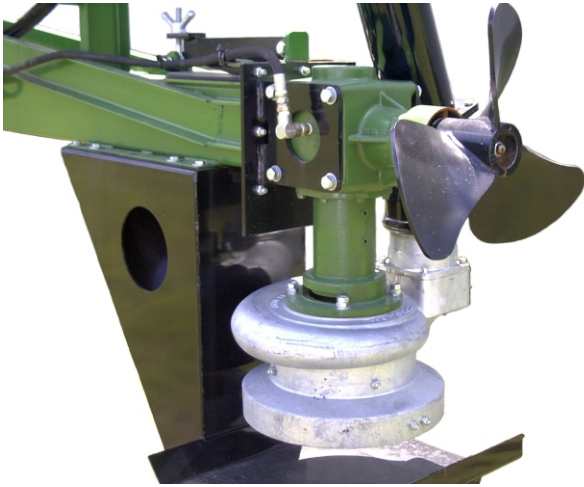


BALZER_{INC.}



MOUNTAIN LAKE

August, 2002



Vertical Lagoon Pumps



USER MANUAL FOR VERTICAL LAGOON PUMP



Vertical Lagoon Pump User's Manual

County Road 27 Box 458 Mountain Lake, MN 56159

Phone Number:

(800) 795-8551

(800) 727-3133

Main:

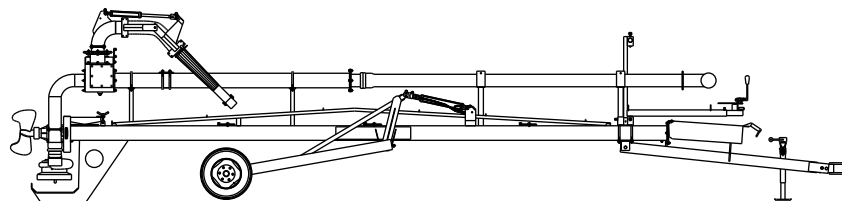
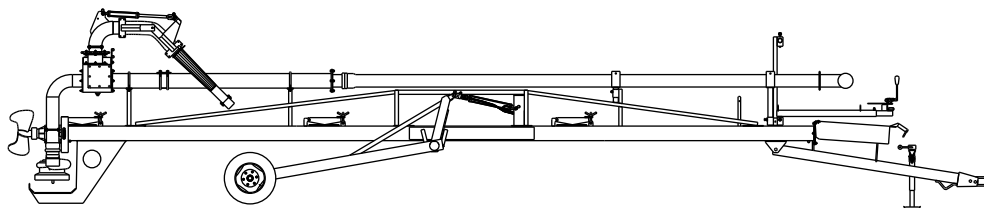
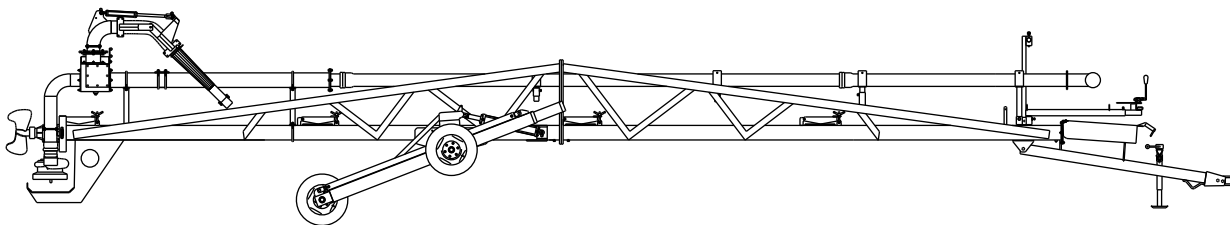
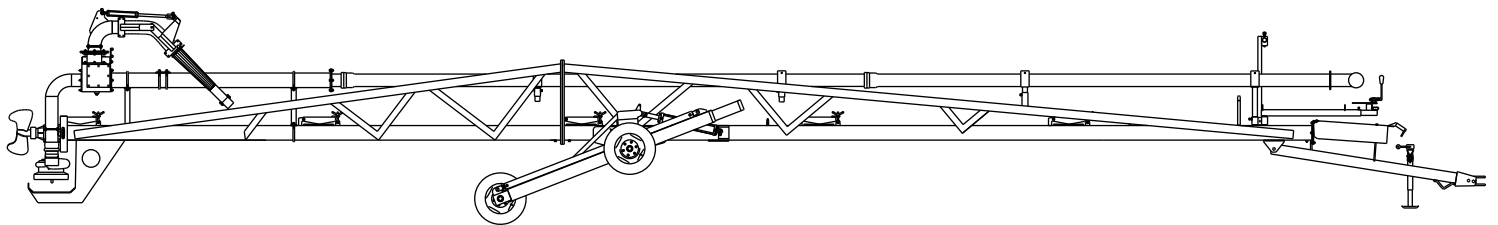
(507) 427-3133

Fax Number:

(507) 427-3640

Website:

<http://www.balzerinc.com>



Index



To The Purchaser	4
Warranty	5
Safety.	6-8
Parts.	9
Operation	10-11
Lagoon Pump Diagrams	
58 Foot Pump	12
48 Foot Pump	13
38 Foot Pump	14
32 Foot Pump	15
Super 150 Doda Pump Diagram 16	
Gearbox and Flange Lubrication	17
Lubrication and Maintenance	18
Greasing Instructions	
58 Foot Pump	19
48 Foot Pump	20
38 Foot Pump	21
32 Foot Pump	22
3-Way Valve Assembly	23
Gun Assembly	24
U-Joint Breakdown	25
Hub and Spindle Assembly	26
Hydraulic Controls Assembly	27
Remote Control Diagram	28
PTO Diagrams	29-31
Maintenance Records	32-33

To The Purchaser



This is the safety alert symbol. It is used to alert the operator to an instruction concerning the personal safety and risk factor of this equipment. Always observe and heed these very important instructions to promote a safe operation with good preventive maintenance habits.

This new Balzer Inc. product is designed and manufactured to give years of very dependable service when used for the purpose for which it is intended, and when properly maintained.

NEVER OPERATE THIS EQUIPMENT UNTIL USER FULLY UNDERSTANDS THE COMPLETE CONTENTS OF THIS MANUAL. FOR OWNERS WHO DO NOT OPERATE THIS EQUIPMENT, IT IS THE OWNER'S RESPONSIBILITY THAT THE USER IS PROPERLY INSTRUCTED AND IS FULLY AWARE OF THIS MANUAL'S CONTENTS.

This is important in the safe handling of this equipment and promoting an efficient operation. If there are any questions about areas in this manual, it is important to contact your dealer for clarification.

This machine is warranted as stated on the next page. A registration card is to be filled in by your dealer with your name and address, and promptly returned to the factory. The card provides a ready reference to help you in securing warranty and in answering questions that you may have at some later date.

Operating instructions and parts book are shipped with this machine. If parts of this book are missing or become unreadable, contact your dealer for a new set.

The serial number and identification tag is located to the front of the frame. Please refer to these numbers when parts or warranty communication is necessary.

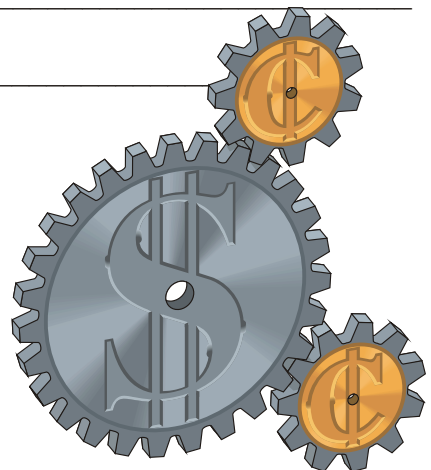
PLEASE FILL IN THE FOLLOWING INFORMATION FOR YOUR RECORDS:

Date of purchase _____

Owner's name _____

Dealer's name _____

Serial # Identification # _____



Warranty



WARRANTY MANUFACTURER

Dealer or Distributor understands and agrees that the Manufacturer extends only the following Warranty to customers. In the event Dealer or Distributor extends any additional warranty (such as by enlarging the scope or period of warranty or undertaking a warranty of merchantability or fitness for any particular purpose) or any other obligation whatsoever, Dealer or Distributor shall: (1) be solely responsible therefore (2) have no recourse against Manufacturer thereof and (3) defend, indemnify and hold Manufacturer harmless against any claim or cause of action whatsoever arising out of, or occasioned by, Dealer or Distributor's extension of said additional warranty or obligation.

CERTIFICATE OF GENERAL EQUIPMENT WARRANTY



Balzer Inc. warrants new Products sold by it to be free from defects in material or workmanship for a period of one (1) year after date of delivery to the first user and subject to the following conditions. Balzer Inc.'s obligation and liability under this Warranty is expressly limited to repairing or replacing at Balzer Inc.'s option, any parts which appear to Balzer Inc. upon inspection to have been defective in material or workmanship. Such parts shall be provided at no cost to user, at the business establishment of the authorized Balzer Inc. dealer or distributor of the Product during regular working hours. This Warranty shall not apply to component parts or accessories of Products not manufactured by Balzer Inc. and which carry the warranty of the manufacturer thereof, or to normal maintenance (such as tune-up) or normal maintenance parts (such as oil filters). Replacement or repair parts installed in this Product covered by this Warranty are warranted only for the remainder of this Warranty as if such parts were original components of said Product. **BALZER INC. MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, AND MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.**

Balzer Inc.'s obligation under this Warranty shall not include any transportation charges, cost of installation, duty taxes or any other charges whatsoever, or any liability for direct, indirect, incidental or consequential damage or delay. If requested by Balzer Inc. products or parts for which a warranty claim is made are to be returned transportation prepaid to Balzer Inc. Any improper use, including operation after discovery of defective or worn parts, operation beyond rated capacity, substitution or parts not approved by Balzer Inc. company or any alteration or repair by others in such manner as in Balzer Inc. company's judgment affects the Products materially and adversely, shall void this Warranty.

“NO EMPLOYEE OR REPRESENTATIVE IS AUTHORIZED TO CHANGE THIS WARRANTY IN ANY WAY OR GRANT ANY OTHER WARRANTY UNLESS SUCH CHANGE IS MADE IN WRITING AND SIGNED BY AN OFFICER OF BALZER INC. AT ITS HOME OFFICE.”

LIABILITY FOR DELAYS

No liability shall attach to Manufacturer direct, or indirect, incidental or consequential damages or expenses due to loss, damage, detention of delay in delivery of Products resulting from acts or delays beyond its control.

SAFETY SIGNS

SAFETY SIGNS ARE IMPORTANT

Safety signs or decals provide very important information and instructions designed to alert you to dangers and hazards that can be present during operation of this equipment. However, safety sign instructions must be read, understood and followed to be effective.

REPLACEMENT OF SAFETY SIGNS

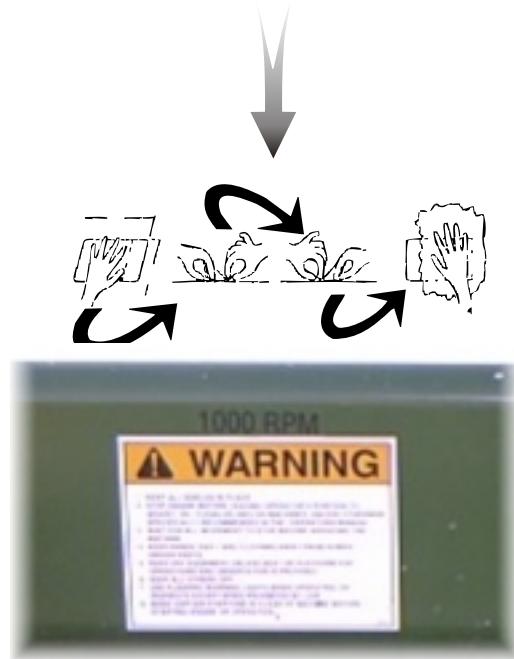
Safety signs or decals must be kept clean and readable. If they become unreadable for any reason, they must be replaced with an identical replacement decal. Safety decals must also be replaced if parts are repaired or replaced with new parts that do not already include the necessary safety decals.

APPLICATION OF SAFETY DECALS

Surface preparation is very important for safety decals to properly adhere. Grease, oil and dirt must be removed and the surface must be smooth and dry. Most decals have a split backing which is meant to be removed from the split outward. To apply the decals follow these procedures:

1. Position the decal in the proper location and hold firmly over the largest portion of backing.
2. Use one hand to hold the decal in position, with the other hand carefully roll the loose end over and peel the backing outward. When the backing is removed as described and shown (Fig. 1), with even and gradual pulling, the decal will roll onto the surface smooth and wrinkle free.
3. With the smallest portion of the decal attached, the same procedure can be applied to the other half.

4. When the decal has been attached in place, use a cloth or soft paper towel to burnish the decal onto the cleaned surface. Work gently from the middle outwards to avoid creating any wrinkles.



REPLACEMENT DECALS

Order replacement decals by part number through your nearest dealer. Part numbers are printed on each decal.





