



# **INDUSTRIAL SCRAPER**

**Operation, Service  
& Parts Manual  
For  
4G2A & 4G4A Series**

**February 2002**

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Date of Purchase: \_\_\_\_\_

Model Number: \_\_\_\_\_

Serial Number \_\_\_\_\_

# PREPARATION & TRAINING

## WARNING

To prevent possible personal injury or death during assembly, installation, operation, adjustment or removal of implement; **DO NOT** wear loose clothing, always wear gloves and safety glasses or face shield. **Keep other persons away from any unit under power.**



### **READ BEFORE OPERATING BOX SCRAPER**

#### **TRAINING:**

- Know your controls. Read this operator's manual and the manual provided with your tractor.
- Learn how to stop the tractor engine quickly in case of an emergency.
- **DO NOT** allow children to operate machine, or adults who do not have the proper instructions.

#### **PREPARATION:**

- Clear area of debris.
- Never permit any person, other than the operator, to ride on board the tractor at any time.
- **DO NOT** allow riders on scraper at any time.
- Operate only in daylight or good artificial light.
- **ALWAYS** wear relatively tight and belted clothing when operating scraper. Loose clothing should not be worn, as it could get caught in the moving parts or controls.
- A minimum of 20% of the tractor and equipment weight must be on the tractors front wheels with the box scraper in transport position. Without this weight, the tractor could tip over causing personal injury or death. The weight may be attained with front wheel weights, ballast in tires or front tractor weights. When attaining the minimum 20% weight on the front wheels, you must not exceed the Roll Over Protection Structure (ROPS) weight certification. Weight tractor and equipment. Do not guess or estimate.

# SAFETY INFORMATION

## OPERATIONAL SAFETY

- Read and observe all safety decals on the tractor and scraper.
- Do not stop or start suddenly when going uphill or downhill. Avoid operation on steep slopes.
- Be alert for holes in terrain and other hidden hazards. Always drive slowly over rough ground.
- Reduce speed on slopes and in sharp turns to prevent tipping or loss of control. Be careful when changing direction on slopes.
- Stop tractor immediately upon striking an obstruction. Turn off engine, inspect and repair any damage before resuming operation.
- Take all possible precautions when leaving tractor unattended; lower scraper, shift into neutral, set parking brake, stop engine and remove key from ignition.
- Front tractor weights or front tire ballast should be used to enhance front end stability on small tractors.
- Never work under scraper without safety blocks.
- Always be sure the box scraper is in the fully raised position when in transport.
- This implement is designed for a one-man operation. It is the responsibility of the tractor operator to see that no one is near the implement while in use.
- No riders are allowed on tractor or box scraper.
- Make sure area behind your tractor is clear before operating in reverse.
- Keep alert and watch ahead as well as behind the tractor when working with the box scraper.
- Ensure equipment is properly mounted to tractor before making adjustments.
- When turning close to buildings or passing through narrow areas, be sure to allow sufficient clearance for the box scraper.
- Use extra caution when backfilling deep holes or trenches.
- Always use the tractor anti-sway bars, blocks or chains to prevent side sway. This is a must when using the box scraper for backfilling.
- Make adjustments using hydraulic controls only when seated in operator's position.

# GENERAL INFORMATION

■ **CUTTING EDGES** - are reversible so always remember to “flip” them over before wearing the back plate. Replace the cutting edge after both edges are worn to the bottom edge of the back plate.

■ **2 POSITION SHANKS** - have a shallow or deep setting. When changing positions, make sure the shank retainer is “seated” properly in the beam. We have a special flat bottom retainer that should always stay in place if installed properly.

■ **REPLACEABLE SHANK POINT** - make sure you replace the point before you wear the drop forged shank. Knock off the worn point and lock the new point in place by “crimping” at the recessed holes in the shank.

■ **SCARIFIER CYLINDER** - should be activated only with the box scraper

raised out of the ground. This will prevent any damage to the hydraulic cylinder or linkage. The scarifier beam should be raised above the top of the rear moldboard, so as to not put any stress on the hydraulic cylinder when the scarifier beam is in the up position and the box is full of dirt. When the scarifier beam is engaged in the lower ripping position, the hydraulic cylinder needs to be fully retracted to fully engage the scarifier beam lock pin. If the lock pin is not properly engaged, it will cause the scarifier beam to put an extreme amount of stress on the hydraulic cylinder causing damage to the cylinder.

■ **PREVENTING DAMAGE** - to your scraper is directly proportional to the speed you are operating at when you hit an immovable object. Please try to operate at slower speeds when working in unknown conditions.

