

LEON

OPERATOR MANUAL



“8 Way” Pull Blade Scraper GZ400 Model

LEON'S MFG. COMPANY INC.

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Leon's Mfg. Company Inc.
"Home of Quality Leon & Ramrod Products"

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SALES / SERVICE BULLETIN

IMPORTANT

The GZ Scraper Operator Manual provides the recommended operation and service instructions for your Leon GZ Blade Scraper. Please follow all recommendations and warnings as detailed in the manual and in this bulletin.

The Blade Scrapers are rated and recommended for use with tractors having a rated drawbar of 150HP and a maximum drawbar of 400HP. (2WD or 2WD/FWA tractors)

THE SCRAPER MUST NOT BE OPERATED WITH ANY 4WD TRACTOR OR ANY TRACTOR THAT EXCEEDS A DRAWBAR RATING OF 400HP.

WARRANTY FOR THE SCRAPER WILL BE VOID IF A LARGER TRACTOR THAN RECOMMENDED IS USED WITH THE SCRAPER.

Your implement has been designed to give you years of satisfactory service. Safe, successful operation and long life depend on the proper precautions and the proper care given to your implement. Please read the operator manual carefully and follow the instructions provided to ensure long life of your implement. Correct operation and maintenance will save you time and expense.

For additional information contact the Sales/Service Department at Leon's.

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TABLE OF CONTENTS

DEALER/CUSTOMER INFORMATION	1
WARRANTY	3
SAFETY	7
PRE-DELIVERY INSPECTION PAGE	8
SAFETY DECAL LOCATIONS	9
OPERATION AND MAINTENANCE	10
DETAILS AND SPECIFICATIONS	12
PARTS BREAKDOWN MANUAL	14

NOTE: THIS MANUAL APPLIES TO ALL MODELS MANUFACTURED IN 2011 AND LATER.
FOR UNITS MANUFACTURED EARLIER PLEASE CONTACT THE FACTORY.

TO THE DEALER:

Warranty Registration

The warranty registration form must be completed and signed by both dealer and customer before or upon machine delivery. Give the owner his copy.

Pre-Delivery

Using the Pre-Delivery Inspection Report, be sure the scraper is completely set up, lubricated and in proper working order upon delivery to the customer.

Operator's Manual

The Operator's Manual is a very important part of the equipment purchase. With the use of the manual be sure to instruct the owner and operator regarding:

- Safety precautions
- Operation and adjustments
- Lubrication and maintenance

BE SURE to give this **MANUAL** to the **OWNER**.

TRANSPORTING

- Use a tractor with adequate power, adequate weight and with adequate towing and braking capacity to safely tow and handle the scraper.
- Always adjust the drawbar length to properly accommodate the scraper as per the recommended connection specifications.
- Always use correct hitch pin size and secure the pin with a retainer clip or pin.
- Attach a transport safety chain between the tractor drawbar support and scraper hitch.
- Always lock tractor brake pedals together when traveling on a public road.
- Always make the necessary safety precautions prior to transporting scraper on public roads:
 - Be sure SMV (Slow Moving Vehicle) sign is mounted and clean and visible.
 - Use flashing warning lights, except where required by law. Ensure that they are clearly visible and in proper working condition.
- Comply with provincial or state and local laws and regulations governing highway safety when moving machinery.
- Use good judgment when transporting scraper on the highway. Maintain complete control of machine at all times.
- When traveling up or down steep grades, use extreme caution to prevent scraper from jackknifing, overturning or causing loss of control of the towing vehicle.

TO THE CUSTOMER:

Warranty Registration

Be sure to sign the registration form and keep a copy.

Know the Equipment

Before operating the scraper, read this operator's manual to become completely familiar with the machine.

Right and Left-Handed Sides of the Machine

Stand behind the machine and face the direction of travel to determine the right hand (RH) and left hand (LH) sides of the machine.

Serial Number

Record the scraper serial number. The dealer needs this information to order parts and process warranty claims.

Authorized Service

For factory authorized service and parts, see your dealer. The dealer's trained service staff uses the latest service techniques, and the parts personnel provide prompt delivery of quality parts.

SAFETY IS IMPORTANT!

- Develop and follow good safety procedures and encourage others to do the same.
- Always operate farm machinery in a careful, safe manner.
- Never attempt to clean, adjust or lubricate a machine while it is running.
- Always stop and shut off the engine before leaving the tractor seat.

