

# **OPERATOR'S MANUAL**

## **Carry-All Ejection Scraper**



**Put DIRT in its place.**

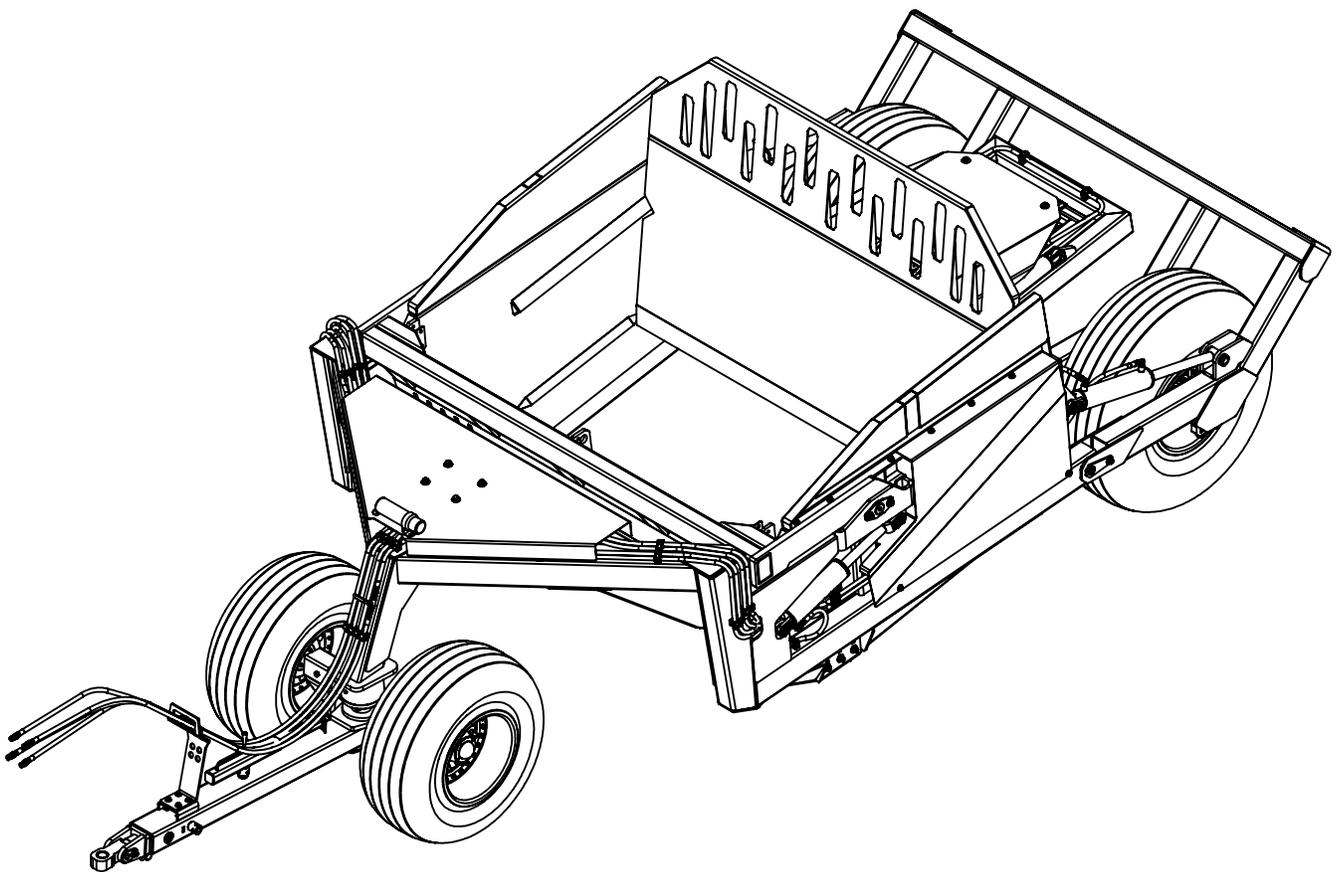
*MODEL*

**GCA1350HC**

# 1350 CARRY ALL

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## Operator's Manual



**13 YD, DOLLY**



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## **INTRODUCTION**

Welcome! You are now the owner of one of the most versatile machines for landscaping, terracing and earth moving. In years to come, your farm or ranch operation will benefit from the efficiency, utility, and economy provided by the GARFIELD SCRAPER.

This CA1350 model has been designed with the most modern methods and built by skilled workers using quality materials.

Please take time to be sure that you understand the proper maintenance and safe operation of this machine. Read this manual and follow the recommendations to help ensure safe and efficient operation. Also, keep this manual handy for future reference.

The information contained within this manual was current at the time of printing. Some parts may change slightly to assure you of the best performance.

To order a new Operator's or Parts Manual contact your authorized dealer.

GARFIELD EQUIPMENT, INC., provides warranty on each new machine sold. Be sure to fill out the warranty card and return it to GARFIELD EQUIPMENT, INC., within 10 days after delivery of your machine to be eligible for this warranty. If you did not get a warranty card with your machine, contact your Dealer to receive one. GARFIELD EQUIPMENT INC. will not provide warranty on any machine that has been altered or used for something other than its intended use.

GARFIELD EQUIPMENT INC., reserves the right to make any changes, or add improvements to its products at any time without incurring any obligation to make such changes on previously manufactured equipment.

**GARFIELD, INC.**

**500 W. SOUTHGATE**

**ENID, OKLAHOMA 73701**

**580-233-1410**

**800-382-4478**

## IMPORTANT SAFETY INFORMATION

Thoroughly read and understand the instructions given in this manual before operation. Refer to the "Safety Label" section, read all instructions noted on them.

Do not allow anyone to operate this equipment who has not fully read and comprehended this manual and who has not been properly trained in the safe operation of the equipment.

Operate equipment from the driver's seat only and do not lubricate, adjust or repair when machine is in motion.

Do not leave tractor or equipment unattended with engine running.

Do not allow anyone to stand between tractor and equipment while backing up to equipment. Keep hands, feet, and clothing away from power-driven parts. Wear snug fitting clothing to avoid entanglement with moving parts

Do not carry passengers on equipment at any time.

