Hydraulic Harrow Extra Heavy Series



CONGRATULATIONS!

You have invested in one of the best implements of its type in the market today.

The care you give your "FIELDKING" implement will greatly determine your satisfaction with its performance and its service life. A careful study of this manual will give you a thorough understanding of your new implement before operating.

If your manual is lost or destroyed, "FIELDKING" will be glad to provide you a new copy. Visit to nearest dealership & get a copy. Most of our manuals can also be downloaded from our website at www.fieldking.com.

As an authorized "FIELDKING" dealer, we stock genuine "FIELDKING" parts which are manufactured with the same precision and skill as our original equipment. Our trained service persons are well informed on methods required to service "FIELDKING" equipments and are ready to help you.

Should you require additional information or assistance, please contact us.

YOUR AUTHORIZED

FIELDKING DEALER

BECAUSE "FIELDKING" MAINTAINS AN ONGOING PROGRAMME OF PRODUCT IMPROVEMENT, WE RESERVE THE RIGHT TO MAKE IMPROVEMENTS IN DESIGN OR CHANGE IN SPECIFICATION WITHOUT INCURRING ANY OBLIGATION TO INSTALL THEM ON UNITS PREVIOUSLY SOLD. BECAUSE OF THE POSSIBILITY THAT SOME PHOTOGRAPHS IN THIS MANUAL WERE TAKEN OF PROTOTYPE MODELS, PRODUCTION MODELS MAY VARY IN SOME DETAIL. IN ADDITION, SOME PHOTOGRAPHS MAY SHOW SHIELDS REMOVED FOR THE PURPOSE OF CLARITY. NEVER OPERATE THIS IMPLEMENT WITHOUT ALL SHIELDS IN PLACE.

TO THE PURCHASER

This manual contains valuable information about your new "FIELDKING" hydraulic harrow extra heavy series. It has been carefully prepared to give you helpful suggestions for operating, adjusting, servicing and ordering spare parts.

Keep this manual in a convenient place for quick and easy reference. Study it carefully. You have purchased a dependable and sturdy hydraulic harrow extra heavy series but only by proper care and operation you can expect to receive the service and long life designed and built into it.

Sometime in the future your hydraulic harrow extra heavy series may need new parts to replace those that are worn or broken. If so, go to your dealer and provide him with the model and part number.

CUSTOMER INFORMATION

Name	
Purchased From	
Date of Purchase	
Model No	
Serial No.	

PURCHASER / OPERATOR'S RESPONSIBILITY

- 1. Read and understand the information contained in this manual.
- 2. Operate, lubricate, assemble and maintain the equipment in accordance with all instructions and safety procedures in this manual.
- 3. Inspect the equipment and replace or repair any parts that are damaged or worn out which under continued operation would cause damage, wear to other parts, or cause a safety hazard.
- 4. Return the equipment or parts to the authorized "FIELDKING" dealer, from where it was purchased, for service or replacement of defective parts that are covered by warranty. (The "FIELDKING" Factory may inspect equipment or parts before warranty claims are honored.)
- 5. All costs incurred by the dealer for traveling to or transporting the equipment for warranty inspection and claims will be borne by the customer.

INDEX

1. TECHNICAL DATA

- 1.1 Introduction
- 1.2 Warranty
- 1.3 When the warranty becomes void
- 1.4 Warning

2. USAGE INSTRUCTIONS

- 2.1 Before Use & Adjustments
- 2.2 Attaching Harrow to the tractor
- 2.3 Warning for driver
- 2.4 Safety

3. MAINTENANCE

- 3.1 Maintenance Instructions
- 3.2 Storage of machine after work
- 3.3 Lubrication
- 3.4 Instruction for driver

4. OPERATIONAL GUIDELINES FOR HARROW

5. TROUBLE SHOOTING CHART

1. TECHNICAL DATA

1.1 INTRODUCTION

This handbook contains the use and maintenance instructions with a list of the spare parts of the hydraulic harrow extra heavy series.