WARNING!

IF BLADE SCRAPER IS TOO HEAVY OR IS TOWED TOO FAST, LOSS OF CONTROL CAN OCCUR. DO NOT EXCEED SPEEDS AND TRACTOR/ IMPLEMENT WEIGHT RATIOS LISTED BELOW. DO NOT EXCEED THE MAXIMUM 300HP RATING OF THE TRACTOR TOWING THE SCRAPER. THE SCRAPER MUST NOT BE OPERATED WITH A 4WD TRACTOR.



- To ensure load does not exceed recommended weight ratio, add ballast to the tractor, reduce load size and/or increase tractor size.
- Stopping distance increases as weight, speed and ground slope increase. Always observe the following for towed equipment:
 - Do not exceed 32 kmh (20 mph)
 - Loaded implement weight must not be more than 1.5 times tractor weight.

WARRANTY

REGISTRATION (OWNER'S COPY)

Leon's Mfg. Company Inc. warrants all products manufactured by Leon's Mfg. Company Inc. for a period of one year from the date of purchase for private use, or a period of 90 days for commercial use.

Leon's Mfg. Company Inc. warrants tires for a period of 60 days for private use or a period of 30 days for commercial use.

This warranty provides that the equipment shall be free of defective materials and workmanship, or we will replace or repair at our factory any part that our inspection shows to be defective.

If any product or portion thereof is modified, changed or tampered with in any way, this warranty shall be deemed null and void.

All hydraulic cylinders, valves, hoses, tires, spindles and other purchased products, except as specifically included in the warranty above, are not manufactured by Leon's and are, therefore, covered by the warranties of the manufacturer of these products.

All parts shipped to the factory shall be shipped prepaid and will be returned F.O.B. Factory. Leon's Mfg. Company Inc. does not assume responsibility for shipping, labour or travel expenses.

Although Leon's products are designed to minimize tractor strain, Leon's Mfg. Company Inc. will assume no responsibility for damage to tractors or other equipment.

Leon's Mfg. Company Inc. reserves the right to make improvements and reserve the right to change the design, materials and specifications without notice or obligation.

MODEL NO. _____ **DATE OF PURCHASE** _____

SERIAL NO. _____ **DEALER** _____

TOWN _____ **PROV. / STATE** _____

OWNER _____ **ADDRESS** _____

TOWN _____ **PROV. / STATE** _____

What make and model of tractor will this product be used with? - _____

Will this product be used: commercially? _____

Privately? _____

Why did you buy **Leon**? Advertising _____

Previous Owner _____

Recommendation _____

Special Features _____

Comments:

NOTE: This warranty is effective only if the warranty registration is filled in and mailed by the original purchaser within ten days after the date of delivery.

WARRANTY

REGISTRATION (MANUFACTURER'S COPY)

Leon's Mfg. Company Inc. warrants all products manufactured by Leon's Mfg. Company Inc. for a period of one year from the date of purchase for private use, or a period of 90 days for commercial use.

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MODEL NO. _____ DATE OF PURCHASE _____

SERIAL NO. _____ DEALER _____

TOWN _____ PROV. / STATE _____

OWNER _____ ADDRESS _____

TOWN _____ PROV. / STATE _____

What make and model of tractor will this product be used with? _____

Will this product be used: commercially? _____
privately? _____

Why did you buy **Leon**? Advertising _____
Previous Owner _____
Recommendation _____
Special Features _____

Comments:

NOTE: This warranty is effective only if the warranty registration is filled in and mailed by the original purchaser within ten days after the date of delivery.

SAFETY

SAFETY ALERT SYMBOL



ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

The symbol above calls your attention to instructions concerning your personal safety. It is found throughout the manual as well as on the machine to point out specific hazards and ways to avoid them. Always follow the instructions to minimize the risk of personal injury or death.

