



**532-16 & 672-20
MANURE SPREADER
TRAILER UNIT**

**MODEL NUMBERS
532-16 SPREADER & 672-20 SPREADER**

**OWNER'S MANUAL
INSTALLATION INSTRUCTIONS
AND PARTS**

**ROTO-MIX
P.O. Box 1724
2205 E. Wyatt Earp Blvd.
Dodge City, Kansas 67801
(620) 225-1142
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INTRODUCTION

Congratulations on the purchase of your new spreader from Roto-Mix. With proper operation and preventative maintenance it will last for years.



This SAFETY ALERT SYMBOL indicates important safety messages in the manual. When you see this symbol, be alert to the possibility of PERSONAL INJURY and carefully read the message that follows.

⚠ WARNING NEVER OPERATE WITHOUT ALL COVERS, SHIELDS AND GUARDS IN PLACE. KEEP HANDS, FEET AND CLOTHING AWAY FROM MOVING PARTS.

Some covers and guards have been removed for illustrative/photographic purposes only in this manual. However, equipment should never be operated in this condition. Keep all shields in place. If shield removal becomes necessary for repairs, replace the shield prior to use.

The Guarantee appears in the front of this book along with the Registration and Inspection Certificate.

For information on ordering repair parts, refer to the Repair Parts section at the back of this book.

The serial number plate is located on the drivers side lower front of the main frame. This number should be recorded on the Registration and Inspection Certificate for your reference and for proper identification of your spreader by Roto-Mix.

You are urged to study this manual and follow the instructions carefully. Your efforts will be repaid in better operation and service as well as a savings in time and repair expense. Failure to read and understand the machine or the system could lead to serious injury. If you do not understand the instructions in this manual contact either your dealer or Roto-Mix at Dodge City, Kansas 67801.

This supersedes all previous published instructions.



Limited Warranty Statement

ROTO-MIX LLC warrants to the original purchaser all products manufactured by it to be free from defects in material and workmanship under normal use and service.

ROTO-MIX's obligation under this warranty is limited to repairing or replacing, as the company may elect, free of charge and without charge for installation, at the place of business of a dealer or distributor authorized to handle the equipment covered by this warranty or at a ROTO-MIX facility, any parts that prove, in the company's judgment, to be defective in material or workmanship within one (1) year after delivery to the original purchaser, and still owned by the original purchaser. This warranty shall in no way make ROTO-MIX liable to anyone for personal injuries or damages, loss of time, or expense of any kind either direct or indirect resulting from part failure or defect. This warranty is subject to acts of God, fire and existing conditions of supply and demand, or production, or ability or inability to deliver, or for any other valid reason beyond the reasonable control of ROTO-MIX, to obtain materials, manufactured replacement parts, or make delivery thereof. No distributor, dealer, agent, or ROTO-MIX employee (other than the CEO or President in writing) is authorized to extend any other or further express or implied warranty or incur any additional obligation on ROTO-MIX's behalf in connection with the sale of this product.

If ROTO-MIX, or its duly authorized representative, shall find that such returned part or parts are defective and such defects, or defect, are included in and covered by said warranty, then such defective part or parts shall promptly be replaced without charge to the purchaser, F.O.B. the ROTO-MIX plant.

Product Registration - It is a condition of this warranty that the original purchaser must fill out the warranty card furnished by ROTO-MIX and that it be returned to ROTO-MIX within 10 days of purchase and be recorded in ROTO-MIX's owner file for this warranty to be valid. In the event an owner's card is not on file at the ROTO-MIX office, the warranty period will extend only from date equipment was picked up or shipped from the ROTO-MIX plant.

Maintenance - It is the customer's responsibility to maintain their equipment in accordance with the instructions provided in the Operator's Manual. ROTO-MIX recommends that you keep records and receipts; you may be asked to prove that maintenance instructions have been followed.

Operation - It is the customer's responsibility to operate the equipment only for the purpose for which it was designed and in accordance with all safety and operational recommendations contained in the Operators Manual. If a defect in materials or workmanship occurs, it is the customer's responsibility to cease operating the equipment until authorized repairs are made. **Damage, which occurs from continued operation, may not be covered by this warranty.**

What this Warranty Covers

This warranty covers failures caused by defects in materials or workmanship only.

This Warranty does not cover failures caused by:

- Improper operation
- Natural calamities
- Unauthorized modifications
- Unauthorized repairs
- Use of Non ROTO-MIX parts
- Neglected maintenance
- The use of PTO Shaft Adaptors
- Usage contrary to the intended purpose of the product

This Warranty does not cover replacement of Wear or Maintenance Items including, but not limited to.

- Lubricants
- Filters
- Hoses
- Tires
- Augers
- Wipers
- Chains
- Idlers
- Batteries
- Blades
- Belts

This Warranty does not cover:

- Pickup and delivery of the equipment
- Service Calls or Travel Time to and from sites
- Rental of replacement equipment during repair period
- Products that have been declared a total loss and subsequently salvaged
- Overtime labor charges
- ROTO-MIX is not responsible and will not be liable for damage caused to persons or property, commercial loss, loss of time or production, loss of use by reason of the installation or use of ROTO-MIX products or their mechanical failure.

Right to Make Changes

ROTO-MIX reserves the right to make any changes to a ROTO-MIX product at any time without incurring any obligation with respect to any product previously ordered, sold or shipped, with or without notice.

Parts Warranty

ROTO-MIX warranties replacement parts against defects in materials or workmanship for a period of 90 days or the remainder of the product warranty, whichever is longer. Remedy for defective replacement parts for units that are beyond the original product warranty, will be limited to replacement of the failed part. Failures that are due to damage, improper installation, lack of maintenance or improper operation will not be covered.

ROTO-MIX 2205 East Wyatt Earp Blvd., Dodge City, KS 67801 (620) 225-1142 Fax: (620) 225-6370

TABLE OF CONTENTS

Introduction	2
Warranty	3
Table Of Contents	4
Safety - Spreader	5
Safety Decals	6
Spreader Safety.	7
Safety Decal Care	10
Specifications	11
Dimensional Data - Spreader	11
Tractor Hydraulic System Recommendations	12
Features	12
Optional Equipment	12
Principle of Operation	12
Pre Operation	13
Understand the Controls	13
Rear Gate	13
Sliding Gate	13
Rate Of Application	13
Spread Pattern.	13
Tractor Drawbar	13
Adjust Trailer Hitch Clevis	14
Pre Operation Checklist	14
Highway and Transport Operation	14
Lighting and Marking.	15
Operation.	16
Tractor Hookup	16
Loading	16
Unloading	17
Shut Down.	17
Unhook the Tractor	17
Storage and Cleaning	17
Maintenance	19
Lubrication.	19
Bearings	19
PTO Drive Shaft	19
Drive Chain Planetary Gearbox	19
Wheel Hubs	20
Hydraulic System	20
Adjustments	20
Sliding Gate Scrapers	20
Rear Gate Flashing	21
Drive Chain Slack	21
Adjust Spread Pattern	22
Repair Parts.	23

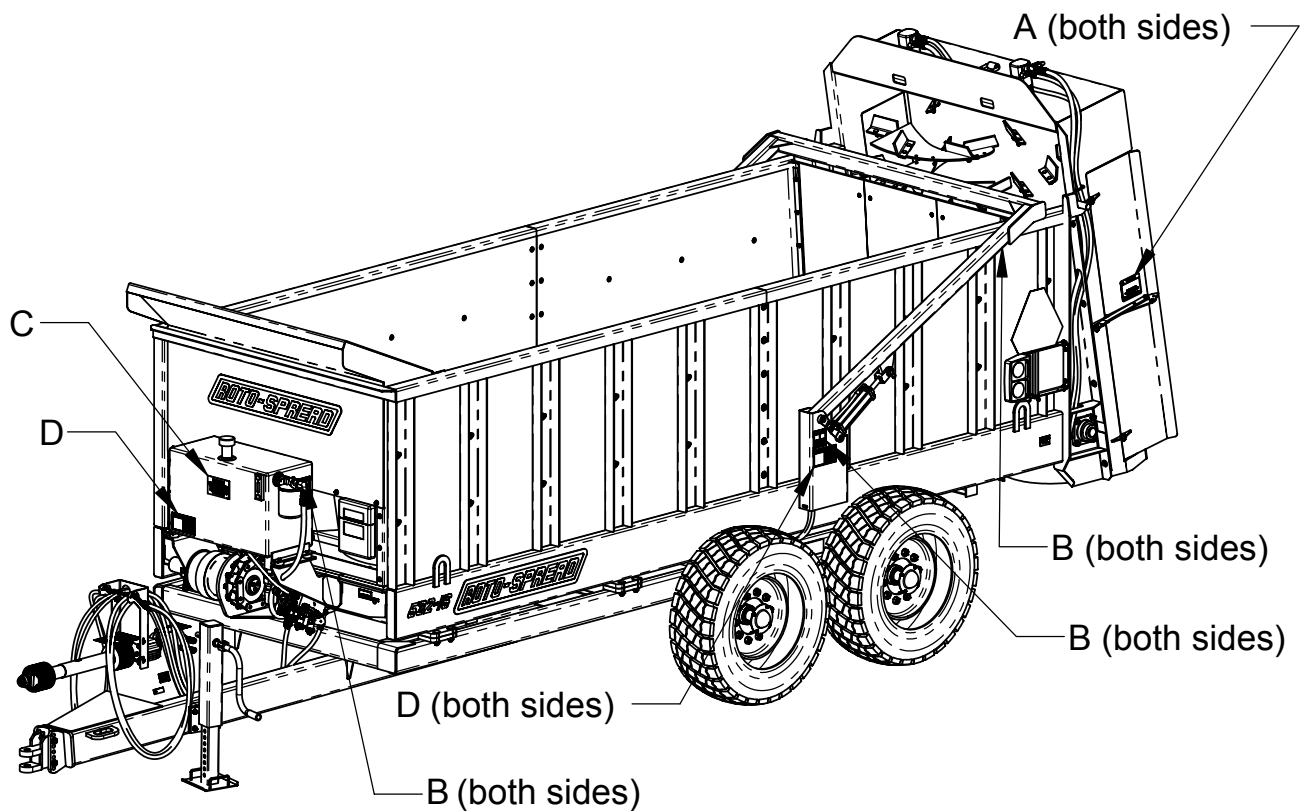
SAFETY - SPREADER

A brief definition of signal words that may be used in this manual:

⚠ 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, and includes hazards that are exposed when guards are removed.

⚠ CAUTION Indicates a potentially hazardous situation that, if not avoided may result in minor or moderate injury.



⚠ CAUTION READ ALL SIGNS ON THE MACHINE AND IN THIS MANUAL. REPLACE ANY LOST OR DAMAGED SIGN BY ORDERING THE PART NUMBERS SHOWN ON THE SAFETY DECAL PAGE.

SAFETY DECALS



DECAL A. 440827



DECAL C. 440801



DECAL B. 440833



DECAL D. 441657

NOTE: Complete decal kit part number 630004.

SPREADER SAFETY

⚠ CAUTION

Do not operate your spreader until you have read this Owner's Manual, the Tractor Owner's Manual, and understand the danger associated with its operation.

This spreader is comprised of rotating drive shafts and rotating beaters. Any exposure to these spreader components can result in serious personal injury or death.

Study the safety decal page and understand where the danger points are.

⚠ CAUTION

THERE ARE INHERENT HAZARDS ASSOCIATED WITH THE OPERATION OF YOUR SPREADER.

FOR YOUR SAFETY:

- Do Not Operate, Service, Inspect Or Otherwise Handle This Equipment Unless You Have Read The Owner's Manual And Have Been Properly Trained In Its Intended Usage.
- Do Not Attempt To Operate This Equipment Under The Influence Of Drugs Or Alcohol.
- Do Not Allow Personnel Other Than The Qualified Operator Near The Machine.
- Require All Personnel Who Will Operate This Machinery Or Perform Service, To Read And Understand The Safe Operating Practices And Safety Precautions In This Manual.
- Before Starting Tractor Engine, Be Sure PTO Shields Turn Freely.
- Do Not Operate Until All Shields, Covers And Guards Are In Place.
- Do Not Allow Children Or Inexperienced Persons To Operate This Machine.
- Keep Hands, Feet And Clothing Away From Power Take-Off Shaft.
- Loose Or Floppy Clothing Should Not Be Worn By The Operator. Wear Close Fitting Clothing.
- Stop The Engine And Be Sure PTO Drive line Is Stopped Before Making Adjustments, Connections, Or Cleaning Out PTO Driven Equipment.
- Do Not Climb On Or Enter Machine While In Operation.
- Do Not Allow Riders On The Spreader.
- Rotating Parts Can Crush Or Dismember Causing Personal Injury Or Death.
- Rotating Parts Can Entangle Or Strike People, Resulting In Personal Injury Or Death.
- Operate The Spreader From The Operator's Seat Only.
- Clear The Area Before Equipment Start Up.
- Do Not Go Near The Spreader Beaters While Machine Is Operating.

- Stay Clear Of Rotating Drive lines
- Entanglement In Rotating Drive line Can Cause Serious Injury Or Death.
- Make Sure Rotating Shields Turn Freely.
- Do Not Exceed Load Capacity Of The Spreader (See Specifications).
- Always Use A Tractor Large Enough To Provide Sufficient Braking Assistance When Towing A Loaded Spreader.
- Do Not Load The Spreader Unless It Is Hitched To The Tractor.
- Do Not Unhitch A Loaded Spreader From The Tractor Leaving It Supported By Only The Jack.
- Reduce Speed When Turning Or Traveling On Rough Terrain. Avoid Traveling Over Loose Fill, Rocks, Ditches Or Holes.
- Do Not Operate On Steep Slopes As Overturn May Result. Operate Up And Down (Not Across) Intermediate Slopes. Avoid Sudden Starts And Stops. Pick The Most Level Possible Route When Transporting Across Fields. Avoid The Edges Of Ditches Or Gullies And Steep Hillsides.
- Use Caution When Traveling Over Uneven Terrain And When Approaching Stops.
- Keep Transmission In Gear When Traveling Downhill.
- Keep Tractor Master Shield And Drive line Shields In Place At All Times.
- Avoid Overhead Wires Or Other Obstacles. Contact With Overhead Lines Could Cause Serious Injury Or Death.
- Highway Travel Is Not To Exceed 20 MPH. The Tires Supplied Are For Farm Use Only And Are Not Designed For Use Above This Speed.
- Use Adequate Safety Chains When Towing The Spreader.
- The Use Of A Slow Moving Vehicle Sign Is Required On All Public Roads. Obey All Applicable Highway Safety Laws And Rules.
- As A Precaution, Always Recheck The Hardware On Spreader Following Every 100 Hours Of Operation. Correct All Problems. Follow The Maintenance Safety Procedures.

FAILURE TO HEED MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.

⚠ CAUTION

THERE ARE ADDITIONAL HAZARDS ASSOCIATED WITH THE SERVICE AND MAINTENANCE OF YOUR SPREADER.

FOR YOUR SAFETY:

- Always Wear Eye Protection When Operating Or Servicing Spreader.
- Disengage Power Take-Off And Remove Keys From Tractor Or Truck Before Servicing Spreader.
- Do Not Attempt To Clean, Oil Or Adjust Spreader While It Is In Motion.
- Stop The Engine And Be Sure PTO Drive line Is Stopped Before Making Adjustments, Connections, Or Cleaning Out PTO Driven Equipment. Disconnect PTO Shaft.
- Make Sure There Is Plenty Of Ventilation. Never Operate The Engine Of The Towing Vehicle In A Closed Building. The Exhaust Fumes May Cause Asphyxiation.
- Before Working On The Spreader, Stop The Towing Vehicle, Set The Brakes, Disengage The PTO And All Power Drives, Shut Off The Engine And Remove The Ignition Keys.
- Inspect When First Delivered And Regularly Thereafter; That All Connections And Bolts Are Tight And Secure Before Operating.
- Retighten All Wheel Bolts After The First Hour Of Towing. Check Periodically Thereafter. See Maintenance, Wheels.
- Maintain Proper Tire Air Pressure At All Times. See Maintenance, Tires.
- Be Certain All Moving Parts On Attachments Have Come To A Complete Stop Before Attempting To Perform Maintenance.
- Before Entering Mixing Chamber Or Servicing Spreader, Disconnect Main Power Source And Lock The Disconnect Device In Off Position To Prevent Accidental Start-Up.
- Do Not Work Under A Spreader Without Supporting With Suitable Support Stands. Always Use A Safety Support And Block The Wheels. Never Use A Jack To Support The Machine.
- Do Not Work Under A Spreader Without Blocking The Wheels To Prevent Rolling.
- A Fire Extinguisher And First Aid Kit Should Be Kept Readily Accessible While Performing Maintenance On This Spreader.
- Escaping Hydraulic Fluid Under Pressure Can Penetrate The Skin Causing Serious Injury Or Death.
- Avoid Hydraulic Hazard By Relieving Hydraulic Pressure Before Disconnecting Hydraulic Or Other Lines. Tighten All Connections Before Applying Pressure.
- Search For Hydraulic Leaks With A Piece Of Cardboard. Protect Hands And Body From High Pressure Fluids. Never Use Your Hands To Locate Hydraulic Leaks On Attachments.
- Replace All Shields And Guards After Servicing And Before Moving.
- Never Replace Hex Bolts With Less Than Grade Five (5) Bolts Unless Otherwise Specified.

FAILURE TO HEED MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.

REMEMBER:

Your best assurance against accidents is a careful and responsible operator. If there is any portion of this manual or function you do not understand, contact your dealer or the ROTO-MIX plant.

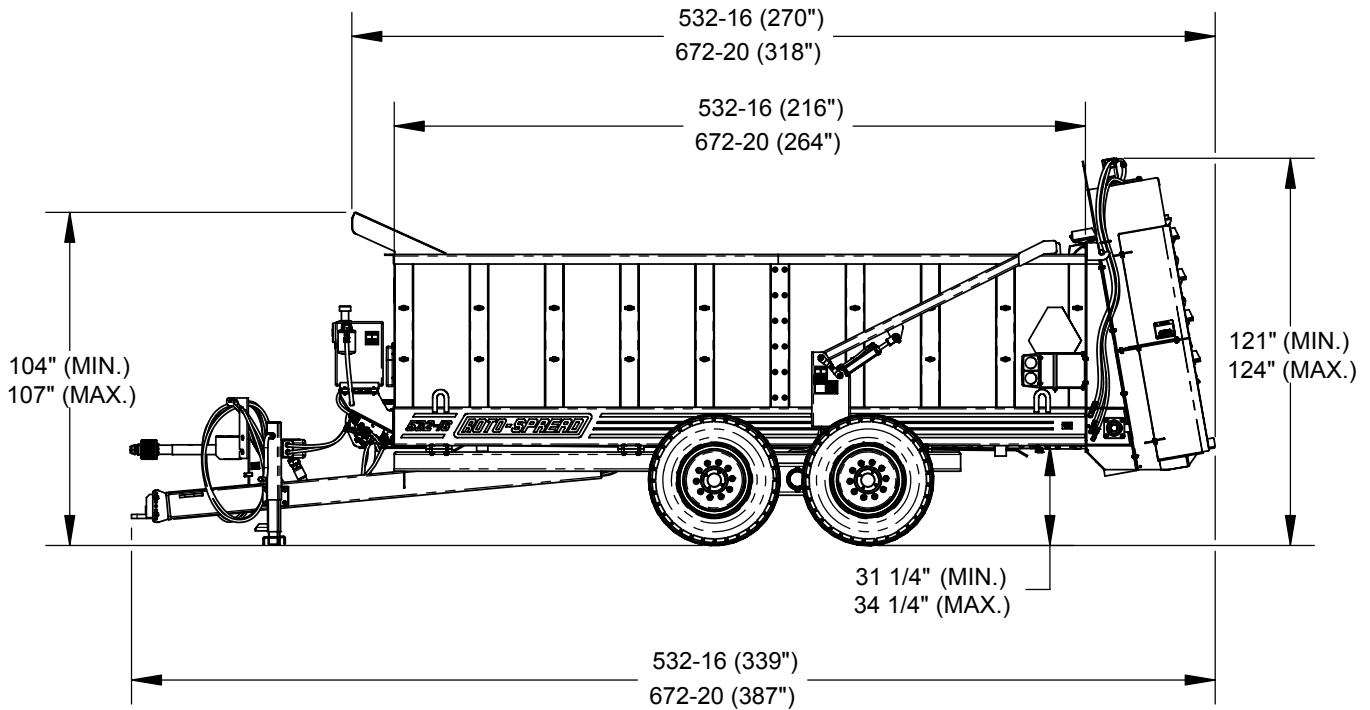
Safety Decal Care

1. Keep safety decals and signs clean and legible at all times.
2. Replace safety decals and signs that are missing or have become illegible.
3. Replaced parts that displayed a safety sign should also display the current sign.
4. Safety decals or signs are available from your dealer or the ROTO-MIX manufacturing plant.
5. How to Install Safety Decals:
 - A. Be sure that the installation area is clean and dry.
 - B. Decide on the exact position before you remove the backing paper.
 - C. Remove the smallest portion of the split backing paper.
 - D. Align the decal over the specified area and carefully press the small portion with the exposed sticky backing in place.
 - E. Slowly peel back the remaining paper and carefully smooth the remaining portion of the decal in place.
 - F. Small air pockets can be pierced with a pin and smoothed out using the piece of decal backing paper.