Turning tractor too tight may cause equipment to ride up on wheels. This could result in injury or equipment damage.

Dismounting from a moving tractor could cause serious injury or death.

Should hydraulic hoses and/or fitting be accidentally damaged, replace those components for safe operation. Never open hydraulic components under pressure.

## BE AWARE OF SIGNAL WORDS

A signal word designates a degree or level of hazard seriousness. The signal words are:



**DANGER**

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. This signal word is limited to the most extreme situations, typically for machine components that, for functional purposes, cannot be guarded.



**WARNING**

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.



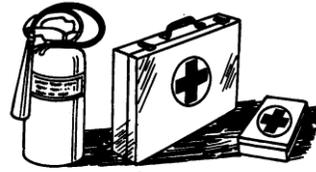
**CAUTION**

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

### PREPARE FOR EMERGENCIES

Be prepared if a fire starts.

Keep a first aid kit and fire extinguisher handy.



Keep emergency numbers for doctor, ambulance, hospital and fire department near phone.

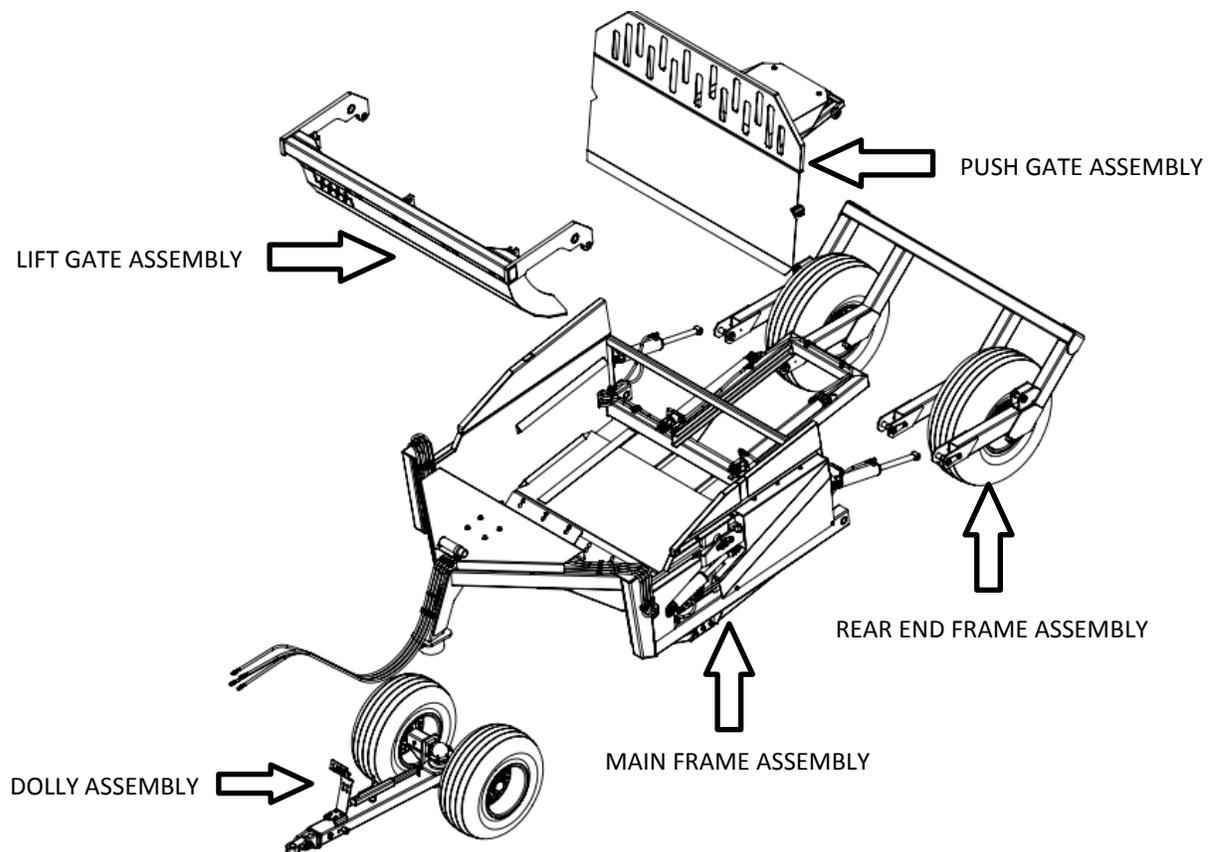
### SHUTDOWN AND STORAGE

Lower machine to ground, put tractor in park, turn off engine, and remove the key. Detach and store implements in an area where children normally do not play. Secure equipment by using blocks and supports.