OPERATING

- In addition to equipment configuration and design, hazard control and accident prevention depend on awareness, concern, prudence and proper training of personnel in the operation, maintenance, transport and storage of equipment.
- Always shut off tractor engine, shift to "PARK" position or shift to neutral, set brakes and allow scraper to completely stop before dismounting tractor or working around the machine.
- Remove tractor start key when tractor and scraper will be unattended for adjustments or maintenance.
- Do not attempt to lubricate or adjust scraper while machine is in operation.
- Machinery operation should be performed only by persons who are trained and qualified to do so and are knowledgeable of the scraper.
- Only the operator should be permitted on the tractor (unless the tractor has a factory installed passenger seat) when the tractor and scraper are in motion. Never permit anyone to ride in or on the scraper at any time.
- Avoid wearing loose-fitting clothing or jewelry when working around the scraper and tie up long hair that can entangle in moving parts.
- Wear personal protective equipment (PPE) such as, but not limited to, protection for eyes, lungs, ears, head, hands and feet when operating, servicing or repairing equipment.
- Be sure bystanders are clear before engaging and operating the tractor or scraper.
- Do not leave tractor or scraper unattended with tractor engine running.
- Never attempt to operate the scraper unless sitting in the tractor driver's seat.
- Keep all guards and shields in place when scraper is in operation.
- Do not stand between tractor and scraper to install hitch pin when tractor is running.
- Regulate ground speed to field conditions, and maintain control at all times.
- Be sure tractor has sufficient weight to operate scraper on public roads, on hillsides and under any other adverse conditions.
- Do not allow children to ride on, play on, or operate equipment. Always keep children away from equipment operating, servicing and storage areas.
- Be sure tractor is in safe operating condition and has adequate braking capabilities.
- Tractor should be equipped with rollover protective structure (ROPS), enclosed cab and seat belts. Use seat belts during operation.
- Detach and store scraper where children do not normally play. Always block the wheels and ensure that the hitch jack is stable and secured to scraper properly.

WARNING:

DO NOT OPERATE THE SCRAPER WITH A TRACTOR EXCEEDING THE 300 HP DRAWBAR RATING. DO NOT OPERATE THE SCRAPER WITH A 4WD TRACTOR. WARRANTY WILL BE VOID IF THE SCRAPER IS OPERATED WITH THESE TYPE OF TRACTORS.

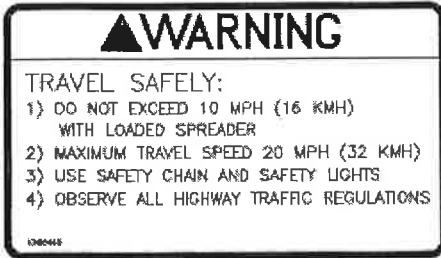
PRE-DELIVERY INSPECTION

The scraper may have been partially disassembled for shipping. If assembly is required, contact Leon's Mfg. Company Inc. for assembly instructions.

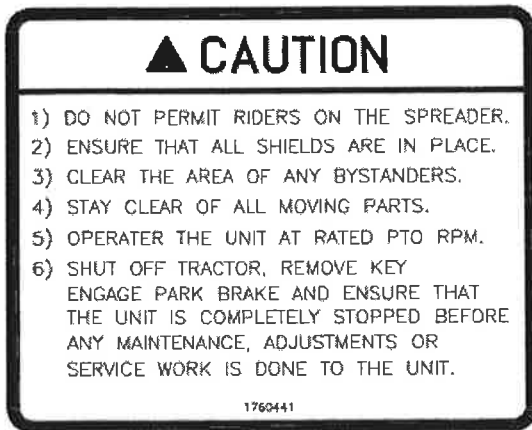
- 1) Install the wheel/tire assemblies on to the axles and secure with wheel bolts or wheel nuts. Refer to page 10 for wheel torque requirements.
- 2) Check and adjust the tire inflation pressure as per requirements on page 10.
- 3) Lubricate all bearings with premium quality multi-purpose grease where applicable.
- 4) Ensure that the safety SMV emblem and safety warning lights have been installed properly.
- 5) Ensure that the safety chain is properly secured to the spreader hitch, if so equipped with a chain.
- 6) Connect warning safety lights and ensure that they work properly for all operation functions.
- 7) Ensure that all safety shields are in place and properly secured.
- 8) Ensure that all bolts and fasteners are in place and properly tightened.
- 9) Hook up the scraper and perform a test run. Ensure that the area around the scraper is clear of obstacles and other people. Cycle the hydraulics and raise and lower the blade, angle the blade from side to side and tilt the blade from left to right at all times ensuring that no interference occurs.
- 10) Note that the blade safety straps can be dis-connected from the blade push assembly once the blade is fully raised. The straps can then be rotated above the main frame tube and pinned in storage position. Ensure that the straps are removed prior to attempting to lower the blade assembly.
- 11) If the blade scraper is equipped with blade skid shoes ensure that they are properly secured to the blade with the mounting bolts supplied.
- 12) If the blade scraper is equipped with folding side plates ensure that the plates are pinned and secured to each side of the blade and that they pivot freely from working to storage position above the blade.