OBSERVE AND FOLLOW ALL SAFETY PROCEDURE TO PREVENT PERSONAL INJURY OR DAMAGE TO THE MACHINE

1. When agitating a pit always be sure there is adequate ventilation in the confinement area.
2. Never enter a pit unless it is absolutely necessary. If a unit must be entered, take proper safety precautions. These include someone at the site, outside the unit and with proper life support system. Contact your BALZER dealer for more information before you enter a tank.
3. Avoid excessive road speed.
4. Never operate this unit until user is familiar with all controls, and has read and understands operators manual.
5. Read and follow the instructions on all decals.
6. Never lubricate, adjust or repair unit while it is in operation. Power unit engine must be shut off and all movement stopped.
7. Never operate this unit with any guards or shields not in place. Replace any missing or damaged ones.
8. Keep hands and feet away from all moving parts.
9. Never wear loose clothing while working around moving parts.
10. Never leave unit running unattended.
11. Before loading make sure that the unit does not have any foreign objects or material in it that can cause equipment damage or personal injury.
12. Never allow anyone to ride on the unit at anytime.
13. Be sure the rear of the unit has a clean SMV emblem properly displayed if towing less than 25 MPH on any public roadway. At night proper warning and running lights are necessary as required by state law.
14. Always use a safety chain between the towing vehicle and pump on public roadways.
15. Hydraulic pressure can be very dangerous and can cause serious personal injury and death. Be sure to relieve all pressure before disconnecting hydraulic lines.
16. Hydraulic fluid escaping from a very small hole can be almost invisible. Use a piece of cardboard or wood, not your hands, to search for leaks.
17. If injured by escaping hydraulic fluid, seek medical attention immediately. Serious infection or reaction may develop.
18. Never assume that everybody is as safety conscious as you are.
19. Always use a hitch pin that has a safety clip pin.

Danger!



! DANGER

MOVING PARTS HAZARD

- Keep hands, clothing, and hair away from moving belts and parts.
- Replace guard before operating.

21730

! DANGER

STOP: WAIT FOR ALL MOVEMENT TO STOP BEFORE SERVICING OR OPENING OF SHIELDS.

LOOK: THE IGNITION KEY IS REMOVED.

LISTEN: FOR ALL MOVEMENT TO STOP, ROTATING PARTS CONTINUE TO ROTATE AFTER POWER IS SHUT OFF.

14175



**GUARD MISSING
DO NOT OPERATE**

! DANGER

Parts



IT IS THE POLICY OF BALZER COMPANY TO CONSTANTLY IMPROVE ITS PRODUCTS WHENEVER IT IS PRACTICAL TO DO SO. THEREFORE, BALZER COMPANY RESERVES THE RIGHT TO REDESIGN OR CHANGE ITS EQUIPMENT OR COMPONENT PARTS THEREOF WITHOUT INCURRING THE OBLIGATION TO INSTALL OR FURNISH SUCH CHANGES ON EQUIPMENT PREVIOUSLY DELIVERED.

INSTRUCTIONS FOR ORDERING PARTS

To enable our customer service department to provide you with the correct replacement parts promptly and accurately, follow the ordering instructions as listed below.

Identify your equipment by serial number whenever possible.

Use part numbers and descriptions from the illustration drawings furnished to assist in identifying the needed parts.

Owners, order all parts through your local dealer.

Dealers must indicate company name, shipping point and mailing address for notification if different from shipping point. State whether freight, express, parcel or other handling is desired.

Send all parts to:

BALZER INC.

County Road 27 Box 458

Mountain Lake, MN 56159



INSTRUCTIONS FOR RETURNING PARTS FOR ADJUSTMENT

Dealers should inspect all parts when received. Shortages or damage should be noted by the carrier agent at the time the parts are accepted. Shippers responsibility ceases upon delivery of shipment to customer in good order. Claims for damage, loss, or malfunction are to be reported within thirty (30) days for warranty considerations.

All returned parts must have return authorization, a copy of the original packing list and transportation prepaid.

For replacement parts contact:

Ken Classen	Extension 104
Doug Wellman	Extension 108

For service contact Dave Bennet at Extension 134 or at his mobile number: (612) 839-9968



Operation



OPERATING & MAINTENANCE

Site-Preparation:

Location of the pump is generally determined by the location of the intake and discharge of the material to be pumped. Improper site conditions can adversely affect the operation and maintenance of your pump.

The area around the pump should be kept clear and as level as possible to make the pumping of the material as convenient as possible.

Pre-Operation Check List:

Before placing your pump into the pumping area, you should perform a check of the following items:

1. Inspect for missing or loose bolts.
2. Check all lubrication areas.
3. Check the universal joints in the PTO.
4. Check the condition of all hydraulic hoses and fittings, replace those that are damaged.
5. Check the agitation nozzles movement.
6. Check the condition of the impeller and housing for objects that might obstruct rotation.

Pump Set-Up:

Position the pump in the working area as required, then convert from a tow-able unit to a working unit.

Connect the PTO shaft and all hydraulic lines to the tractor. Check all lines and connectors, tighten all loose fittings.

With the tractor's throttle at idle, check the pump rotation by engaging the control lever. Remember which direction the control lever was moved to produce proper impeller rotation. If it is necessary to purge the hydraulic lines of air, cycling of the cylinders several times will clear the lines.

Next, position the pump into the area of the pit that has the most liquid. Direct the gun nozzle towards the pump to set up a flowing motion of the slurry.

Operating Procedures:

Operation of the pump begins by slowly increasing the PTO rpm's up to the designated rate.

Agitate until the area around the pump becomes liquid, then readjust the gun nozzle to spray the liquid over the top crust to saturate until it breaks into chunks and either sinks to the bottom or floats towards the pump and becomes liquid thru the agitation process. Agitation is complete when there are no solids floating and density of slurry is consistent.

Reduce the PTO speed to idle, position the tanker for filling, and connect to the pump. Slowly increase the PTO speed to 60% of rating for filling the tanker. When tanker is full reduce PTO speed and close filler valve. Disconnect pump from tanker.

When operation of the pump is complete, remove from the pit area and wash complete to insure that all product is removed from the unit, especially

Operation



OPERATING AND MAINTENANCE CONTINUED...

around the hydraulics portion of the pump. A light coating of oil is recommended to protect against corrosion.

Transporting:

When moving the lagoon pump, the hydraulic lines and PTO shaft that are connected to the tractor should be disconnected and placed in the transport position to avoid damage that could occur during transportation of the pump.

Lubrication:

The operation and lifetime of the components of this pump are dependant on regular and proper lubrication. The frequency of lubrication will depend on conditions of use. Severe or unusual conditions may determine actual service needs.

Replace any broken or missing grease fittings and always clean the fittings before greasing.

Additional lubrication is as follows:

- Grease PTO every 8 hours of running time
- Change gearbox oil every season, Spring & Fall, to prevent contamination
- Other areas to be lubricated daily

Note: A small amount of moisture in the gearbox is common due to condensation when the warm gearbox is cooled. If this occurs, change the gearbox oil and continue to inspect it frequently. Regular changing of grease will minimize chance for total failure and the need for repairs.

IMPORTANT - When not operating the pump, (overnight or during periods of inactivity exceeding one hour), remove or raise the pump out of the lagoon in order to prevent the internal gearbox from water contamination.

Also, grease wheel bearings after removing the pump from the lagoon, this will displace any moisture that has leaked into the hub. This should extend the life of the wheel bearings considerably.

Remote Control System Option:

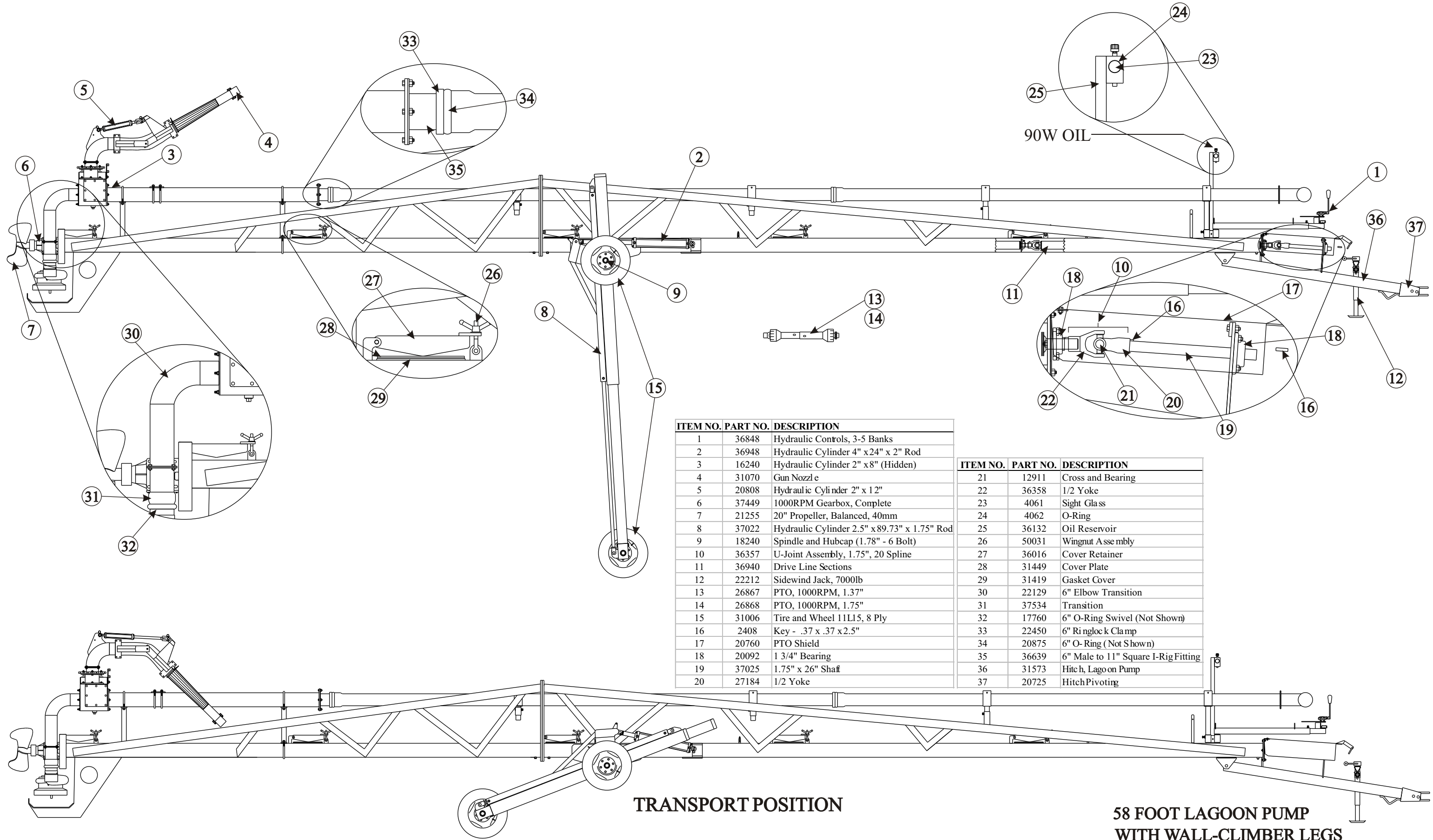
If your lagoon pump is equipped with a wireless remote control, this system simply replaces the usual manual control that normally comes with the valve.

The range of the system is greatly dependant on the location and positioning of the receiver box. Under ideal conditions, the range of the system will be 100 ft. - 150ft. When there is a clear path between the transmitter and receiver. The transmitter operates on a 9 volt battery. When the battery is weak, the range will become shorter and the unit will become erratic.

The wireless system uses a digitally coded signal to reduce the possibility of some other signal from causing false operation. If there is a radio transmitter operating in close proximity to the receiver, it may block your signal.

This unit operates on a 12 volt system only. Disconnect the battery connection when not in use to prevent draining power from the battery.

58 FOOT LAGOON PUMP WITH WALL-CLIMBER LEGS



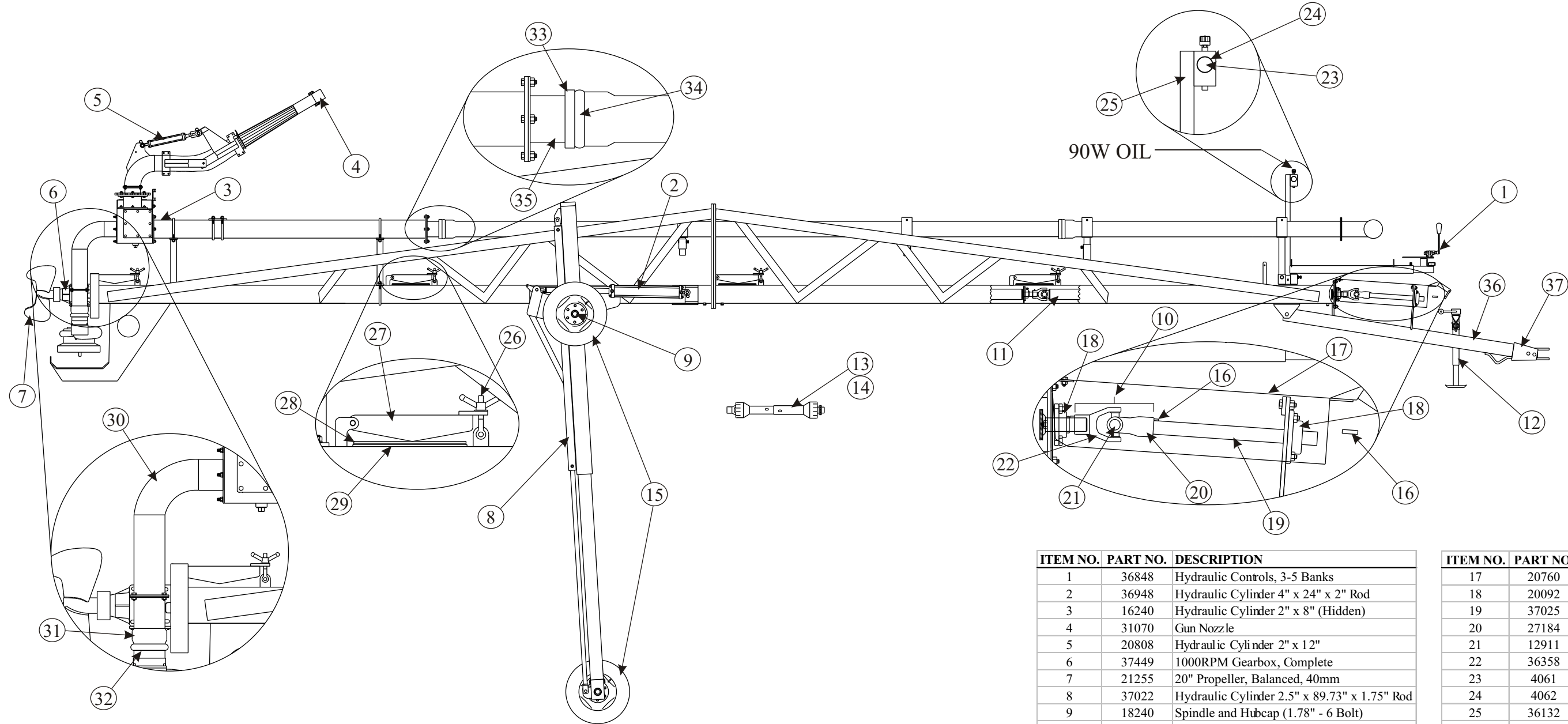
ITEM NO.	PART NO.	DESCRIPTION
1	36848	Hydraulic Controls, 3-5 Banks
2	36948	Hydraulic Cylinder 4" x 24" x 2" Rod
3	16240	Hydraulic Cylinder 2" x 8" (Hidden)
4	31070	Gun Nozzle
5	20808	Hydraulic Cylinder 2" x 12"
6	37449	1000RPM Gearbox, Complete
7	21255	20" Propeller, Balanced, 40mm
8	37022	Hydraulic Cylinder 2.5" x 89.73" x 1.75" Rod
9	18240	Spindle and Hubcap (1.78" - 6 Bolt)
10	36357	U-Joint Assembly, 1.75", 20 Spline
11	36940	Drive Line Sections
12	22212	Sidewind Jack, 7000lb
13	26867	PTO, 1000RPM, 1.37"
14	26868	PTO, 1000RPM, 1.75"
15	31006	Tire and Wheel 11L15, 8 Ply
16	2408	Key - .37 x .37 x 2.5"
17	20760	PTO Shield
18	20092	1 3/4" Bearing
19	37025	1.75" x 26" Shaft
20	27184	1/2 Yoke