### ASSEMBLY AND SET-UP

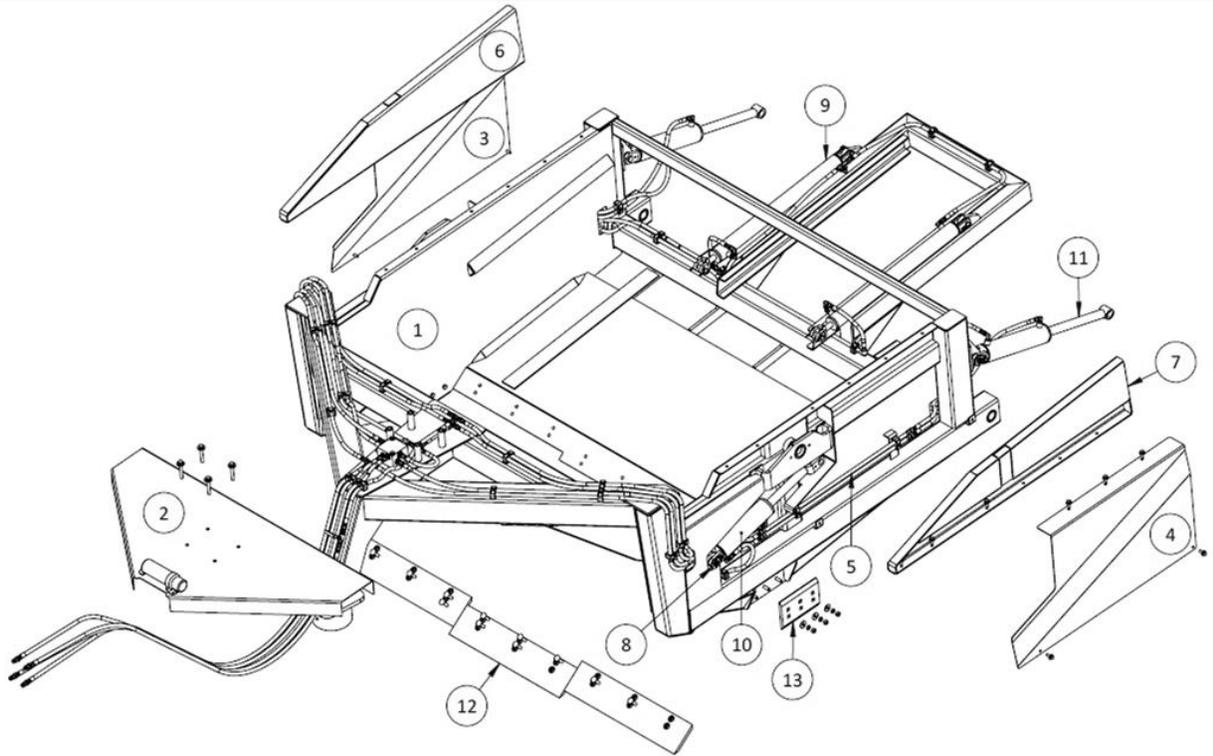
#### PARTS MANUAL

1350 scrapers are delivered fully assembled, but you can have a reference in the next diagrams.



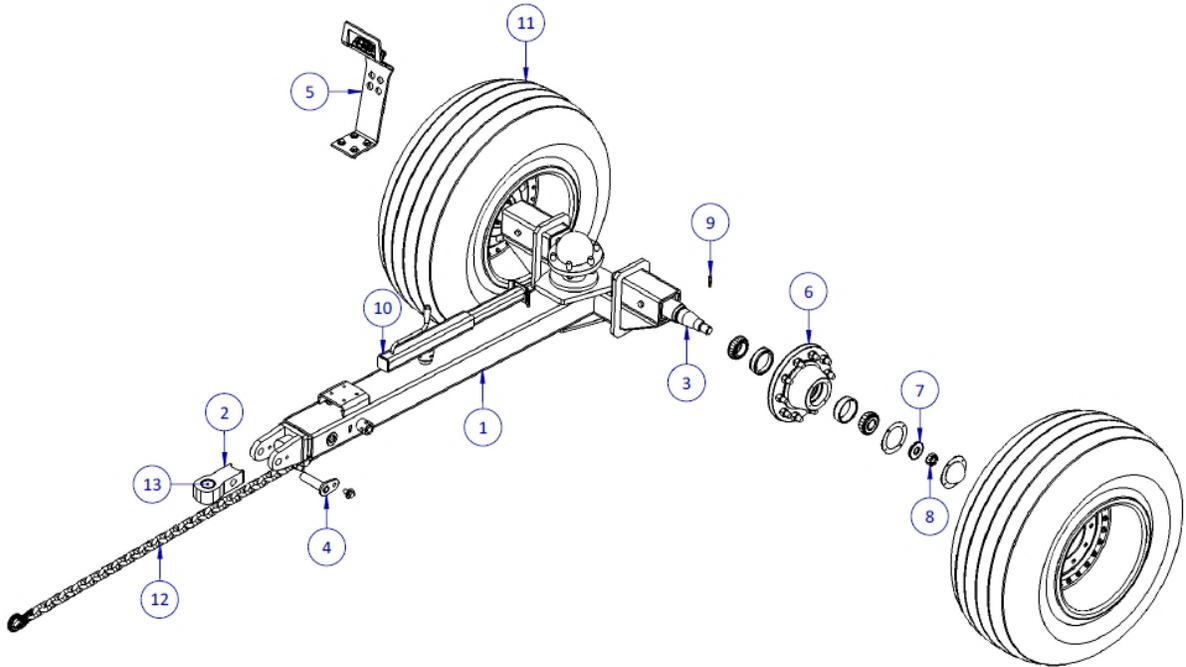
**IMPORTANT:** Parts must be ordered through your local authorized Garfield dealer. Be sure to state **MODEL** and **SERIAL NUMBER** of the machine, **PART NUMBER**, **DESCRIPTION** and **QUANTITY** needed.

# MAIN FRAME ASSEMBLY



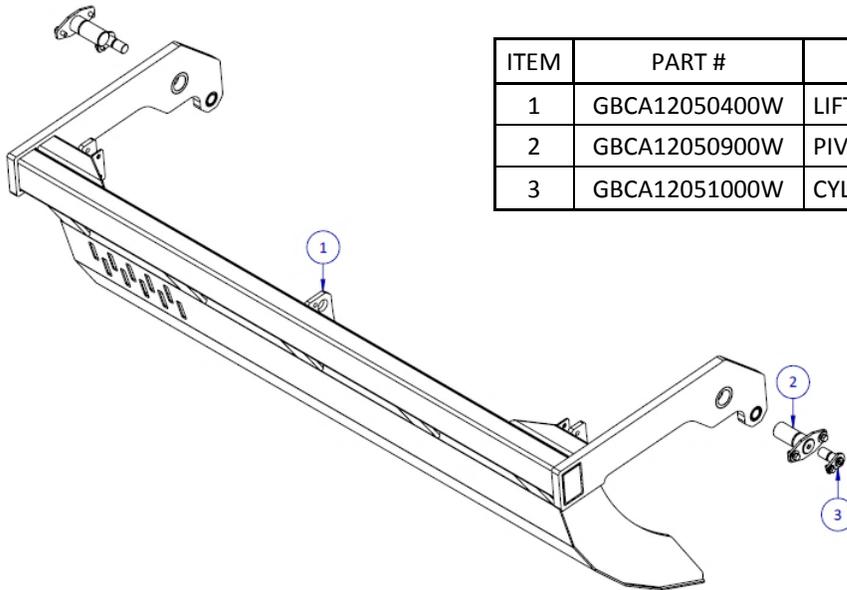
ITEM	PART #	DESCRIPTION	QTY.
1	GBCA12050100W	MAIN FRAME, ASSEMBLY	1
2	GBCA12050001C	NECK GUARD	1
3	GBCA12050002C	RIGHT SIDE GUARD	1
4	GBCA12050003C	LEFT SIDE GUARD	1
5	GBCA12050009C	SIDE TUBE	7
6	GBCA12050700W	RIGHT SPOILER	1
7	GBCA12050800W	LEFT SPOILER	1
8	GBCA12051000W	CYLINDER PIN ASSY	4
9	SP4110-4050-01	3" X 36" X 1-1/2" STROKE HYD CYL (HCY3X36X112)	2
10	SP4110-4094-01	4" X 12" X 2" STROKE HYD CYL (HCY4X12X2)	2
11	SP4110-4098-01	4" X 16" X 2" STROKE HYD CYL (HCY4X16X2)	2
12	SP4370-1321-00	BLADE 3/4" X 8" X 36" RB (GCARB3RB)	3
13	SP4370-1340-00	G.CARRY ALL SIDE WEAR BLADES NEW (GCASWBN)	2