This disc harrow is equipped with heavy-duty box frame specially designed for harrowing / land preparation of rough soil (Secondary finer operation).

Regular and satisfactory operation together with economic and long lasting use of the implement depends on the compliance with instructions given in this handbook.

Compliance with the instructions in this handbook is also important since manufacturer declines all and every responsibility for damage to persons or property caused by negligence and failure to comply with these instructions.

1.2 WARRANTY

When the machine is delivered, check that it has not been subjected to damage during transport and that the accessories are in a perfect condition and complete.

Any claims following the receipt of damaged goods shall be presented in writing within 8 days from the receipt of the goods.

The purchaser may only make the claims under warranty when he has complied with the warranty conditions in the supply contract.

1.3 WHEN THE WARRANTY BECOMES VOID

Besides the cases specified in the supply agreement, the warranty shall in any case become void.

- 1. When the implement has been used beyond the specified power limit like (Tractor horse power).
- 2. When repairs made by the customer without authorization from the manufacturer or owing to installation of spurious spare parts, the machine is subjected to variations and the damage can be ascribed to these variations.
- 3. When the user has failed to comply with the instructions in this handbook.
- 4. If the implement is used in very hard/stony soil no warranty of discs will be given.
- 5. No warranty will be given if the service and greasing is not done on time.

1.4 WARNING

- 1. Thoroughly read the instruction manual before proceeding with the various operations.
- 2. Maintain the harrow as per the instructions of this handbook to be entitled for warranty.

2. USAGE INSTRUCTIONS

2.1 BEFOREUSE & ADJUSTMENTS

- Before mounting of disc harrow make sure that all nuts & bolts are properly secured.
- 2. Also determine soil and trash conditions of the field and make the preliminary adjustments. e.g.

a) Disc gang angle adjustment

Gang angle (Angle between two gangs) ranges between 0° to 50°. The angle can be increased for better penetration in dry soil while it should be reduced to avoid clogging in wet soil.

b) Disc harrow leveling

To eliminate uneven penetration and side draft, leveling is done by means of drawbar adjustment. While tractor pulls to right the rear gang should be lowered a little. When the tractor pulls to the left the rear gang should be raised.

c) Scraper adjustment

The scraper can be adjusted by loosening the bolts at the scraper clamp.

d) Depth control

The depth at which the implement is required to work is controlled hydraulically by raising or lowering the control lever on the tractor.

e) Disc harrow penetration

Factors affecting disc harrow penetration are

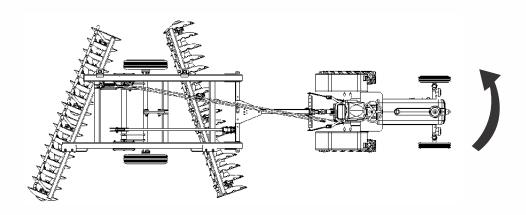
- 1. Angle of the gang
- 2. Weight of the harrow
- 3. Disc diameter
- 4. Disc sharpness
- 5. Blunt disc increases the draft considerably, check the disc sharpness
- 6. Angle of hitch

2.2 ATTACHING THE HARROW TO THE TRACTOR

- 1. Place the harrow duly leveled on the flat piece of land.
- 2. Reverse the tractor to the harrow (Do not drag the harrow up the tractor).
- 3. Attach tongue (Hook) of harrow securely to the towing tractor using drawbar pin.
- 4. Connect cleaned hydraulic couplers (Q.R.C value) of harrow to tractor.

a) Maneuver direction

Never maneuver to the right hand side, because the angle formed by the disc angle, transmits great effort to the implement, overloading mainly the pulling components i.e. offset bar, drawbar etc.