ITEM NO.	PART NO.	DESCRIPTION
21	12911	Cross and Bearing
22	36358	1/2 Yoke
23	4061	Sight Glass
24	4062	O-Ring
25	36132	Oil Reservoir
26	50031	Wingnut Assembly
27	36016	Cover Retainer
28	31449	Cover Plate
29	31419	Gasket Cover
30	22129	6" Elbow Transition
31	37534	Transition
32	17760	6" O-Ring Swivel (Not Shown)
33	22450	6" Ringlock Clamp
34	20875	6" O-Ring (Not Shown)
35	36639	6" Male to 11" Square I-Rig Fitting
36	31573	Hitch, Lagoon Pump
37	20725	Hitch Pivoting

TRANSPORT POSITION

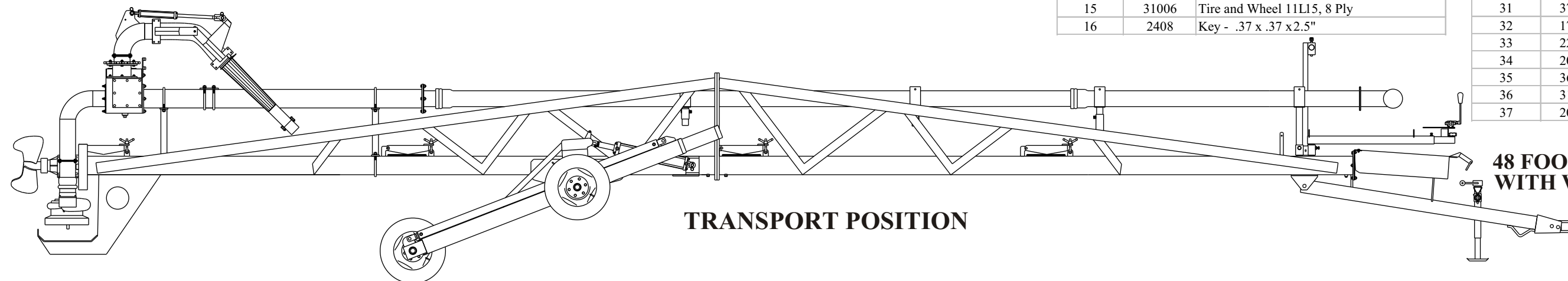
58 FOOT LAGOON PUMP WITH WALL-CLIMBER LEGS

48 FOOT LAGOON PUMP WITH WALL-CLIMBER LEGS



ITEM NO.	PART NO.	DESCRIPTION
1	36848	Hydraulic Controls, 3-5 Banks
2	36948	Hydraulic Cylinder 4" x 24" x 2" Rod
3	16240	Hydraulic Cylinder 2" x 8" (Hidden)
4	31070	Gun Nozzle
5	20808	Hydraulic Cylinder 2" x 12"
6	37449	1000RPM Gearbox, Complete
7	21255	20" Propeller, Balanced, 40mm
8	37022	Hydraulic Cylinder 2.5" x 89.73" x 1.75" Rod
9	18240	Spindle and Hubcap (1.78" - 6 Bolt)
10	36357	U-Joint Assembly, 1.75", 20 Spline
11	36940	Drive Line Sections
12	22212	Sidewind Jack, 7000lb
13	26867	PTO, 1000RPM, 1.37"
14	26868	PTO, 1000RPM, 1.75"
15	31006	Tire and Wheel 11L15, 8 Ply
16	2408	Key - .37 x .37 x 2.5"

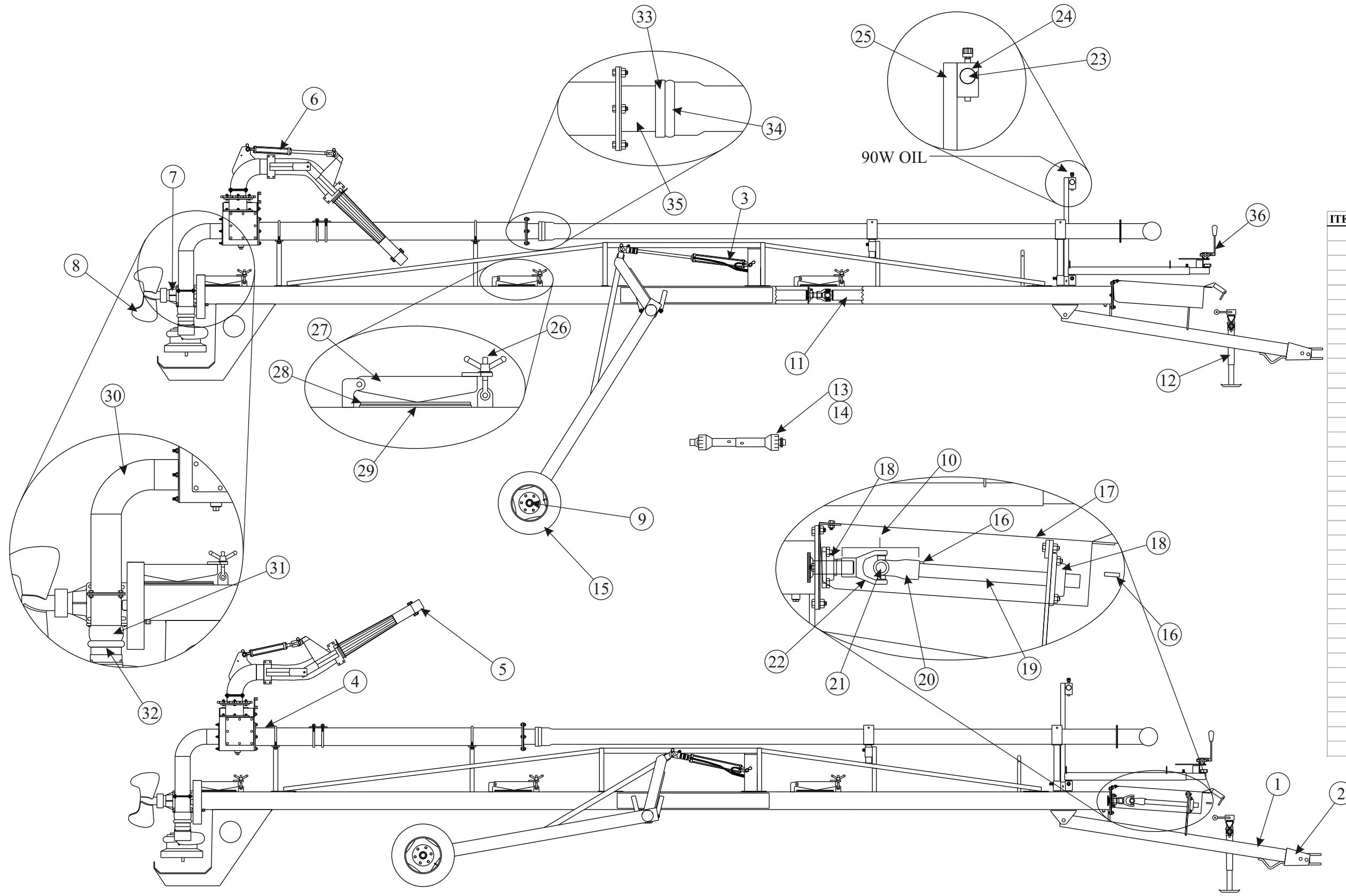
ITEM NO.	PART NO.	DESCRIPTION
17	20760	PTO Shield
18	20092	1 3/4" Bearing
19	37025	1.75" x 26" Shaft
20	27184	1/2 Yoke
21	12911	Cross and Bearing
22	36358	1/2 Yoke
23	4061	Sight Glass
24	4062	O-Ring
25	36132	Oil Reservoir
26	50031	Wingnut Assembly
27	36016	Cover Retainer
28	31449	Cover Plate
29	31419	Gasket Cover
30	22129	6" Elbow Transition
31	37534	Transition
32	17760	6" O-Ring Swivel (Not Shown)
33	22450	6" Ringlock Clamp
34	20875	6" O-Ring (Not Shown)
35	36639	6" Male to 11" Square I-Rig Fitting
36	31573	Hitch, Lagoon Pump
37	20725	Hitch Pivoting



TRANSPORT POSITION

48 FOOT LAGOON PUMP WITH WALL-CLIMBER LEGS

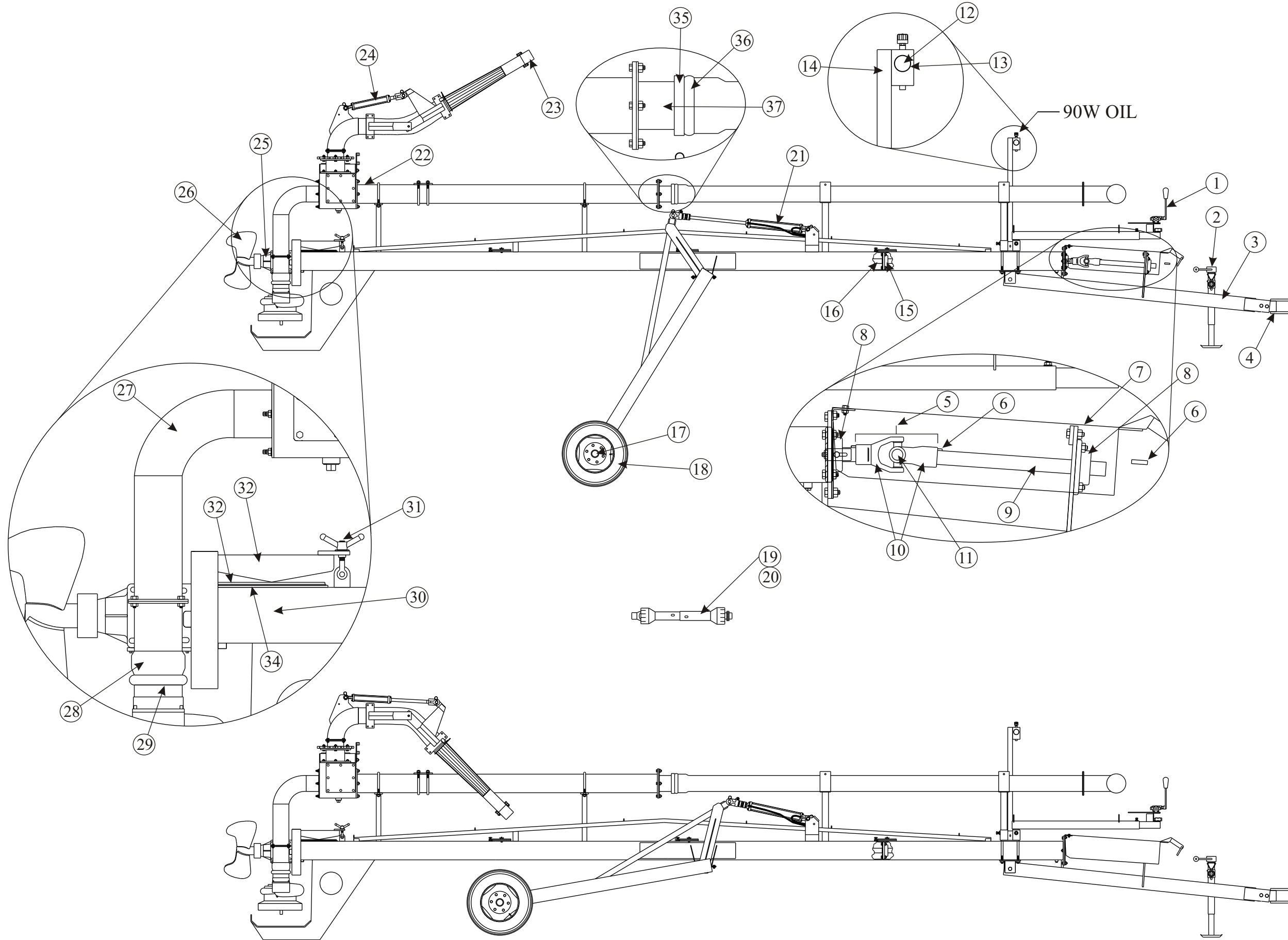
38 FOOT LAGOON PUMP



ITEM NO.	PART NO.	DESCRIPTION
1	31573	Hitch, Lagoon Pump
2	20725	Hitch Pivoting
3	36130	Hydraulic Cylinder 3.5" x 18" x 1.5" Rod
4	16240	Hydraulic Cylinder 2" x 8" (Hidden)
5	31070	Gun Nozzle
6	20808	Hydraulic Cylinder 2" x 12"
7	37449	1000RPM Gearbox, Complete
8	21255	20" Propeller, Balanced, 40mm
9	18240	Spindle and Hubcap (1.78" - 6 Bolt)
10	36357	U-Joint Assembly, 1.75", 20 Spline
11	36940	Drive Line Sections
12	22212	Sidewind Jack, 7000lb
13	26867	PTO, 1000RPM, 1.37"
14	26868	PTO, 1000RPM, 1.75"
15	31006	Tire and Wheel 11L15, 8 Ply
16	2408	Key - .37 x .37 x 2.5"
17	20760	PTO Shield
18	20092	1 3/4" Bearing
19	37025	1.75" x 26" Shaft
20	27184	1/2 Yoke
21	12911	Cross and Bearing
22	36358	1/2 Yoke
23	4061	Sight Glass
24	4062	O-Ring
25	36132	Oil Reservoir
26	50031	Wingnut Assembly
27	36016	Cover Retainer
28	31449	Cover Plate
29	31419	Gasket Cover
30	22129	6" Elbow Transition
31	37534	Transition
32	17760	6" O-Ring Swivel (Not Shown)
33	22450	6" Ringlock Clamp
34	20875	6" O-Ring (Not Shown)
35	36639	6" Male to 11" Square I-Rig Fitting
36	36848	Hydraulic Controls, 3-5 Banks

