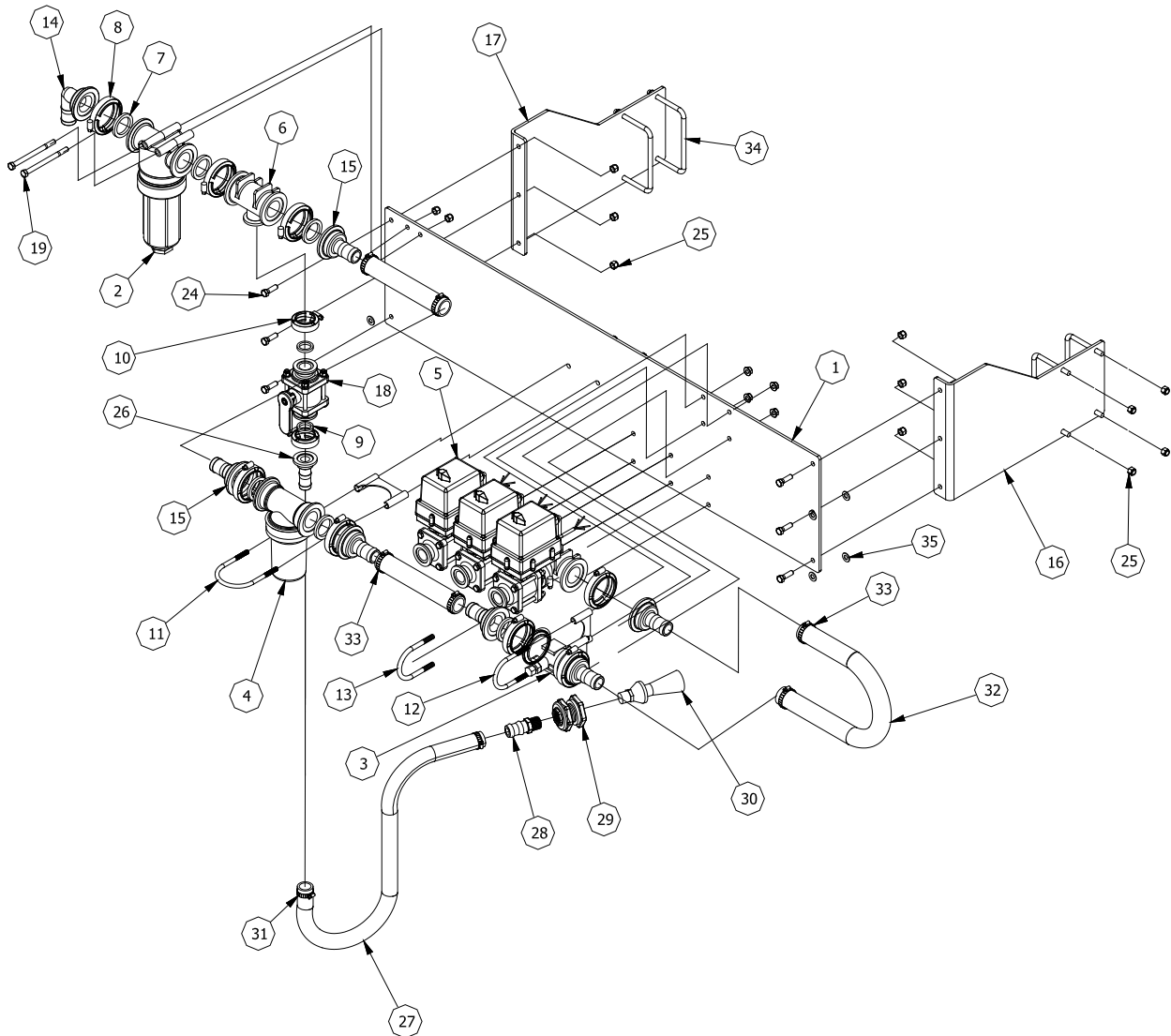
Item#	Part #	Description	Quantity
1	SX453A	Cup, Outer	1
2	SX39520	Cup, Inner	1
3	SX39585	Cone Bearing, Inner	1
4	SX906497	Seal, Grease	1
5	SX460	Cone Bearing, Outer	1
6	SX909983	Cap, Hub	1
7	SX289141	Casting, Hub; 10 Bolt	1
8	SX953033	Stud, Wheel	10
9	SX013741	Lug Nut, Flanged; 3/4"-16	10
10	SX913632	Flat Washer, Spindle	1
11	SX912969	Nut, Spindle, 1-1/4"-12	1
12	SX905944	Cotter Pin, Spindle	1
13	SX905205	Bolt, Dust Cap	4

