



INDUSTRIAL SCRAPER

**Operation, Service
& Parts Manual For
2G1 Series**

September 1999

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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. Weigh 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.
- Take all possible precautions when leaving tractor unattended: Lower scraper, shift into neutral, set parking brake, stop engine and remove key from ignition.
- Never work under scraper without safety blocks.
- 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.
- Front tractor weights or front tire ballast should be used to enhance front end stability on small tractors.
- No riders are allowed on tractor or box scraper.
- Stop tractor immediately upon striking an obstruction. Turn off engine, inspect and repair any damage before resuming operation.
- 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.
- Always be sure the box scraper is in the fully raised position when in transport.
- 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** - has two spring loaded internal check ball valves. These valves are set at 800 P.S.I. to prevent damage to the cylinder when operating. You should hear a "squeaking" noise when extending or retracting the valve. This tells you the cylinder is by passing properly. If you notice the scarifier beam is "drifting" down when the beam is raised, it usually means that there is some foreign material in the cylinder which is preventing the spring loaded ball from "seating" properly. Take the cylinder to your dealer for repair.
- **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.
- Block box scraper securely before working underneath.
- Keep all persons away from operator control area while performing adjustments, service or maintenance.
- 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 $\frac{5}{8}$ " 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 -

BOLT	MINIMUM	MAXIMUM
$\frac{5}{8}$ " Plow	150 Ft/lbs.	180 Ft/lbs.

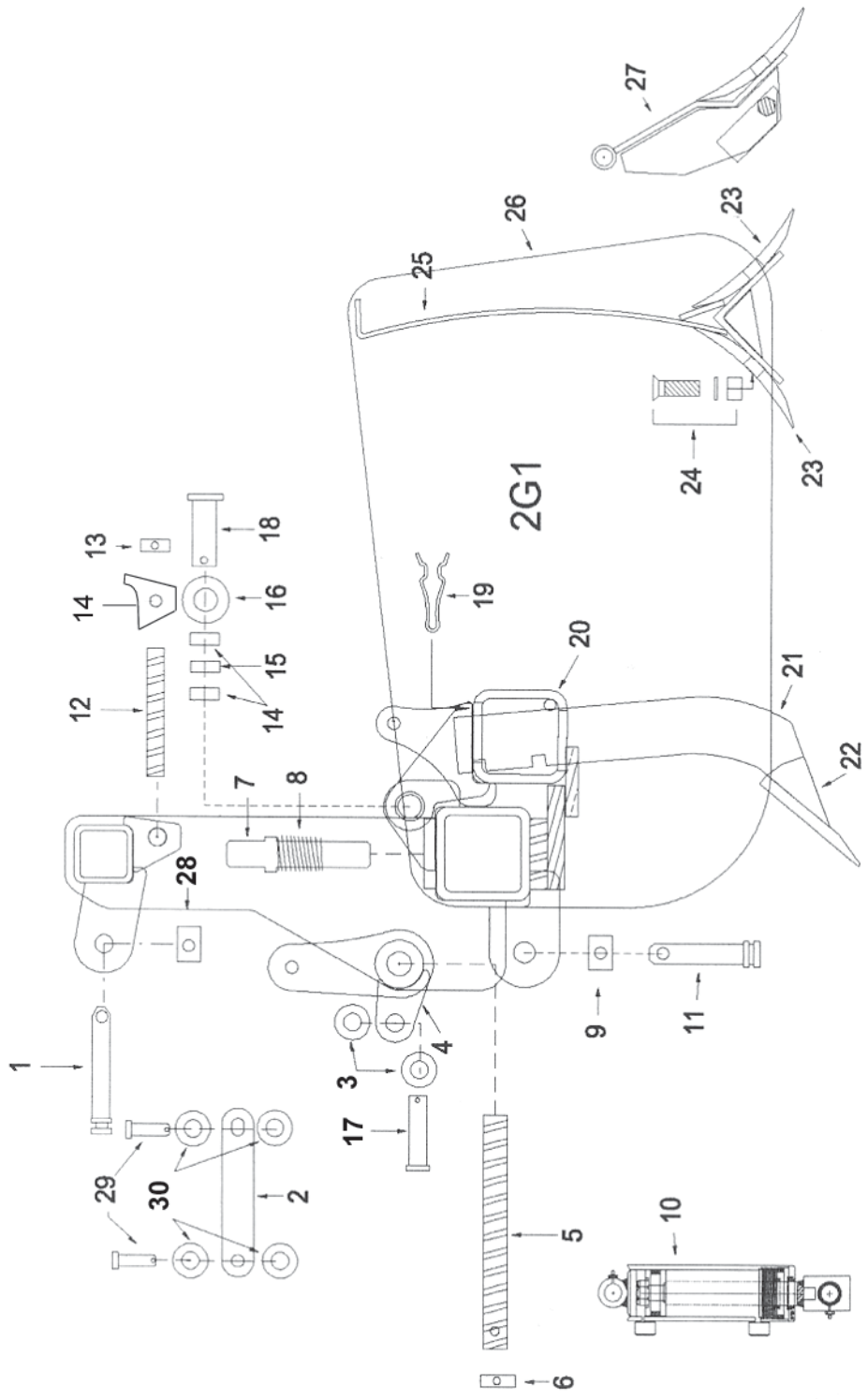
LUBRICATION:

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. ($\frac{9}{16}$ 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. Crack fitting on cylinder and cycle 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 bell crank has fully engaged onto the frame lock lug to avoid pressure on the cylinder and linkage when in use.