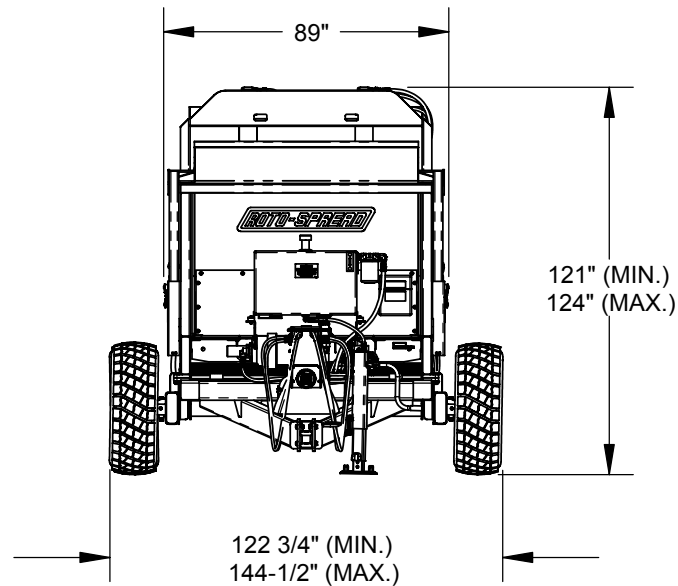
FAILURE TO HEED MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.

SPECIFICATIONS

532-16 & 672-20 TRAILER DIMENSIONAL DATA



MIN. & MAX. DIMENSIONS REPRESENT THE DIFFERENCE IN THE AVAILABLE TIRE SIZED.



TRACTOR HYDRAULIC SYSTEM RECOMMENDATIONS

10 GPM Minimum
2000 to 3750 PSI Operating Range
Hydraulic system should be self purging.

FEATURES

Capacity: 530 Cubic Foot- Heaped; 385 Cubic Foot- Struck Level; 2880 Gallon
Patent Pending Belt & Retention Gate System
Hydraulic Motor & Planetary Gearbox For Belt & Retention Gate System- Operates From Tractor Hydraulics
5/16" 350 psi PVC Belt
C102.5 Combination Chain for Belt & Retention Gate Drive System
Hydraulic Operated End Gate
9000# Drop Leg Jack
150 HP Tractor (Minimum)
1000 RPM PTO Drive
6' Wide x 16' Long Inside Dimension
High-Density Polyethylene on Floor, Side Walls, and End Gate
Two High Speed Vertical Beaters with Spinners, Flighting & Kickers
Independent PTO Driven Hydraulic Pumps & Motors For Beater Drive System
Adjustable Wings on Beater Assembly for Variable Discharge Width
Heavy Duty Tube Frame Trailer
Oscillating Tandem Axle Undercarriage with 4-12,000# Spindles & Heavy Duty 10 Bolt Hubs
4-15 x 22.5 Recap Tires With 10 Bolt Wheels

OPTIONAL EQUIPMENT

4- New 23.1L x 26"- 16 Ply Diamond Tread Tires with 10 Bolt Wheels- ILS
4- New 28L x 26"- 16 Ply Diamond Tread Tires with 10 Bolt Wheels- ILS

PRINCIPLE OF OPERATION

Two vertical spinning beaters at the rear of the spreader expel manure in a uniform spread pattern. Each beater is driven by a hydraulic motor. A PTO driven hydraulic power supply on the spreader provides power to the beaters. The hydraulic pump is two stage thereby supplying independent power to each beater motor.

A wide heavy duty belt covers the box floor. At the front of the spreader, this belt is attached to a sliding gate. At the rear, this belt goes around a winged idler pulley and on the lower side is connected to a drive chain. At the front of the spreader, this chain is driven by a hydraulic motor driving a planetary gear box and sprocket that is powered by the tractor hydraulic system. See figure 1 page 19. Driving the belt toward the rear of the spreader pulls the sliding gate rearward to move the load toward the beaters. A remote flow control in the tractor cab or a manually adjustable flow control in the drive chain motor circuit regulates the speed the gate moves.

An end gate at the rear of the spreader is raised and lowered by two hydraulic cylinders, powered by the tractor hydraulic system. See figure 5 page 17. This gate must be lowered during loading to prevent packing of the material into the beaters and to help prevent leakage during transport.

PRE OPERATION

UNDERSTAND THE CONTROLS

Rear Gate

The rear gate cylinders are hydraulically controlled by a tractor spool valve. It is recommended that the hoses be connected to the tractor so pulling the spool valve lever back raises the gate and pushing the valve lever forward closes it. Make it a habit to connect the hoses the same so the Operator is familiar with this operation.

Sliding Gate

The unloading belt which moves the sliding gate is powered by a hydraulic motor and planetary gearbox. This motor is powered from the tractor hydraulic system and started and stopped by the tractor spool valve for the port to which this motor is connected. It is recommended that the hoses be connected to the tractor so pulling the spool valve lever back starts the gate rearward and pushing the valve lever forward returns the gate to the front. The gate can be stopped by moving the spool valve lever to the neutral detent. Make it a habit to connect the hoses the same so the Operator is familiar with this operation.

When the sliding gate reaches the rear of the spreader (see figure 5) it will bear against mechanical stops. The tractor hydraulic system will sense increased hydraulic pressure and return the spool valve to the neutral OFF position. The same process occurs when returning the gate to the front.

Rate Of Application

The rate of application is determined by how fast the sliding gate and belt (floor) progresses toward the rear of the spreader. This is regulated by a manually adjusted flow control valve on the spreader or a remote adjusted flow control valve in the tractor. See figure 1.

The remote flow control knob is turned CW to increase the rate and CCW to decrease the rate. Completely CCW is OFF.

The manual flow control knob should be turned CW to decrease the rate and CCW to increase the rate. Completely CW is OFF.

NOTE: If the belt speed is too fast the material will overload the beaters and cause them to stall and the warning horn to sound.

Always turn power off when making this adjustment. Start with a slow rate and then increase as required. Once adjusted, the unloading rate will remain constant for the same type of material. Further application rate adjustment can be obtained by regulating the tractor ground speed. The application rate is not affected by engine RPM.

Spread Pattern

The spread pattern is affected by the speed of the rotating beaters. The two beater hydraulic motors are powered independently by a two stage hydraulic pump on the spreader. This pump is powered by the tractor PTO. The spreader is designed to give a uniform spread pattern when the tractor engine is operated at 1000 PTO RPM for typical materials. Adjustment of the beater speed and spread pattern is regulated by the engine speed.

TRACTOR DRAWBAR

Set tractor drawbar as shown in figure 2.

CAUTION

FAILURE TO SET DRAWBAR PROPERLY MAY CAUSE SHAFT TO OVER EXTEND AND SEPARATE OR BEND WHEN CORNERING OR TRANSPORTING RESULTING IN DEATH OR PERSONAL INJURY.

Spreaders are available for 1000 RPM drive line only. Match tractor PTO with the spreader drive line.

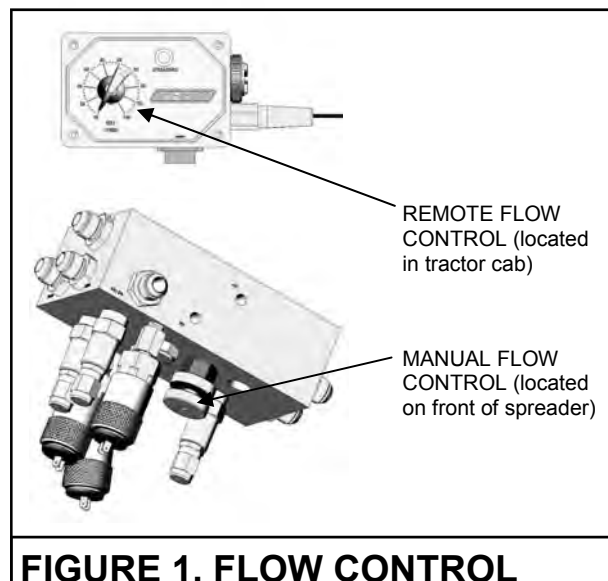
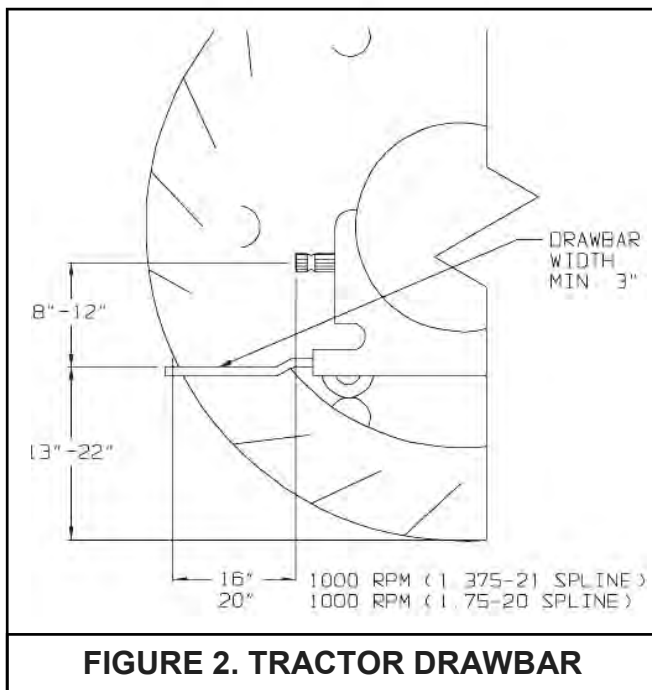


FIGURE 1. FLOW CONTROL



IMPORTANT: To prevent drive line damage, adjust tractor drawbar to recommended setting. Disengage tractor PTO before turning.

Adjust Trailer Hitch Clevis

Spreader should be approximately level when attached to tractor.

Adjust clevis by changing hole location on trailer tongue.

PRE OPERATION CHECKLIST

1. Carefully study and understand this manual.
2. Do not wear loose-fitting clothing, which may catch in moving parts.
3. Always wear protective clothing *and* substantial shoes.
4. Keep wheel lug nuts or bolts tightened to specified torque.
5. Assure that agricultural implement tires are inflated evenly and at proper pressure.
6. Give the unit a visual inspection for any loose bolts, worn parts or cracked welds, and make necessary repairs. Follow the maintenance safety instructions included in this manual.
7. Check to see that no obstructions are present in the spreader prior to start up.
8. Be sure that there are no tools lying on or in the spreader.

9. Do not use the unit until you are sure that the area is clear, especially children and animals.
10. The ball valve in the suction line and the return line must be open prior to engaging PTO (handle parallel with valve housing). (See Page 42 RESEROIR TANK)
11. Because it is possible that this spreader may be used in dry areas or the presence of combustibles, special precautions should be taken to prevent fires and fire fighting equipment should be readily available.
12. Don't hurry the learning process or take the unit for granted. Ease into it and become familiar with your new spreader.
13. Practice operation of your spreader and its attachments. Completely familiarize yourself and other operators with its operation before using.
14. Securely attach to towing unit. Use a high strength, appropriately sized hitch pin with a mechanical retainer.
15. Do not allow anyone to stand between the tongue or hitch and the towing vehicle when backing up to the spreader.

HIGHWAY AND TRANSPORT OPERATION

1. Adopt safe driving practices:
2. Always drive at a safe speed relative to local conditions and ensure that your speed is low enough for an emergency stop to be safe and secure. Keep speed to a minimum.
3. Reduce speed prior to turns to avoid the risk of overturning.
4. Avoid sudden uphill turns on steep slopes.
5. Always keep the tractor in gear to provide engine braking when going downhill. Do not coast.
6. Do not drink and drive.
7. Comply with state and local laws governing highway safety and movement of farm machinery on public roads.
8. Use approved accessory lighting, flags and necessary warning devices to protect operators of other vehicles on the highway during daylight and night time transport.
9. The use of flashing amber lights is acceptable in most localities. However, some localities prohibit their use. Local laws should be checked for all highway lighting and marking requirements.

10. The spreader does not have brakes. Towing the spreader must be done safely. The ASAE (American Society of Agricultural Engineers) specifies that the towing vehicle should weigh at least 2/3 as much as the loaded implement to be reasonably safe towing at speeds up to 20 mph. This (20 mph) is also the maximum recommended towing speed for the spreader.
11. When driving the tractor and spreader on the road or highway at night or during the day, use flashing amber warning lights and a slow moving vehicle (SMV) identification emblem.
12. Be sure the slow moving vehicle sign is installed on the rear of the spreader for transporting on roadways.
13. Plan your route to avoid heavy traffic.
14. Be a safe courteous driver. Always yield to oncoming traffic in all situations, including narrow bridges, intersections, etc.
15. Be observant of bridge loading ratings. Do not cross bridges rated lower than the gross weight at which you are operating.
16. Watch for obstructions overhead and to the side while transporting.
17. Make allowances for increased length and weight of the spreader when making turns, stopping the unit, etc.
18. Install safety chains as illustrated on figure 3. This is a requirement for travel on public roadways. They are installed to retain the connection between tractor (or other towing vehicle) and spreader whenever traveling on public roads.

Lighting and Marking

It is the responsibility of the customer to know the lighting and marking requirements of the local highway authorities and to install and maintain the equipment to provide compliance with the regulations. Add extra lights when transporting at night or during periods of limited visibility.

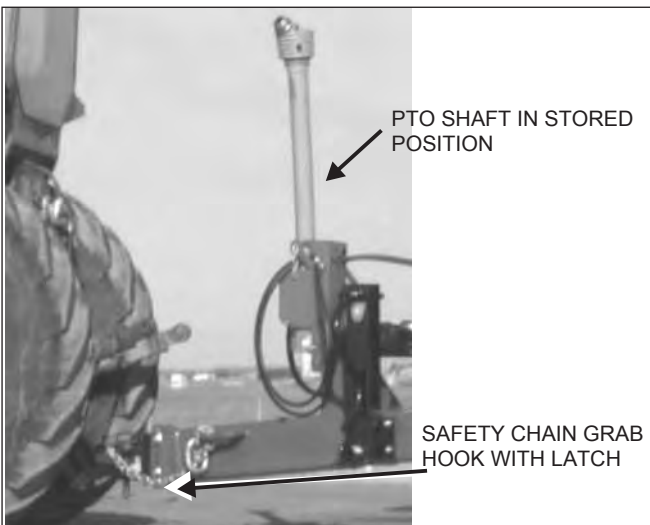


FIGURE 3. SAFETY CHAIN INSTALLATION

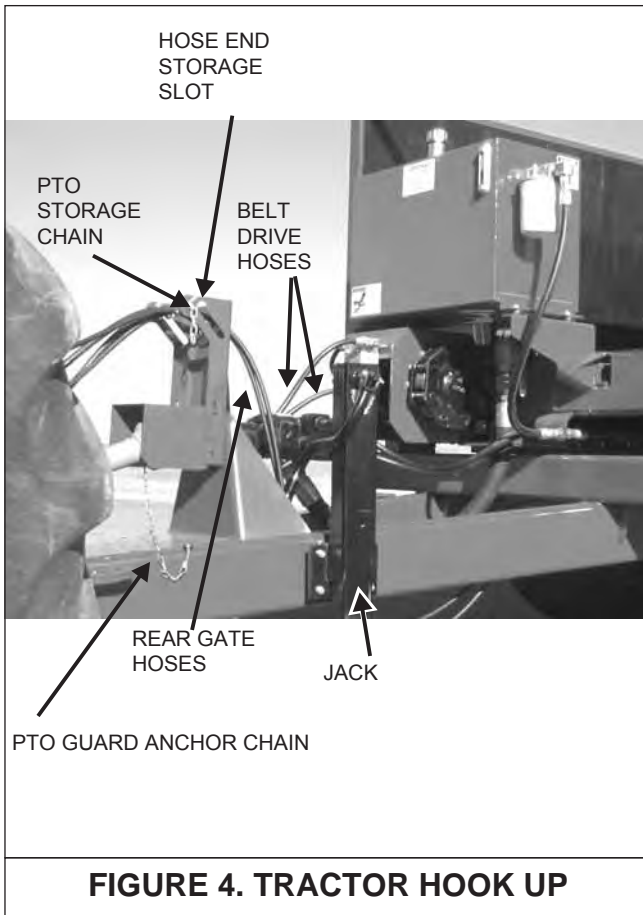
OPERATION

⚠ DANGER DO NOT CLIMB ON OR ENTER THE SPREADER WHILE IN OPERATION.

⚠ WARNING CLEAR THE AREA OF ALL PERSONS BEFORE BEGINNING OPERATION.

TRACTOR HOOKUP

See figure 4.



1. Back tractor so draw bar aligns with spreader hitch. Put tractor in PARK, set park brake and turn off engine before dismounting.
2. Connect the spreader hitch to the tractor drawbar with a 1-1/4" hitch pin. The hitch pin must have a security clip or retainer to prevent it from accidentally coming out of the hitch.
3. Install safety chain around tractor drawbar support and secure with safety latched grab hook. See figure 3.
4. Crank the spreader jack completely up.

5. Remove the pair of hydraulic hoses coming from the spreader hydraulic pump from their storage bracket and connect the ends a tractor port. See Understand The Controls on page 13 for recommended connection.
6. Remove the pair of hydraulic hoses coming from the spreader rear gate hydraulic cylinders from their storage bracket and connect the ends a tractor port. See Understand The Controls on page 13 for recommended connection.
7. Unhook the PTO storage chain from the slotted storage bracket and slide the PTO drive shaft yoke onto the splined tractor PTO shaft. Be sure the yoke securely snaps onto the retention groove of the tractor shaft.
8. Connect the PTO Guard anchor chain to the anchor loop on the spreader hitch.
9. Place the PTO storage chain back in the slotted storage bracket so it does not dangle.
10. Remove wheel chocks.

⚠ WARNING NEVER OPERATE SPREADER WITH ANY GUARDS OR SHIELDS REMOVED. FAILURE TO HEED MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.

LOADING

⚠ CAUTION SPREADER MUST BE HITCHED TO TRACTOR FOR LOADING. THE JACK CAN NOT SUPPORT THE LOADED SPREADER WEIGHT AND/OR UNEXPECTED "TIP UP" OF THE SPREADER CAN RESULT.

1. Park the spreader for loading. Put the tractor in PARK or NEUTRAL and apply the parking brake.
2. Close the hydraulic rear gate before loading.
3. It is unlawful to allow any manure spillage to occur on public roadways. Be sure rear gate is fully closed and sliding gate scrapers are adjusted so no liquid leakage occurs. Do not heap load such that manure is allowed to fall off spreader during transporting on roadways.
4. Load the spreader. The moisture content will determine how full it can be loaded. See SPECIFICATIONS for capacity. Solid manure can generally be loaded level to slightly heaped. High moisture slurries are heavier and loading may be limited.

UNLOADING

⚠ DANGER KEEP AWAY AND KEEP OTHERS AWAY FROM THE ROTATING BEATERS. BEATERS CAN CRUSH, DISMEMBER OR KILL.