# MAINTENANCE SAFETY

- Lower box scraper to ground, set tractor locking system device, turn tractor engine off, and remove key before performing any service or maintenance.
  - Keep all persons away from operator control area while performing adjustments, service or maintenance.
  - Block box scraper securely before working underneath.
  - Periodically tighten all bolts and nuts to ensure scraper is in a safe working condition.
  - Before operating the scraper, always check to make sure that the lynch pins are in the lock position, so that the lift pins do not work their way out.
- 

## SERVICING INSTRUCTIONS:

### CUTTING EDGE -

For reversing the cutting edge:

1. Remove 5/8" plow bolts.
2. Remove cutting edge from moldboard and reinstall with sharp edge down.
3. Replace when both edges are worn out.

### BOLTS -

Keep all the bolts tight at all times by checking them periodically. Replace the bolts only with those having the same marks on the heads as on original bolt. Marks on bolt head indicate high strength.

### BOLT TORQUE -

<u>BOLT</u>	<u>MINIMUM</u>	<u>MAXIMUM</u>
5/8"	150 Ft/lbs.	180 Ft/lbs.

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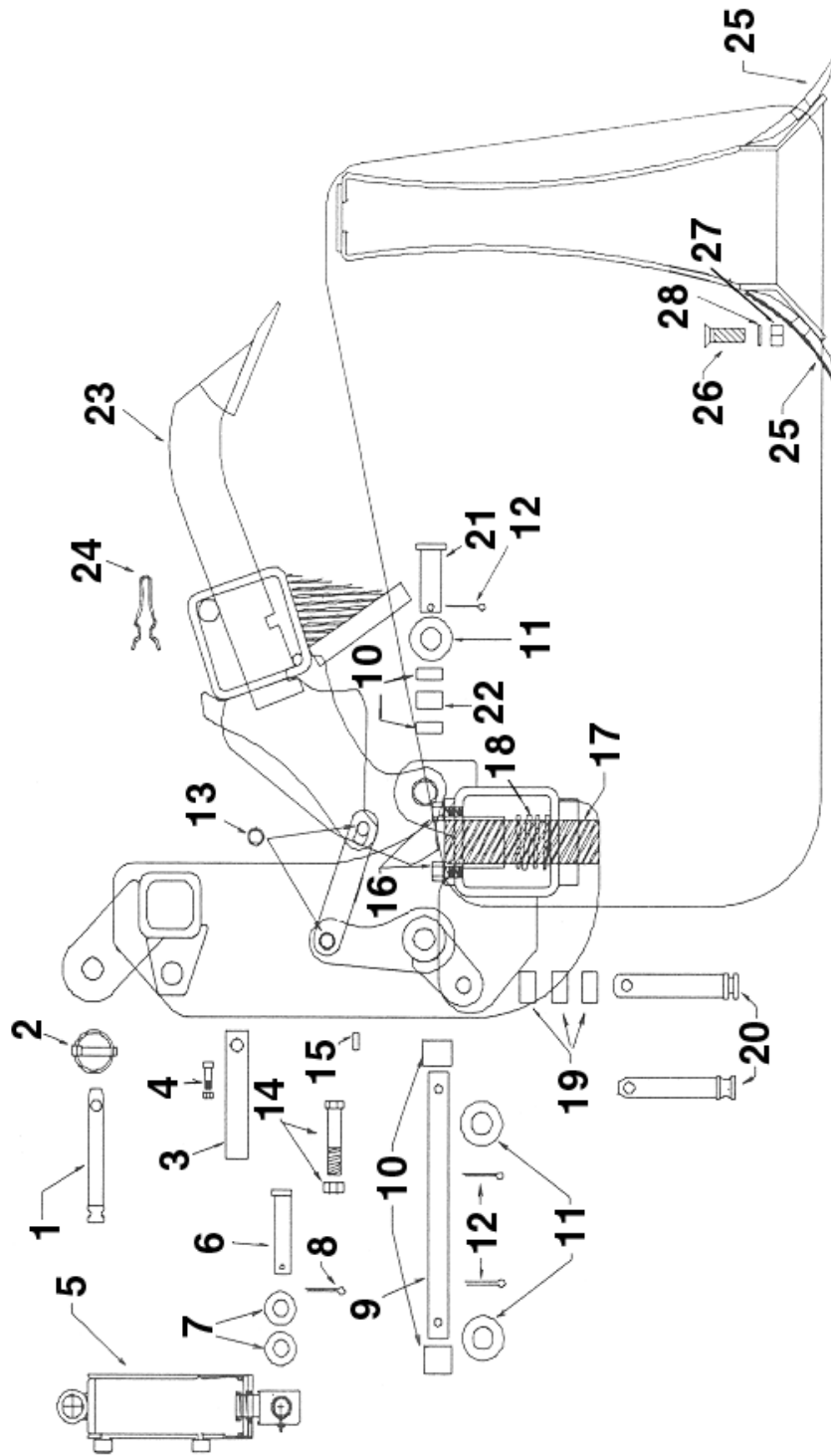
## LUBRICATION:

Lubricate bell crank **every 50 hours** of use.

# ASSEMBLY INSTRUCTIONS

1. Attach box scraper to 3-point hitch lower lift arms using pins supplied.
2. Attach 3-point hitch top link to a-frame mast on scraper using pin supplied.
3. Make sure the box scraper is sitting on the ground and the tractors' safety device is set.
4. Install fittings (dealer supplied) to the hydraulic cylinder. (9/16 o-ring boss - JIC 6MB-6MJ)
5. Install quick couplers (dealer supplied) to hydraulic hoses (dealer supplied). Connect hoses to fittings on cylinder and couple other end to tractor hydraulic valve.
6. Cycle hydraulic valve in order to remove air from the system.
7. Raise scraper off the ground with tractor 3-point hitch.
8. Extend cylinder to raise shank bar to upper position.
9. Retract cylinder to lower shank bar to working position. Be certain to check that the hydraulic cylinder has fully retracted and the locking pin is engaged to avoid pressure on the cylinder and linkage when in use.

# REPLACEMENT PARTS



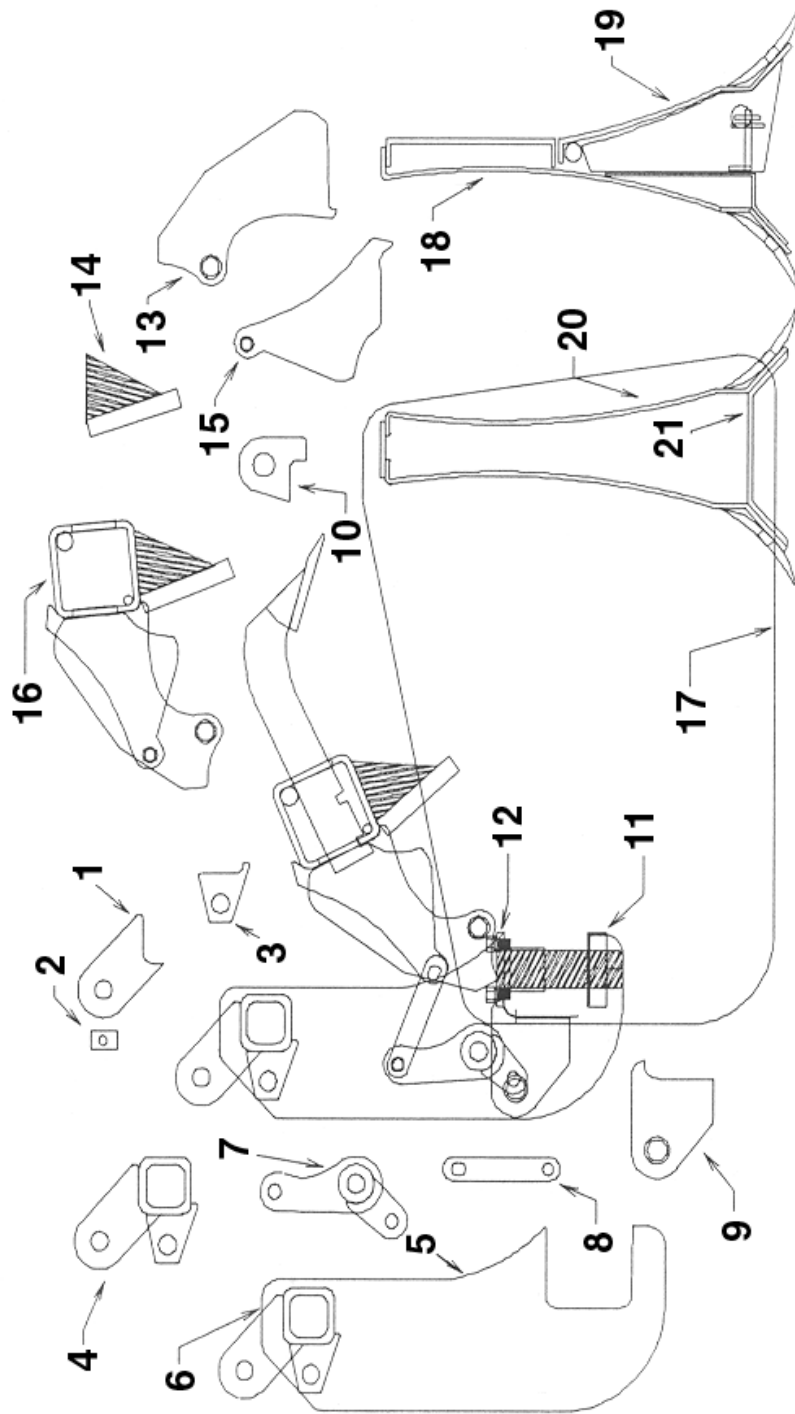


# REPLACEMENT PARTS

<u>Ref. #</u>	<u>Part No.</u>	<u>Description</u>	<u>72"</u>	<u>76"</u>	<u>80"</u>	<u>84"</u>	<u>88"</u>
1	P100500C2TL	Cat II Top Link Pin	1	1	1	1	1
2	P716175LY	Hitch Pin/Tailboard Lock Out Clip	5	5	5	5	5
3	R05A001	Top Cylinder Pin No Hole	1	1	1	1	1
	R05A002	With Hole On End For Collar	1	1	1	1	1
	R05A003	With Hole In Middle	1	1	1	1	1
4	B038200	Cylinder Rod Bolt/Nut	1	1	1	1	1
5	S2.5X4-10.25	Hydraulic Cylinder	1	1	1	1	1