38 FOOT LAGOON PUMP

32 FOOT LAGOON PUMP

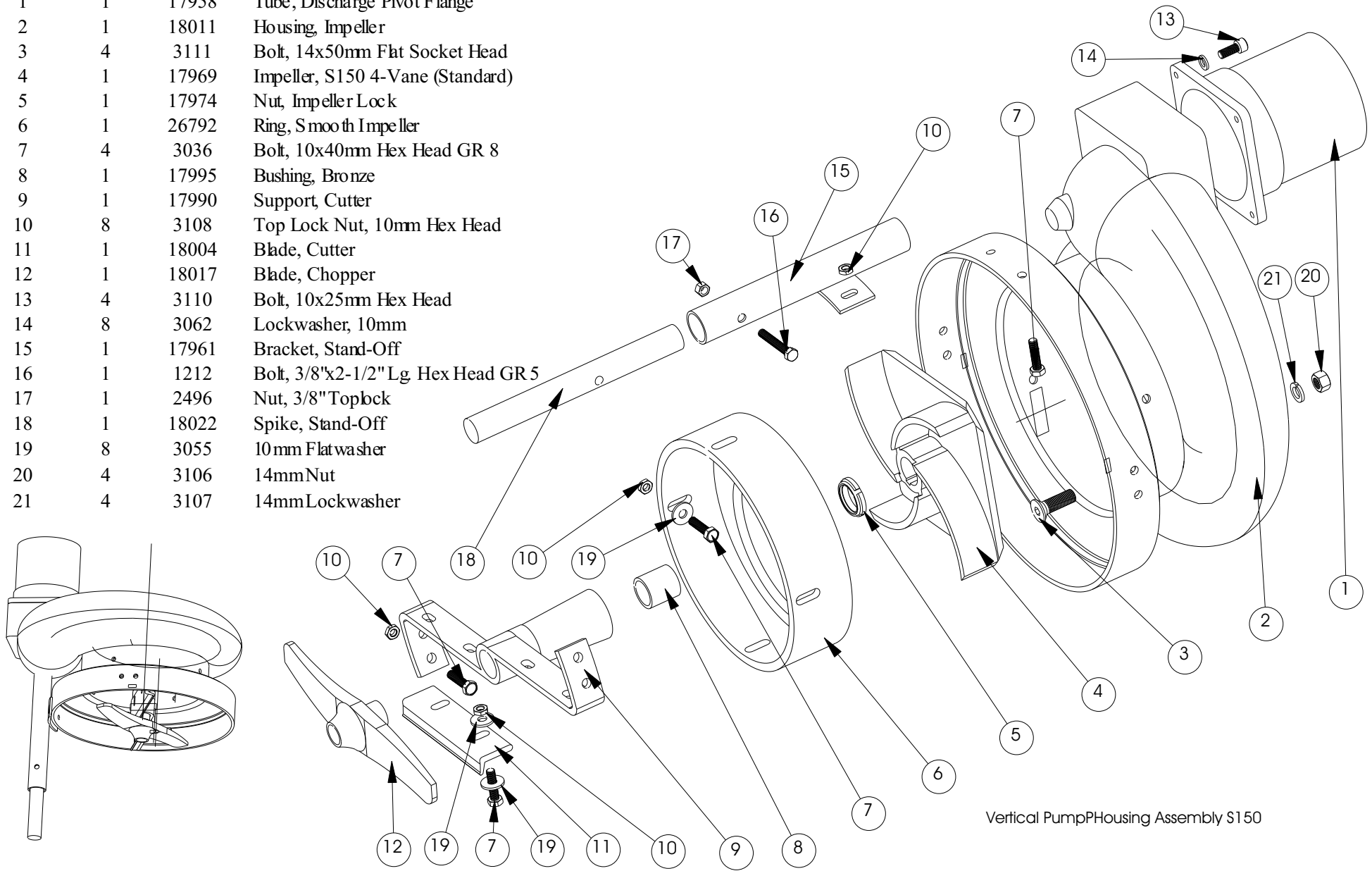


ITEM NO.	PART NO.	DESCRIPTION
1	36848	Hydraulic Controls, 3-5 Banks
2	22212	Sidewind Jack, 7000lb
3	20737	Hitch, 32' Lagoon Pump
4	20725	Hitch Pivoting
5	22766	U-Joint Assembly, 1.75" Round
6	2408	Key - .37 x .37 x 2.5"
7	20760	PTO Shield
8	20092	1.75" Bearing
9	37025	1.75" x 26" Shaft
10	27184	1/2 Yoke
11	12911	Cross and Bearing
12	4061	Sight Glass
13	4062	O-Ring
14	36132	Oil Reservoir
15	20092	1.75" Bearings (4)
16	22761	1.75" x 284" Shaft
17	18240	Spindle and Hubcap (1.78" - 6 Bolt)
18	31006	Tire and Wheel 11L15, 8 Ply
19	26867	PTO, 1000RPM, 1.37"
20	26868	PTO, 1000RPM, 1.75"
21	36130	Hydraulic Cylinder 3.5" x 18" x 1.5" Rod
22	16240	Hydraulic Cylinder 2" x 8" (Hidden)
23	31070	Gun Nozzle
24	20808	Hydraulic Cylinder 2" x 12"
25	37449	1000RPM Gearbox, Complete
26	21255	20" Propeller, Balanced, 40mm
27	22129	6" Elbow Transition
28	37534	Transition
29	17760	6" O-Ring Swivel (Not Shown)
30	22767	U-Joint Assembly, 1.75" with Shear Yoke
31	50031	Wingnut Assembly
32	36016	Cover Retainer
33	31449	Cover Plate
34	31419	Gasket Cover
35	22450	6" Ringlock Clamp
36	20875	6" O-Ring (Not Shown)
37	36639	6" Male to 11" Square I-Rig Fitting

32 FOOT LAGOON PUMP

VERTICAL PUMP HOUSING ASSEMBLY S150

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	17958	Tube, Discharge Pivot Flange
2	1	18011	Housing, Impeller
3	4	3111	Bolt, 14x50mm Flat Socket Head
4	1	17969	Impeller, S150 4-Vane (Standard)
5	1	17974	Nut, Impeller Lock
6	1	26792	Ring, Smooth Impeller
7	4	3036	Bolt, 10x40mm Hex Head GR 8
8	1	17995	Bushing, Bronze
9	1	17990	Support, Cutter
10	8	3108	Top Lock Nut, 10mm Hex Head
11	1	18004	Blade, Cutter
12	1	18017	Blade, Chopper
13	4	3110	Bolt, 10x25mm Hex Head
14	8	3062	Lockwasher, 10mm
15	1	17961	Bracket, Stand-Off
16	1	1212	Bolt, 3/8"x2-1/2" Lg Hex Head GR 5
17	1	2496	Nut, 3/8" Toplock
18	1	18022	Spike, Stand-Off
19	8	3055	10mm Flatwasher
20	4	3106	14mm Nut
21	4	3107	14mm Lockwasher



Vertical Pump Housing Assembly S150

Lubrication & Maintenance



All Maintenance shall be carried out by a competent operator after disconnecting the PTO from the tractor.

An adequate lubrication and the use of suitable lubricants are both essential for the long life and correct operation of the machine. Keep oil level visible in the sight glass. (Use 90W oil)

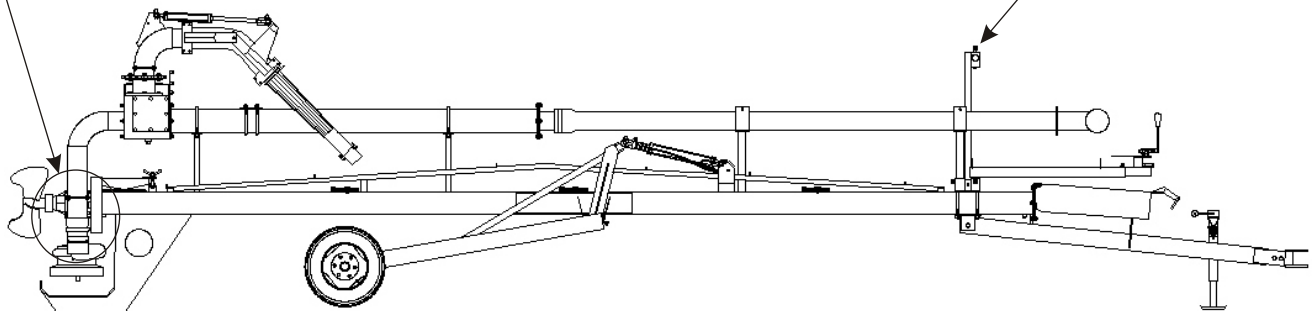
Make sure all screws and bolts have been tightened, and the bolts are in the correct position after the first 4 hours of operation and regularly there after.

Maker sure all safety guards and devices are in place and working.

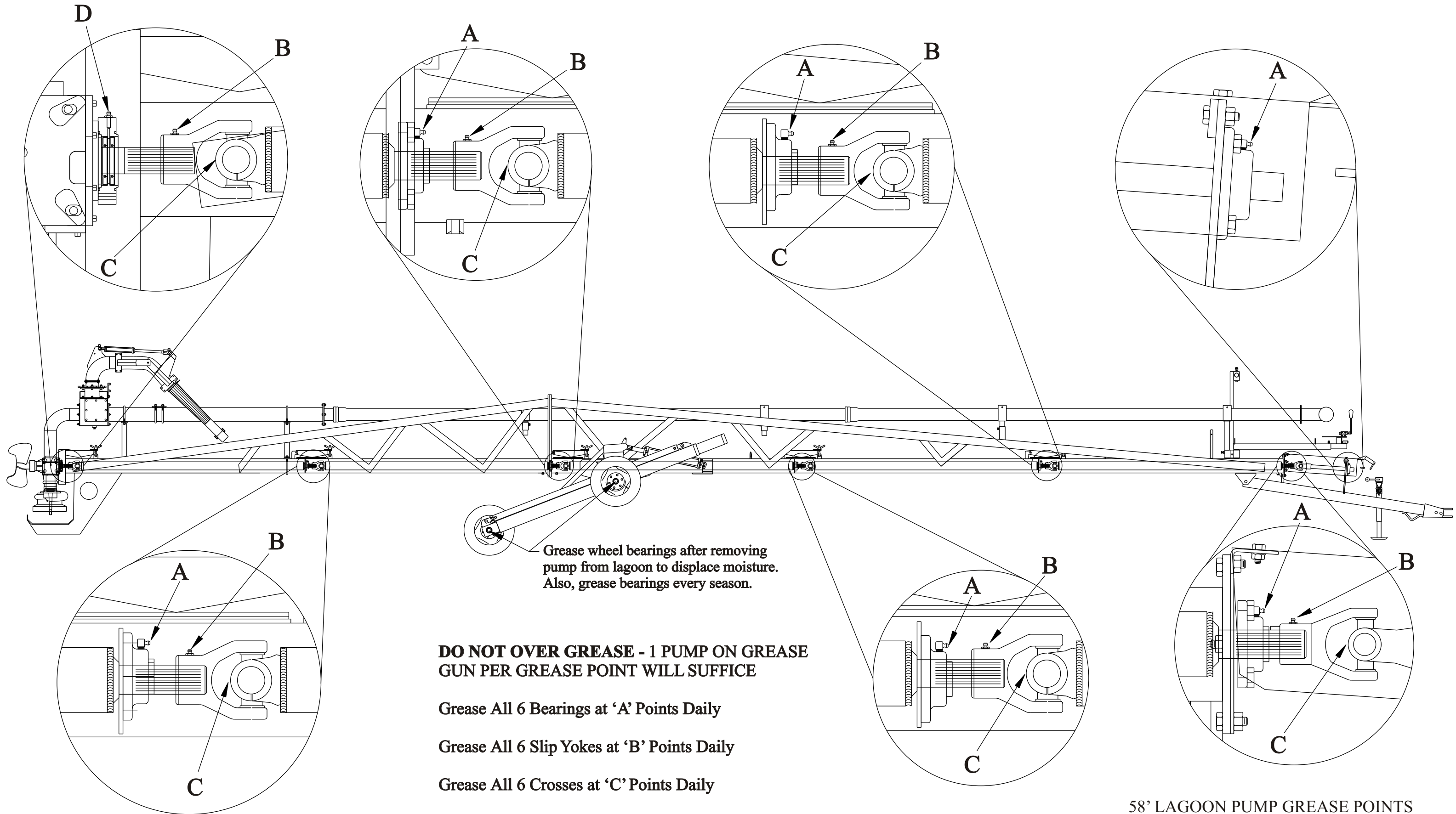
Check the distance of the two halves of the PTO (they shall overlap at least 1/3 their length). This shall be checked every time you change tractor. Grease PTO & end bearings regularly.