## DOLLY ASSEMBLY



ITEM	PART #	DESCRIPTION	QTY.
1	GBCA12050500W	DOLLY ASSEMBLY	1
2	GBCA12050006C	LARGE 2" HOLE PULL BLOCK	1
3	GBCA12050007C	FRONT SPINDLE	2
4	GBCA12051100W	HITCH PIN	1
5	GBCA12051300W	HOSES SUPPORT, ASSY	1
6	SP4190-0015-25	W871 HUB W/CUPS AND STUDS/COMPLETE (WHBW871)	2
7	SP4240-1036-04	SPINDLE WASHER FOR W871 HUB (WWW871)	2
8	SP4220-1022-26	SPINDLE NUT FOR FRONT 12 YD CA ASSY (WSNW871)	2
9	SP4260-1122-01	COTTER PIN 1/4" X 2" FOR W871 HUB (WCPW871)	2
10	SP4190-1082-00	15" TUBE MT JACK 5000# (JK155)	1
11	SP4330-2540-01	H46 X 18-20 TIRE AND WHEEL (TIRE18)	2
12	SP4360-3038-05	1/2" GRADE 70 SAFETY CHAIN ASSEMBLY	1
13	SP4390-1102-00	2" ID X 2-1/2" OD X 2-1/2" LONG HARDENED BUSHING	1