6	P075350CL	Lower Cylinder Pin	1	1	1	1	1
7	W075SAEF	Lower Cylinder Pin Washer	2	2	2	2	2
8	P532125COT	Lower Cyl. Pin Cotter Pin 5/32" x 1 1/4"	1	1	1	1	1
9	R05A191	Bell Crank Shaft	1	1	1	1	1
10	HB125050	Mast/Pivot Plate Ear Bushing	6	6	6	6	6
11	W100SAEF	Bell Crank Shaft/Pivot Pin Washer	6	6	6	6	6
12	P316150COT	Bell Crank/Pivot Pin Cotter Pin 3/16"x1 1/2"	4	4	4	4	4
13	HB078075	Bell Crank Arm/Shank Bar Ear Bushing	2	2	2	2	2
14	B058300-8A	Link Bolt with Nut	2	2	2	2	2
15	FTN516G	Bell Crank Grease Zerk	1	1	1	1	1
16	B050100-8	Top Main Lock Pin Plate Bolts	2	2	2	2	2
17	R07A01A	Main Lock Pin Assembly	1	1	1	1	1
18	S200300COM	Main Lock Pin Spring	1	1	1	1	1
19	HB176075	Draw Ear Bushing	6	6	6	6	6
20	P118500MD	Cat II Industrial Draw Pin	2	2	2	2	2
21	P100258CL	Pivot Pins	2	2	2	2	2
22	HB125075	Pivot Plate Bushing	2	2	2	2	2
23	G163	Industrial Forged Shanks w/Tips	8	8	8	8	8
24	SR100	Shank Retainer Clip	8	8	8	8	8
25	CE72I	72" Industrial Cutting Edge	2				
25	CE76I	76" Industrial Cutting Edge		2			
25	CE80I	80" Industrial Cutting Edge			2		
25	CE84I	84" Industrial Cutting Edge				2	
	CE84I-8	84" x 8" Ind. Cutting Edge (Optional)				2	
25	CE88I	88" Industrial Cutting Edge					2
	CE88I-8	88" x 8" Ind. Cutting Edge (Optional)					2
26	GR85/8X2	Cutting Edge Plow Bolts	12	14	14	14	16
27	GR85/8NC	Cutting Edge Hex Nut	12	14	14	14	16
28	W058L	Cutting Edge Lock Washer	12	14	14	14	16

NOTE: For Cat. 1 hitch, you must order part no. PK100. This kit includes adapter bushings for cat. II to Cat. I pins and draw pins.