90W gearbox oil should be changed in Spring and Fall. In addition, oil must be inspected regularly for moisture contamination.

Commercial operators should change gearbox oil more frequently.



58 FOOT LAGOON PUMP GREASE POINTS



Grease wheel bearings after removing pump from lagoon to displace moisture. Also, grease bearings every season.

DO NOT OVER GREASE - 1 PUMP ON GREASE GUN PER GREASE POINT WILL SUFFICE

Grease All 6 Bearings at 'A' Points Daily

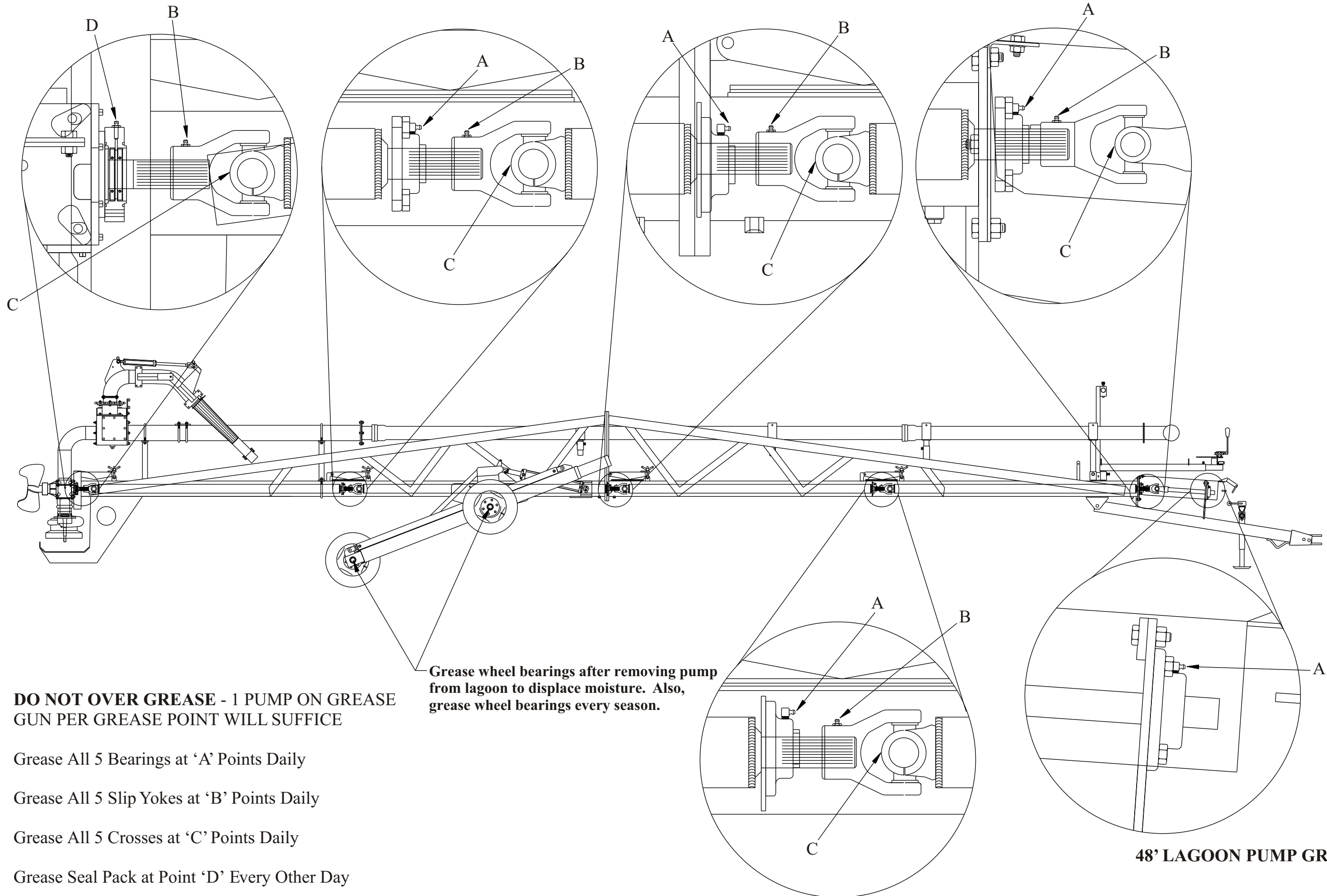
Grease All 6 Slip Yokes at 'B' Points Daily

Grease All 6 Crosses at 'C' Points Daily

Grease Seal Pack at Point 'D' Every Other Day

58' LAGOON PUMP GREASE POINTS

48 FOOT LAGOON PUMP GREASE POINTS



DO NOT OVER GREASE - 1 PUMP ON GREASE GUN PER GREASE POINT WILL SUFFICE

Grease All 5 Bearings at 'A' Points Daily

Grease All 5 Slip Yokes at 'B' Points Daily

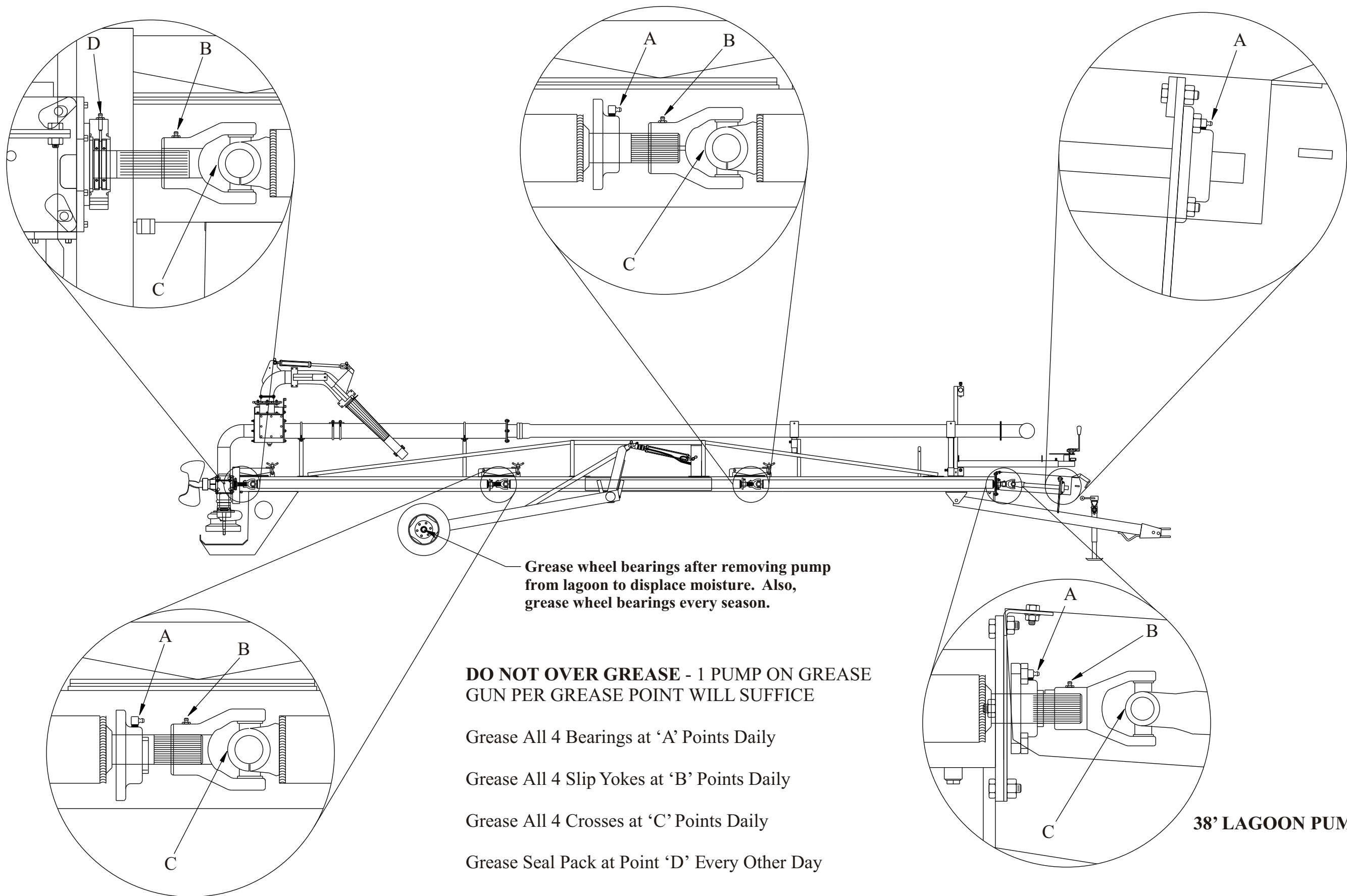
Grease All 5 Crosses at 'C' Points Daily

Grease Seal Pack at Point 'D' Every Other Day

Grease wheel bearings after removing pump from lagoon to displace moisture. Also, grease wheel bearings every season.

48' LAGOON PUMP GREASE POINTS

38 FOOT LAGOON PUMP GREASE POINTS



Grease wheel bearings after removing pump from lagoon to displace moisture. Also, grease wheel bearings every season.

DO NOT OVER GREASE - 1 PUMP ON GREASE GUN PER GREASE POINT WILL SUFFICE

Grease All 4 Bearings at 'A' Points Daily

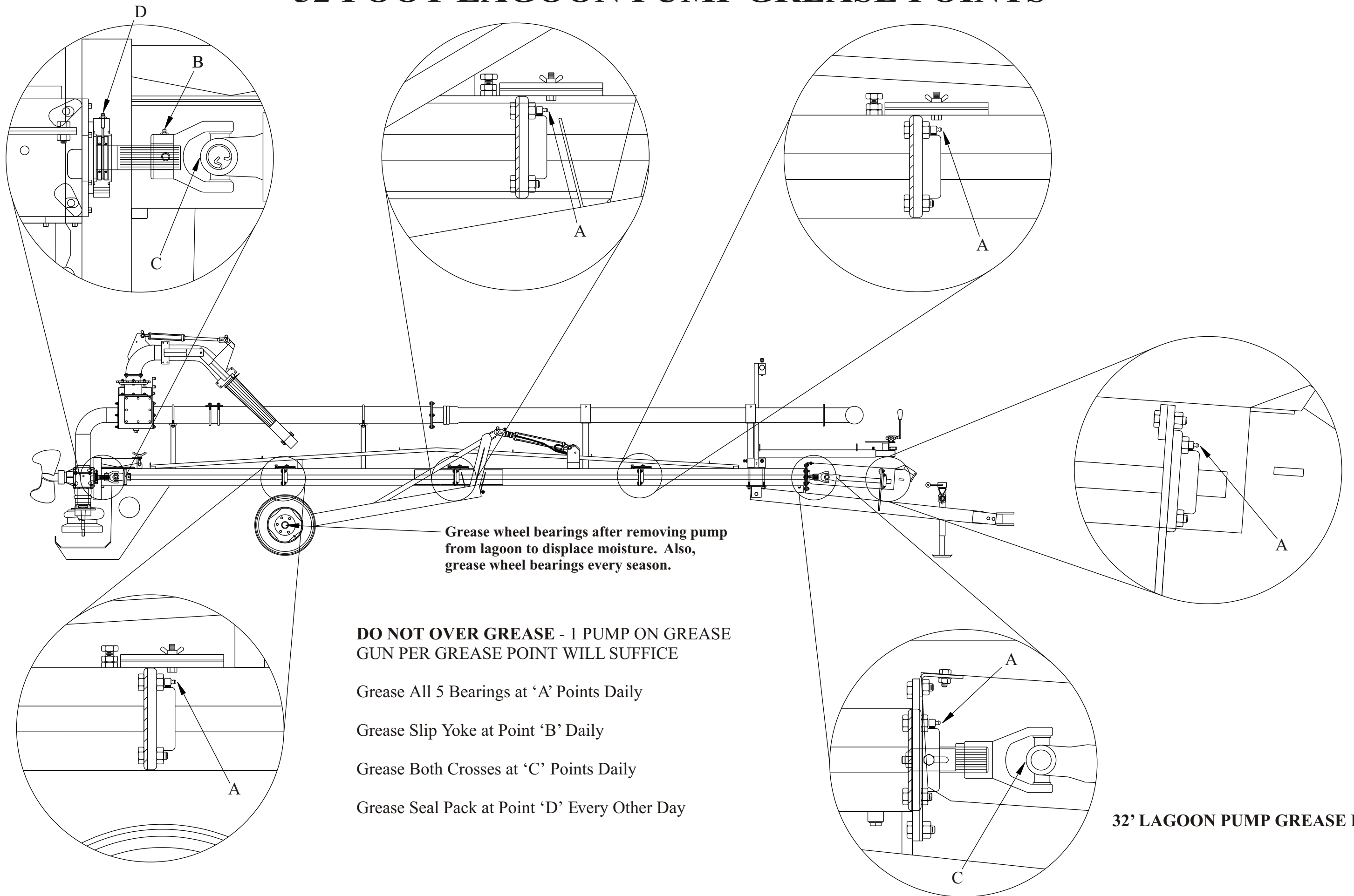
Grease All 4 Slip Yokes at 'B' Points Daily