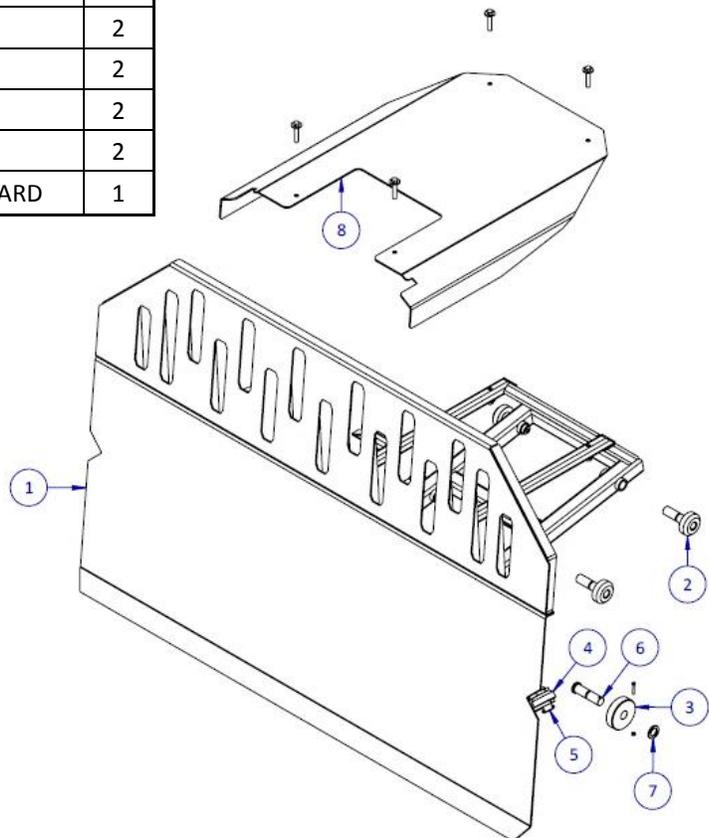
### LIFT GATE ASSEMBLY



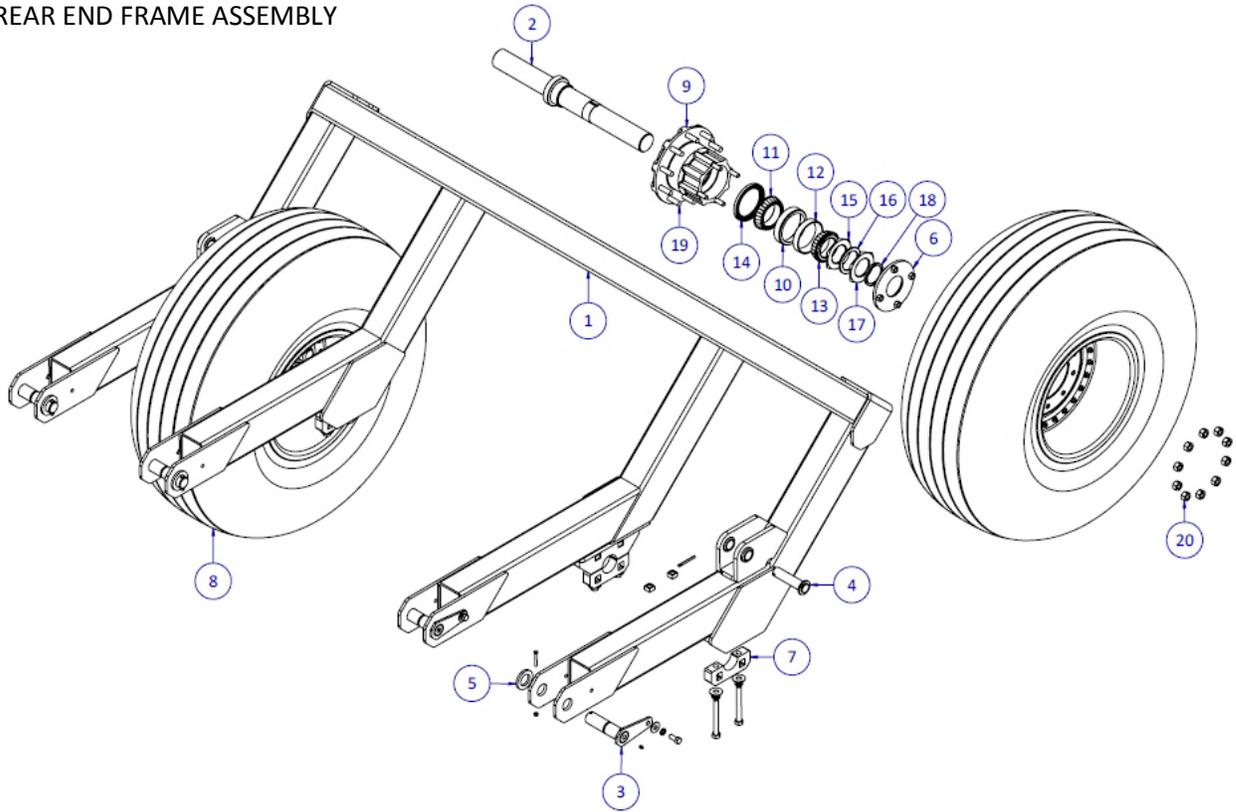
ITEM	PART #	DESCRIPTION	QTY.
1	GBCA12050400W	LIFT GATE, ASSEMBLY	1
2	GBCA12050900W	PIVOT PIN ASSY	2
3	GBCA12051000W	CYLINDER PIN ASSY	2

### PUSH GATE ASSEMBLY

ITEM	PART #	DESCRIPTION	QTY.
1	GBCA12050300W	PUSH GATE, ASSEMBLY	1
2	GBCA12011200W	ROLLER W/PIN	4
3	GBCA12010005C	ROLLER	2
4	GBCA12010006C	SIDE ROLLER	2
5	GBCA12010901C	4" LONG PIN	2
6	GBCA12011001C	6" LONG PIN	2
7	GBCA12010517C	ROLLER PIN WASHER	2
8	GBCA12050004C	EJECTOR CYLINDER GUARD	1