⚠ WARNING CLEAR THE AREA OF ALL PERSONS BEFORE BEGINNING OPERATION.

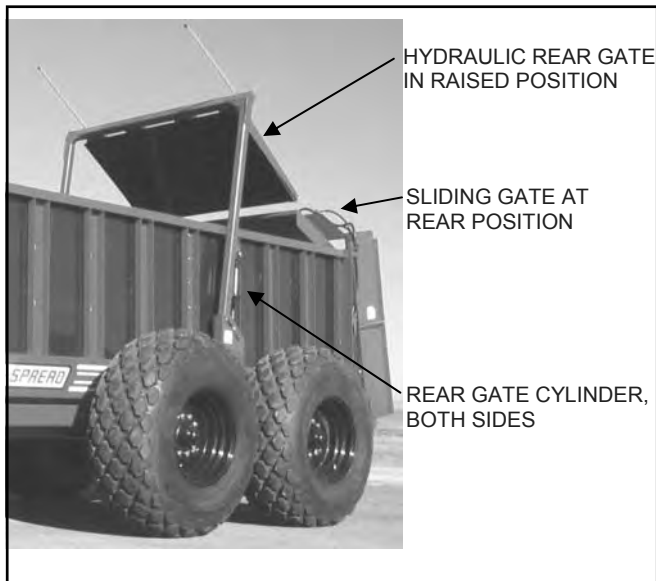


FIGURE 5. HYDRAULIC REAR GATE AND SLIDING GATE

1. Engage the tractor PTO to start the beaters and increase engine speed to 1000 PTO RPM.
2. Raise the hydraulic rear gate completely up. See figure 5.
3. Start the sliding gate.
4. When material begins discharging from the beaters and the spreading light comes on begin forward motion.

NOTE: Performing the preceding steps while moving forward will minimize heavy discharge onto the field during startup.

5. Plan application onto the field so that you do not travel over previously spread manure which is slippery. Travel cautiously on hills and slopes. Proceed up and down slopes instead of along them.

SHUT DOWN

1. When the load has been discharged, the hydraulic control to the sliding gate will return to neutral, OFF. Allow the beaters to operate for a few seconds to clear out any remaining material and then stop the PTO.
2. Start the sliding gate to return to the front of the spreader. When it reaches the front the hydraulic control to the sliding gate will return to neutral, OFF.
3. Once the sliding gate moves forward to the stop position, completely close the rear gate.

UNHOOK THE TRACTOR

1. Park the spreader on level ground. Put the tractor in PARK, set the park brake, and turn the engine off before dismounting.
2. Place wheel chocks in front and in back of two spreader wheels on opposite sides to prevent the spreader from rolling after the tractor is unhooked.
3. Remove the PTO drive shaft yoke from the splined tractor PTO shaft. Unhook the PTO storage chain from the slotted storage bracket and pivot the PTO drive shaft up and into the storage bracket. Reconnect the storage chain in the slotted storage bracket to secure the PTO shaft.
4. Remove the hydraulic hose ends from the tractor hydraulic ports and store the hose ends in the slotted hose storage brackets to keep them from dragging on the ground. See figure 4.
5. Crank the spreader jack down until the spreader hitch lifts off the tractor draw bar.
6. Remove the hitch pin.
7. Unhook safety chain from tractor drawbar support. See figure 4.
8. Slowly drive the tractor away from the spreader.

STORAGE AND CLEANING

DISCONNECT PTO DRIVE SHAFT AND HYDRAULIC HOSES BEFORE CLEANING, ADJUSTING, LUBRICATING, OR SERVICING THIS MACHINE.

1. The spreader must be thoroughly cleaned for extended storage. Manure is acidic and will damage paint and cause rusting of metal components.

2. Allow the spreader to completely unload.
3. Return the sliding gate to the front of the spreader.
4. To clean the spreader, raise the rear gate.

⚠ WARNING TURN OFF ALL POWER DURING CLEANING AND INSPECTION. DO NOT USE POWER TO MOVE ANY COMPONENTS OR TO DISCHARGE MATERIAL WHILE CLEANING OR INSPECTING.

5. Hose off manure from the outside and inside of the spreader. Completely clean manure from moving mechanisms such as the beaters, winged pulley, sliding gate, chain drive and rear gate. Remove accumulation in confined areas or pockets that trap manure.
6. Avoid directing high pressure spray directly on bearings, seals and flow control valve.
7. Keep high pressure spray moving on painted surfaces. Sustained spray on cracks or scratches in paint can result in paint peeling.
8. Allow machine to dry.
9. Lower rear gate completely down before storing spreader.
10. Inspect the spreader for loose connections, damaged hydraulic hoses or connections and for other damaged components. Repair if necessary so the spreader is ready for future operation.

MAINTENANCE

⚠ WARNING PUT THE TRACTOR IN PARK, APPLY THE PARKING BRAKE, TURN OFF ENGINE AND REMOVE IGNITION KEY BEFORE CLEANING, ADJUSTING, LUBRICATING OR SERVICING THIS MACHINE. FAILURE TO HEED MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.

⚠ WARNING DISCONNECT PTO DRIVE SHAFT AND HYDRAULIC HOSES BEFORE CLEANING, ADJUSTING, LUBRICATING, OR SERVICING THIS MACHINE.

READ THE FOLLOWING BEFORE WELDING ON THIS MACHINE

1. When welding on your spreader, do not allow the current to flow through the ball bearings or the roller chains. Ground directly to the item being welded.
2. The alternator should always be disconnected if the spreader is not disconnected from the towing vehicle.

LUBRICATION

Bearings

Grease 2 lower beater bearings and 2 wing pulley bearings every 100 hours of operation with 2 pumps of grease. See figure 6.

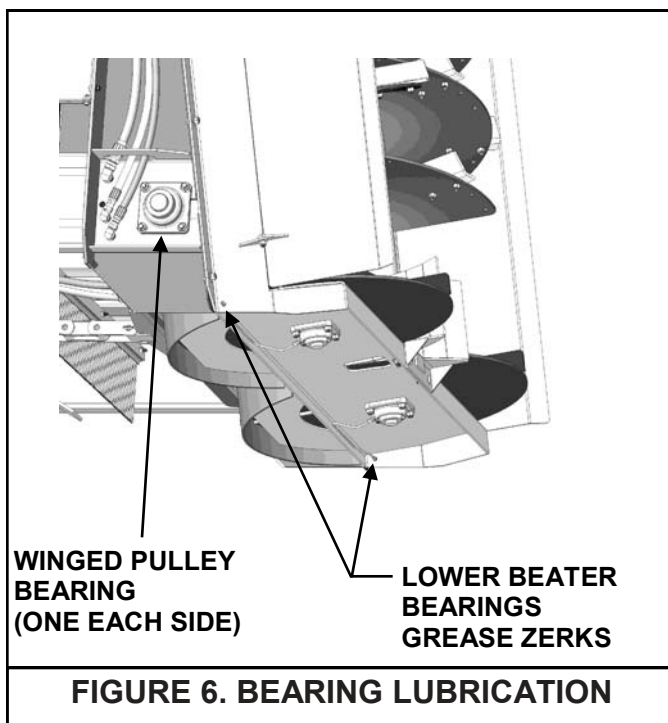


FIGURE 6. BEARING LUBRICATION

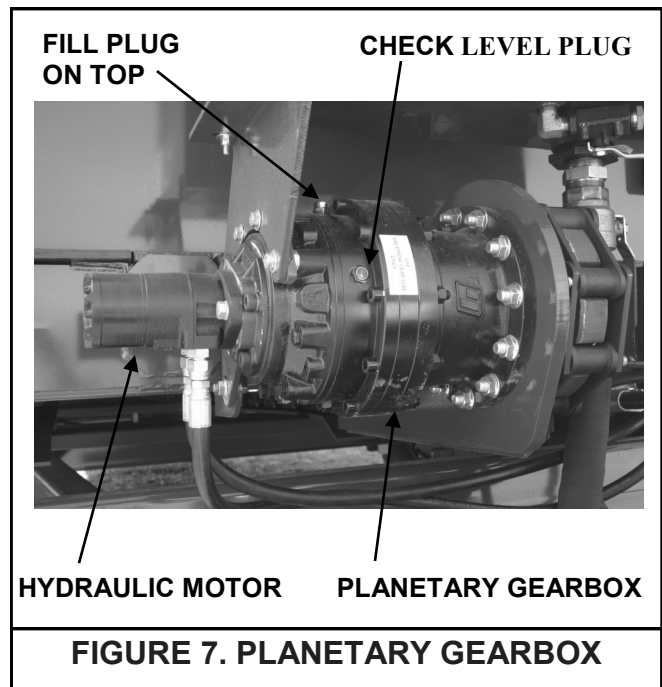


FIGURE 7. PLANETARY GEARBOX

PTO Drive

1. The PTO drive shaft yoke cross bearings must be greased, both ends of assembly. Grease every 8 hrs of operation with one pump.
2. There is also a zerk at the center of the shaft assembly to grease the telescoping shafts. It is accessible through a slot in the guard. Grease every 8 hrs of operation with 4 pumps.

Drive Chain Planetary Gearbox

(See figure 7)

Oil Specification: Mobil Delvac Synthetic Gear Oil 75W-90.

There is a check plug half way up on the gearbox. Maintain the oil level to this check plug. Fill plug is located on the top of the gearbox.

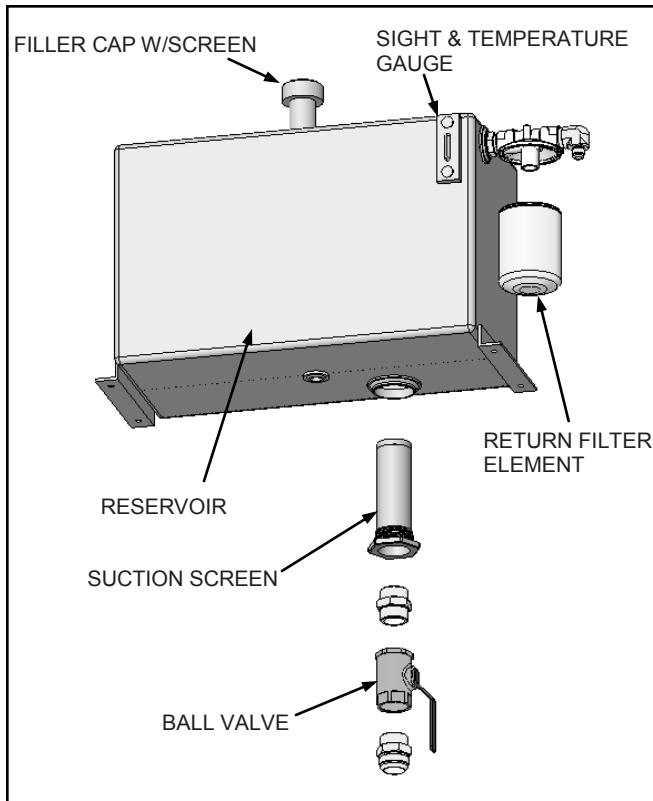


FIGURE 8. HYDRAULIC RESERVOIR

Wheel Hubs

Clean and repack wheel hubs annually with quality axle grease.

HYDRAULIC SYSTEM

(See figure 8)

1. Oil Specification: CITGO Transgard Tractor Hydraulic Fluid - Material Code 633310001
2. Capacity: 40 gallon
3. Maximum allowable operating temperature 240_F.
4. Check the oil level in the reservoir daily. It should be maintained 1" from the top level on the sight gauge.
5. Oil is added through a filter screen inside the filler neck. Before filling, remove the screen, inspect and clean if required.
6. Carefully clean dirt from the return filter head and element. Replace the filter element every 500 hrs of operation.

7. Drain reservoir and refill with new oil every 2000 hrs or annually, whichever occurs first. If the oil becomes contaminated and appears milky colored, replace immediately.
8. Every 100 hrs of operation, inspect all hydraulic hoses, hose connections, pump seals and motor seals for leakage. Tighten loose connections and replace damaged components.
9. A ball valve is provided at the bottom of the reservoir where the suction hose is connected. Turn this valve off to service hydraulic components. This prevents draining of the reservoir, however it is necessary to catch the oil that drains from disconnected hoses into a suitable container for proper disposal. Always check and refill the reservoir as required when servicing is completed.

Rear Gate Flashing

(See figure 9)

1. Swinging gate flashing strips are clamped to both vertical ends of the rear gate frame. These strips must bear against the vertical box sides to minimize leakage.
2. To adjust, loosen the six 3/8" carriage bolts clamping the flashing.
3. Move the flashing strips so they contact against the box wall and retighten bolts.

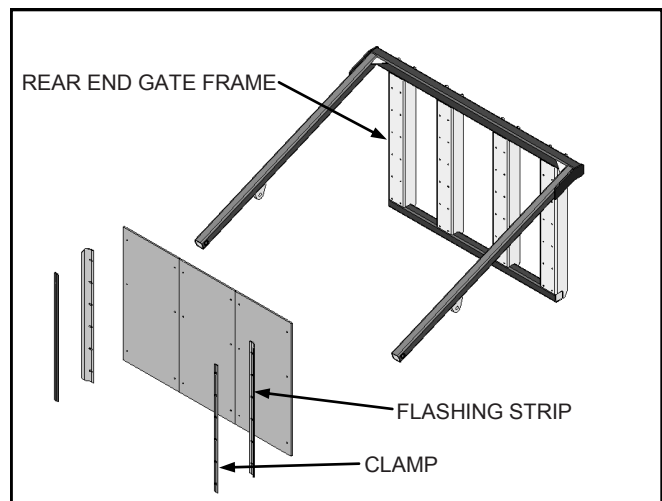


FIGURE 9.
ADJUST REAR END GATE FLASHING

ADJUSTMENTS

Sliding Gate Scrapers

(See figure 5)

1. A high density polyethylene scraper bar is clamped to the vertical edges of the sliding gate. These scrapers must contact the vertical box walls to clean material.
2. To adjust, loosen the seven 3/8 carriage bolts clamping the scraper.
3. Move the scrapers so they contact against the box wall and retighten bolts.

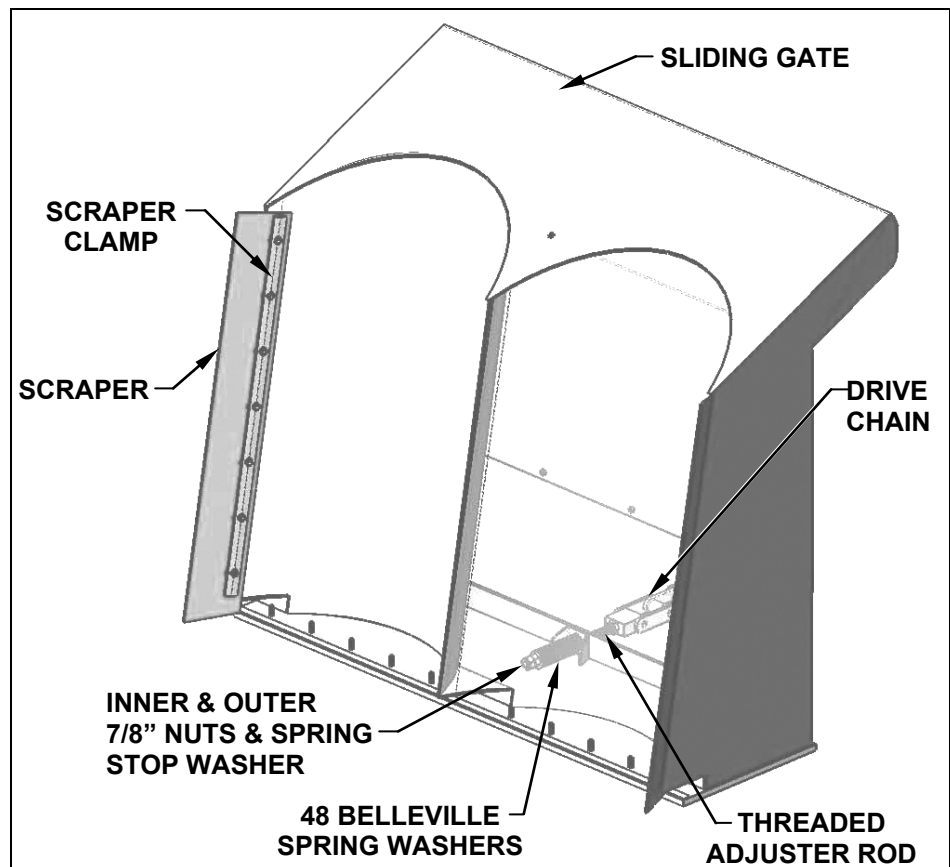


FIGURE 10. ADJUST DRIVE CHAIN & SLIDING GATE

Drive Chain Slack

(See figure 6)

1. To adjust the floor drive chain, run the sliding gate all the way to the rear of the spreader until it stops.
2. Remove the front panel of the sliding gate.
3. A threaded adjuster rod is provided where the drive chain attaches to the sliding gate. It is factory preset, but may require adjustment with usage. **(CHECK CHAIN TENSION WEEKLY)**
4. Loosen the two 7/8" hex nuts on the end of the threaded rod. Tighten the inner nut until the forty eight Belleville washers are almost fully compressed (approximately 4-1/2"). Tighten the outer nut against the inner to lock the adjustment.
5. Replace the front panel.

NOTE: The Belleville washers are assembled in "tail to tail" pairs and stacked per figure 11.

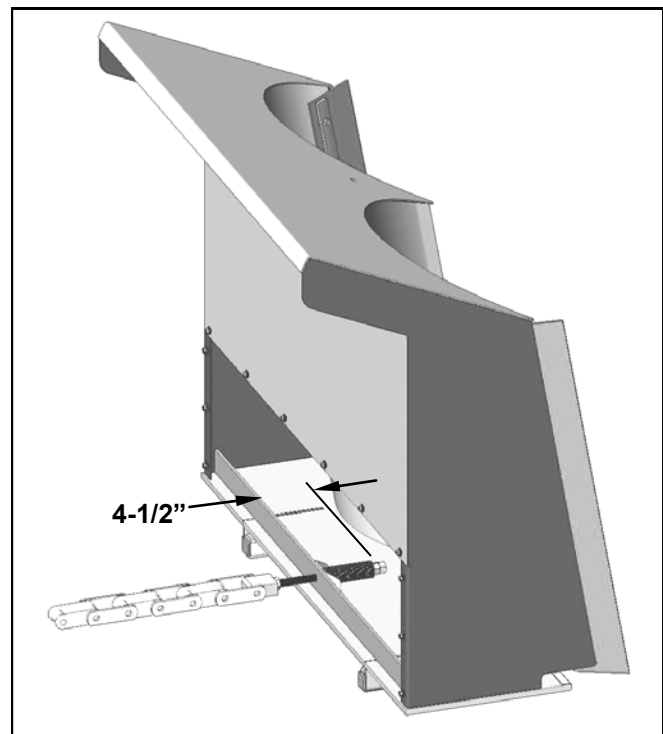


FIGURE 11. BELLVILLE SPRING WASHER STACK

Adjust Spread Pattern

(See figure 12)

The spread pans at the rear of the spreader can be set for wide spreading or they can be hinged inward to spread straight behind the spreader.