Grease All 4 Crosses at 'C' Points Daily

Grease Seal Pack at Point 'D' Every Other Day

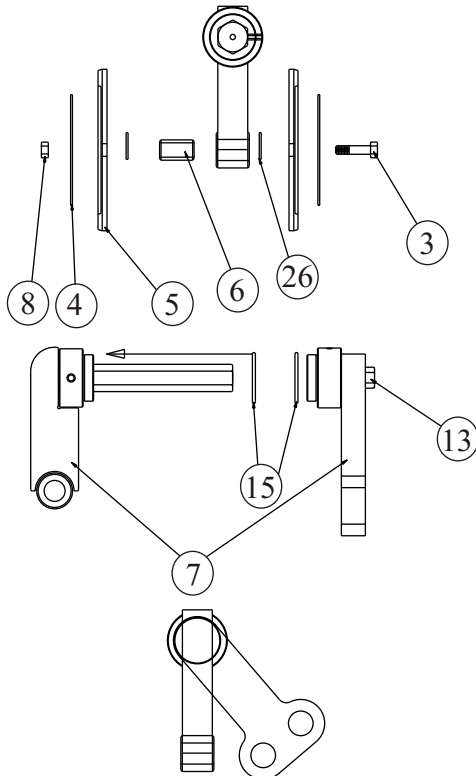
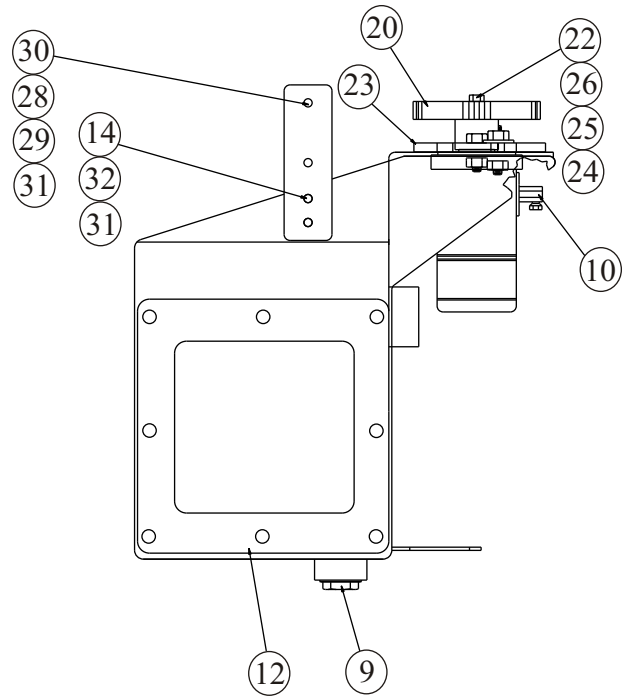
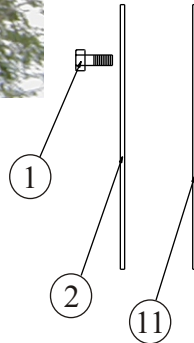
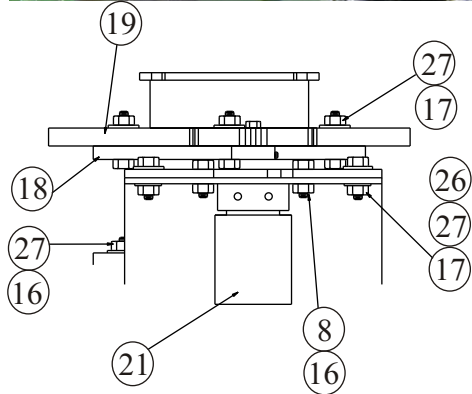
38' LAGOON PUMP GREASE POINTS

32 FOOT LAGOON PUMP GREASE POINTS



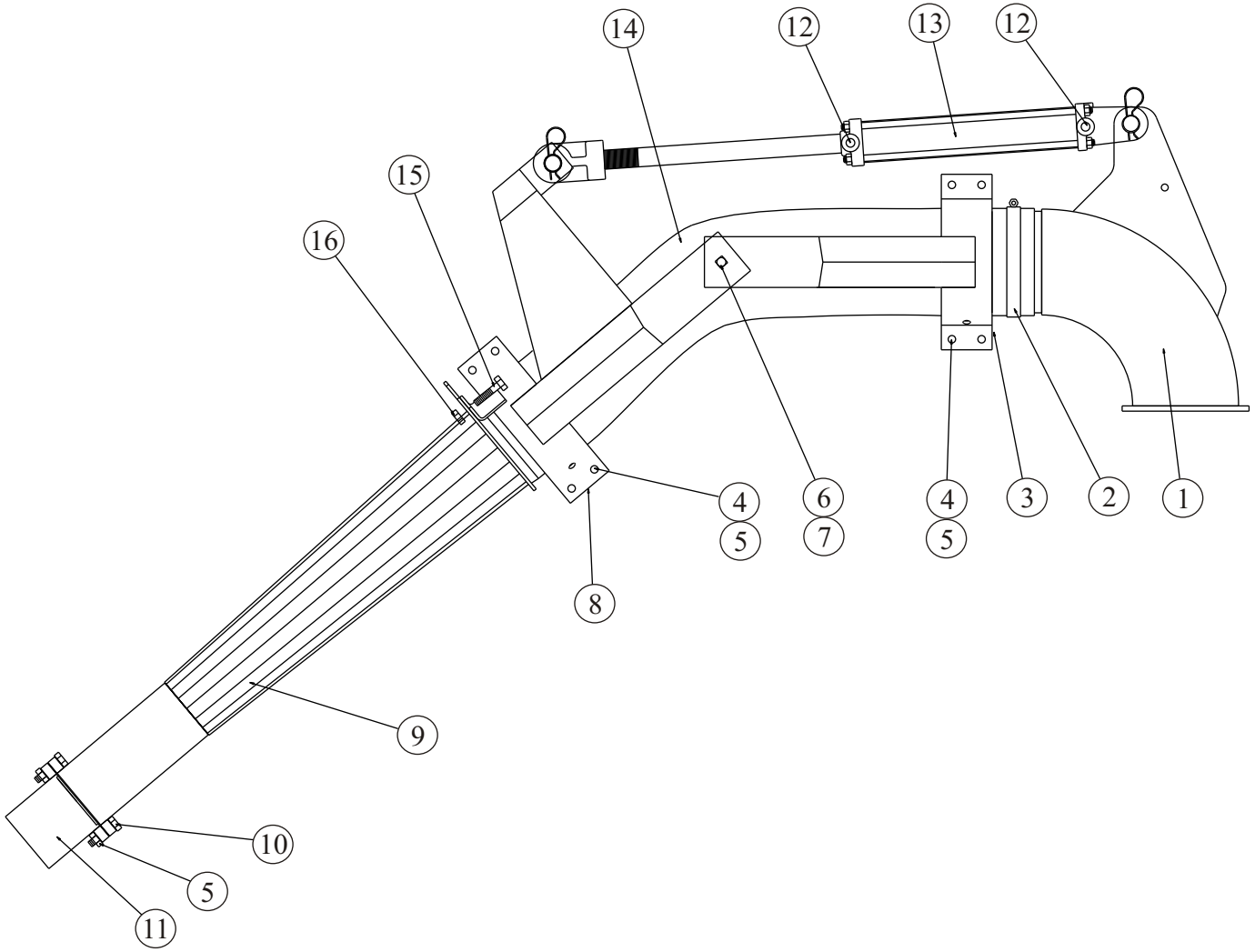
32' LAGOON PUMP GREASE POINTS

3 - WAY VALVE ASSEMBLY



ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	8	1249	.5" x 1.25" Hex Head Bolt
2	1	20699	Cover - 7" Square Flnge
3	1	1255	.5" x 2.75" Hex Head Bolt
4	2	21479	.53" x 4.62" x .075" Washer
5	2	4114	6.75" Clapper Valve
6	1	21023	.5" x 1.44" Bushing
7	1	36070	1.25" Clapper Pivot Linkage
8	3	2539	.5" Top Lock Nut
9	1	11685	1.5" Pipe Plug
10	2	31756	Elbow Orb .88 - 14 x .25FPS
11	1	36012	Gasket .03"/ 11" Square Flange
12	1	31581	6" Clapper Valve with Back Mount
13	REF	18911	.31" x 1.88" Stainless Steel Bolt
14	1	31632	.25" x 2" x 6.5" Flat Plate with Holes
15	2	21253	O' Ring, 2" In Däm, 2.25" Out Däm
16	8	1250	.5" x 1.5" Hex Head Bolt
17	8	1252	.5" x 2" Hex Head Bolt
18	1	22149	6" O' Swivel
19	1	22125	Gear Gun Swivel Large
20	1	22126	Gear Gun Swivel Small
21	1	31757	Hydraulic Gear Motor
22	1	1164	.25" x 1" Hex Head Bolt
23	1	15781	Hydraulic Gear Motor Mount
24	1	1634	.25" Lock Washer
25	1	1596	.25" Flat Washer
26	3	36938	.5" Belleville Spring Washer
27	14	2084	.5" W/iz Nut
28	2	1189	.31" x 2" Hex Head Bolt
29	2	1597	.31" Flat Washer
30	2	15742	.25" Hose Holder (Double - 2 pieces)
31	6	2081	.31" W/iz Nut
32	2	1185	.31" x 1" Hex Head Bolt