Description: Pump; Optional

Item#	Part #	Description	Quantity
1	SX# 4JM	Clamp; 1/4" x 5/16" Stainless	2
2	SX013582	Mount; Product Pump	1
3	SX013731	Mount; Front, Product Pump	1
4	SX150G	Gasket; For 2" Flanged Valve	1
5	SX200G	Gasket; 2" Coupling EPDM	1
6	SX3A1814	Hose Barb; 1/8" x 1/4", Poly	1
7*	SX73HD	Spin weld; 1/4" FPT Raised Heavy Duty	1
8	SXBH-038-125-5	Bolt; 3/8" x 1-1/4" Grade 5	4
9	SXBH-038-175-5	Bolt; 3/8" x 1-3/4 Grade 5	2
10	SXFC200	Coupling; 2" x 2" FPT, Nylon	1
11	SXFC220	Clamp; 2" Series Worm Screw	1
12	SXFMC-150F-HYD-206	Product Pump; FMC-150F-HYD-206	1
13	SXFW-038-5	Flat washer; 3/8"	2
14	SXHB025-90	Hose Barb Ell; 1/4" Vinyl Reinforce Clear	1
15	SXK3150-025	Hose; 1/4" Vinyl Reinforce Clear, 12'	1
16	SXLN-038-NI	Locknut, 3/8"; Nylon Insert	6
17	SXM200/125BRB90	Elbow; 2" x 1-1/4", 90°	1
18	SXM220BRB90	Manifold; 2" Flange x 2" HB	1