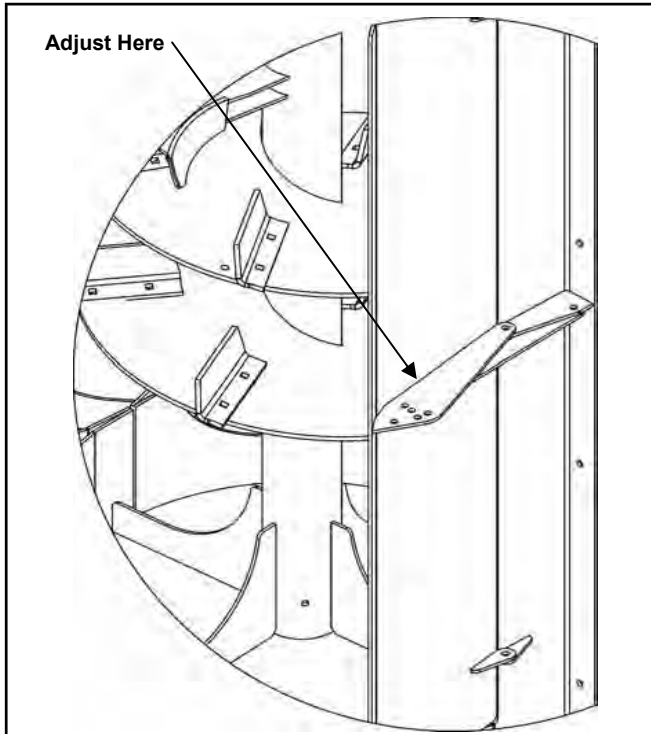


FIGURE 12. ADJUST SPREAD PATTERN

Adjust Pressure Switches

(See figure 13 & 14)

NOTE: PRESSURE SWITCHES ARE PRE-SET AT FACTORY AND NEED NOT BE RESET UNLESS BEING REPLACED.

⚠ DANGER Before attempting to do the following procedures, be sure to clear the beater area and put barriers around the back of the spreader to prevent accidental contact with the beaters while they are running.

Setting “Stall” Pressure Switches:

1. Block one of the beaters to prevent it from turning. (only one beater at a time).
2. Engage PTO to start pump and observe the warning horn. (it should be sounding).
3. The left hand beater (driver side) should be the L/H (drivers side) pressure switch closest to the

spreader box. (See figures 13 & 14) Loosen set screw on side of sleeve. Turn the adjusting sleeve in (clockwise) just until the horn stops sounding. Then turn the adjusting sleeve out (c/clockwise) until the horn sounds again. Then turn 1/4 turn more counter clockwise. Tighten set screw. The switch should then be set.

4. Disengage the PTO and repeat the above steps for the right hand beater, to adjust the R/H switch.

Setting “Spread Light” Pressure Switch

1. With beaters free to run, engage PTO to start the pump, run at full PTO speed.
2. The pressure switch for the “Spreading Light” is located in front of the left hand beater pressure switch (see figure 13 & 14).
3. Loosen set screw on side of sleeve. Turn adjusting sleeve out (counter-clockwise) until the “Spreading Light” lights up.
4. Then turn the adjusting sleeve in (c lockwise) until the light goes out. Then turn the sleeve in 1 more turn after the light goes out. Tighten set screw.
5. Disengage PTO.

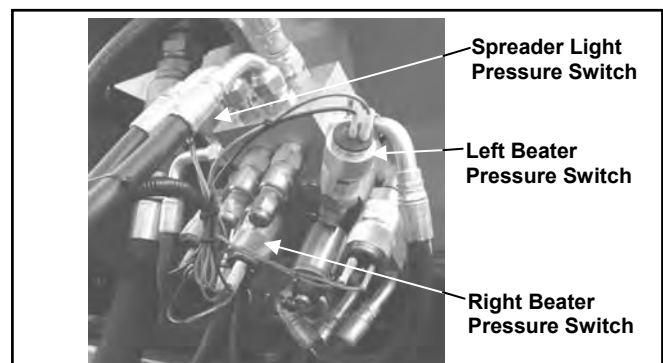


FIGURE 13. ADJUST REMOTE PRESSURE SWITCHES

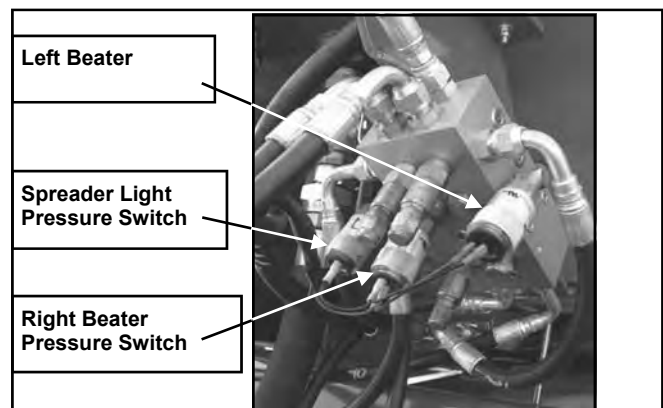


FIGURE 14. ADJUST MANUAL PRESSURE

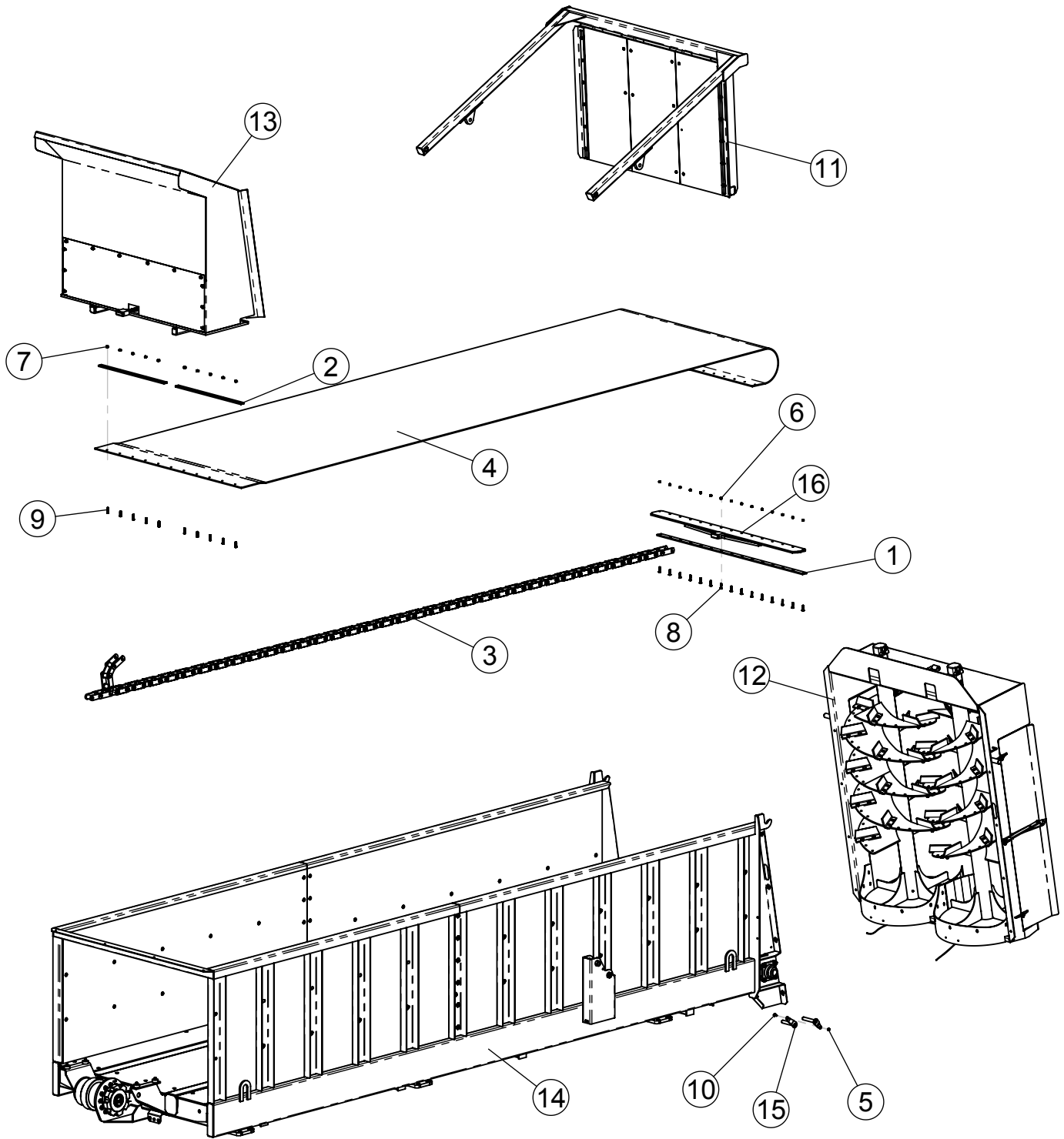
REPAIR PARTS

532-16 & 672-20

TABLE OF CONTENTS

532-16 Spreader Box Assembly.....	24
Trailer Assembly.....	26
Beater Assembly (Standard).....	32
Beater Assembly (Short).....	34
Sliding Gate assembly.....	36
Rear Gate Assembly.....	37
Decals.....	38
PTO Drive Shaft Assembly.....	39
Hub & Wheel Assembly.....	40
Spreader Hydraulic Parts.....	42-47
Spreader Electrical Parts.....	48-49

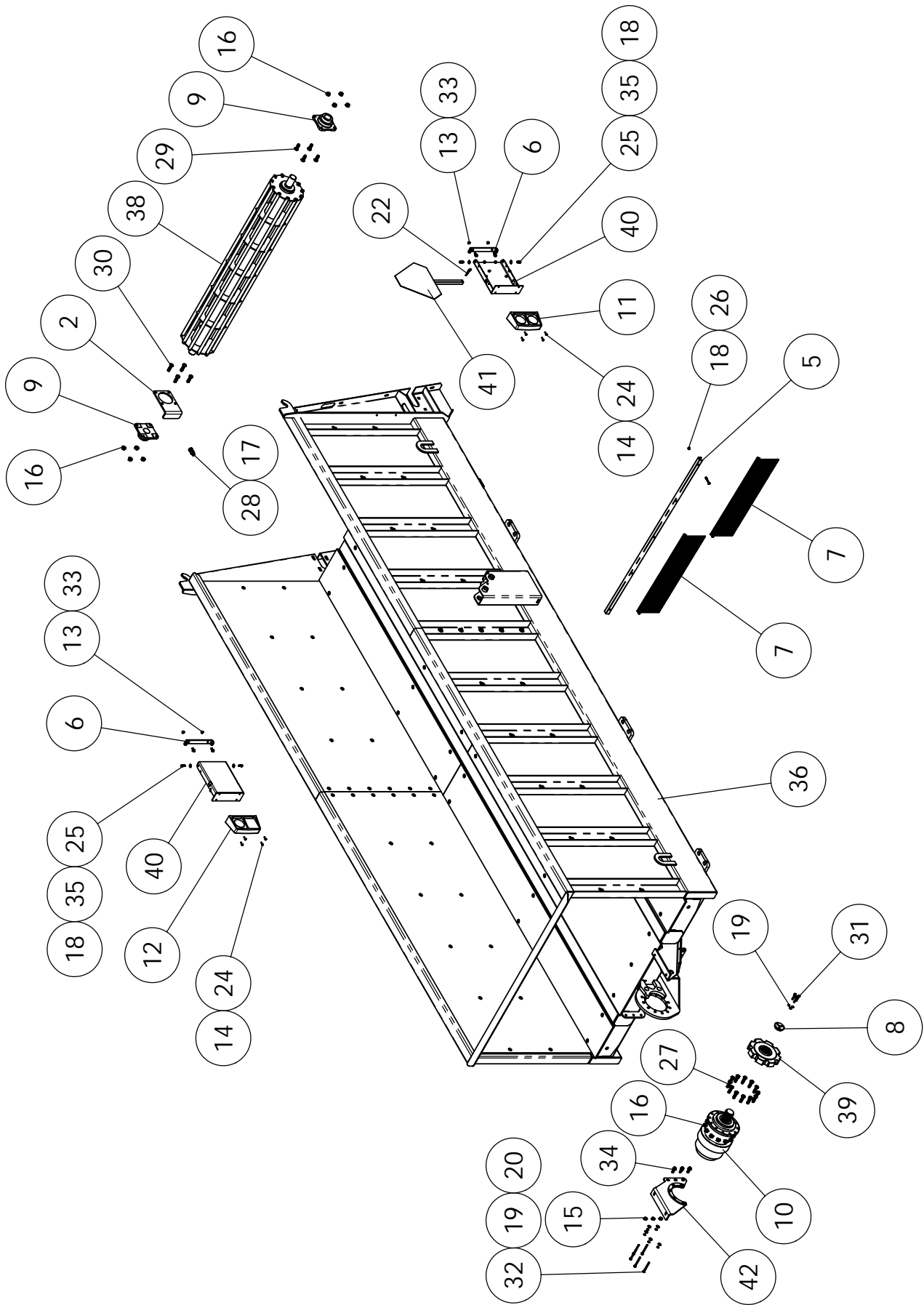
532-16 & 672-20 TRAILER SPREADER ASSEMBLY



532-16 & 672-20 TRAILER SPREADER ASSEMBLY

ITEM #	PART #	DESCRIPTION	QTY
1	130445	PLATE BELT CLAMP	1
2	130480	BELT CLAMP	2
3	322560	COMBINATION CHAIN (672-20 SPREADER)	1
	322560	COMBINATION CHAIN (532-16 SPREADER)	
4	351035	672-20 SPREADER BELT, 5/16" x 71" x 281 1/2"	1
	351033	532-16 SPREADER BELT, 5/16" x 71" x 235"	
5	400107	3/8"-16 HEX NUT, SERRATED FLANGE	2
6	401106	3/8" - 16 HEX NYLOC NUT #5 PLTD	15
7	401207	HEX NYLOC NUT #5 Pltd 7/16" -20	10
8	407043	CHCS #5 Pltd. 3/8"-16 x 1 3/4"	15
9	407730	STUD BOLT, RIBBED NECK 7/16-20 UNF x 1 3/4"	10
10	407901	3/8"-16 X 1" HHCS SERRATED #5 PLTD	2
11	730106	REAR GATE ASSY	1
12	730131	532/672 EXT BEATER ASSY, FULL FLIGHT	1
13	730134	532/672 SLIDING GATE ASSY	1
14	730139	672 SPREADER BOX ASSY (TRUCK)	1
15	830235	802 PIVOT PIN W/A	2
16	830239	CHAIN / BELT ADAPTER W/A	1

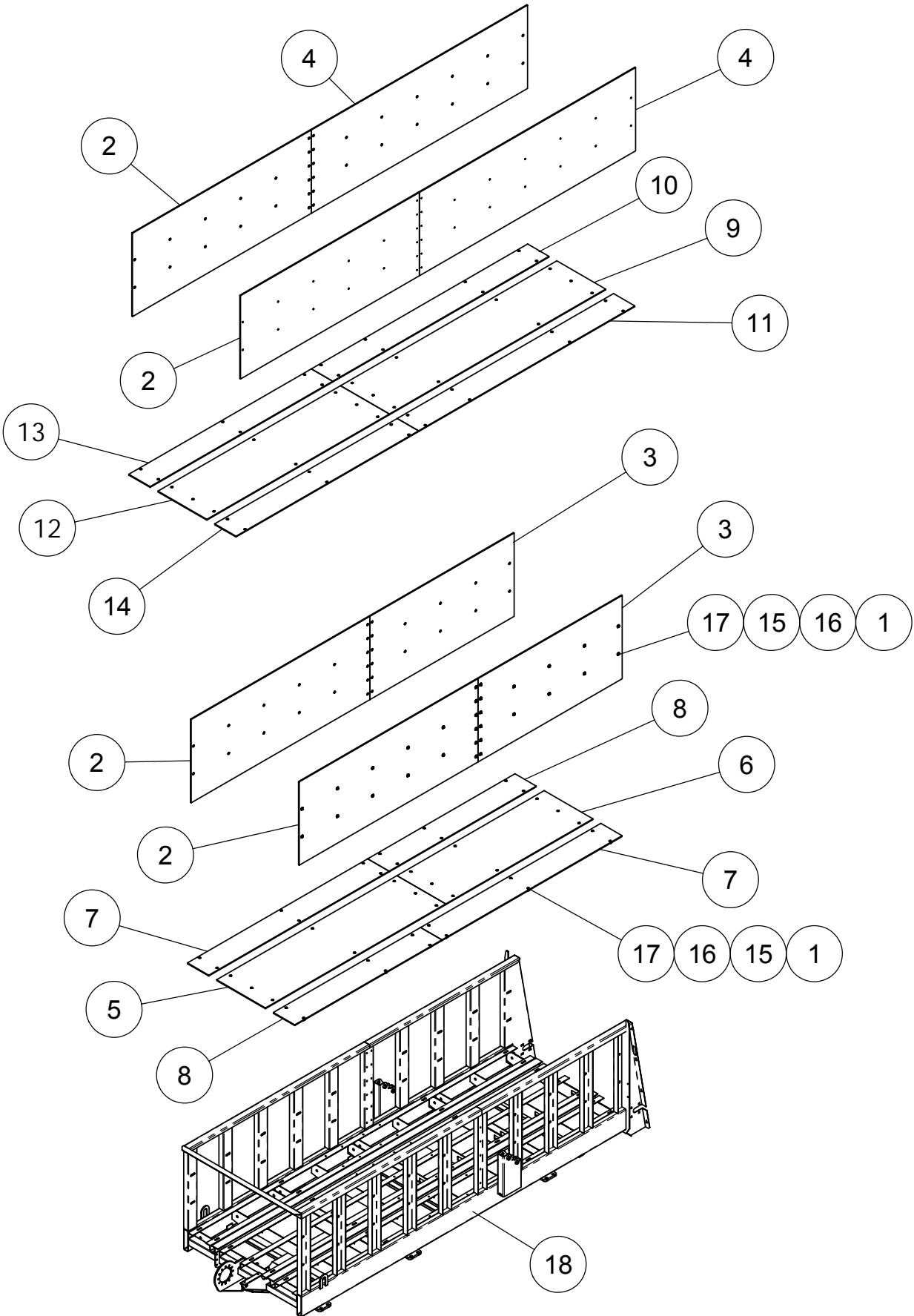
532-16 & 672-20 TRAILER SPREADER BOX ASSEMBLY



532-16 & 672-20 TRAILER SPREADER BOX ASSEMBLY

ITEM #	PART #	DESCRIPTION	QTY
1	130314	SPACER	63
2	130316	BRACKET, BELT ADJUSTER	1
3	130320	HDPE SIDE, FRONT - 532 SPREADER	2
4	130330	SIDE, REAR - 532 SPREADER	2
5	130446	BROOM CLAMP	1
6	130820	HAZARD LIGHT MOUNTING BRACKET	2
7	130837	BROOM, 8" BRISTLES x 36" LG	2
8	332680	RETAINER,	1
9	340436	FAFNIR 2 3/16" BEARING	2
10	344136	GEAR BOX, 25.98:1 REDUCTION	1
11	357512	LIGHT ASSY, L/H	1
12	357513	LIGHT ASSY, R/H	1
13	400107	HEX NUT, SERRATED FLANGE #5 Pltd., 3/8"-16	4
14	400113	1/4"-20 SERRATED FLANGE HEX NUT	8
15	400114	HEX NUT, SERRATED FLANGE #5 Pltd., 1/2"-13	3
16	400115	HEX NUT, SERRATED FLANGE #5 Pltd., 5/8"-11	20
17	400812	HEX 2-WAY LOCNUT # 5 Pltd. 3/4"-10	1
18	401106	HEX NYLOC NUT #5 Pltd 3/8" -16	110
19	402006	3/8" MED PLTD SPRING LOCK WASHER	8
20	402406	FLAT WASHER, 3/8" ID x 1" OD	5
21	402606	FENDER WASHER PLTD. 3/8" x 1 1/2"	101
22	404210	5/32" x 2.94 # 10 CLIPP PIN	1
23	405050	TRUSS HD SCREW, 3/8"-16 x 1 1/4" LG	101
24	405604	HHCS #5 Pltd., 1/4" -20 x 1"	8
25	405653	HHCS #5 Pltd., 3/8"-16 x 1"	4
26	405659	HHCS #5 PLTD., 3/8-16 x 2-1/2 LG.	5
27	405755	5/8"-11 x 2-1/2" HEX BOLT #5 PLTD	12
28	405780	HHCS #5 Pltd., 3/4" 10 x 2 1/4"	1
29	407121	CARRIAGE BOLT, 5/8" -11 x 2", #5 PLTD	4
30	407122	CHCS #5 Pltd., 5/8" -11 x 2-1/2" LG.	4
31	407810	HHCS 8.8 - 10MM x 50MM	3
32	407820	HHCS METRIC 10mm-1.5 x 100mm	5
33	407901	3/8"-16 X 1" WHIZ BOLT	4
34	407913	HHCS, SERRATED #5 Pltd. 1/2"-13 x 1 1/2"	3
35	410029	BELLVILLE DISC SPRING, 1" OD x .343 ID x .09 THICK	4
36	830200	532-16 SPREADER BOX W/A (532 CU FT)	1
	830209	672-20 SPREADER BOX W/A (672 CU FT)	1
38	830220	WING PULLEY 72" W.A.	1
39	830224	SPROCKET W/A, SPREADER	1
40	830318	HAZARD LIGHT MTG BRKT W/A	2
41	830319	362/532/672 SLOW SIGN BRKT WA	1
42	830320	GEARBOX / TANK MOUNT W/A	1