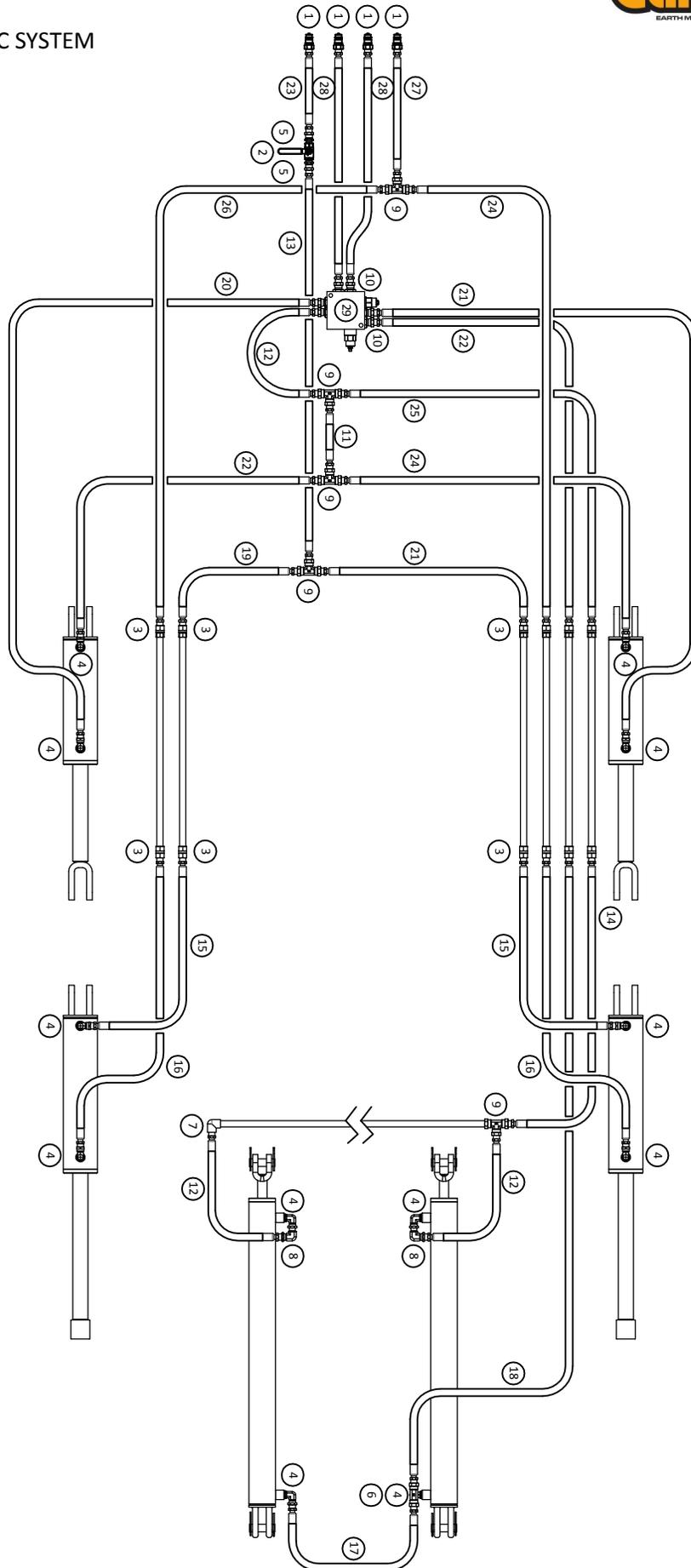


### REAR END FRAME ASSEMBLY



ITEM	PART #	DESCRIPTION	QTY.
1	GBCA12050200W	REAR END FRAME, ASSEMBLY	1
2	GBCA12050600W	SPINDLE, ASSEMBLY (WSPQ900S)	2
3	GBCA12051200W	PIN FOR HINGE	4
4	GBCA12010800W	6-1/2" LONG PIN	2
5	GBCA12010004C	1/2" WASHER	4
6	GBCA12010011C	DUST CAP (WDCQ900S)	2
7	GBCA12050005C	CLAMP	4
8	SP4330-2090-01	20 X 20 FOR 12 YD CA (TIRE 20X20)	2
9	SP4380-1025-05	S900 HUB FOR REAR 12 YD CA (WHBQ900S)	2
10	SP4150-7985-00	12 YD INNER RACE REAR AXLE (592 A)	2
11	SP4150-1985-00	INNER BEARING FOR REAR 12 YD CA HUB (594 A)	2
12	SP4150-7950-00	12 YD OUTER RACE REAR AXLE (572)	2
13	SP4150-1950-00	OUTER BEARING FOR REAR 12 YD CA HUB (580)	2
14	SP4130-5131-00	INNER SEAL FOR REAR 12 YD CA HUB (NAT370003A)	2
15	SP4220-1050-22	SPINDLE INNER NUT FOR REAR 12 YD CA (06-411)(WSINQ900S)	2
16	SP4240-1064-04	SPINDLE WASHER FOR REAR 12 YD CA HUB (WWSQ900S)	2
17	SP4220-1051-22	SPINDLE OUTER NUT FOR REAR 12 YD. CA (06-412) (WSONQ900S)	2
18	SP4130-5130-00	OUTER SEAL FOR 900S HUB 12 YD (NAT416404) (WOSQ900S)	2
19	SP4210-1458-96	STUD FOR REAR 12 YD CA HUB (13-1203 R OR L) WSTQ900S)	20
20	SP4220-1014-98	LUG NUT FOR REAR 12 YD CA HUB (WLNQ900S)	20

# 1350 HYDRAULIC SYSTEM

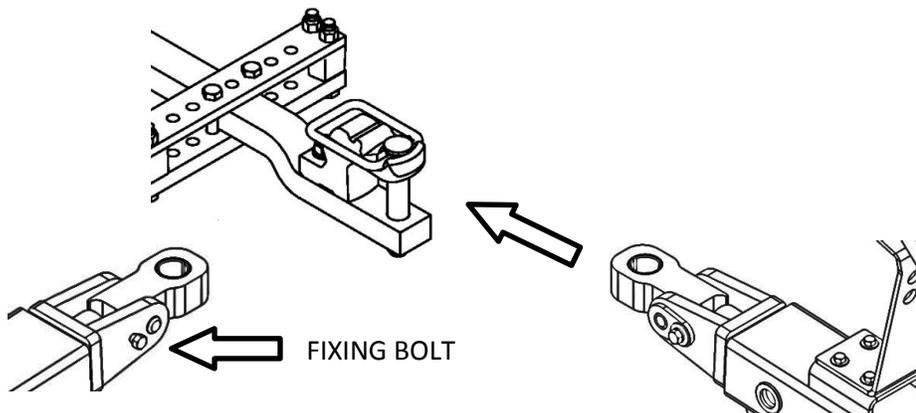




1350 HYDRAULIC SYSTEM

ITEM	PART #	DESCRIPTION	UNIT	GCA1350
				QTY
1	SP4110-6012-00	PIONEER END W/POPPET 1/2"(HEPP)	PC	4.00
2	SP4110-8020-00	1/2" CARBON STEEL BALL VALVE (HBV12)	PC	1.00
3	SP4120-1006-25	1/2" FP X 1/2" FP HYD SWIVEL ADAPTOR	PC	12.00
4	SP4120-1016-45	1/2 MB X 1/2 FP HYD SWIVEL 90 (HMBFS912)	PC	12.00
5	SP4120-1018-20	1/2" MP X 1/2" FP HYD SWIVEL ADAPTOR (HMFS12)	PC	2.00
6	SP4120-1019-20	1/2" MP X 1/2" FP SWIVEL TEE (HTMFS12)	PC	1.00
7	SP4120-1132-80	1/2" FP X 1/2" FP HYD 90 ELBOW	PC	1.00
8	SP4120-1168-20	1/2" MP X 1/2 FP HYD SWIVEL 90 (HMFS912)	PC	2.00
9	SP4120-1210-85	1/2" FP SWIVEL TEE (HTFS12)	PC	5.00
10	SP4120-1026-45	3/4" MB X 1/2" FP SWIVEL (HMBFS34)	PC	6.00
11	SP4430-0120-22	8M2T - 8MP - 9" HYD HOSE, ASSEMBLY	PC	1.00
12	SP4430-0120-45	8M2T - 8MP - 18" HYD HOSE, ASSEMBLY	PC	3.00
13	SP4430-0121-06	8M2T - 8MP - 42" HYD HOSE, ASSEMBLY	PC	1.00
14	SP4430-0121-11	8M2T - 8MP - 44" HYD HOSE, ASSEMBLY	PC	1.00
15	SP4430-0121-16	8M2T - 8MP - 46" HYD HOSE, ASSEMBLY	PC	2.00
16	SP4430-0121-24	8M2T - 8MP - 49" HYD HOSE, ASSEMBLY	PC	2.00
17	SP4430-0121-87	8M2T - 8MP - 74" HYD HOSE, ASSEMBLY	PC	1.00
18	SP4430-0122-36	8M2T - 8MP - 93" HYD HOSE, ASSEMBLY	PC	1.00
19	SP4430-0122-92	8M2T - 8MP - 115" HYD HOSE, ASSEMBLY	PC	1.00
20	SP4430-0122-99	8M2T - 8MP - 118" HYD HOSE, ASSEMBLY	PC	1.00
21	SP4430-0123-04	8M2T - 8MP - 120" HYD HOSE, ASSEMBLY	PC	2.00
22	SP4430-0123-09	8M2T - 8MP - 122" HYD HOSE, ASSEMBLY	PC	2.00
23	SP4430-0123-17	8M2T - 8MP - 125" HYD HOSE, ASSEMBLY	PC	1.00
24	SP4430-0123-20	8M2T - 8MP - 126" HYD HOSE, ASSEMBLY	PC	2.00
25	SP4430-0123-27	8M2T - 8MP - 129" HYD HOSE, ASSEMBLY	PC	1.00
26	SP4430-0123-30	8M2T - 8MP - 130" HYD HOSE, ASSEMBLY	PC	1.00
27	SP4430-0123-70	8M2T - 8MP - 146" HYD HOSE, ASSEMBLY	PC	1.00
28	SP4430-0123-81	8M2T - 8MP - 150" HYD HOSE, ASSEMBLY	PC	2.00
29	SP4110-1101-02	17103AA HYD MANIFOLD W/VALVES (CBGBLHN & SCGALAN)	PC	1.00

## DRAWBAR HOOK-UP



Keep the pull block on horizontal position tightening the fixing bolt. Be sure to loosen the bolt before operating.