* Not Shown

Description: Valve Panel, w/o Tank Access; Optional

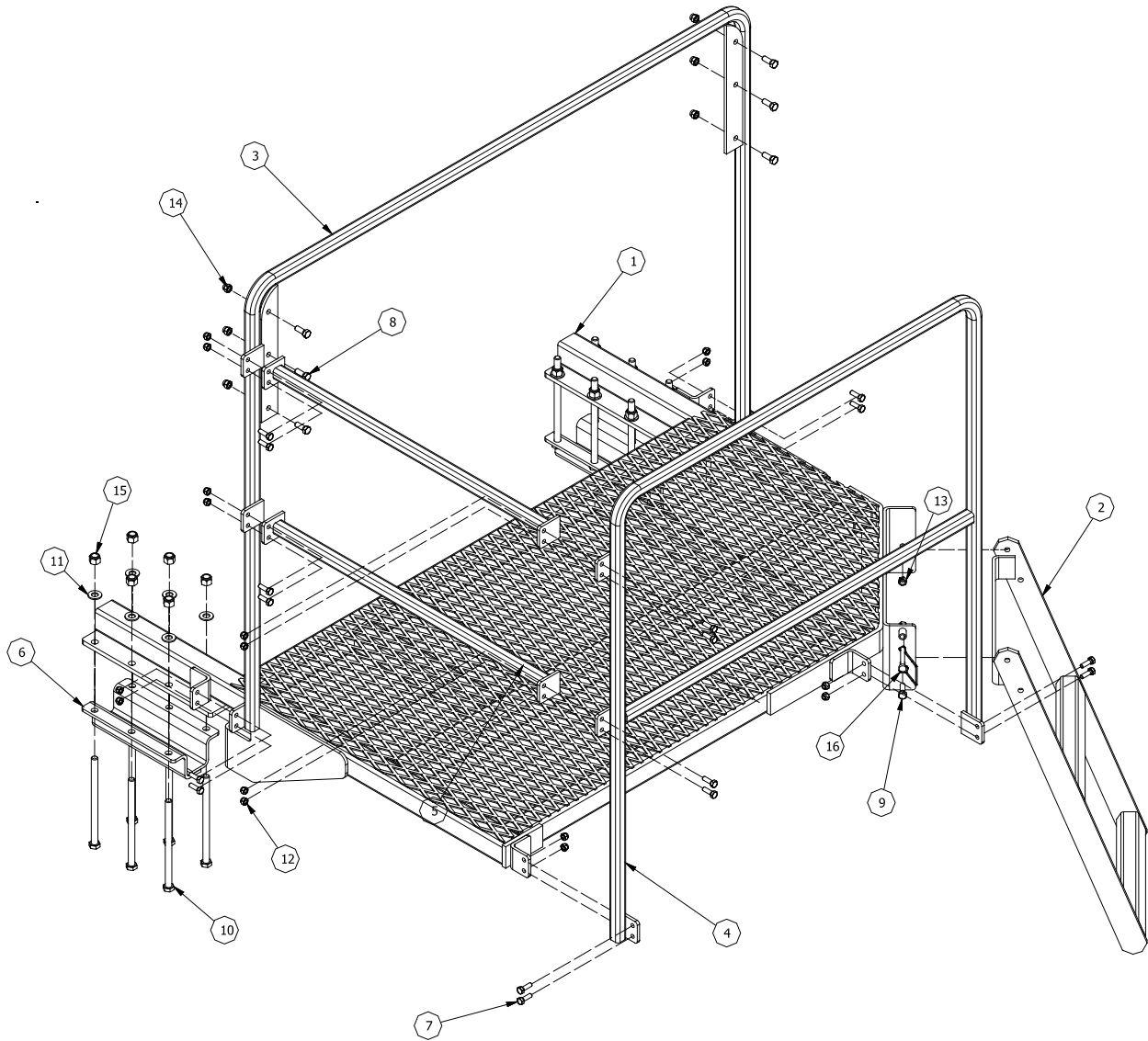


Description: Valve Panel, w/o Tank Access; Optional

Item#	Part #	Description	Quantity
1	SX013726	Plate; Valve Panel, 1700	1
2	SXXMLST150HB	Stainer, Flanged; 2" Standard Port	1
3	SX063-0717-793	Flow Meter, RFM 60P	1
4	SX063-0171-894	Valve; Control, 1 1/2" Poly	1
5	SXMVE103CF	Manifold 3-Valve Assembly, 1" Out 2" Inlet	1
6	SXM200100TEE	Tee; 2" x 1" Tee	1
7	SX150G	Gasket; For 2" Flanged Valve	8
8	SXFC200	Coupling; 2" x 2" FPT, Nylon	8
9	SXM100G	Gasket; For 1" Flanged Valve	2
10	SXFC100	Coupling; 1" FPT	2
11	SX013751	U-Bolt, 3-3/16" OD; Clamping	1
12	SX013752	U-Bolt, 2-7/16" OD; Clamping	2
13	SXUB200	U-Bolt For Banjo Ball Valve	3
14	SXM200/125BRB90	Elbow; 2" x 1-1/4", 90°	1
15	SXM200125BRB	Hose Barb; 2" x 1-1/4" Straight	6
16	SX013728	Mount; Valve Panel, LH	1
17	SX013727	Mount; Valve Panel, RH	1
18	SXMV100CF	Valve; 1" Viton Flanged Valve	1
19	SXBH-038-500-5	Bolt; 3/8" x 5" Grade 5	2
20*	SX063-0171-220	Console; SCS 450, Raven	1
21*	SX115-0159-492	Cable, Console	1
22*	SX115-0159-857	Cable, Extension	1
23*	SX006367	Cable, Flow	1
24	SXBH-038-125-5	Bolt; 3/8" x 1-1/4" Grade 5	6
25	SXLN-038-NI	Locknut; 3/8" Nylon Insert	16
26	SXM100BRB	Hose Barb; 1" x 1" Straight	1
27	SX011612	Hose; 1" 150# Black Rubber, 45.6"	1
28	SXBHB075-100	Hose Barb; 3/4" MPT x 1" HB Poly	1
29	SXTF075	Bulkhead Fitting; 3/4" Poly	1
30	SX013744	Agitator; Hydraulic	1
31	SX16J	Clamp; 1" x 1/2" Stainless	2
32	SX012012	Hose; 1-1/4" 150# Black Rubber, 45.6"	1
33	SX20J	Clamp; 1-1/4" x 1/2" Stainless	6
34	SXBU038-600-400-2	U-Bolt, 3/8"-16; 6" x 4" x 1.5"	4
35	SXFW-038-5	Flat washer; 3/8"	8