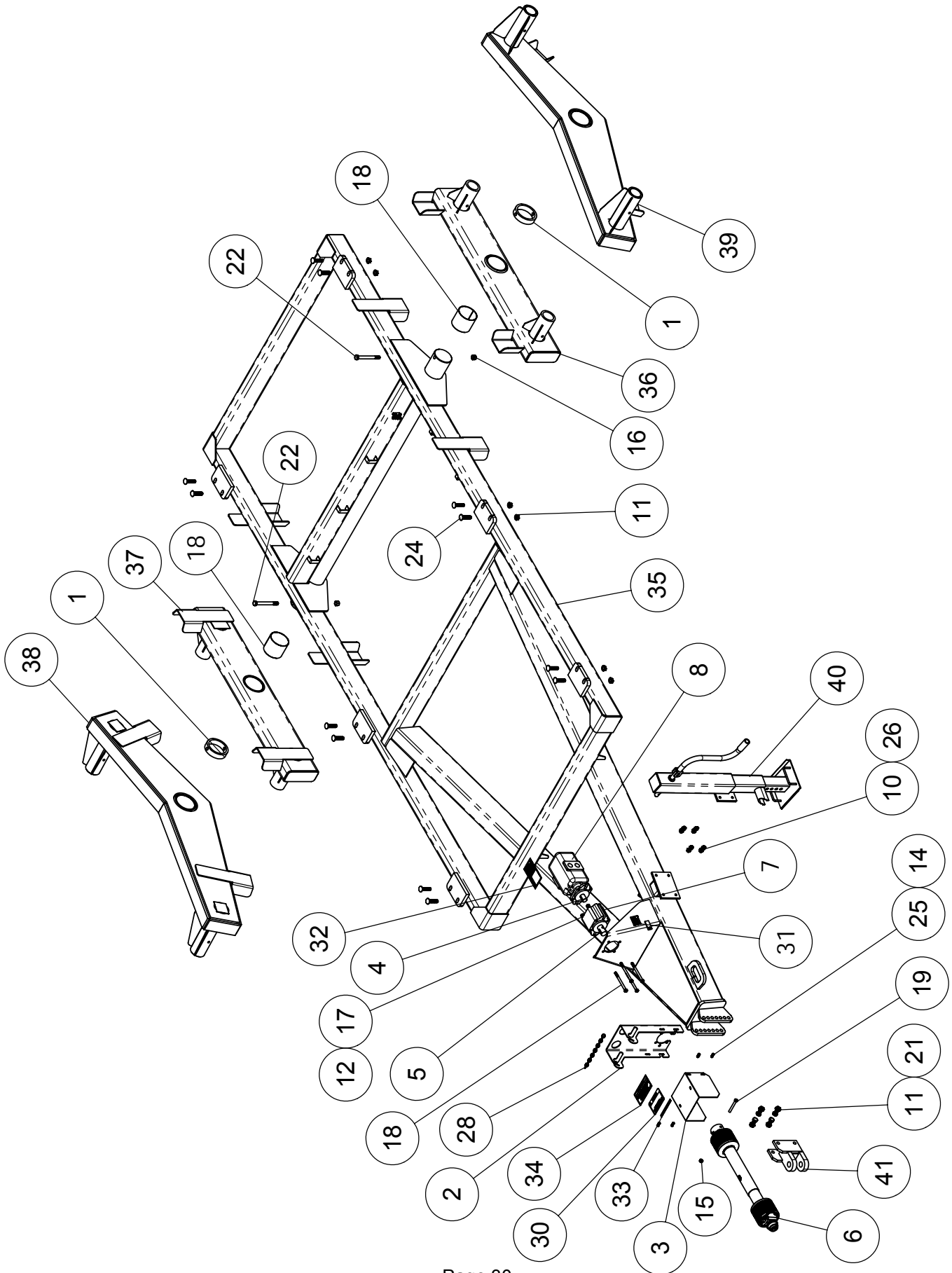
532-12 - 672-20 TRAILER SPREADER SIDES



532-12 - 672-20 TRAILER SPREADER SIDES

ITEM #	PART #	DESCRIPTION	QTY
1	130314	SPACER	AN
2	130320	532 SPREADER, HDPE SIDE, FRONT - 1/2" x 48" x 119"	4
3	130330	532 SPREADER, SIDE, REAR - 1/2"x48"x96"	2
4	130350	672 SPREADER, HDPE SIDE, REAR - 1/2" x 48" x 144"	2
5	130491	532 SPREADER, HDPE-UVI FLOOR STRIP 1/2x32-1/2x120	1
6	130492	532 SPREADER, HDPE-UVI FLOOR STRIP 1/2x32-1/2x98	1
7	130493	532 SPREADER, HDPE-UVI FLOOR STRIP 1/2x14-3/16x120	2
8	130494	532 SPREADER, HDPE-UVI FLOOR STRIP 1/2x14-3/16x98	2
9	130609	672 SPREADER, HDPE-UVI FLOOR STRIP 1/2x32-1/2x144	1
10	130610	672 SPREADER, HDPE-UVI FLOOR STRIP 1/2x14-3/16x144	1
11	130615	672 SPREADER, HDPE-UVI FLOOR STRIP 1/2x14-3/16x144	1
12	130821	672 SPREADER, HDPE-UVI FLOOR STRIP 1/2x32 1/2x121-1/2	1
13	130822	672 SPREADER, HDPE-UVI FLOOR STRIP 1/2x14-3/16x121-1/2	1
14	130823	672 SPREADER, HDPE-UVI FLOOR STRIP 1/2x14-3/16x121-1/2	1
15	401106	HEX NYLOC NUT #5 Pltd 3/8" -16	AN
16	402606	FENDER WASHER PLTD. 3/8" x 1 1/2"	AN
17	405050	TRUSS HD SCREW, 3/8"-16 x 1 1/4" LG	AN
18	830200	532-16 SPREADER BOX W/A	1
	830209	672-20 SPREADER BOX W/A	1

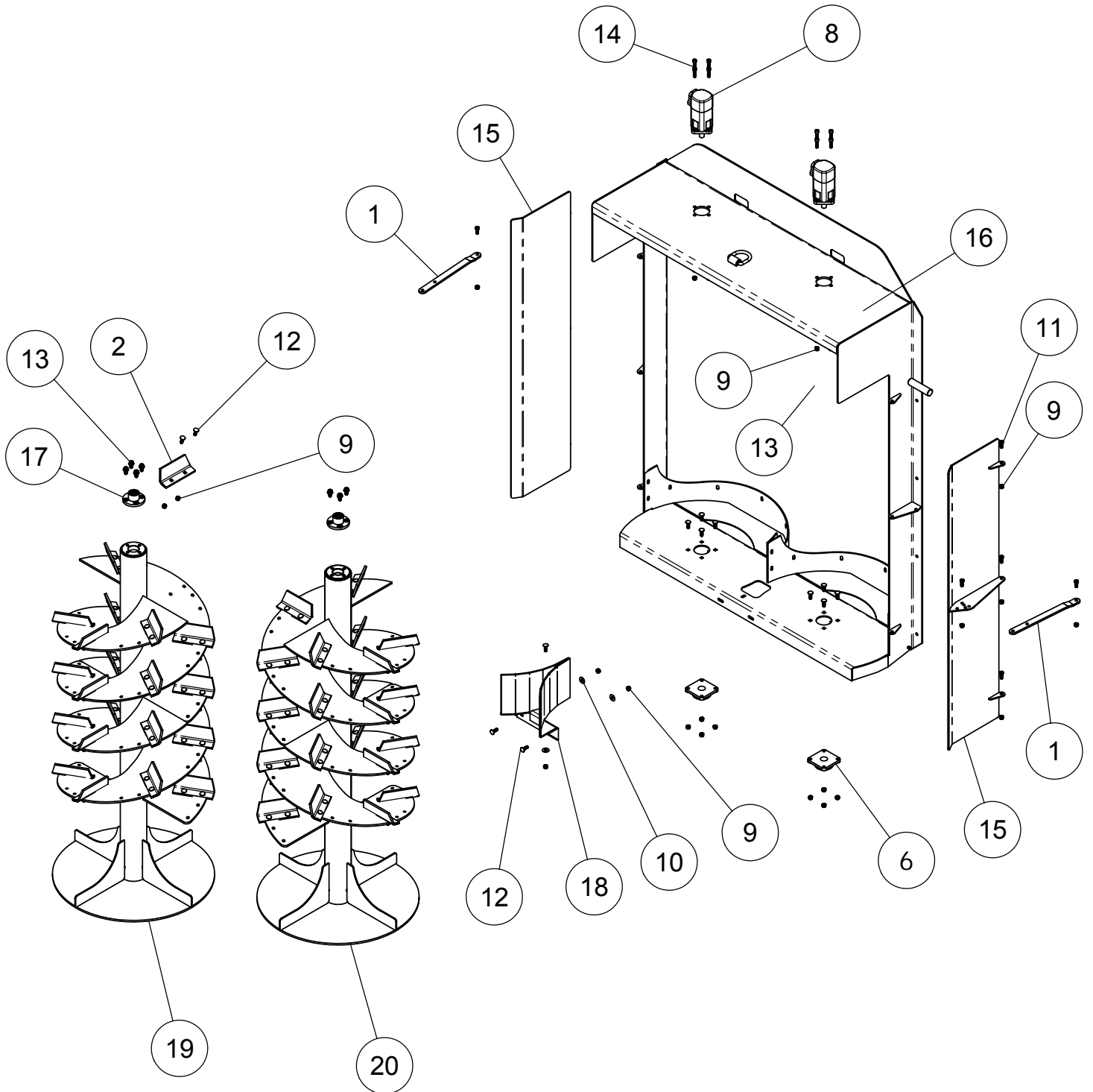
532-16 TRAILER SPREADER ASSEMBLY



532-16 TRAILER SPREADER ASSEMBLY

ITEM #	PART #	DESCRIPTION	QTY
1	130399	AXLE RETAINER 1-1/2"	2
2	130561	PTO SHIELD MTG BRACKET	1
3	185302	P.T.O. SHIELD 9" x 22 9/16"	1
4	185483	KEY, 5/16" x 1-1/4"	1
5	188043	KEY, 3/8" x 1-7/16"	1
6	338028	DRIVE SHAFT W2400 1-3/8" 21T x 1 1/2" D. KEY	1
7	344070	OVERHUNG ADAPTER, 1-1/2 KEYED	1
8	362028	PUMP, 4.97 CID TANDEM GEAR	1
9	400113	1/4"-20 SERRATED FLANGE HEX NUT	1
10	400114	HEX NUT, SERRATED FLANGE #5 Pltd., 1/2"-13	4
11	400116	HEX NUT, SERRATED FLANGE #5 Pltd., 3/4"-10	16
12	400208	HEX NUT #5 Pltd., 1/2"-13	4
13	400606	HEX JAM NUT 3/8"-16"	1
14	401105	HEX NYLOC NUT #5 Pltd., 5/16"-18	4
15	401108	HEX NYLOC NUT #5 Pltd., 1/2"-13	1
16	401112	HEX NYLOC NUT #5 Pltd., 3/4"-16	2
17	402008	LOCK WASHER, Pltd., 1/2"	4
18	404462	5.000 I.D. x 5.188 O.D. x 4.5" LG BRONZE BUSH.	2
19	405713	1/2"-13 x 4" HHCS	1
18	405718	HHCS # 5 PLTD 1/2-13 X 6 1/2	4
21	405779	HHCS 3/4"-10 x 2"	4
22	405793	HHCS #5 Pltd 3/4"-10 x 7"	2
23	407000	1/4"-20 x 3/4" CARR BOLT #5 PLTD	1
24	407142	3/4"-10 X 3" CARRIAGE BOLT	12
25	407410	SHOULDER BOLT, 3/8 DIA x 3/8 LG (5/16 THD)	4
26	407913	HHCS, SERRATED #5 Pltd. 1/2"-13 x 1 1/2"	4
27	409543	SQ HD SET SCR CUP, 3/8" x 1"	1
28	412020	CHAIN-2/0 PASSING LINK	1
29	412076	SAFETY CHAIN 7/16" 30,000#	1
30	440826	DECAL - DANGER: ROTATING AUGERS	1
31	441301	DECAL, CAUTION OPERATE AT 1000 PTO	1
32	441657	WARNING ESCAPING HYD OIL	1
33	441661	GREASE EVERY 10 HOURS DECAL	1
34	441663	WARNING DO NOT ATTACH PTO SHAFT	1
35	830210	532 -16 TRAILER FRAME W/A	1
36	830223	WALKING BEAM TRAILER W.A. L/H	1
37	830225	WALKING BEAM TRAILER W.A. R/H	1
38	830243	WALKING BEAM W/A R/H	1
39	830244	WALKING BEAM W/A L/H	1
40	872090	9T DROP LEG JACK W/A	1
41	872094	TRAILER CLEVIS W.A.	1

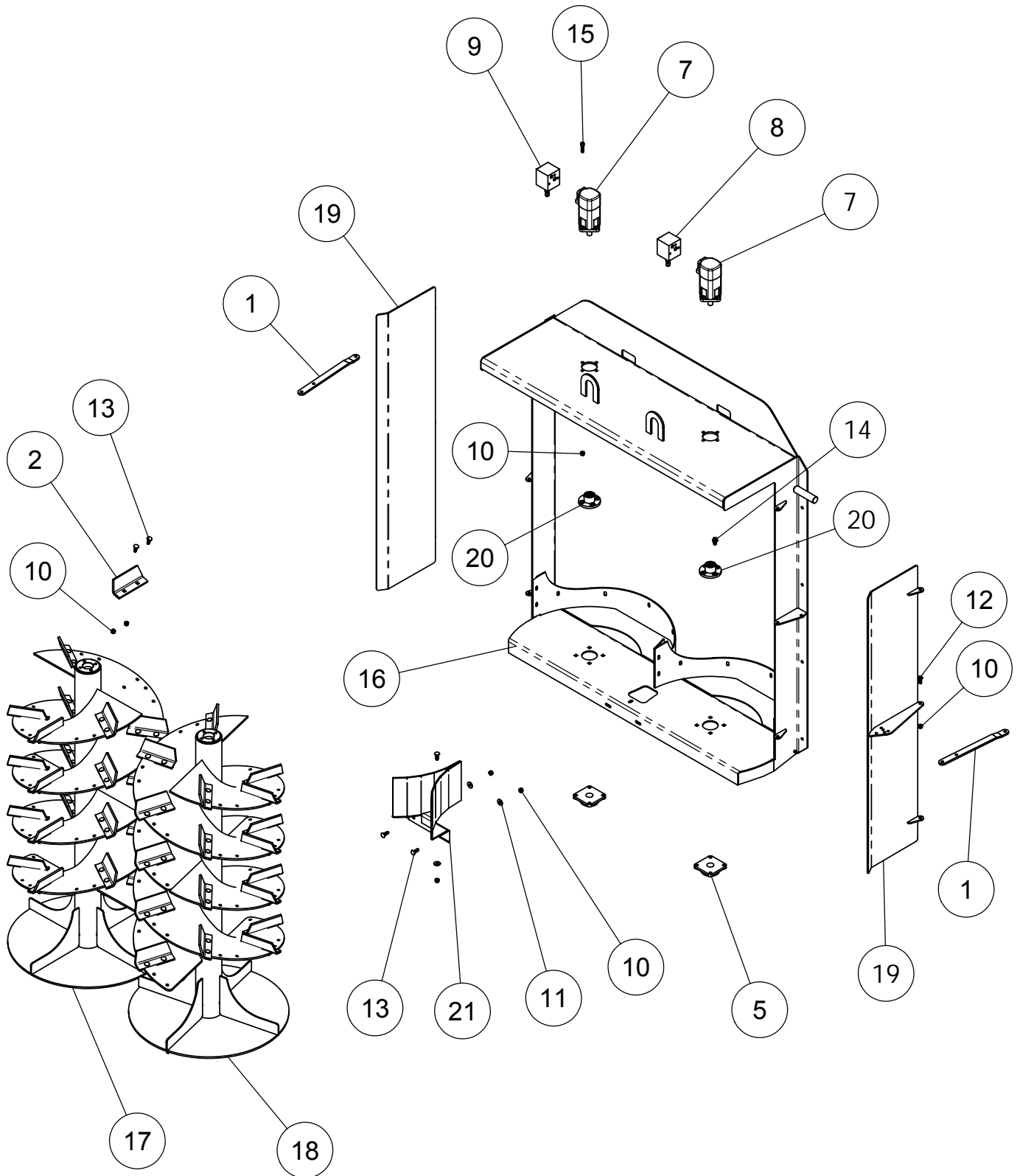
532/672 STANDARD BEATER ASSEMBLY



532-672 STANDARD BEATER ASSEMBLY

ITEM #	PART #	DESCRIPTION	QTY
1	130378	DOOR LINK	2
2	130464	ANGLE DEFLECTOR 9" x 4-1/2"	48
NS	130612	GREASE LINE, 3/16 x 24" LG	1
NS	310750	GREASE ZERK PLTD 1/8"	2
6	340425	BEARING, RCJC, 4-BOLT FLANGE, 1-1/2"	2
NS	356002	COMP STR. FITTING 1/8" MP x 3/16" TUBE	4
8	360035	HYD MOTOR, SPREADER BEATER 18.7 CID	2
9	401108	HEX NYLOC NUT #5 Pltd., 1/2-13	125
10	402408	FLAT WASHER, 1/2" ID x 1-3/8" OD	3
11	405702	HHCS #5 PLTD. 1/2"-13 x 1 1/4" LG	10
12	407102	CARRIAGE BOLT, 1/2"-13 X 1-1/2", #5 PLTD	107
13	407911	HHCS SERR. FLANGE. #5 PLTD. 1/2-13 x 1"LG	8
14	409065	SHCS, 1/2 x 1 1/2 LG	8
15	830207	DEFLECTOR W/A, VERTICAL BEATER	2
16	830211	FRAME W/A, VERTICAL BEATER (EXT)	1
17	830234	DRIVE FLANGE W/A	2
18	830245	DEFLECTOR W/A	1
19	830315	532/672 LEFT VERTICAL BEATER W/A, EXTENDED	1
20	830316	532/672 RIGHT VERTICAL BEATER W/A, EXTENDED	1