2.3 WARNING FOR THE DRIVER

- 1. Before harrowing check all nuts & bolts of the disc harrow.
 - 2. Be vigilant about the tree roots and stones. Don't harrow on stony soil.
 - 3. Tractor should be in first high or fourth low gear.
 - 4. Don't allow anyone to come across the harrow.
 - 5. Before lifting the hydraulic harrow extra heavy series check the hydraulic couplers (Q.R.C value) & pressure flow properly.
 - 6. Lift the hydraulic harrow extra heavy series with the help of hydraulic pressure before approaching the road.

1.4 SAFETY

Understanding the machine safety labels



Safety-Alert Symbol

The machine safety labels shown in this section are placed in important areas on your machine to draw attention to potential safety hazards

On your machine the words DANGER, WARNING, and CAUTION are used with this safety-alert symbol. DANGER identifies the most serious hazards.

The operator's manual also explains any potential safety hazards whenever necessary.

➤ Before harrowing with disc harrow take care that nobody stands near it.



In order to protect yourself always wear adequate clothes and shoes during the operations.



Never use your hands to check hydraulic leaks. Escaping hydraulic oil under pressure may have sufficient force to penetrate the skin causing injury.



Never allow riders on the tractor or implement unless an additional seat is available.



Be careful when moving around steep gradient to avoid sharp turn.



Never transport the implement on rough roads during the night. When operating, avoid sharp turns that may cause tractor colliding with the implement.

3. MAINTENANCE

3.1 MAINTENANCE INSTRUCTIONS

If you work the extra hydraulic harrow extra heavy series on stony land then maintenance also increases.

- 1. If the soil has entered the grease nipple, then change the nipple.
- 2. If disc harrow is new after initial working of first two hours, tighten all nuts & bolts.
- 2. If disc harrow is new after initial working of first two hours, tighten all nuts & bolts.
- 3. After every fifty hours grease all greasing points with grease gun and tighten all nuts & bolts.
- 4. After fifty hours, open the bearing hub/bearing spool of hydraulic harrow extra heavy series & cleanse with diesel oil & pump in new grease.
- 5. Check hydraulic cylinder oil leakage occasionally.

3.2 STORAGE OF MACHINE AFTER WORK

- 1. Wash the hydraulic harrow extra heavy series after work.
- 2. Replace the worn out nuts & bolts.
- 3. If hydraulic harrow extra heavy series has to remain unused for long time then clean it & apply a layer of used oil for rust prevention.

These steps will enhance the life of your disc harrow.

3.3 LUBRICATION

- 1. Please take care that the high quality grease is used in the greasing points.
- 2. Please take care that the high quality hydraulic oil is used in the hydraulic cylinder.



Be careful with the environment. Do not spill combustible oil, battery and filter residues in the soil. These trashes in contact with the soil reach sub layer which directly damage the environment. Look for the information to recycle or re-use them.

3.4 INSTRUCTIONS FOR DRIVER

- 1. In case of scraper touching the discs, loosen the scraper bolt and readjust the scraper.
- 2. Never reverse the tractor when the harrow is engaged in the soil.
- 3. Never turn the tractor to the right or left when the harrow is engaged in the soil.
- 4. Properly fit the drawbar hook duly locked with lynch pin.
- 5. To get good results from the harrow, disc should be replaced when its diameter is reduced by 5" from its original size.
- 6. When hydraulic harrow extra heavy series is ready for use don't stand between harrow & the tractor.

4. OPERATIONAL GUIDELINES FOR HARROW

- 1. Adding of wheel weights/water ballasting or combination of both is recommended when excessive rear wheel slippage is experienced.
- 2. Adjust internal /external check chains to obtain implement swing range within 50 mm (2") when raised.
- 3. Always maintain the correct tyre pressure to avoid wheel slippage.
- 4. Always set hydraulic levers correctly for draft and position control operation.