* Not Shown

Description: Service Platform; Optional



Description: Service Platform; Optional

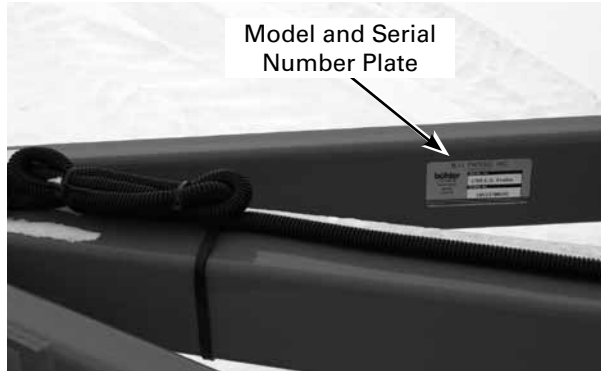
Item#	Part #	Description	Quantity
1	SX013701	Platform W/A; Tank Access	1
2	SX013722	Ladder W/A	1
3	SX013757	Rear Railing W/A; Tank Access	1
4	SX013758	Front Railing W/A; Tank Access	1
5	SX013794	Side Railing W/A; Tank Access	2
6	SX016208	Weldment; 1700 Platform Mount	2
7	SXBH-031-100-5	Bolt; 5/16" x 1" Grade 5	16
8	SXBH-038-100-5	Bolt; 3/8" x 3/4" Grade 5	6
9	SXBH-038-125-5	Bolt; 3/8" x 1-1/4" Grade 5	2
10	SXBH-050-800-5	Bolt; 1/2" x 8.00" Grade 5	12
11	SXFW-050	Flat washer; 1/2"	12
12	SXLN-031-NI	Locknut, 5/16"; Nylon Insert	16
13	SXLN-038-CL	Nut; 3/8" Center Lock Nut	2
14	SXLN-038-NI	Locknut, 3/8"; Nylon Insert	6
15	SXLN-050-NI	Locknut; 1/2" Nylon Insert	12
16	SXPLI-031-250	Pin; Linch Pin, 5/16" x 2-1/2"	1

NOTES:

Warranty

Section E

Serial and Model Number Location



Inner frame of liquid supply trailer, facing front.

The following page contains a space for you to record the information about your liquid supply trailer found on this plate. Please record this information here for future reference.

SERIAL NUMBER INFORMATION

Farm King Model Number: _____

Farm King Serial Number: _____

Component Serial Numbers:

Manufacturer	Part Number	Serial No.	Notes:
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____



IMPORTANT

The binder containing this manual is sub-component of the liquid supply trailer and should go with the liquid supply trailer in the event of a future sale. This information contained within this binder is specific to this specific liquid supply trailer and cannot easily be replaced.

Warranty Policy

Farm King Liquid Supply Trailer Limited Warranty

This document limits your warranty rights.

Base Limited Warranty

Farm King provides this warranty only to original retail purchasers of its liquid supply trailers. Farm King warrants to such purchasers that all Farm King-manufactured parts and components used and serviced as provided for in the Operator's Manual shall be free from defects in materials and workmanship for a period following delivery to the original retail purchaser of one (1) year. This limited warranty applies only to those parts and components manufactured by Farm King. Parts and components manufactured by others are subject to their manufacturer's warranties, if any.

Farm King will fulfill this limited warranty by, at its option, repairing or replacing any covered part that is defective or is the result of improper workmanship, provided that the part is returned to Farm King within thirty (30) days of the date that such defect or improper workmanship is, or should have been, discovered. Parts must be returned through the selling representative and the buyer must prepay transportation charges.

Farm King will not be responsible for repairs or replacements that are necessitated, in whole or part, by the use of parts not manufactured by or obtained from Farm King. Under no circumstances are component parts warranted against normal wear and tear. There is no warranty on product pump seals, product pump bearings, rubber product hoses, pressure gauges, or other components that require replacement as part of normal maintenance.

Repair Parts Limited Warranty

Farm King warrants genuine Farm King replacement parts purchased after the expiration of the Farm King Limited Warranty, and used and serviced as provided for in the Operator's Manual, to be free from defects in materials or workmanship for a period of thirty (30) days from the invoice date for the parts. Farm King will fulfill this limited warranty by, at its option, repairing or replacing any covered part that is defective or is the result of improper workmanship, provided that the part is returned to Farm King within thirty (30) days of the date that such defect or improper workmanship is, or should have been, discovered. Such parts must be shipped to the Farm King factory at the purchaser's expense.