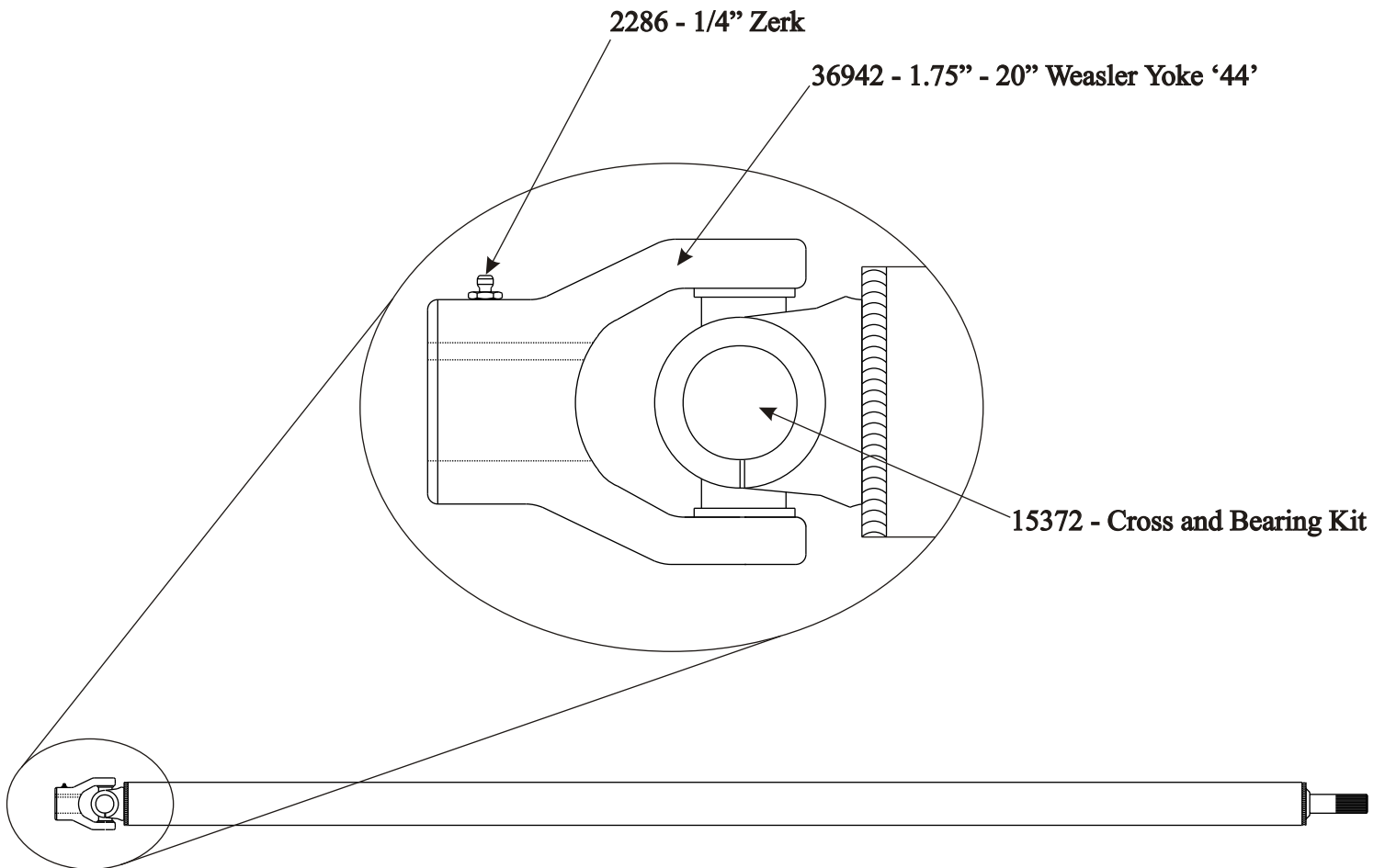
GUN ASSEMBLY



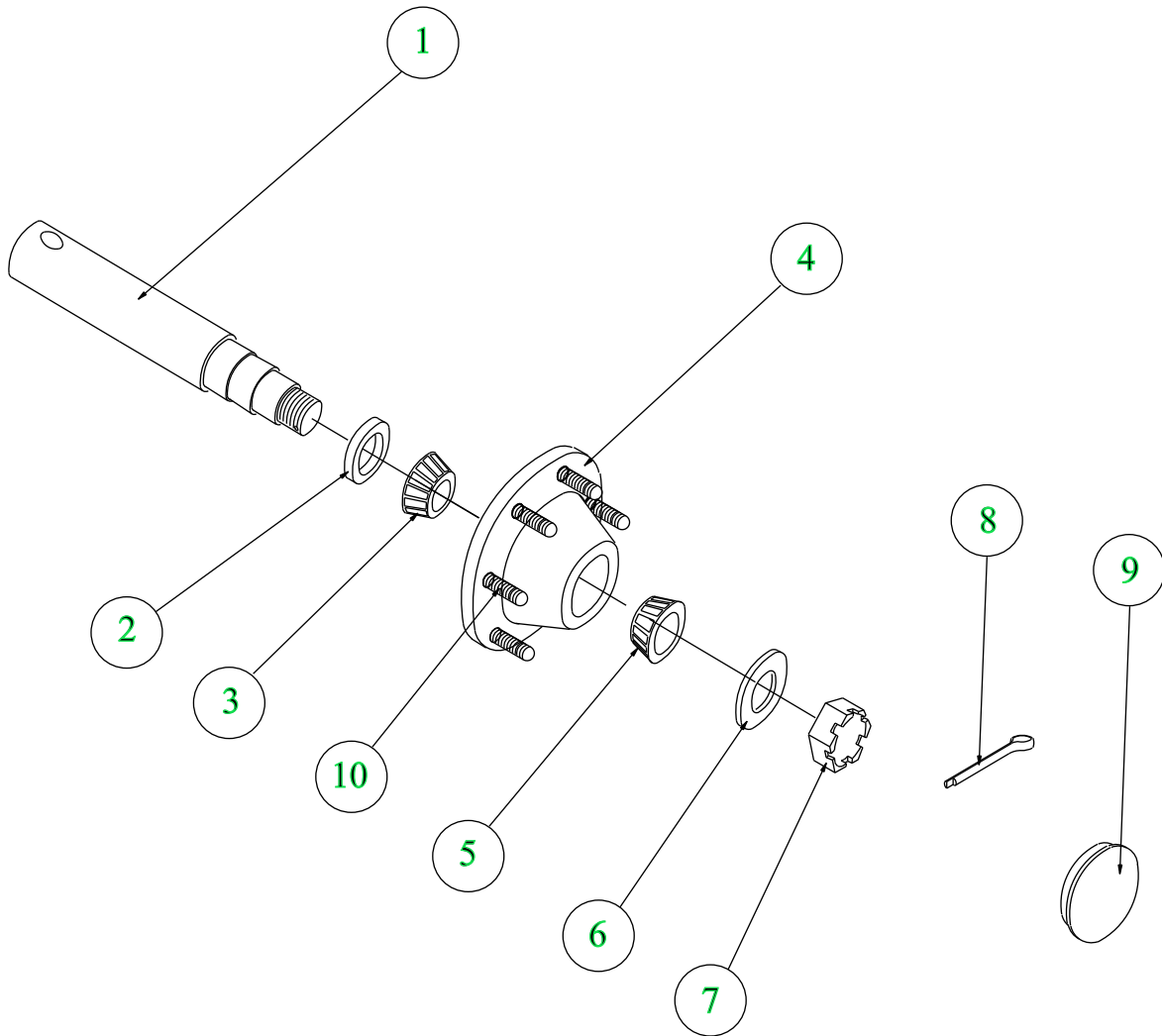
ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	36128	Elbow, 4Bolt - 6" Barb with Lug
2	1	16585	Hose Clamp 6.4" T-Bolt
3	2	20621	Gun Pivot Bracket
4	12	1208	Bolt, 3/8"x1.5" Hex Head
5	14	2496	Nut, 3/8" Top Lock
6	2	2539	Nut, 1/2" Top Lock
7	2	1093	Bolt Carriage 1/2"x1" Lg.
8	1	20622	Gun Pivot Bracket with Cylinder Lug
9	1	36001	Nozzle-6", Hosebarb-3.5"
10	2	1209	Bolt, 3/8"x1.75" Hex Head
11	1	31070	Nozzle 3.5"x3"
12	2	21171	Elbow 3/8"MP-1/4"FPS
13	1	20808	Hydraulic Cylinder 2"x12" Stroke
14	1	20623	Hose 6"x35" LG
15	1	1185	Bolt .31"x1.0" Hex Head
16	1	2081	Nut .31" WizLock



U-JOINT BREAKDOWN



HUB AND SPINDLE ASSEMBLY



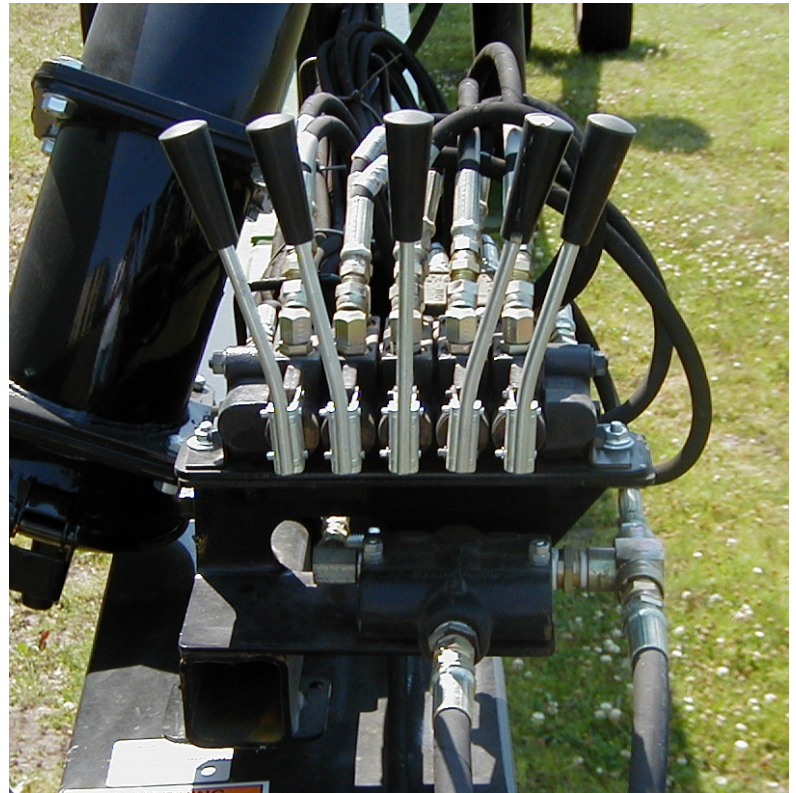
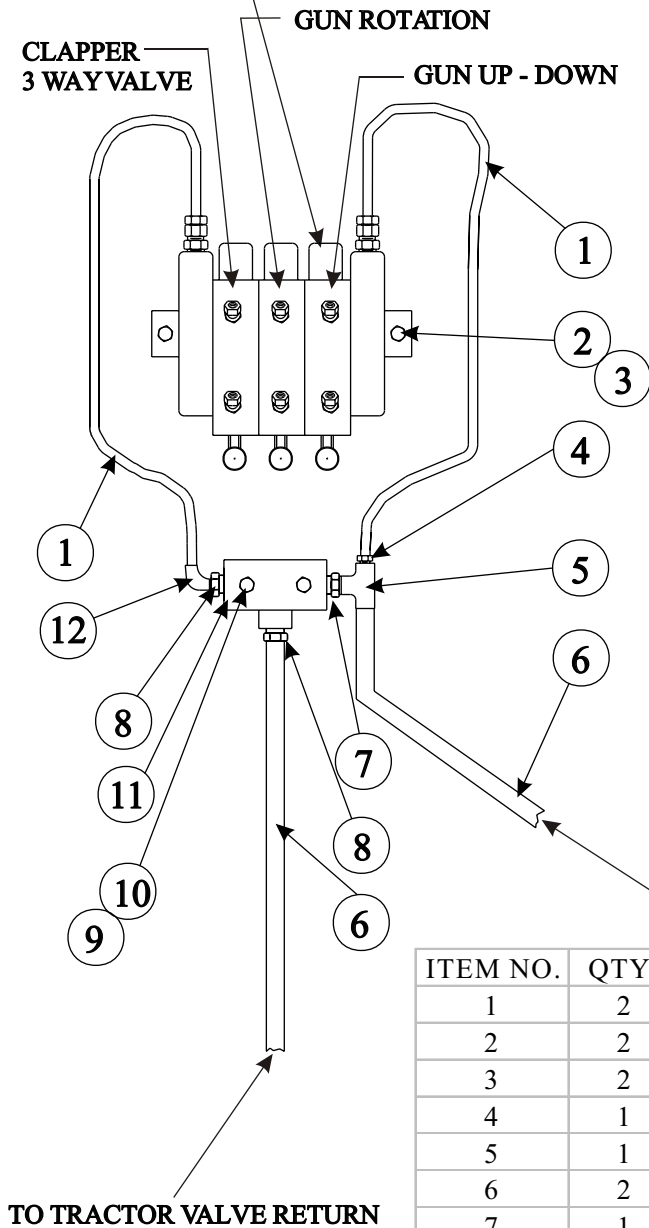
ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	18241	1.75" Removable Spindle
2	1	6572	Seal Wheel
3	1	6573	Inner Bearing Cone
4	1	12440	6 Bolt Hub Assembly
5	1	6665	Outter Bearing Cone
6	1	6672	1" Narrow Flatwasher
7	1	1754	1" Castle-Hex Nut
8	1	2045	0.15" x 1.5" Cotter Pin
9	1	6666	Hub Cap
10	6	50700	Stud Bolt
11	1	6574	Bearing Cup Inner (Not Shown)
12	1	6663	Bearing Cup Outer (Not Shown)
13	6	2603	Wheelnut (Not Shown)
14	1	18240	Hub and Spindle Assembly

HYDRAULIC CONTROLS

#21228-POWER CORD

#20803-VALVE, HYDRAULIC, '2' MANUAL, '1' REMOTE (OPT #20611)

#21011-VALVE HYDRAULIC '3' BANK MANUAL (OPT #20810)

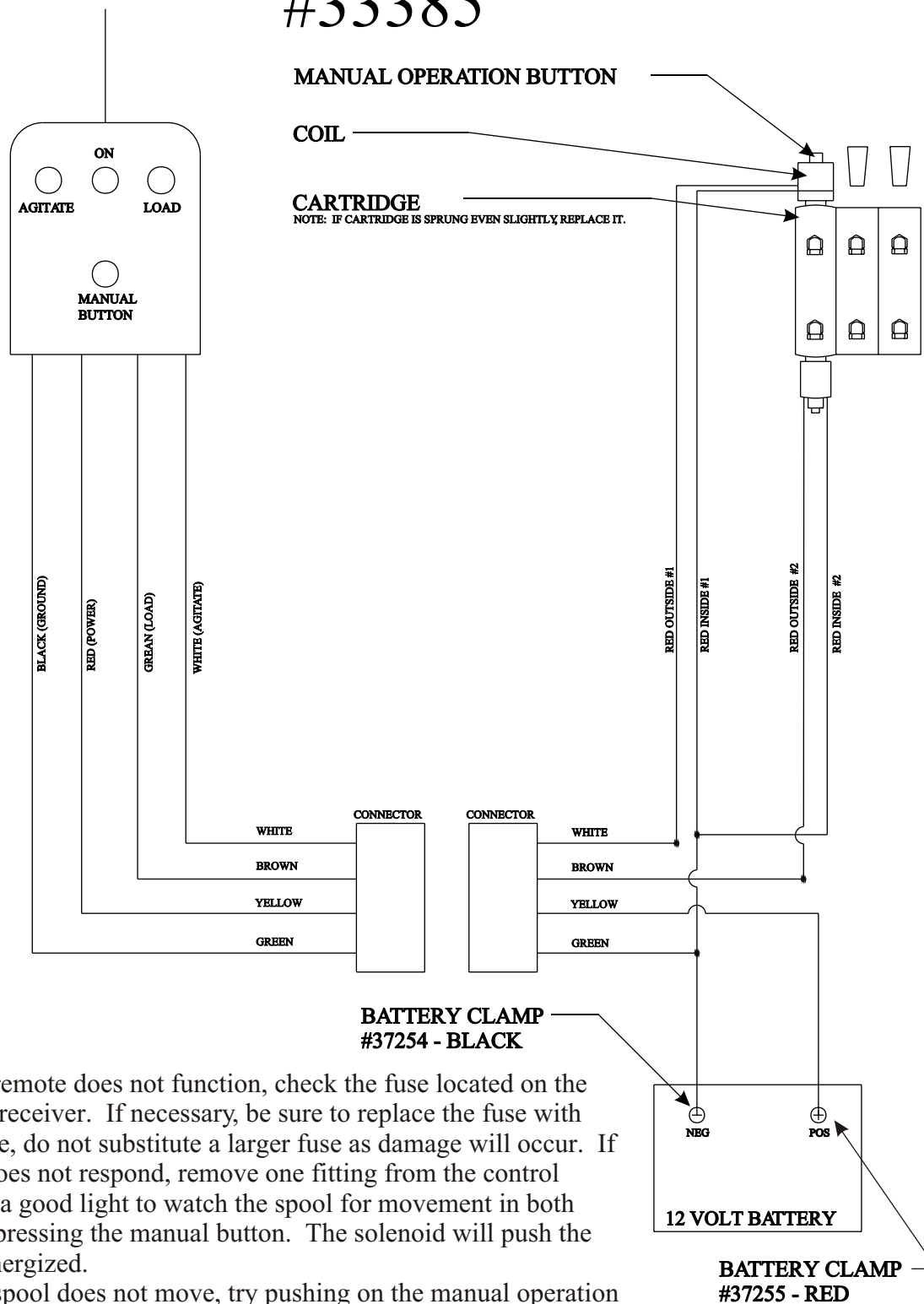


TO TRACTOR VALVE - PRESSURE

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	2	11156	HOSE, 1/4" NPT X 15" LG.
2	2	1185	BOLT, 5/16" X 1" LG.
3	2	2081	NUT, 5/16" WHIZLOCK
4	1	12190	REDUCER, 1/2" - 1/4" NPT HEX
5	1	8603	TEE, 1/2" FEMALE NPT
6	2	11305	HOSE, 1/2" X 119" LG. HYDRAULIC
7	1	21502	REDUCER, PIPE 3/4" MALE - 1/2" MALE
8	2	8622	REDUCER, 3/4" - 1/2" NPT HEX HP
9	2	2564	NUT, 1/4" TOPLOCK
10	2	1169	BOLT, 1/4" X 2-1/4" LG.
11	1	21674	CONTROL, BRAND 4 GPM FLOW
12	3	21201	ELBOW, 90' 1/2" NPT - 1/4" FEMALE SWIVEL
13	3 to 5	50081	HANDLE KIT (SHOWN IN PICTURE)