SAFETY DECAL LOCATIONS

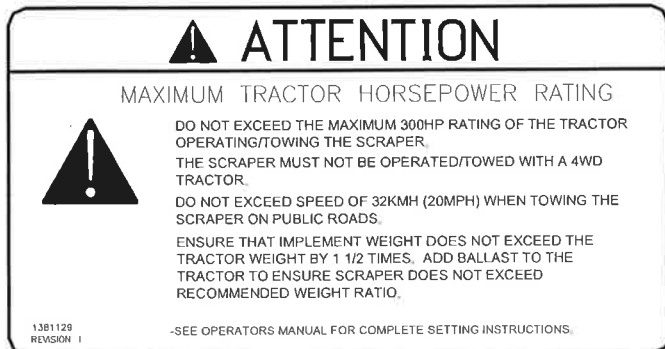
WARNING – Travel Safety
#1760440 (located on front scraper frame)



CAUTION – Do not permit riders on the scraper
#1760441 (located on front scraper frame)



ATTENTION – Maximum Tractor Horsepower Rating



OPERATION AND MAINTENANCE

Attaching the Scraper

- 1) Ensure that your Leon GZ Blade Scraper Pre-Delivery Inspection has been completed prior to hook up.
- 2) Ensure that your tractor has sufficient power and weight and adequate braking capability to safely and properly control the scraper in field and road conditions.
- 3) Use a properly sized hitch pin to attach the scraper.
- 4) Connect the drawbar safety chain to the scraper hitch and tractor drawbar.
- 5) Ensure that hitch jack is secured properly in storage location.
- 6) Connect the hydraulic hoses as per the instructions in the pre-delivery inspection.
- 7) Connect the safety warning lights and ensure that they are working properly for all operating functions.
- 8) Ensure that the area around the scraper is clear prior to operation.

BEORE OPERATING SCRAPER

- Lubricate scraper bearings, walking axles and blade pivots.
- Check and adjust tire pressure.
- Check wheel bolt torque as listed below.
- Hitch scraper to tractor and cycle operate the entire scraper while empty. Stop tractor and make adjustments as required.
- Cycle all hydraulic functions several times to ensure proper operation of hydraulics. Ensure to raise and lower the blade fully. When all the cylinders are retracted, check the tractor oil level, adding to maintain normal levels.
- Approximate oil volumes required to charge the hydraulic system:
Model GZ 20 liters

WHEEL BOLT TORQUE

IMPORTANT! New Scrapers: Tighten all wheel bolts after 4 hours of use. Tighten hub bolts to:

Model GZ	5/8 bolts	180 ft-lbs
	3/4 bolts	300 ft-lbs

TILT PLATE BOLT TORQUE

3/4 bolts	300 ft-lbs
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TRANSPORT SAFETY CHAIN / SAFETY LIGHTS

Always use a transport safety chain and Safety Lights in use on roads as per Highway Traffic Regulations.

TIRE PRESSURE

Tire Size	PSI
425/65 R22.5	100

OPERATION AND MAINTENANCE

TRACTOR 3PT HITCH LIFT ARMS

Maintain lowest position to avoid scraper hitch damage when turning.

HITCH JACK

TO PREVENT INJURY AND JACK FAILURE ALWAYS POSITION HITCH JACK IN SUPPORT POSITION PRIOR TO UNHITCHING SCRAPER FROM TRACTOR.

- Do not operate scraper when unhitched from tractor.
- Stand clear of hitch when raising or lowering hitch jack
- Securely block wheels before unhitching on uneven terrain.
- Store hitch jack on scraper frame after hitching to tractor and before towing spreader.

Activate the tractor hydraulics to raise the blade. Note that one hydraulic system is required to activate each operation of the blade. When the hydraulic system is activated and the blade is raised, the transport straps can be disconnected and then raised over the hitch tube for storage position. Ensure that the blade moves freely in all six directions.