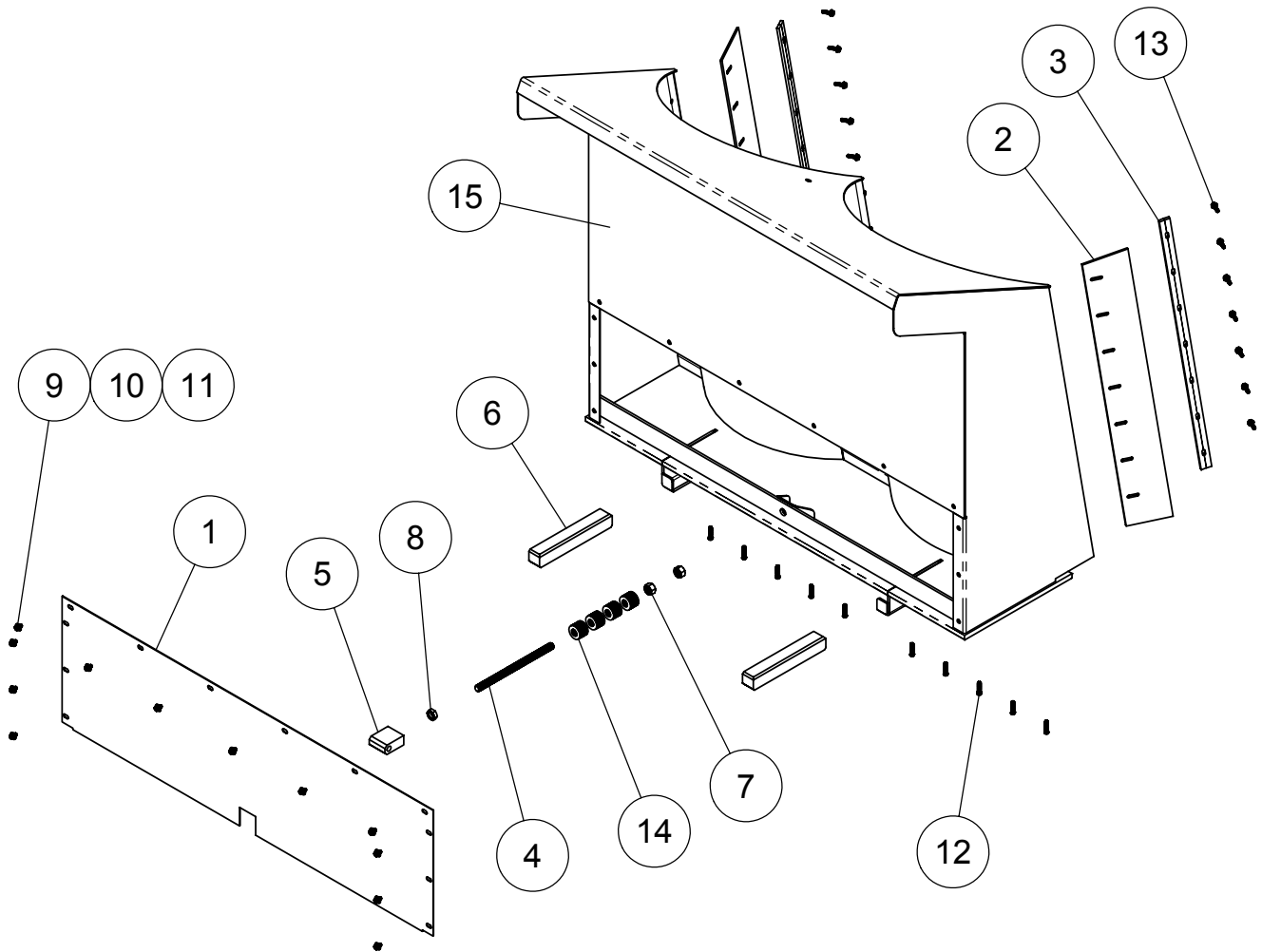
532/672 SHORT BEATER ASSEMBLY (OPTION)



532/672 SHORT BEATER ASSEMBLY (OPTION)

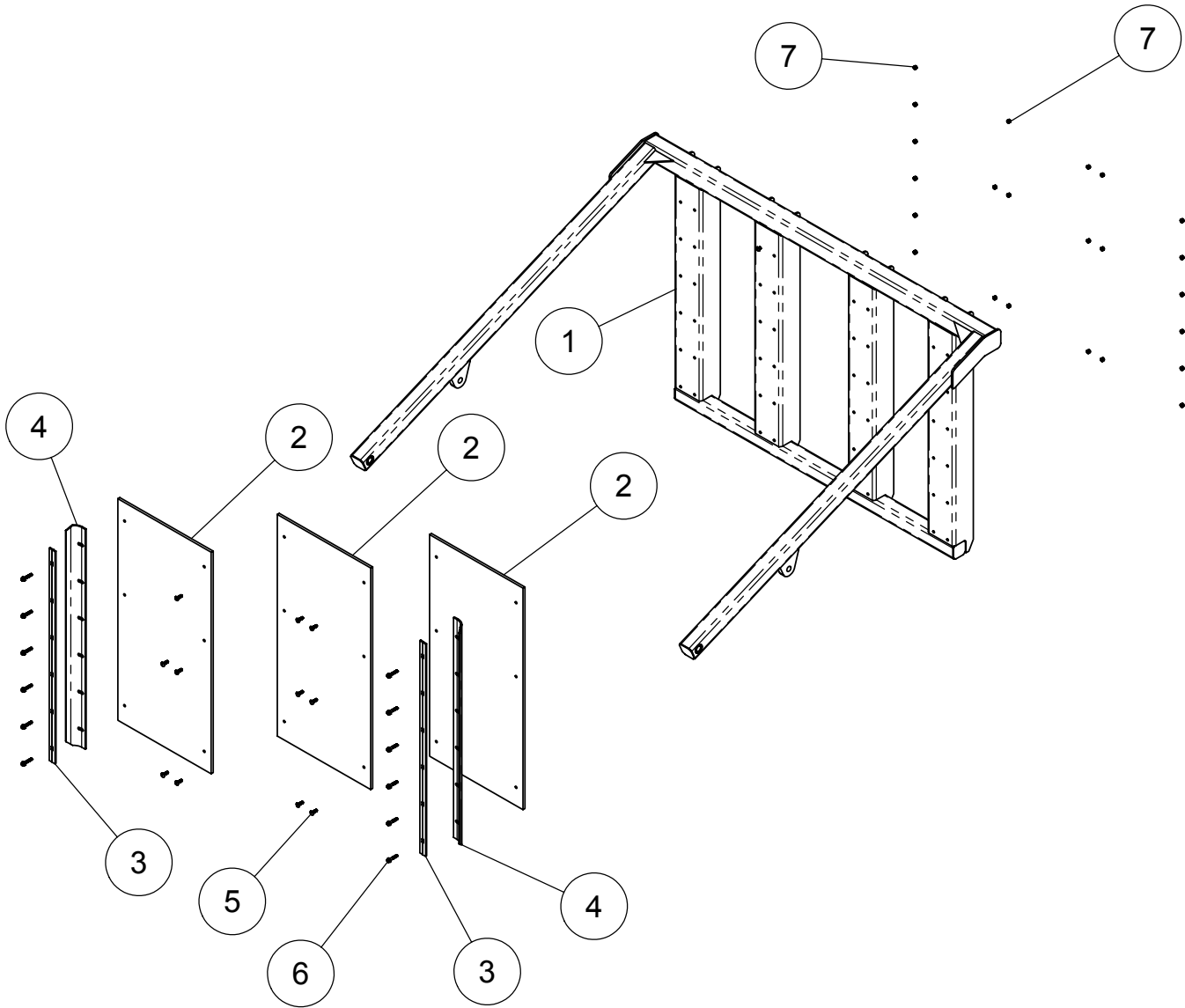
ITEM #	PART #	DESCRIPTION	QTY
1	130378	DOOR LINK	2
2	130464	ANGLE DEFLECTOR 9" x 4-1/2"	48
NS	160312	GREASE LINE, 3/16" x 24" LG	2
NS	310750	GREASE ZERK PLTD 1/8"	2
5	340425	BEARING, RCJC, 4-BOLT FLANGE, 1-1/2"	2
NS	356002	COMP STR. FITTING 1/8" MP x 3/16" TUBE	2
7	360027	HYD MOTOR, SPREADER BEATER 14.9 CID	2
8	362344	VALVE BLOCK, RELIEF/ANTI-CAV - C/W ROT.	1
9	362345	VALVE BLOCK, RELIEF/ANTICAV - CC/W ROT.	1
10	401108	HEX NYLOC NUT #5 Pltd., 1/2-13	125
11	402408	FLAT WASHER, 1/2" ID x 1-3/8" OD	3
12	405702	HHCS #5 PLTD. 1/2"-13 x 1 1/4" LG	10
13	407102	CARRIAGE BOLT, 1/2"-13 X 1-1/2", #5 PLTD	107
14	407911	HHCS SERR. FLANGE. #5 PLTD. 1/2-13 x 1"LG	8
15	409065	SHCS, 1/2 x 1 1/2 LG	8
16	830203	FRAME W/A, VERTICAL BEATER	1
17	830205	532/672 LEFT VERTICAL BEATER W/A, SHORT	1
18	830206	532/672 RIGHT VERTICAL BEATER W/A, SHORT	1
19	830207	DEFLECTOR W/A, VERTICAL BEATER	2
20	830234	DRIVE FLANGE W/A	2
21	830245	DEFLECTOR W/A	1

532/672 SLIDING GATE ASSEMBLY



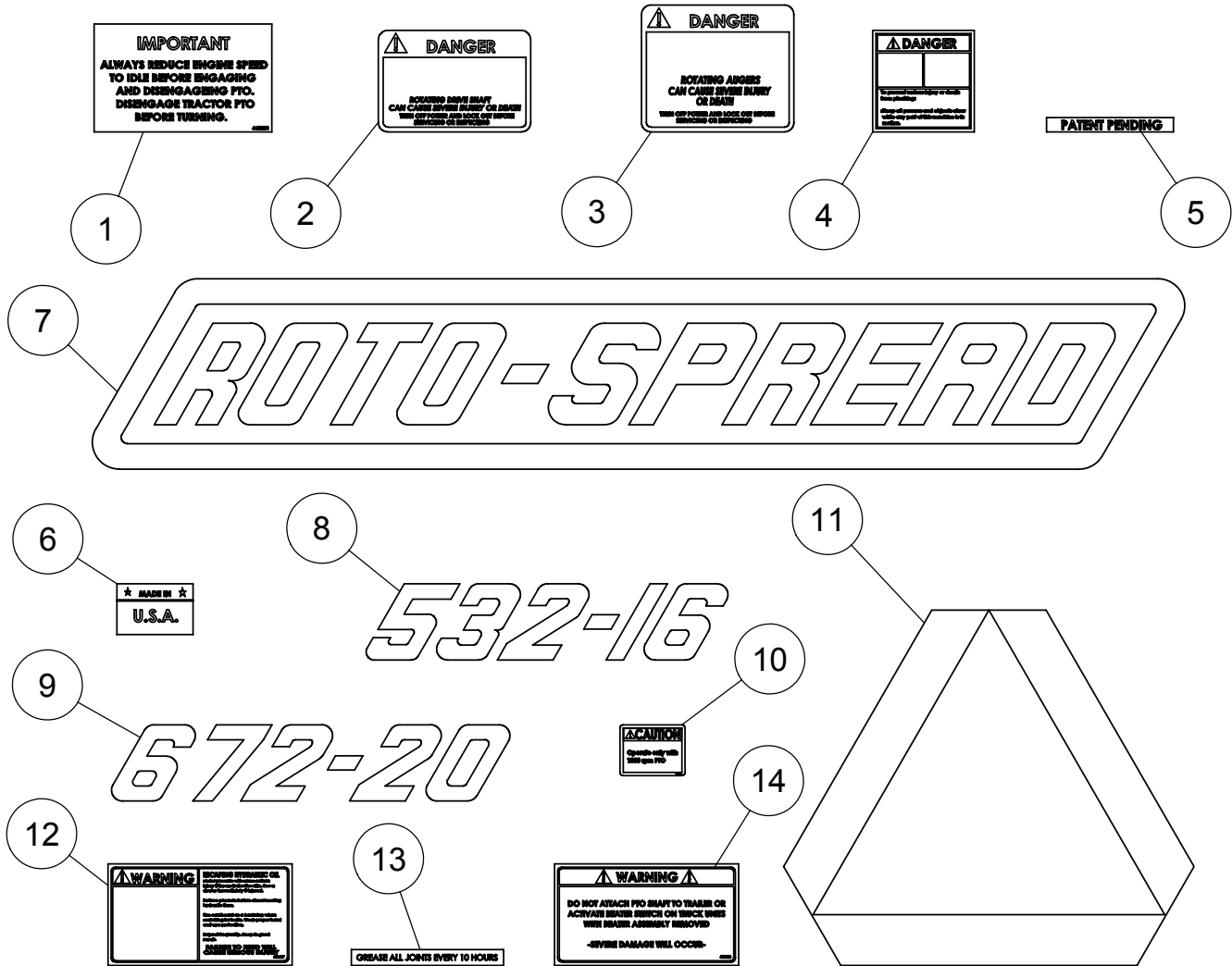
ITEM #	PART #	DESCRIPTION	QTY.
1	130423	SHEET SLIDING GATE COVER	1
2	130428	SCRAPER (6 1/2" x 48")	2
3	130429	CLAMP, SCRAPER (44 1/2" LG)	2
4	130448	THREADED ROD, BELT TENSION	1
5	130593	LUG, CHAIN	1
6	130726	532 UHMW GUIDE BLOCK x 13 1/2"	2
7	400214	HEX NUT #5 PLTD, 7/8-9	2
8	400614	HEX JAM NUT #5, 7/8-9 PLATED	1
9	402006	3/8" MED PLTD SPRING LOCK WASHER	12
10	402406	FLAT WASHER, 3/8" ID x 1" OD	12
11	405652	HHCS #5 PLTD., 3/8"-16 x 3/4"	12
12	407730	STUD BOLT, RIBBED NECK 7/16-20 UNF x 1 3/4"	10
13	407904	HHCS, SERRATED #5 Pltd. 3/8" -16 X 1-1/4"	14
14	410027	BELLVILLE SPRING WASHERS PACKAGE OF (12)	4
15	830302	SLIDING GATE W.A. 532/672	1

532/672 REAR GATE ASSEMBLY



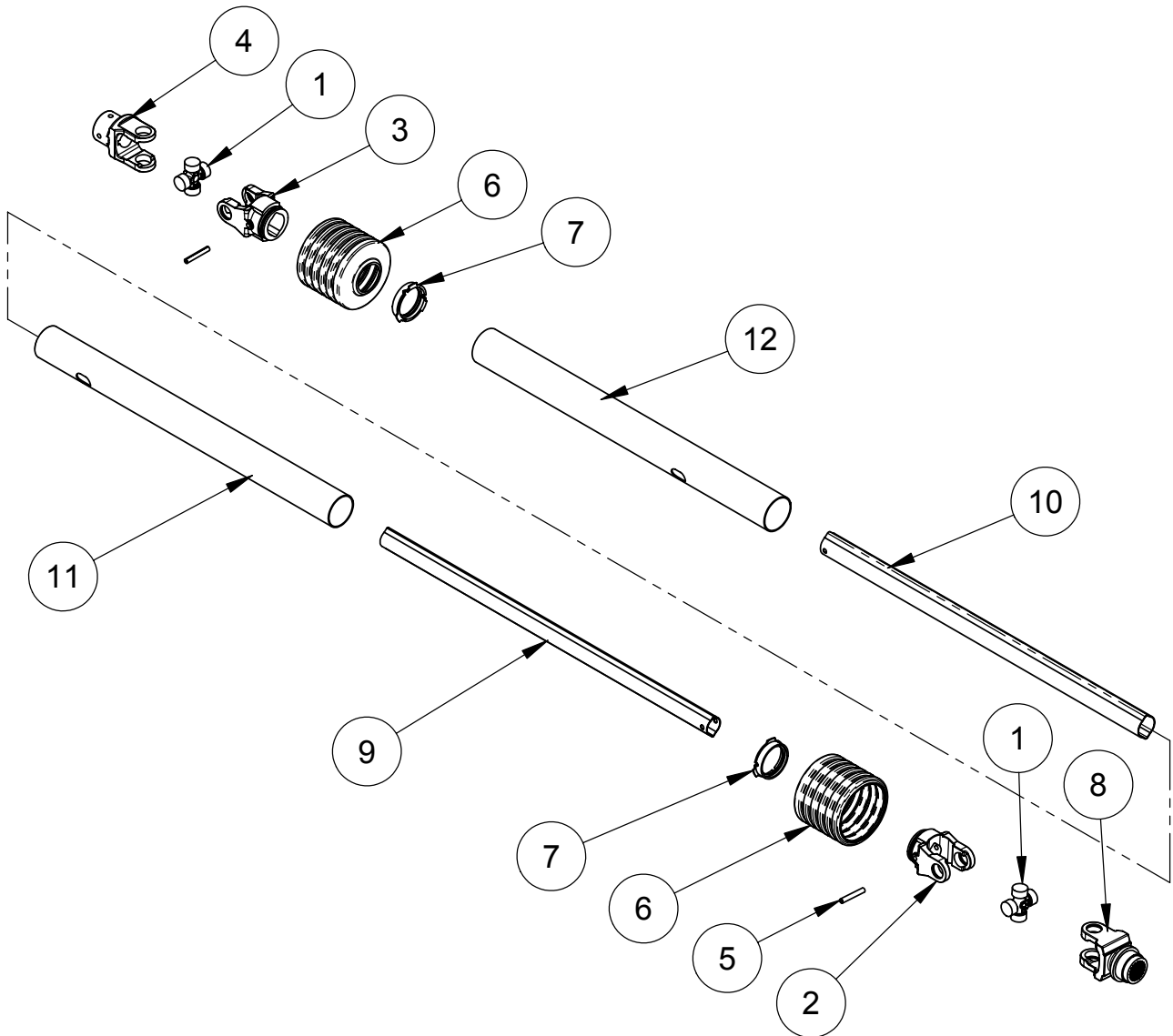
ITEM #	PART #	DESCRIPTION	QTY
1	830201	SWINGING GATE W.A.	1
2	130334	END GATE LINER	3
3	130439	CLAMP, SEAL	2
4	130440	FLASHING, SWINGING GATE	2
5	405050	TRUSS HD SCREW, 3/8"-16 x 1 1/4" LG	12
6	407903	HHCS, SERRATED #5 Pltd. 3/8" -16 x 2"	12
7	401106	HEX NYLOC NUT #5 Pltd 3/8" -16	24

532/672 SPREADER DECALS



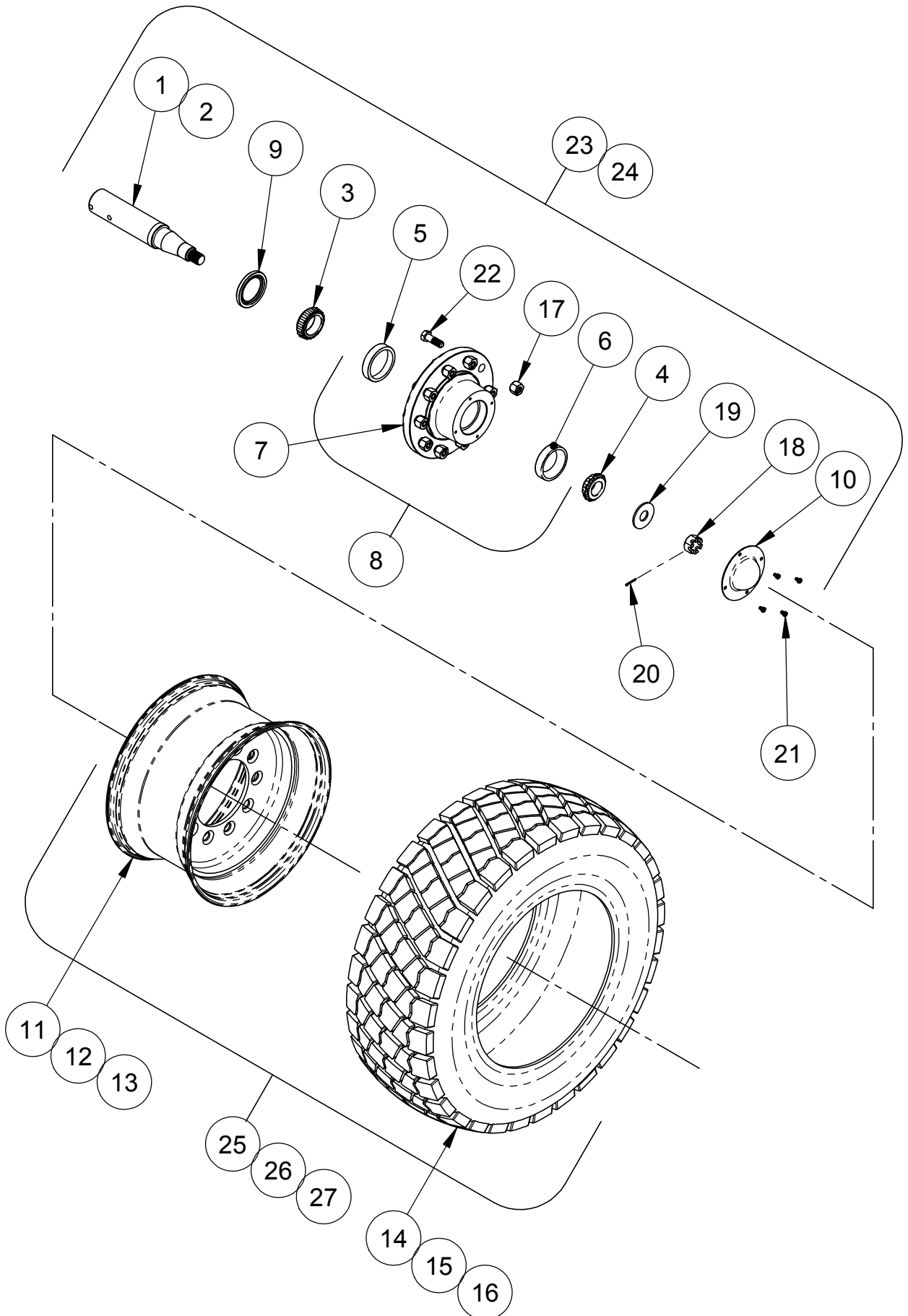
ITEM #	PART #	DESCRIPTION	QTY.
1	440801	DECAL(IMP-REDUCE SPD.) 4.25x7	1
2	440826	DECAL - DANGER: ROTATING AUGERS	1
3	440827	DECAL - DANGER: ROTATING AUGERS	2
4	440833	DANGER PINCH POINT 4"x 4"	4
5	440841	DECAL - PATENT PEND 11/16x5	1
6	440844	DECAL- (MADE IN USA)	2
7	440939	DECAL, ROTO-SPREAD 7-1/2"x43-1/16"	3
8	440940	DECAL 532-16 (ROTO-SPREAD)	2
9	440945	DECAL 672-20 (ROTO-SPREAD)	2
10	441301	DECAL, CAUTION OPERATE AT 1000 PTO	1
11	441405	SMV DECAL PLATE	1
12	441657	WARNING ESCAPING HYD OIL	4
13	441661	GREASE EVERY 10 HOURS DECAL	1
14	441663	WARNING DO NOT ATTACH PTO SHAFT	3