There are twenty-four different grease zerks on the machine; one on each cylinder pin; one on each of the rear frame pivot pins; eight on the push gate; one on the ball and receiver; and one on the swivel hitch.

The machine should be greased every four hours or daily, depending on usage.

The wheel bearings should be repacked yearly.

Check air pressure in all tires and kept at minimum of 50lbs.

Lug bolts should be checked periodically. Refer to "Torque Values Chart" to determine correct torque values when tightening hardware.

Torque Values Chart for Common Bolt Sizes													
Bolt Size (inches)	Bolt Head Identification						Bolt Size (Metric)	Bolt Head Identification					
	Grade 2		Grade 5		Grade 8			Class 5.8		Class 8.8		Class 10.9	
in-tpi <sup>1</sup>	N · m <sup>2</sup>	ft-lb <sup>3</sup>	N · m	ft-lb	N · m	ft-lb	mm x pitch <sup>4</sup>	N · m	ft-lb	N · m	ft-lb	N · m	ft-lb
1/4" - 20	7.4	5.6	11	8	16	12	M 5 X 0.8	4	3	6	5	9	7
1/4" - 28	8.5	6	13	10	18	14	M 6 X 1	7	5	11	8	15	11
5/16" - 18	15	11	24	17	33	25	M 8 X 1.25	17	12	26	19	36	27
5/16" - 24	17	13	26	19	37	27	M 8 X 1	18	13	28	21	39	29
3/8" - 16	27	20	42	31	59	44	M10 X 1.5	33	24	52	39	72	53
3/8" - 24	31	22	47	35	67	49	M10 X 0.75	39	29	61	45	85	62
7/16" - 14	43	32	67	49	95	70	M12 X 1.75	58	42	91	67	125	93
7/16" - 20	49	36	75	55	105	78	M12 X 1.5	60	44	95	70	130	97
1/2" - 13	66	49	105	76	145	105	M12 X 1	90	66	105	77	145	105
1/2" - 20	75	55	115	85	165	120	M14 X 2	92	68	145	105	200	150
9/16" - 12	95	70	150	110	210	155	M14 X 1.5	99	73	155	115	215	160
9/16" - 18	105	79	165	120	235	170	M16 X 2	145	105	225	165	315	230
5/8" - 11	130	97	205	150	285	210	M16 X 1.5	155	115	240	180	335	245
5/8" - 18	150	110	230	170	325	240	M18 X 2.5	195	145	310	230	405	300
3/4" - 10	235	170	360	265	510	375	M18 X 1.5	220	165	350	260	485	355
3/4" - 16	260	190	405	295	570	420	M20 X 2.5	280	205	440	325	610	450
7/8" - 9	225	165	585	430	820	605	M20 X 1.5	310	230	650	480	900	665
7/8" - 14	250	185	640	475	905	670	M24 X 3	480	355	760	560	1050	780
1" - 8	340	250	875	645	1230	910	M24 X 2	525	390	830	610	1150	845
1" - 12	370	275	955	705	1350	995	M30 X 3.5	960	705	1510	1120	2100	1550
1-1/8" - 7	480	355	1080	795	1750	1290	M30 X 2	1060	785	1680	1240	2320	1710
1-1/8" - 12	540	395	1210	890	1960	1440	M36 X 3.5	1730	1270	2650	1950	3660	2700
1-1/4" - 7	680	500	1520	1120	2460	1820	M36 X 2	1880	1380	2960	2190	4100	3220
1-1/4" - 12	750	555	1680	1240	2730	2010							
1-3/8" - 6	890	655	1990	1470	3230	2380							
1-3/8" - 12	1010	745	2270	1670	3680	2710							
1-1/2" - 6	1180	870	2640	1950	4290	3160							
1-1/2" - 12	1330	980	2970	2190	4820	3560							

<sup>1</sup> in-tpi = nominal thread diameter in inches-threads per inch  
<sup>2</sup> N · m = newton-meters  
<sup>3</sup> ft-lb = foot pounds  
<sup>4</sup> mm x pitch = nominal thread diameter in millimeters x thread pitch

Torque tolerance + 0%, -15% of torquing values. Unless otherwise specified use torque values listed above.



## OPERATION

The 1350 Carry All scrapers are designed with Category III hitch. Horsepower rating of tractor should be between 250 and 300 hp for the 1350 single and between 350 and 375 hp for the 1350 tandem.

**IMPORTANT:** You could lose steering control if your tractor is too light. Refer to your tractor's manual to determine if additional ballast is needed.

Follow all laws when transporting on highways and drive slowly over rough ground, side hills, and around curves. Always put transport lock in while traveling down the road.

Watch out for wires, trees, etc., when raising equipment. Make sure all persons are clear of working area.

Hook up to the tractor, cycle all hydraulics and be sure to remove transport locks by raising the scraper with your hydraulics before operating.

Check the oil levels in the tractor hydraulic system and add to maintain the proper level. Care should be used when adding oil or when disconnecting any oil line to keep all dirt out of the oil as dirt is a major factor in the failure of hydraulic components.

There are two sets of hydraulic controls: The two outside hoses control the raise and lower. The two center hoses operate the clam and the pushgate. The clam will raise completely open, before the pushgate cylinders start pushing and can be retracted without closing the clam. You can level from 0 to 16 inches by adjusting the height of your scraper and then pushing out your load.