BEFORE STORAGE

Clean and lubricate machine. Park the scraper on the level surface and use hitch jack to elevate front of the machine slightly to ensure that water will flow out. Install blocks in front of tires.

MAINTENANCE

- Always follow proper safety precautions.
Never attempt any service, maintenance, adjustment or repair unless you have been properly trained and are qualified to do so.
Always shut off the tractor, engage the park brake and take steps to ensure no person can start up the machine while you are working on it.
- Axles, Wheels & Tires.
Check wheel bolts hourly for the first day of operation and every 50 hours of operation thereafter.
Check tires daily for sign of damage or noticeably low air pressure. Every 50 hours check the tire pressure. Grease walking beam bearings every 8 hours and wheel bearings every 50 hours with premium quality multi-purpose grease.

LUBRICATION AND CHECK SUMMARY

8 hrs	Grease Blade Pivot Shafts Grease walking beam bearings Check tires
50 hrs	Check wheel bolts Check air pressure Grease wheel bearings

DETAILS AND SPECIFICATIONS SUMMARY

BLADE DIMENSIONS

Model GZ1200

144" Blade Width x 260" Length x 88" High

Model GZ1400

168" Blade Width x 260" Length x 88" High

Model GZ1600

192" Blade Width x 260" Length x 88" High

TIRE AND WHEEL –All Models:

Tire: 16.5 x 22.5 (425/65R x 22.5)

Rim: 11.75 x 22.5 x 8-bolt
TR-501 metal valve

Hub: 8-bolt

CYLINDERS

Lift Cylinders: All Models

Bore Diameter: -4.0"
Shaft Diameter: -2.00"
Stroke: -16"
Design Pressure: -3000 psi
Test Pressure: -3500 psi

Angle Cylinders: All Models

Bore Diameter: -3.0"
Shaft Diameter: -2.00
Stroke: -23"
Design Pressure -3000 psi
Test Pressure: -3500 psi

Tilt Cylinders: All Models

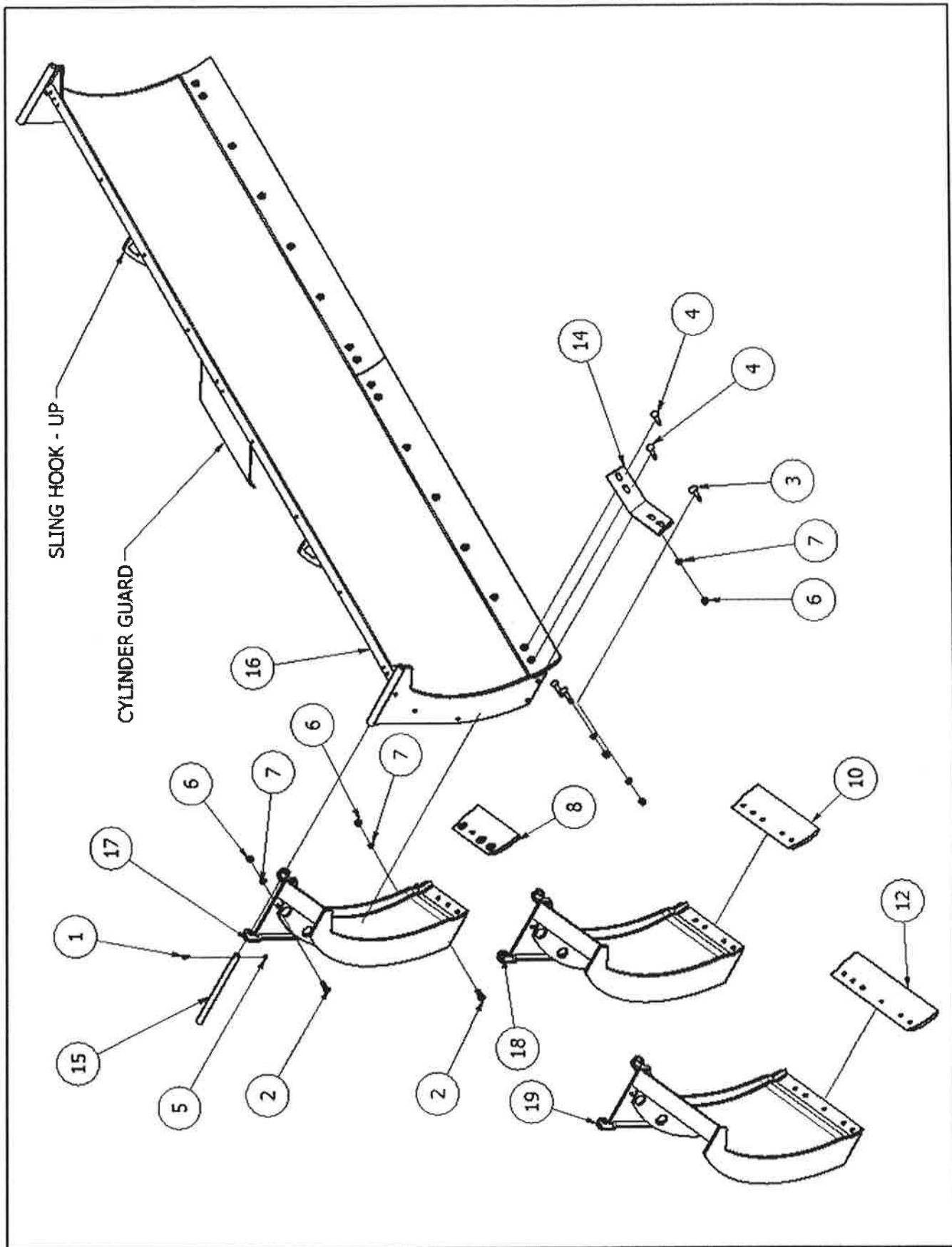
Bore Diameter: -4.0"
Shaft Diameter: -2.0"
Stroke: -3.25"
Design Pressure -3000 psi
Test Pressure: -3500 psi