532/672 DRIVE SHAFT ASSEMBLY #338027



ITEM #	PART #	DESCRIPTION	QTY.
1	338443	CROSS KIT 1-1/4" x 2-7/8" W2400 312410	2
2	338450	INBOARD YOKE W2400 019518	1
3	338452	INBOARD YOKE W2400 019519	1
4	338463	Yoke W2400 1-1/2" 3/8"KWY 383388	1
5	338473	ROLL PIN #10 METRIC 10 x 80	2
6	338486	WWE-2480 INNER SHIELD TUBE RND - 383868	2
7	338489	W-2400 BEARING RING SC 25 -087276	2
8	338559	Yoke 1-3/4" - 20 SPL. 1000 RPM 2400-362448	1
9	338578	W-2400 INNER PROFILE - 317341	1
10	338579	W- 2400 OUTER PROFILE - 046638	1
11	338580	W-2400 OUTER SHIELD TUBE OVL - 056591	1
12	338581	W-2400 INNER SHIELD TUBE ROUND - 094564	1

HUB & WHEEL ASSEMBLY

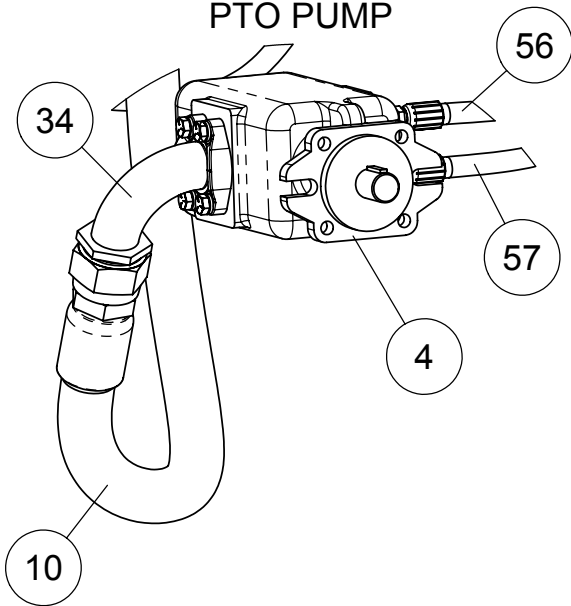


HUB & WHEEL ASSEMBLY

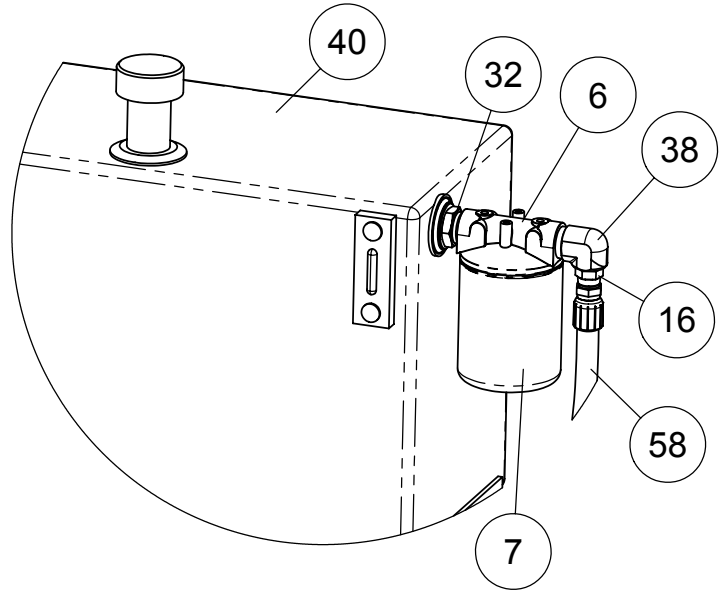
ITEM #	PART #	DESCRIPTION	QTY.
1	130509	SPINDLE, 3" DIA, 12,000 LB x 17" LG	1
2	150117	SPINDLE, 3" DIA, 12,000 LB x 20" LG	1
3	342209	INNER BEARING, 2-1/2" BORE	1
4	342210	OUTER BEARING, 1-3/4" BORE	1
5	342211	INNER BEARING RACE 4-7/16"OD	1
6	342212	OUTER BEARING RACE 4-1/4" OD	1
7	372209	HUB ASSY , 10 BOLT-12000LB	1
8	372209A	HUB 10 BOLT 12,000 LB w/BRG, STUDS & NUTS	1
9	372306	SEAL-OIL 3.0 DIA SHAFT, CR#30087	1
10	372308	DUST CAP, 12000 LB AXLE	1
11	372422	WHEEL 15" WIDE x 22-1/2" DIA 10 BOLT	1
12	372435	WHEEL 25" WIDE x 26" DIA 10 BOLT	1
13	372436	WHEEL 20" WIDE x 26" DIA 10 BOLT	1
14	372614	TIRE, 15 x 22.5, LUG TREAD	1
15	372635	TIRE, 28L x 26, 12PLY DIAMOND TREAD	1
16	372636	TIRE, 23.1 x 26, 12PLY DIAMOND TREAD	1
17	400102	BUDD LUG NUT RH 3/4"-16	10
18	401820	CASTLE NUT, 1-1/4"-12 HEX SAE PLT	1
19	402911	WASHER 3.25"OD x 1.22"ID x .19"THK	1
20	404003	5/32" COTTER PIN x 1 1/4"	1
21	405625	5/16"-18 x 1/2" #5 PLTD HEX BOLT	4
22	407724	STUD BOLT RH 3/4"-16	10
23	750006	HUB ASSEMBLY w/#150117 SPINDLE, 12,000 LB	1
24	750168	HUB ASSEMBLY w/#130509 SPINDLE, 12,000 LB	1
25	780752	TIRE 28L x 26 & 10 BOLT WHEEL ASSY	1
26	780753	TIRE 23.1 x 26 & 10 BOLT WHEEL ASSY	1
27	781209	TIRE 15 X 22.5 & 10 BOLT WHEEL ASSY	1

532-16 & 672-20 TRAILER HYDRAULIC PARTS

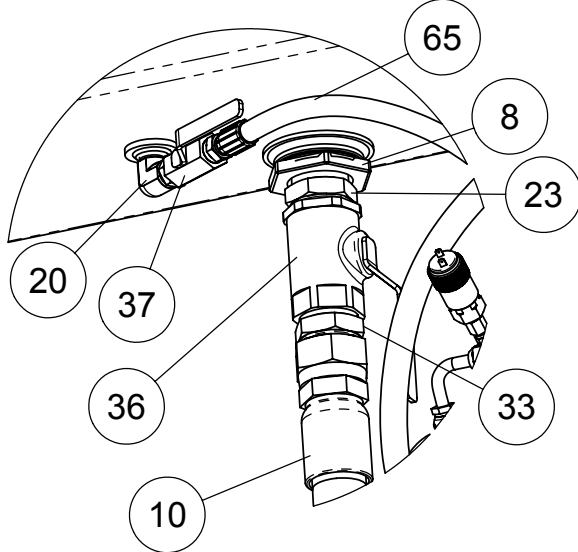
PTO PUMP



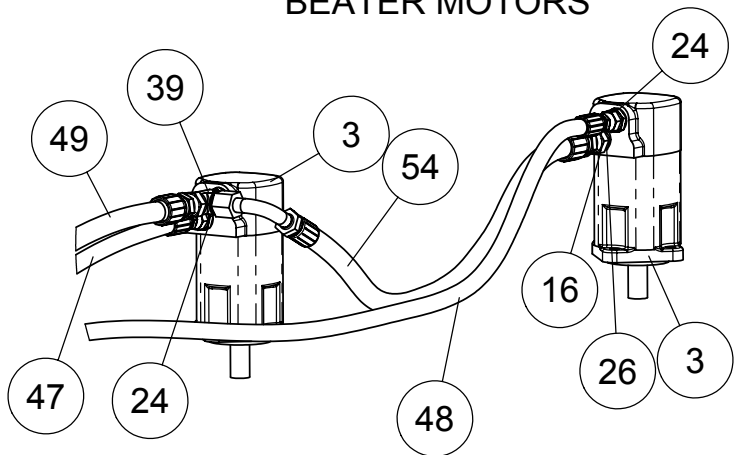
RESERVOIR TANK FILTER



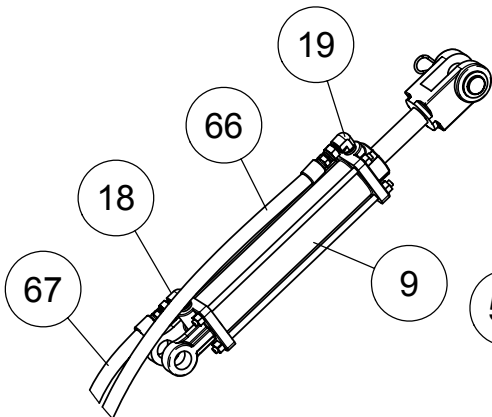
RESERVOIR TANK VALVES



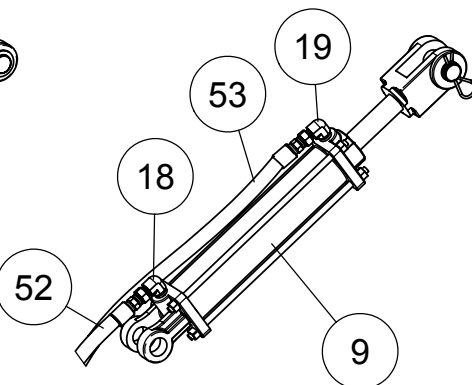
BEATER MOTORS



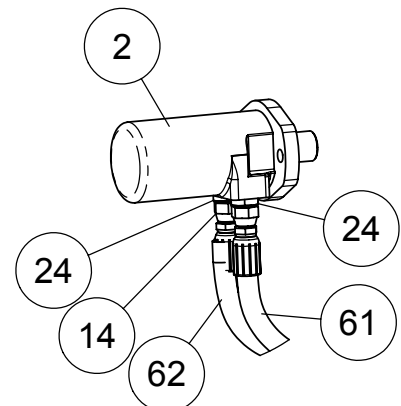
RIGHT SIDE CYLINDER & HOSES



LEFT SIDE CYLINDER & HOSES



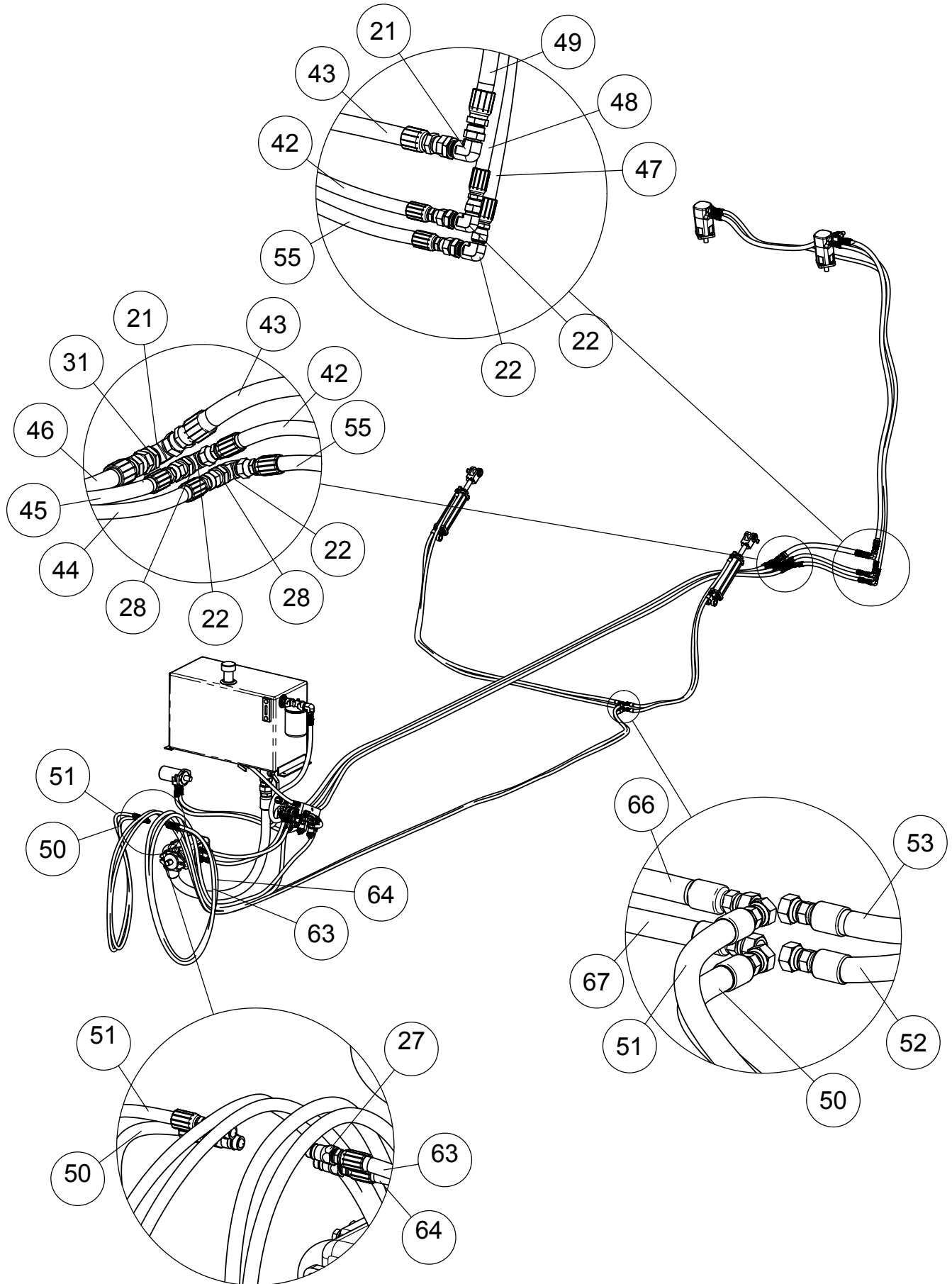
CHAIN DRIVE MOTOR



532-16 & 672-20 TRAILER HYDRAULIC PARTS

ITEM #	PART #	DESCRIPTION	QTY.
2	360025	MOTOR, CHAR-LYNN T SERIES, 14.9 CID	1
3	360035	HYD MOTOR, SPREADER BEATER 18.7 CID	2
4	362028	PUMP, 4.97 CID TANDEM GEAR	1
6	362404	FILTER HEAD, 1-1/4" FP	1
7	362442	FILTER ELEMENT	1
8	362508	STRAINER, SUCTION	1
9	364073	2-1/2" x 8" x 20-1/4" HYD. CYL.	2
10	366750	HOSE ASSY, 2-1/2 FJX x 50" LG.	1
14	367095	7/8 FJX x 1/2" HOSE COUPLING (MEGACRIMP)	17
16	367105	1-1/16 FJX x 3/4" HOSE COUPLER (MEGACRIMP)	9
18	368009	90° ELBOW, 3/8 MP x 9/16 JIC .031 ORFICE	2
19	368033	90° ELBOW, 3/8 MP x 9/16 JIC	2
20	368049	90° ADPT, 3/4 MP x 3/4 MP	1
23	368130	ST ADPT, 2 MP x 2 MP HEX NPL	1
24	368161	STR ADPT, 7/8 MOR x 7/8 JIC	4
26	368171	STR ADPT, 7/8 MOR x 1-1/16 JIC	1
32	368422	STR ADPT, 1-5/8 MOR x 1-1/4 MP	1
33	368423	ST ADPT, 2-1/2 JIC x 2 MP	1
34	368454	90° FLANGE, 2-1/2" JIC x 2" FLANGE	1
36	368523	BALL VALVE, 2" FP	1
37	368526	BALL VALVE, 3/4" FP	1
38	368626	90° ADPT, 1-1/16 JIC x 1-1/4 MP	1
39	368638	TEE, 1-1/16 * 7/8 * 1-1/16 JIC RUN	1
40	370235	TANK, 40 GAL HYD	1
47	781396	1/2' x 95" HOSE ASSY, (7/8FJX)	1
48	781397	1/2" x 128"HOSE ASSY, (7/8FJX)	1
49	781500	3/4" x 85" HOSE ASSY, (1-1/16FJX)	1
52	781505	3/8" x 42" HOSE ASSY, (9/16FJX)	1
53	781506	3/8" X 55" HOSE ASSY, (9/16FJX)	1
54	781510	3/4 x 36 HOSE ASSY, (7/8FJX * 1-1/16FJX90S)	1
56	781555	1/2" x 28" HOSE ASSY, (7/8FJX * 7/8 FJX90)	1
57	781555	1/2" x 28" HOSE ASSY, (7/8FJX * 7/8FJX90)	1
58	781556	3/4" x 46" HOSE ASSY, (1-1/16FJX)	1
61	781559	1/2 x 40 HOSE ASSY, (7/8FJX * 7/8FJX90)	1
62	781560	1/2 x 42 HOSE ASSY, (7/8FJX * 7/8FJX90)	1
65	781562	1/2" x 21" HOSE ASSY, (7/8FJX * 3/4MP)	1
66	781563	3/8" x 114" HOSE ASSY, (9/16FJX * 9/16FJX)	1
67	781564	3/8" x 103" HOSE ASSY, (9/16FJX * 9/16FJX)	1