The following settings are necessary to ensure that uniform working depth is maintained

a.) Side Draft

The hydraulic harrow extra heavy series will trail correctly behind the tractor provided the side thrust of the front gang is equal to that of rear. In case it is different there will be side draft. To set it correctly, the gang angle should be changed.

b.) Severe Side Draft

In case of severe side draft the cutting depth of rear disc gang should be increased or decreased.

Precautions during transportation

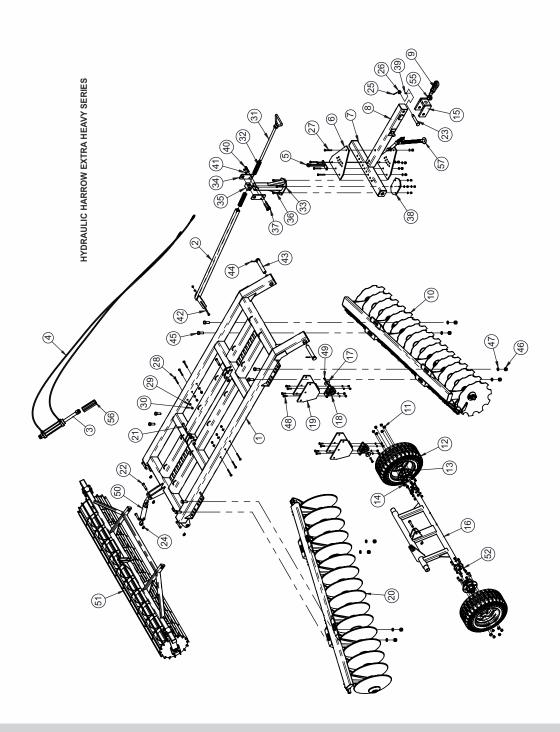
- 1. When transporting lift the harrow on tyres.
- 2. Set hydraulic levers in top raised position and lock levers.
- 3. Maintain the speed to avoid jumps.
- 4. Watch while over taking on road.
- 5. Always use SMV (Slow Moving Vehicles) symbols.



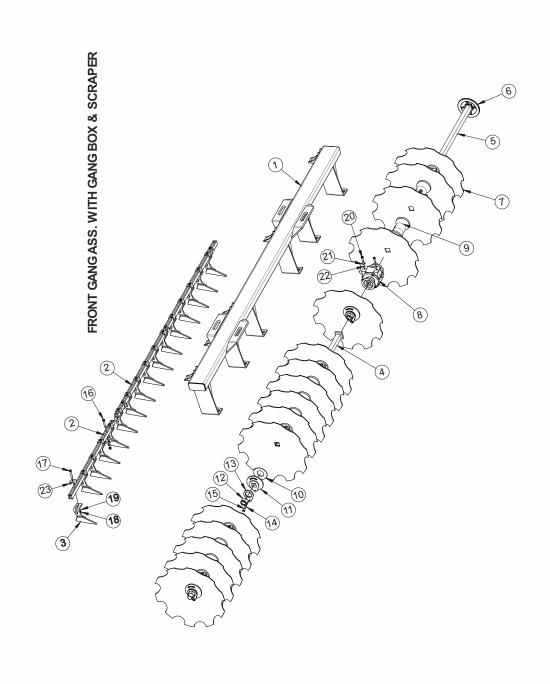
Dear user!
Respect the Ecology.
Do not throw the trash away.
This gesture helps to protect our Environment.