What is Not Covered

Under no circumstances does this limited warranty cover any components or parts that have been subject to the following: negligence; alteration or modification not approved by Farm King; misuse; improper storage; lack of reasonable and proper maintenance, service, or repair; normal wear; damage from failure to follow operating instructions; accident; and/or repairs that have been made with parts other than those manufactured, supplied, and or authorized by Farm King.

Continued on next page

Authorized Dealer and Labor Costs

Repairs eligible for labor under this limited warranty must be made by Farm King or an authorized Farm King dealer. Farm King retains the exclusive discretion to determine whether it will pay labor costs for warranty repairs or replacements, and the amount of such costs that it will pay and the time in which the repairs will be made. If Farm King determines that it will pay labor costs for warranty work, it will do so by issuing a credit to the dealer's or distributor's account. Farm King will not approve or pay invoices sent for repairs that Farm King has not previously approved. Warranty service does not extend the original term of this limited warranty.

Warranty Requirements

To be covered by warranty, each new liquid supply trailer must be registered with Farm King within thirty (30) days of delivery to original retail purchaser. If the customer decides to purchase replacement components before the warranty disposition of such components is determined, Farm King will bill the customer for such components and then credit the replacement invoice for those components later determined to be covered by this limited warranty. Any such replacement components that are determined not to be covered by this limited warranty will be subject to the terms of the invoice and shall be paid for by the purchaser.

Exclusive Effect of Warranty and Limitation of Liability

TO THE EXTENT PERMITTED BY LAW, FARM KING DISCLAIMS ANY WARRANTIES, REPRESENTATIONS, OR PROMISES, EXPRESS OR IMPLIED, AS TO THE QUALITY, PERFORMANCE, OR FREEDOM FROM DEFECT OF THE COMPONENTS AND PARTS COVERED BY THIS WARRANTY AND NOT SPECIFICALLY PROVIDED FOR HEREIN.

TO THE EXTENT PERMITTED BY LAW, FARM KING DISCLAIMS ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ON ITS PRODUCTS COVERED HEREIN, AND DISCLAIMS ANY RELIANCE BY THE PURCHASER ON FARM KING'S SKILL OR JUDGMENT TO SELECT OR FURNISH GOODS FOR ANY PARTICULAR PURPOSE. THE PURCHASER'S ONLY AND EXCLUSIVE REMEDIES IN CONNECTION WITH THE BREACH OR PERFORMANCE OF ANY WARRANTY ON FARM KING'S LIQUID SUPPLY TRAILERS ARE THOSE SET FORTH HEREIN. IN NO EVENT SHALL FARM KING BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING, BY WAY OF EXAMPLE ONLY AND NOT LIMITATION, LOSS OF CROPS, LOSS OF PROFITS OR REVENUE, OTHER COMMERCIAL LOSSES, INCONVENIENCE, OR COST OF REPLACEMENT OF RENTAL EQUIPMENT). IN NO EVENT SHALL FARM KING'S CONTRACT OR WARRANTY LIABILITY EXCEED THE PURCHASE PRICE OF THE PRODUCT. (Note that some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusion may not apply to you.) This warranty gives you specific legal rights and you may also have other rights, which vary from state to state.

Farm King neither assumes nor authorizes any person or entity, including its selling representatives, to assume any other obligations or liability in connections with the sale of covered equipment, or to make any other warranties, representations, or promises, express or implied, as to the quality, performance, or freedom from defect of the components and parts covered herein. No one is authorized to alter, modify, or enlarge this limited warranty, or its exclusions, limitations and reservations.

Continued on next page.

Corrections of defects and improper workmanship in the manner, and for the applicable time periods, provided for herein shall constitute fulfillment of all responsibilities of Farm King to the purchaser, and Farm King shall not be liable in negligence, contract, or on any other basis with respect to the subject equipment.

This limited warranty is subject to any existing conditions of supply which may directly affect Farm King's ability to obtain materials or manufacturer replacement parts.

Buhler Industries Inc. reserves the right to make improvements in design or changes in specifications to its products at anytime, without incurring any obligation to owners of units previously sold.

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