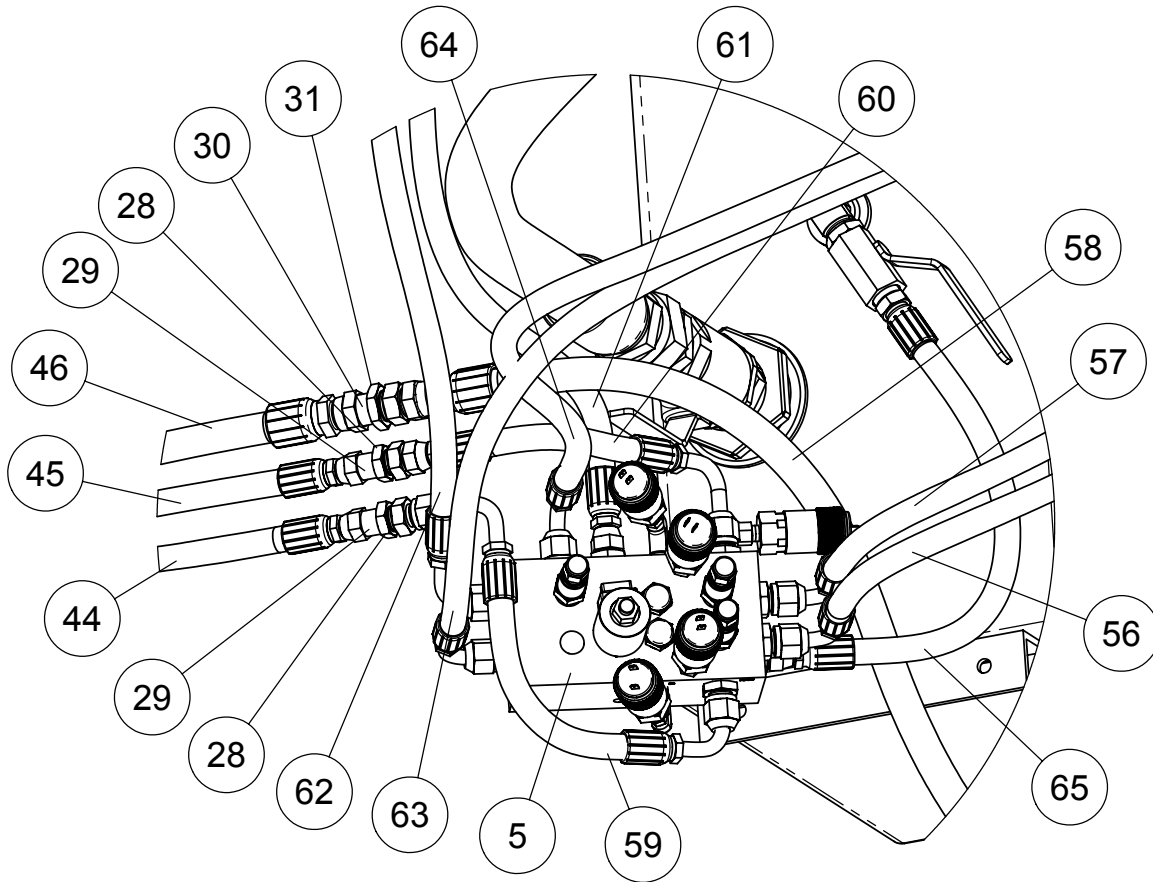
532-16 & 672-20 TRAILER HYDRAULIC PARTS



532-16 & 672-20 TRAILER HYDRAULIC PARTS

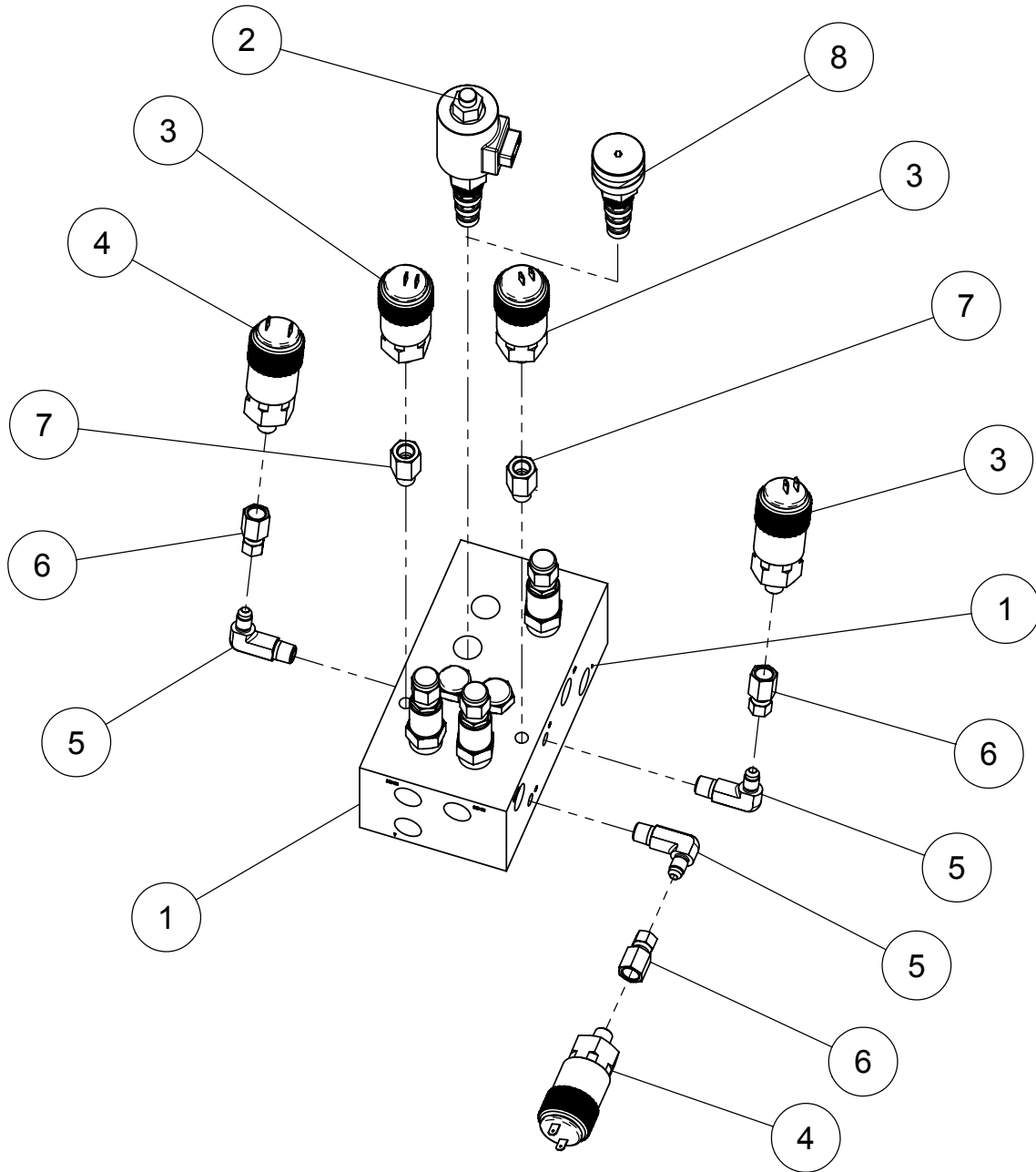
ITEM #	MODEL 532 PART #	MODEL 672 PART #	DESCRIPTION	QTY.
21	368086	368086	90° ADPT, 1-1/16 JIC BULKHEAD	2
22	368087	368087	90° ADPT, 7/8 JIC BULKHEAD	4
27	368238	368238	QUICK DISCONNECT, PIONEER-1/2" FP	4
28	368327	368327	BULKHEAD NUT, 7/8" JI	6
29	368328	368328	STR ADPT, 7/8 JIC BULKHEAD FITTING	2
42	781392	781392	1/2" x 22" HOSE ASSY, (7/8FJX)	1
43	781393	781393	3/4" x 25" HOSE ASSY, (1-1/16FJX)	1
44	781394	781588	1/2" x (532 = 216") (672 = 264") HOSE ASSY (7/8FJX)	1
45	781394	781588	1/2" x (532 = 216") (672 = 264") HOSE ASSY (7/8FJX)	1
46	781395	781589	3/4" x (532 = 216") (672 = 264") HOSE ASSY, (1-1/16FJX)	1
47	781396	781396	1/2' x 95" HOSE ASSY, (7/8FJX)	1
48	781397	781397	1/2" x 128"HOSE ASSY, (7/8FJX)	1
49	781500	781500	3/4" x 85" HOSE ASSY, (1-1/16FJX)	1
50	781502	781590	3/8" x (532 = 285") (672 = 333") HOSE ASSY, (1/2 MP * 9/16FJX)	1
51	781502	781590	3/8" x (532 = 285") (672 = 333") HOSE ASSY, (1/2MP * 9-16FJX)	1
52	781505	781505	3/8" x 42" HOSE ASSY, (9/16FJX)	1
53	781506	781506	3/8" X 55" HOSE ASSY, (9/16FJX)	1
55	781511	781511	1/2" x 19" HOSE ASSY, (7/8FJX)	1
63	781561	781561	1/2" x 170" HOSE ASSY (7/8FJX * 7/8FJX90)	1
64	781561	781561	1/2" x 170" HOSE ASSY, (7/8FJX * 7/8FJX90)	1
66	781563	781563	3/8" x 114" HOSE ASSY, (9/16FJX * 9/16FJX)	1
67	781564	781564	3/8" x 103" HOSE ASSY, (9/16FJX * 9/16FJX)	1

532-16 & 672-20 TRAILER MANIFOLD VALVE ASSY



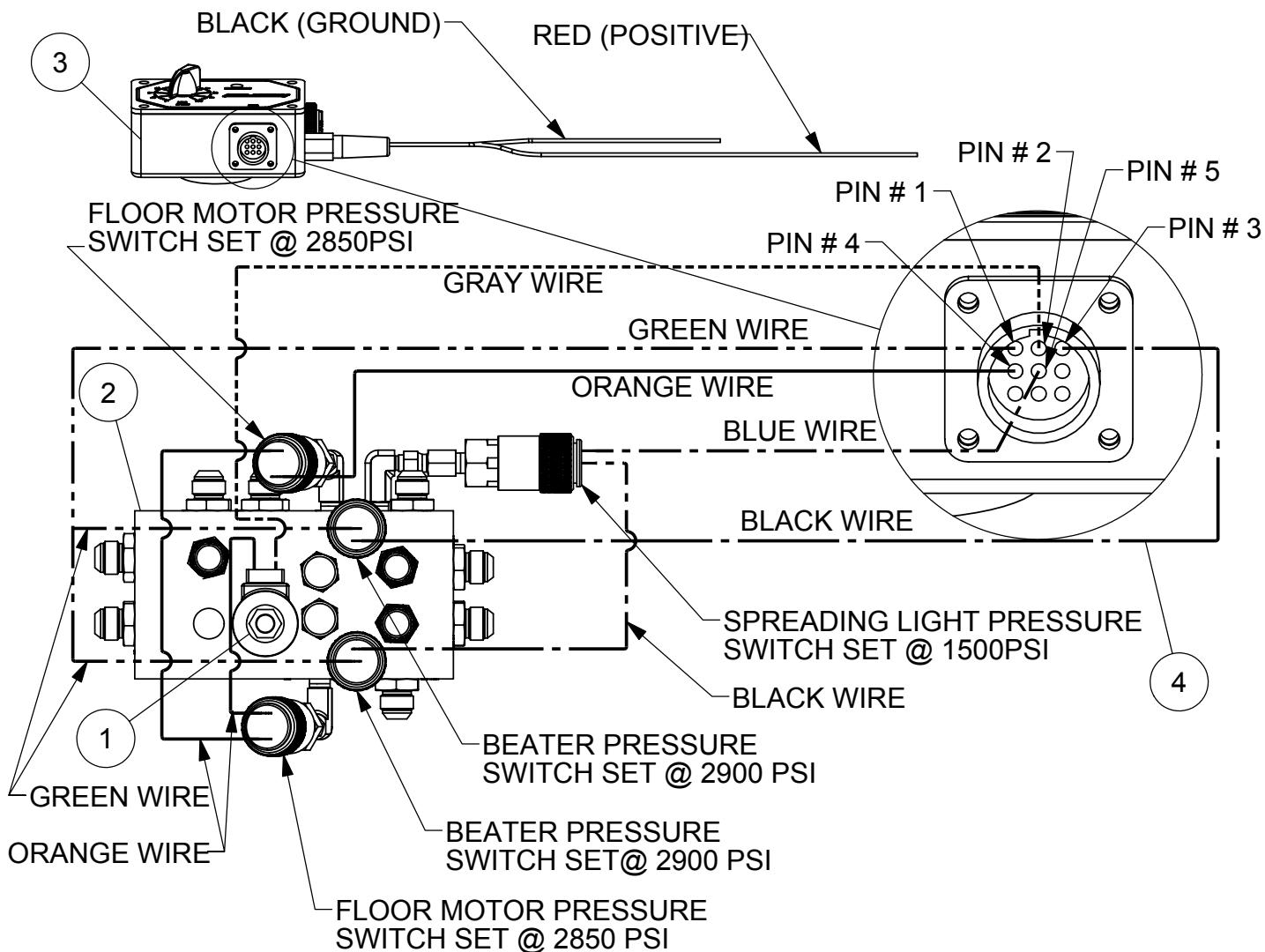
ITEM #	MODEL 532 PART #	MODEL 672 PART#	DESCRIPTION	QTY.
5	362356	362356	362/532/672 TRAILER MANIFOLD VALVE ASSY	1
28	368327	368327	BULKHEAD NUT, 7/8" JIC	6
29	368328	368328	STR ADPT, 7/8 JIC BULKHEAD FITTING	2
30	368329	368329	STR ADPT, 1-1/16 JIC BULKHEAD	1
31	368330	368330	BULKHEAD NUT, 1-1/16" JIC	3
44	781394	781588	1/2" x (532 = 216") (672 = 264") HOSE ASSY (7/8FJX)	1
45	781394	781588	1/2" x (532 = 216") (672 = 264") HOSE ASSY (7/8FJX)	1
46	781395	781589	3/4" x (532 = 216") (672 = 264") HOSE ASSY, (1-1/16FJX)	1
56	781555	781555	1/2" x 28" HOSE ASSY, (7/8FJX * 7/8 FJX90)	1
57	781555	781555	1/2" x 28" HOSE ASSY, (7/8FJX * 7/8FJX90)	1
58	781556	781556	3/4" x 46" HOSE ASSY, (1-1/16FJX)	1
59	781557	781557	1/2" x 12" HOSE ASSY, (7/8FJX90-L * 7/8FJX90-L)	1
60	781558	781558	1/2" X 9" HOSE ASSY, (7/8FJX * 7/8FJX90-L)	1
61	781559	781559	1/2 x 40 HOSE ASSY, (7/8FJX * 7/8FJX90)	1
62	781560	781560	1/2 x 42 HOSE ASSY, (7/8FJX * 7/8FJX90)	1
63	781561	781561	1/2" x 170" HOSE ASSY, (7/8FJX * 7/8FJX90)	1
64	781561	781561	1/2" x 170" HOSE ASSY (7/8FJX * 7/8FJX90)	1
65	781562	781562	1/2" x 21" HOSE ASSY, (7/8FJX * 3/4MP)	1

532-16 & 672-20 TRAILER MANIFOLD VALVE ASSEMBLY



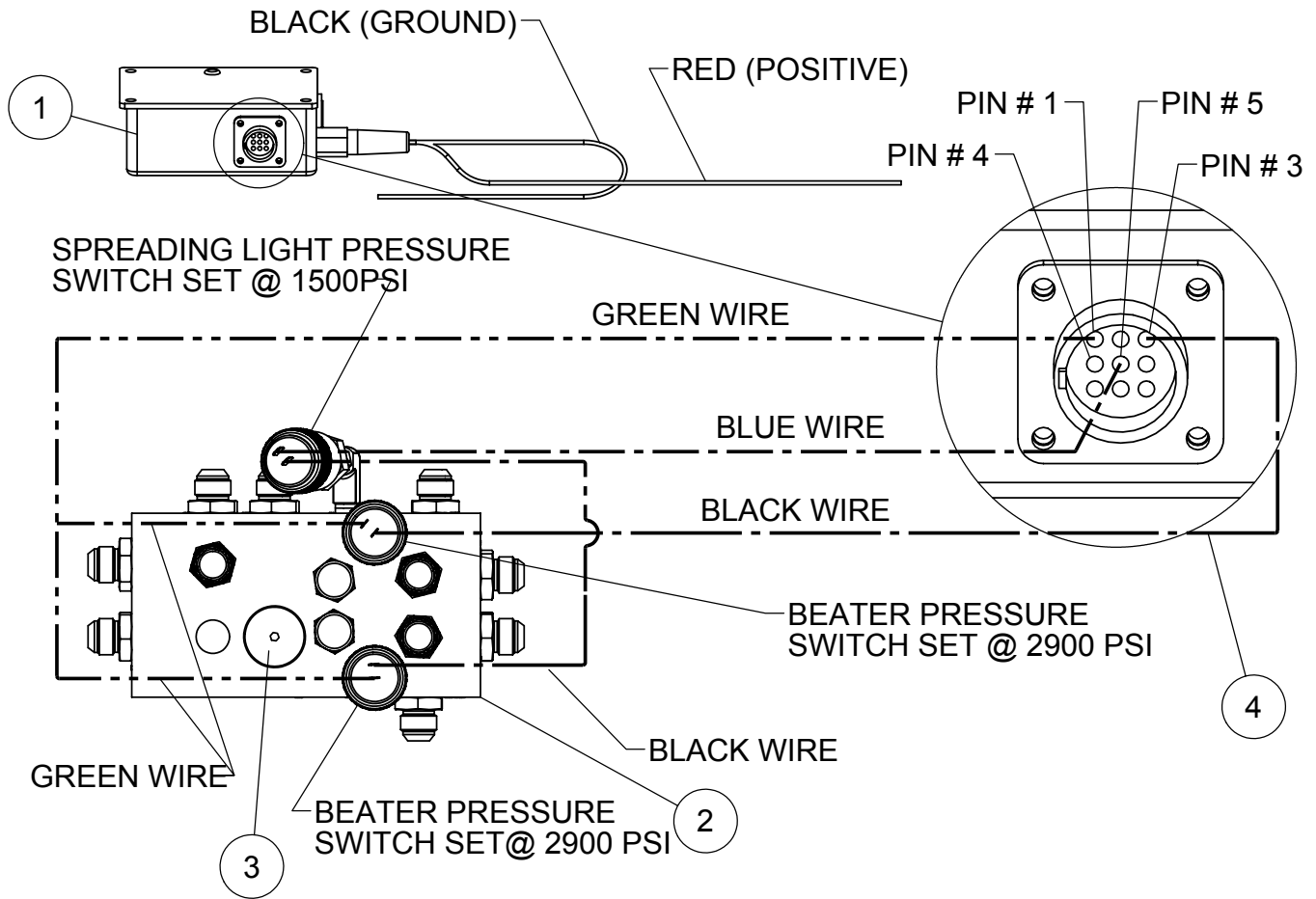
ITEM #	PART #	DESCRIPTION	QTY.
1	362356	SPREADER MANIFOLD VALVE ASSY	1
2	362293	SOLENOID VALVE, 4-WAY 3-POS	1
3	357725	PRESSURE SWITCH, NASON ADJUSTABLE (N/O)	3
4	357728	PRESSURE SWITCH, NASON ADJUSTABLE (N/C)	2
5	368014	90° ADPT, 1/4 MP x 7/16 JIC (LONG)	3
6	368630	ADAPTER, 1/4 NPT x 7/16 JIC SWIVEL	3
7	368104	ST. ADPT 1/4" MP x 1/4 FP" (STEEL)	2
8	362296	HYDAULIC FLOW CONTROL CARTRIDGE, MANUAL(OPTIONAL)	1

532-16 & 672-20 TRAILER WIRING SCHEMATIC WITH FOLW CONTROL



ITEM #	PART #	DESCRIPTION	QTY.
1	362297	HYD FLOW CONT. CARTRIDGE, (REMOTE)	1
2	362356	MANIFOLD VALVE ASSEMBLY LESS SWITCHES	1
3	357726	REMOTE FLOW CONTROL BOX W/POWER CABLE	1
4	358418	WIRE HARNESS, SPREADER REMOTE	1

532-16 & 672-20 TRAILER WIRING SCHEMATIC WITHOUT FLOW CONTROL



ITEM #	PART #	DESCRIPTION	QTY.
1	357727	CONTROL BOX W/POWER CABLE	1
2	362356	MANIFOLD VALVE ASSEMBL	1
3	362296	HYDAULIC FLOW CONTROL CARTRIDGE, (MANUAL)	1
4	358418	WIRING HARNESS, MANUAL REMOTE	1