The manifold block containing the pushgate sequence valve cartridge and clam sequence valve cartridge is used to control two hydraulic circuits with one hydraulic remote. When the tractor hydraulic remote is activated, oil flows first to the clam's cylinders until they are fully extended. Once the cylinders are fully extended, the clam circuits' hydraulic pressure begins to increase. Once the pressure threshold is surpassed (which is adjustable. See adjustment section), the sequence valve diverts the oil flow to the pushgate's hydraulic circuit. Once the push gate is completely extended the operator then reverses the tractors hydraulic remote. The counterbalance valve will hold the clam open until the push gate is fully retracted. The clam sequence valve then opens and allows the clam to close.

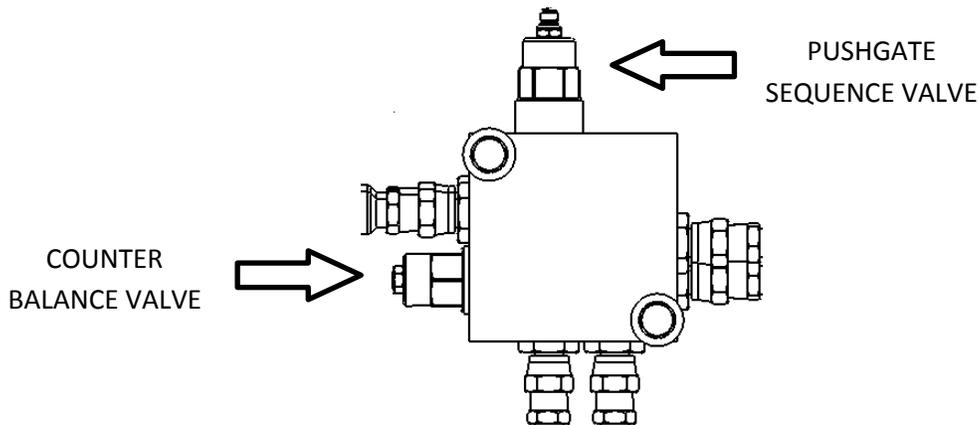
## SETTING THE VALVES

### STEP 1 PUSHGATE SEQUENCE VALVE

Loosen the lock nut (9/16") on the sequence valve cartridge. Turn the setscrew (4mm) clockwise until the front apron rises before the push-off begins to advance. (Earthmover should be empty) Turn the adjustment screw an additional 1/4 turn clockwise and tighten jam nut.

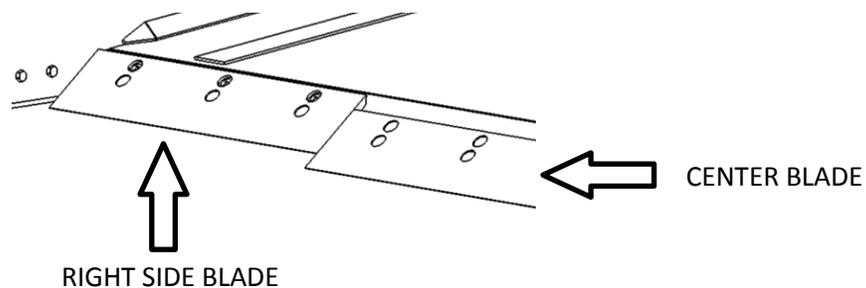
## STEP 2 COUNTER BALANCE VALVE

Loosen the lock nut (9/16") on the counterbalance valve cartridge. Turn the setscrew (4mm) counter-clockwise until the apron holds in a raised position while rear gate is being retracted. Turn adjustment screw an additional 1/4 turn, tighten jam nut. DO NOT tighten adjusting screw more than necessary.



## BLADES

Inspect cutting edges daily. Replace cutting edges when center blade has been worn to approximately 6" and side edges worn to approximately 4".



### CAUTION

Failure to replace worn cutting edges may result in unnecessary wear to the earthmover sides and floor.

Note: Please specify left or right cutting edges when ordering replacements. Left or right side parts are determined by viewing from rear of the scraper.

When the scraper is placed into operation, the operator will have to "feel out" the amount of depth of cut to obtain maximum loading efficiency. This is usually accomplished by taking a lesser and more uniform cut; however, some soil conditions such as loose sand may require a "pumping action" obtained by taking successive deep cuts and lifting out of cut as the tractor begins to lose power or traction.



## **WARRANTY**

Under the conditions described herein GARFIELD, INC. will within 12 months from the date of purchase on agricultural designed the operated machinery, and 90 days for hire commercial machinery, supply or at GARFIELD's option, repair any part manufactured and/or workmanship, upon receipt of the damaged part.

GARFIELD components manufactured by companies other than GARFIELD are warranted solely by those companies. Those components include but are not limited to tires, rims belts, hoses, and hydraulics.

GARFIELD will not warrant any part which in GARFIELD's opinion has failed due to modifications, abuse, misuse, improper maintenance, or due to normal wear.

GARFIELD will pay no further expenses, including but not limited to transportation, labor and loss of time income, or crops.

This warranty is made expressly in place of all other guarantees or warranties, expressed or implied.



## FORWARD

This manual is written as a guide for owners and operators of the GARFIELD equipment, read it carefully and follow the suggestions which are made. Keep this manual in a convenient place for quick, easy reference and use it whenever questions come up.

Fill in the following warranty registration form and return to GARFIELD INC. Keep this information for future reference. Always give this information to your Dealer when ordering new parts, or asking for help. Your GARFIELD dealer is your primary source for information, however, if at any time it is necessary for you to write directly to GARFIELD INC. for additional information, give the model and serial number of your machine and as much descriptive information as possible. This will help us to do a better job of solving your problem and/or getting parts to you.

MODEL NO. \_\_\_\_\_

SERIAL NO. \_\_\_\_\_

DATE OF PURCHASE \_\_\_\_\_

NAME AND ADDRESS \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

It is the policy of GARFIELD INC. to make improvements on our product. GARFIELD, INC. reserves the right to make these improvements without incurring any obligation to those machines already in the field. Years of research and development combined with experience gained through close contact with operators has been drawn upon designing your products.

**GARFIELD, INC.**

**500 W. SOUTHGATE**

**ENID, OKLAHOMA 73701**

**580-233-1410**

**800-382-4478**