REMOTE WIRING DIAGRAM (ONE TOUCH SYSTEM)

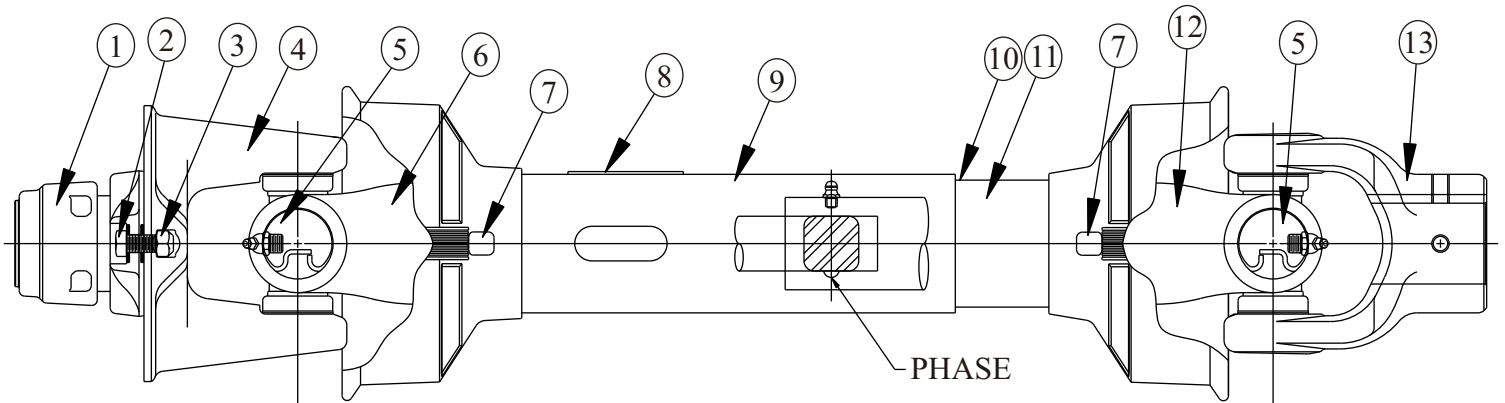
#33385



If the remote does not function, check the fuse located on the bottom of the receiver. If necessary, be sure to replace the fuse with the correct size, do not substitute a larger fuse as damage will occur. If the cylinder does not respond, remove one fitting from the control valve and use a good light to watch the spool for movement in both directions by pressing the manual button. The solenoid will push the spool when energized.

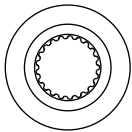
If the spool does not move, try pushing on the manual operation buttons to try to free up the spool. If the spool seems to be sticking, remove the nuts by the manual operation buttons, slide the coils off of the cartridges, being careful not to break the wires. Remove the cartridge and pull the spool out of the valve. Check the spool for signs of wear. If the spool looks good, clean both the spool and the bore with solvent. Grease the spool surface and reassemble. Check the cartridge to make sure it has not been sprung.

WEASLER LAGOON PTO - 1 3/8" 21 SPLINE, PART #26867

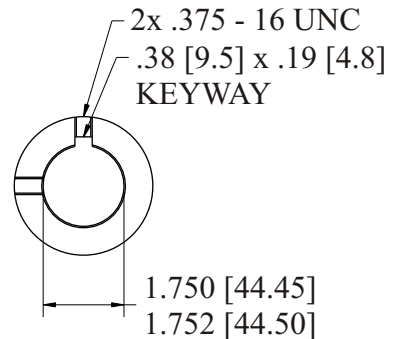


39.75 [1009.7] CENTERLINE TO CENTERLINE COMPRESSED (REF.)

59.13 [1501.8] CENTERLINE TO CENTERLINE EXTENDED w/5.00 [127] LAP
GREASE @ 39.75 [1009.7] CENTERLINE TO CENTERLINE



1 3/8 - 21 SLINE
PER ASAE S203.13

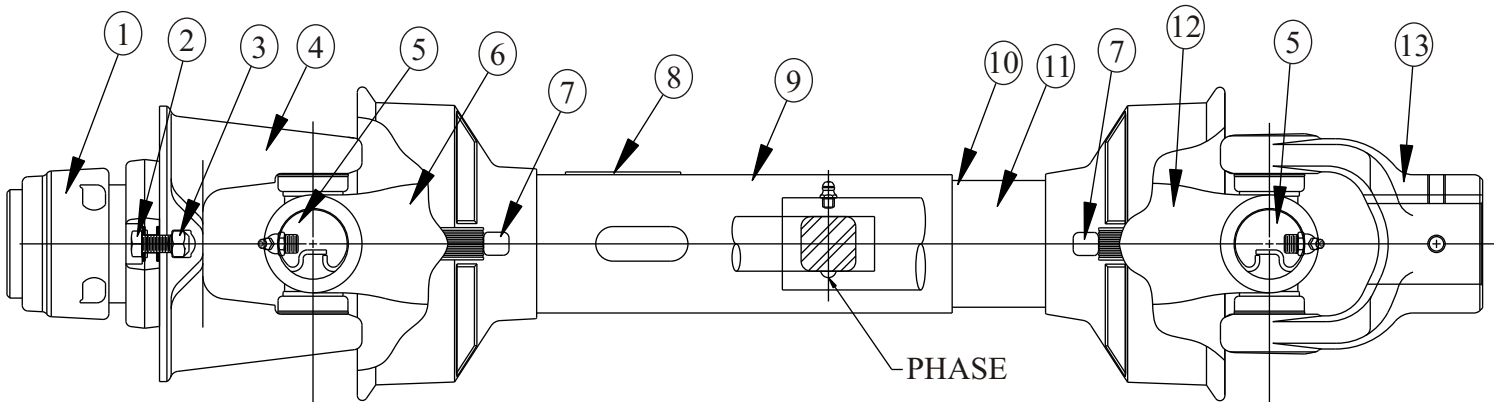


NOTES:

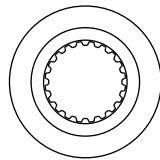
1. MAX OPERATING SPEED 1000 RPM
2. SHEAR VALUE 27,800 in-lbs (+ or -)3,500 [3141.0 N-m (+ or -)395.4] @ 2.25 [57.2] RADIUS
3. PAINT JOINTS MEDIUM GLOSS BLACK
4. IND. HARDEN SHAFT
5. IND. HARDEN SLEEVE

ITEM	QTY.	PART NO.	DESCRIPTION
1	1	12921	Safety Slide Lock Repair Kit
2	2	1206	Bolt, 3/8" x 1.0" Lg. Grade 5
3	2	27167	Locknut, 3/8" - 16
4	1	27187	Ball Shear Assembly
5	2	12911	55R Cross & Bearing Kit
6	1	27180	Yoke & Shaft (1.19 SQ.)
7	2	12914	Nylon Repair Kit (Not Shown)
8	1	11040	Safety Sign
9	1	27181	Outer Guard
10	1	27182	Inner Guard
11	1	15295	Safety Sign (Not Shown)
12	1	27183	Yoke, Tube, & Slip Sleeve
13	1	27184	Yoke
14	1	31186	Hub With Shear Collar (Not Shown)
15	1	27185	Tractor Half With Shields (Not Shown)
16	1	27177	Implement Half With Shields (Not Shown)

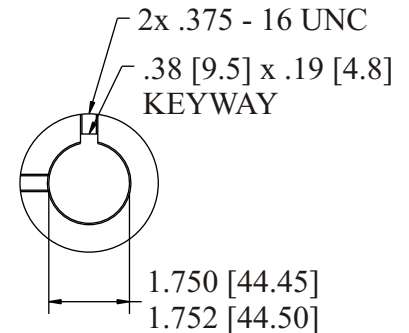
WEASLER LAGOON PTO - 1 3/4" 20 SPLINE, PART #26868



39.75 [1009.7] CENTERLINE TO CENTERLINE COMPRESSED (REF.)
 59.13 [1501.8] CENTERLINE TO CENTERLINE EXTENDED w/5.00 [127] LAP GREASE @ 39.75 [1009.7] CENTERLINE TO CENTERLINE



1 3/4 - 20 SPLINE
 PER ASAE S203.13

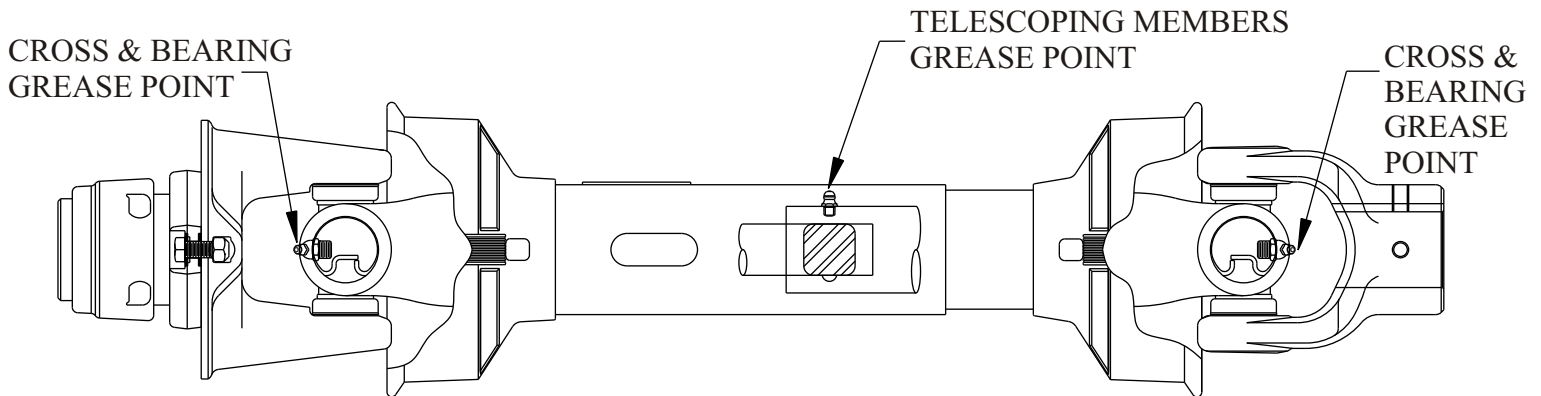


NOTES:

1. MAX OPERATING SPEED 1000 RPM
2. SHEAR VALUE 27,800 in-lbs (+ or -)3,500 [3141.0 N-m (+ or -)395.4] @ 2.25 [57.2] RADIUS
3. PAINT JOINTS MEDIUM GLOSS BLACK
4. IND. HARDEN SHAFT
5. IND. HARDEN SLEEVE

ITEM	QTY.	PART NO.	DESCRIPTION
1	1	27190	Safety Slide Lock Repair Kit
2	2	1206	Bolt, 3/8" x 1.0" Lg. Grade 5
3	2	27167	Locknut, 3/8" - 16
4	1	27187	Ball Shear Assembly
5	2	12911	55R Cross & Bearing Kit
6	1	27180	Yoke & Shaft (1.19 SQ.)
7	2	12914	Nylon Repair Kit (Not Shown)
8	1	11040	Safety Sign
9	1	27181	Outer Guard
10	1	27182	Inner Guard
11	1	15295	Safety Sign (Not Shown)
12	1	27183	Yoke, Tube, & Slip Sleeve
13	1	27184	Yoke
14	1	31185	Hub With Shear Collar (Not Shown)
15	1	27188	Tractor Half With Shields (Not Shown)
16	1	27177	Implement Half With Shields (Not Shown)

PTO LUBRICATION SPECIFICATIONS



LUBRICATE ALL FITTINGS WITH A GOOD QUALITY LITHIUM SOAP BASE E.P. GREASE MEETING THE N.L.G.I. #2 SPECIFICATIONS AND CONTAINING NO MORE THAN 1% MOLYBDENUM DISULFIDE. (EX. SHELL SUPER DUTY OR EQUIVALENT)

AN E.P. GREASE MEETING THE N.L.G.I. #2 SPECIFICATIONS AND CONTAINING 3% MOLYBDENUM DISULFIDE MAY BE SUBSTITUTED IN THE TELESCOPING MEMBERS ONLY. (EX. MOBIL OIL COMPANY, "MOBILGREASE COMPANY", SHELL OIL COMPANY, "RETINAX AM". TEXACO, "MOLYTEX EP #0 AND #2".)

GREASE RECOMMENDATIONS

<u>INTERVAL</u>	<u>LOCATION</u>	<u>AMOUNT</u>
8 HRS.**	CROSS & BEARINGS	1 PUMP
8 HRS.**	TELESCOPING MEMBERS	4-8 PUMPS

** CONSTANT ANGLE APPLICATIONS MUST HAVE A LUBE INTERVAL OF 4 HOURS.

CAUTION!! REPLACEMENT PARTS ARE NOT LUBRICATED
 REPLACEMENT PARTS MUST BE LUBRICATED AT TIME OF ASSEMBLY.
 USE AMOUNT LISTED ABOVE PER LOCATION THEN FOLLOW LUBE
 RECOMMENDATIONS OUTLINED ABOVE FOR LUBING INTERVALS.



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