# WELDMENT PARTS



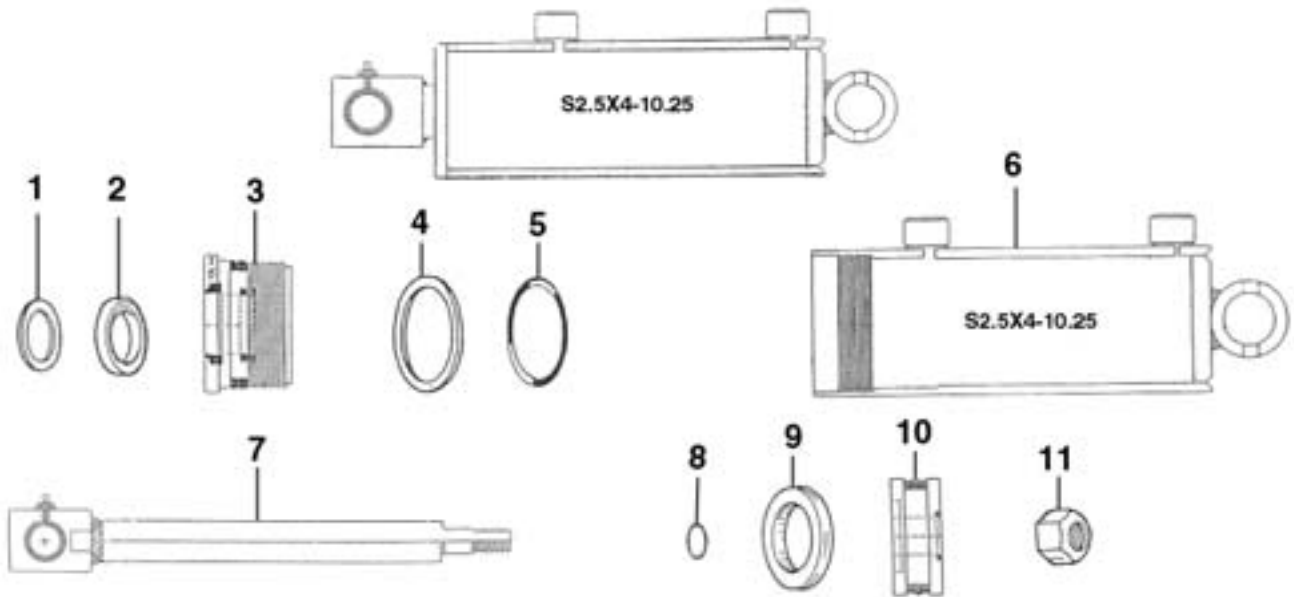
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1	P05A05B	Top Link Ear w/Bushing	1	1	1	1	1
2	P05A05BA	Top Link Ear w/Bushing & Collar	1	1	1	1	1
3	P02A014	Top Cylinder Ear	1	1	1	1	1
4	T06A3A	Mast Spacer Assy. (Includes Mast Spacer, Cyl. Ear & Both Top Link Ears)	1	1	1	1	1
5	P04A022B	Mast w/Bushing	2	2	2	2	2
	P04A023B	HD Mast w/Bushing for 4G4A-8E	2	2	2	2	2
6	P04A022BA	Mast Assy. (Includes 2 Mast, Mast Spacer w/Cyl. & Top Link Ears)	1	1	1	1	1
	P04A023BA	HD Mast Assy. (Includes 2 Mast, Mast Spacer w/Cyl. & Top Link Ears & Mast Brace) for 4G4A-8E	1	1	1	1	1
7	P04A7A	Bell Crank Assy. (Includes Bell Crank Pipe, Cyl. Ears & Bell Crank Arm)	1	1	1	1	1
8	P03A04A	Link Assembly	1	1	1	1	1
9	P05A061B	Draw Ear w/Bushing	6	6	6	6	6
10	P03A01271B	Pivot Plate Ear w/Bushing	4	4	4	4	4
11	P06A011	Bottom Main Lock Pin Plate	1	1	1	1	1
12	F19A001	Top Main Lock Pin Plate	1	1	1	1	1
13	P05A0191BA	Pivot Plate w/Bushing & Brace	2	2	2	2	2
14	P06A002A	Latch Plate w/Gussets	1	1	1	1	1
15	P05A0072B	Shank Bar Ear w/Bushing	1	1	1	1	1
16	T18A05271A	72" Shank Bar Assy. Complete	1				
16	T18A06271A	76" Shank Bar Assy. Complete		1			
16	T18A07271A	80" Shank Bar Assy. Complete			1		
16	T18A08271A	84" Shank Bar Assy. Complete				1	
16	T18A09271A	88" Shank Bar Assy. Complete					1
17	P03A22	4G2A Side Plate	2	2	2	2	
	P03A00	4G2A Low Profile Side Plate (Opt.)	2	2	2	2	
17	P03A021	4G4A Side Plate			2	2	2
	P03A03	4G4A Low Profile Side Plate (Opt.)			2	2	2
18	P00A529A	Back Plate Assy. (No Tlbd or Cut. Edge)	1				
	P00ALP529A	4G2A Low Profile Back Plate Assy. (No Tlbd or Cutting Edge)	1				
18	P00A629A	Back Plate Assy. (No Tlbd or Cut. Edge)		1			
	P00ALP629A	4G2A Low Profile Back Plate Assy. (No Tlbd or Cutting Edge)		1			
18	P00A729A	Back Plate Assy. (No Tlbd or Cut. Edge)			1		
	P00ALP729A	4G2A Low Profile Back Plate Assy. (No Tlbd or Cutting Edge)			1		