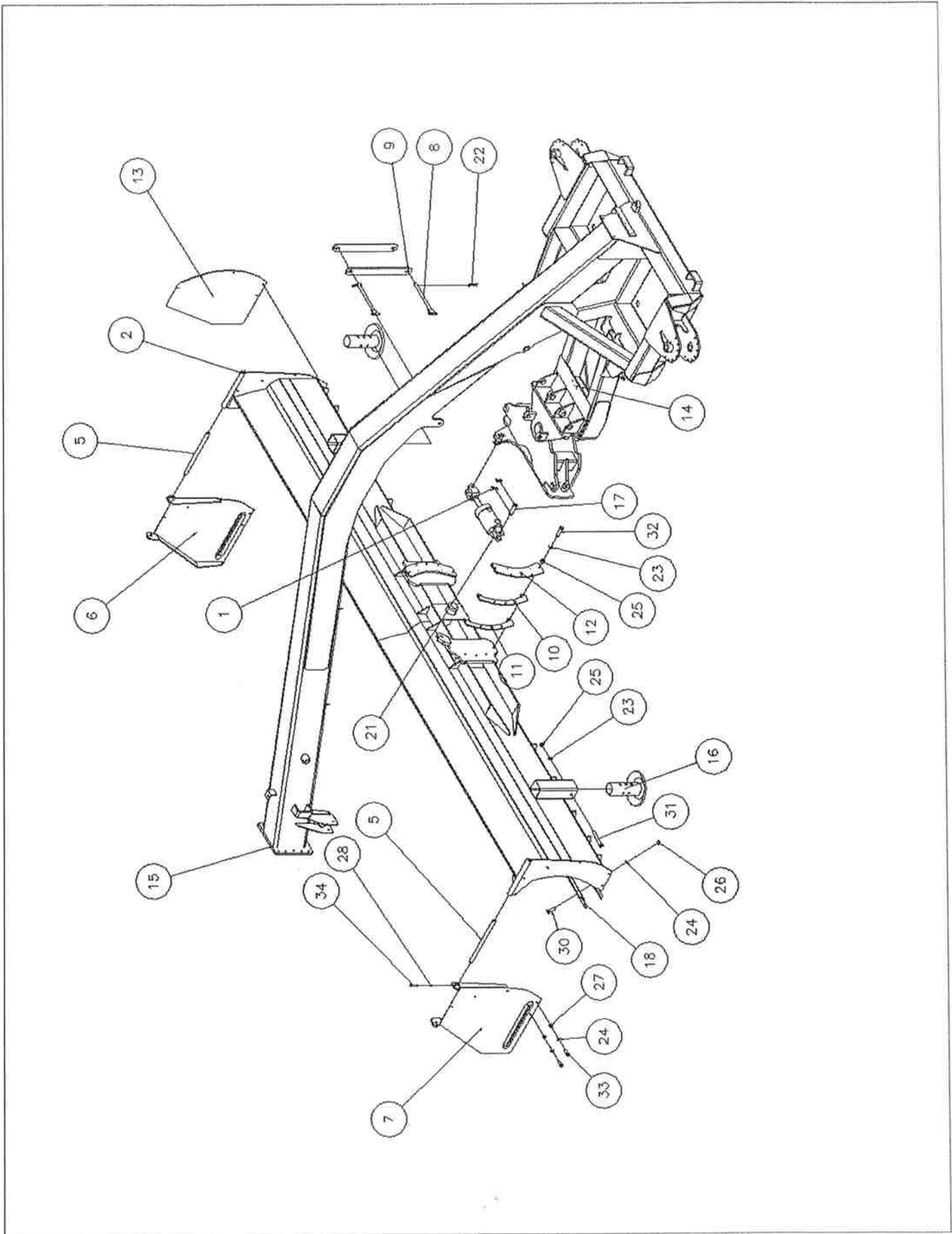
Steering Cylinders: All Models

Bore Diameter: -2.0"
Shaft Diameter: -1.250"
Stroke: -14"
Design Pressure -3000 psi
Test Pressure: -3500 psi

Dozer Blade Installation

1. Remove the cylinder guard off blade
2. Position blade to the frame as close as possible
3. Lift blade up with sling hook-up eyes
4. Lift blade up and align the pin to the hole
5. Wiggle until pin slides into the hole. It might have to lift up the cutting edge with a forklift from bottom to help slide the pin easier
6. Take items # [10, 11, &12] and install the bolts through holes, {3/4" x 3"}
7. Repeat 1-6 on the opposite side. Keep nuts loose until all bolts are fastened
8. Attach cylinder with pin # 17, (on diagram)
9. Install the cylinder guard back on the blade





Parts List			
Item	Part No.	Description	Qty.
1	1500115	RETAINER - GROOVE PIN	4
2	1381214	BLADE - 32" X 10 FT	1
2	1381203	BLADE - 32" X 12 FT	1
2	1381204	BLADE - 32" X 14 FT	1
2	1381205	BLADE - 32" X 16 FT	1
5	1381195	PIN - BOX END PIVOT - 1 DIA	2