PARTS BREAKDOWN



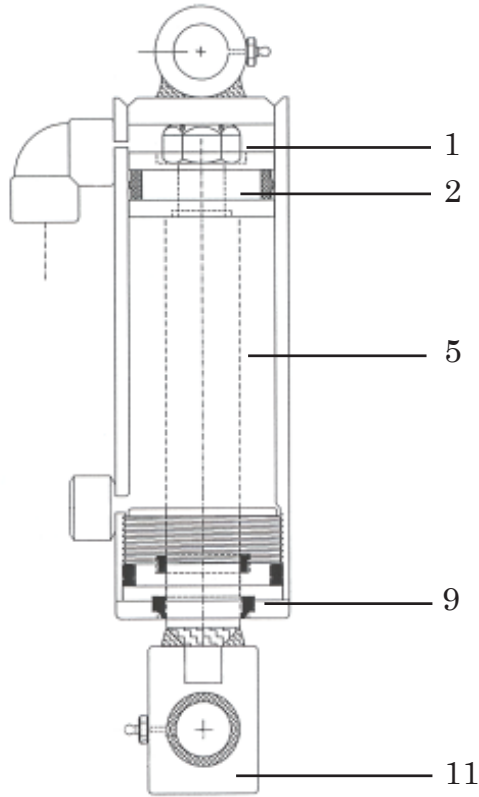
PARTS BREAKDOWN

REF #	PART NO.	DESCRIPTION	QTY			
			42	48	54	60
1	74	Top Link Pin, Cat. 1	1	1	1	1
2	P03B216C	Link Bracket	2	2	2	2
3	W075F	3/4" Washer	2	2	2	2
4	P05B001C	Bell Crank Assembly	1	1	1	1
5	R05B91	Shaft, Bell Crank	1	1	1	1
6	X02A31	Lock Collar	1	1	1	1
7	R08B001	Lock Pin	1	1	1	1
8	LOPS	Spring	1	1	1	1
9	X02B001	Lock Collar	2	2	2	2
10	S2X4-9	Cylinder - s/n	1	1	1	1
10A	S2X4-9G2	Cylinder - s/n	1	1	1	1
11	11904	Lift Pin Cat. 1	2	2	2	2
12	R04AB001	Rod	1	1	1	1
13	SC075025SS	Lock Collar	1	1	1	1
14	P02AB100	Ear, Rod	1	1	1	1
15	AB125500	Bushing	3	3	3	3
16	33448	1" Washer	2	2	2	2
17	P075300CC	Pin	1	1	1	1
18	B7914	Pin, Pivot	2	2	2	2
19	SR100	Retainer, Shank	3	4	5	5
20	T00B0127C	Shank Bar	1			
20	T00B0137C	Shank Bar		1		
20	T00B0147C	Shank Bar			1	
20	T00B0157C	Shank Bar				1
21	M10395B	Shank w/Point	3	4	5	5
22	RPS76931	Point	3	4	5	5
23	CE42	Cutting Edge	1			
23	CE48	Cutting Edge		1		
23	CE54	Cutting Edge			1	
23	CE60	Cutting Edge				1
24	5802		6	8	10	10
25	P00B130C	Tailboard	1			
25	P00B131C	Tailboard		1		
25	P00B132C	Tailboard			1	
25	P00B133C	Tailboard				1
26	P01B012	Side Plate	2	2	2	2

PARTS BREAKDOWN

REF #	PART NO.	DESCRIPTION	QTY			
			42	48	54	60
27	P00B131A	Tailboard, Hinged	1			
27	P00B231A	Tailboard, Hinged		1		
27	P00B331A	Tailboard, Hinged			1	
27	P00B431A	Tailboard, Hinged				1
28	X02B001	Lock Collar	1	1	1	1
29	P050175CL	Pins	2	2	2	2
30	W050SAEF	Washer	4	4	4	4

S2X4-9 CYLINDER



Ref. #	Part No.	Description	Qty.
1	IT2N	Crimped Locknut	1
2	LC2V	Piston	1
3	*	Crown Seal	1
4	*	O-ring	1
5	IT2C	Barrel	1
6	*	Rod Seal	1
7	*	O-ring	1
8	*	Back-up Ring	1
9	IT2E-S-1.2	Gland	1
10	*	Wiper Seal	1
11	IT2S	Piston Rod	1
*Parts available in packing kit only	SK24-6	Packing Kit (Consists of: 1 ea. Ref. 3,4,6,7,8, & 10)	1

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.