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18	P00A829A	Back Plate Assy. (No Tlbd or Cut. Edge)					1
	P00ALP829A	4G2A Low Profile Back Plate Assy. (No Tlbd or Cutting Edge)					1
19	P00A524A	4G2A Tailboard Assy. (No Cutting Edge)	1				
19	P00A624A	4G2A Tailboard Assy. (No Cutting Edge)		1			
19	P00A724A	4G2A Tailboard Assy. (No Cutting Edge)			1		
19	P00A824A	4G2A Tailboard Assy. (No Cutting Edge)				1	
20	P01A1029A	4G4A Back Plate Assy. w/Bridge (No Cut. Edge)					1
	P01ALP1029A	Low Profile Back Plate Assy. w/Bridge (No Cutting Edge)				1	
20	P01A1129A	4G4A Back Plate Assy. w/Bridge (No Cut. Edge)					1
	P01ALP1129A	4G4A Low Profile Back Plate Assy. w/Bridge (No Cutting Edge)				1	
	P01A1129EA	4G4A Back Plate Assy. w/Bridge (No Cutting Edge) For 4G4-84-8E				1	
20	P01A1229A	Back Plate Assy. w/Bridge (No Cut. Edge)					1
	P01ALP1229A	Low Profile Back Plate Assy. w/Bridge (No Cutting Edge)					1
	P01A1229EA	Back Plate Assy. w/Bridge (No Cutting Edge) For 4G4-88-8E					1
21	P01A1024A	4G4A Back Plate Bridge Assy. (Includes Bridge & Bridge Gussets)			1		
21	P01A1124A	4G4A Back Plate Bridge Assy. (Includes Bridge & Bridge Gussets)				1	
21	P01A1224A	4G4A Back Plate Bridge Assy. (Includes Bridge & Bridge Gussets)					1

# S2.5x4-10.25 CYLINDER



<u>Ref. #</u>	<u>Qty.</u>	<u>Part No.</u>	<u>Description</u>
1	1	IT25RW	Rod Wiper
2	1	IT25US	Shaft Packing
3	1	IT25E	Head
4	1	IT25BU	Back Up
5	1	IT25HO	O-Ring
6	1	S25410.25C	Tube Assembly
7	1	S25410.25S	Shaft Assembly
8	1	IT25SO	Small O-Ring
9	1	IT25CS	Crown Seal
10	1	IT25V	Piston
11	1	IT25N	Piston Lock Nut
12	1	SK2.5-6	Seal Kit (Not Shown)

# LIMITED WARRANTY



GEARMORE, INC., warrants each new Gearmore product to be free from defects in material and workmanship for a period of twelve (12) months from date of purchase to the original purchaser. This warranty shall not apply to implements or parts that have been subject to misuse, negligence, accident, or that have been altered in any way.

Our obligation shall be limited to repairing or replacement of any part, provided that such part is returned within thirty (30) days from date of failure to Gearmore through the dealer from whom the purchase was made, transportation charges prepaid.

This warranty shall not be interpreted to render us liable for injury or damages of any kind or nature, direct, consequential or contingent, to person or property. This warranty does not extend to loss of crops, loss because of delay in harvesting or any other expenses, for any other reasons.

Gearmore in no way warrants engines, tires, or other trade accessories, since these items are warranted separately by these respective manufacturers.

Gearmore reserves the right to make improvements in design or changes in specification at any time, without incurring any obligations to owners or units previously sold.

GEARMORE, INC.  
13477 Benson Ave.  
Chino, CA 91710

Always refer to and heed machine operating warning decals on machine.

*The serial number of this product is stored in our computer database, thus submitting a warranty registration card is not required.*