6	1381194	BOX END - 32" BLADE - RIGHT	1
7	1381193	BOX END - 32" BLADE - LEFT	1
8	1381181	PIN - RETAINER - SAFETY LATCH	2
9	1381180	LINK - SAFETY LATCH	2
10	1381179	SHIM PLATE - TILT-1/2	2
11	1381178	SHIM PLATE - TILT-3/8	2
12	1381175	RETAINER PLATE - TILT	2
13	1381128	SIDE PLATE-32 BLADE	1
14	1381020	SUBFRAME - BLADE SCRAPER - GZ	1
15	1381010	HITCH - MAIN FRAME - GZ SCRAPER	1
16	1317020	SKID SHOE - BLADE	2
17	1225654	PIN - GROOVE - 1 X 2 7/8 UL	2
18	1162832	CUTTING EDGE - 8FT	2
18	1162830	CUTTING EDGE - 6FT	2
18	1162831	CUTTING EDGE - 7FT	2
21	1127084B	CYLINDER - 4 X 3 1/4	1
22	1102774	HITCHPIN - .188 X 2 - #8	2
23	1102596	LOCKWASHER - 3/4	12
24	1102594	LOCKWASHER - 5/8	26
25	1102545	HEX NUT -3/4-10UNC	12
26	1102541	HEX NUT -5/8-11UNC-GR.8	16
27	1102540	HEX NUT -5/8-11UNC	10
28	1102521	HEX LOCK NUT -5/16-18UNC	2
30	1102327	SCRAPER BOLT-5/8UNC X 2 1/4	16
31	1102158	HEX HD BOLT-3/4 UNC X 5 1/2	2
32	1102153	HEX HD BOLT-3/4 UNC X 3	10
33	1102100	HEX HD BOLT-5/8 UNC X 1 1/2	10
34	1101963	HEX HD BOLT-5/16UNC X 2 1/4	2
35	1102371	SCRAPER BOLT-NUT-LOCKWASHER-(SET)	0