5. TROUBLE SHOOTING CHART

SR. NO.	POSSIBLE CAUSES	POSSIBLE REMEDIES
	A. Side Draft	
1.	Disc not running level	Adjust using leveling lever
2.	Gangs improperly angled	Set the gangs
3.	Too much left hand offset.	By adjusting the drawbar plate bolt
	B. Excessive field slippage	
1.	Tractor overloaded	Reduce angle, reduce depth.
2.	Not enough tractor ballast	Add wheel weight or liquid
	C. Not filling the furrow	
1.	Too much left hand offset	By adjusting the drawbar
2.	Tractor wheel running in furrow enlarging it	Drive the tractor in un worked ground
3.	Disc too far from furrow	Keep the left front discs in furrow
4.	Rear gang set wrong, laterally.	By adjustment of gang box angle
	D. Poor penetration	
1.	Hard ground	Increase angle between front and rear gang.
	E. Disc unsteady	
1.	Too much angle in gang	Reduce the gang angle
	F. Gang clogging	
1.	Field too wet.	Disc at shallow depth for first pass to speed up drying process.
2.	Gang set in maximum angle.	Reduce the angle
3.	Not using scrapers	Install scrapers.
4.	Scrapers worn out or not set properly.	Replace worn ones. Adjust scrapers close to the disc
5.	Disc is too deep in damp soil	Reduce penetration

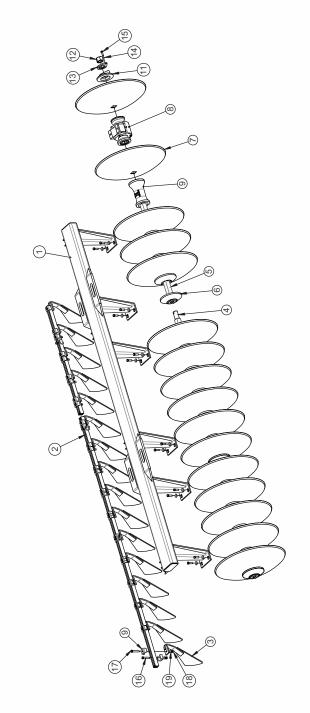


	HIDRAULIC HARROW I	EXTRA HEAVY SERIES	
SR. NO.	DESCRIPTION	PART NO.	QTY.
		12x12 14x14 16x16 18x18	12x12 14x14 16x16 18x18
1	HYDRAULIC HARROW FRAME ASSEMBLY	77840001	1
2	DEPTH ADJUSTMENT SQ. ROD ASSY.	79220019	1
3	HYDRAULIC CYLINDER ASSY. 4T	10450042	1
4	HOSE PIPE ASSY.	74600008 / 74600006	2
5	HOSE PIPE STAND ASSY.	74570001	1
6	DRAWBAR JOINT PLATE	74530005	2
7	CENTER LINK PIPE ASSY.	74440006	1
8	DRAWBAR ASSY.	74450005	1
9	HOOK ASSY.	10560001	1
10	FRONT GANG ASSY WITH GANG BOX & SCRAPER		1
11	PREVALING TORQUE NUT 22MM (HUB NUT)	10280061	12
12	TYRE WITH RIMASSY.	11030026	2
13	TYRE HUB ASSEMBLY	74500001	2
14	HUB BOLT 22MM X11g 5/8X65L	10260227	12
15	HOOK BRACKET ASSY.	76550016	1
16	TYRE SYSTEMASSY.	74490011	1
17	CENTER SUPPORT HUB AXLE LOCK PLATE	74530004	2
18	AXLE HUB	10090035	2
19	AXLE HUB MOUNTING ASSY.	77860001	2
20	REAR GANG ASSY. WITH GANG BOX & SCRAPER		1
21	PIN 25x105	10020126	1
22	PIN 25X120	10020035	7
23	PIN	79480002	1
24	LINCH PIN 10MM	10020022	8
25	SPLIT PIN 4x55L	10020054	1
26	CASTLE NUT M30x3.5P	10280019	1
27	HEX HEAD BOLT M20X200X2.5MM	10260411	5
28	HEX HEAD BOLT M20X215X2.5MM	10260420	6
29	NYLOCK NUT M20	10280021	11
30	SPRING WASHER 20MM	10270016	11
31	THREADED ROD ASSY.	79220022	1
32	SPRING	10210025	2
33	COIL SPRING BRACKET ASSEMBLY	79220017	1
34	SPRING MOUNTING FLAT	79220005	2
35	THREADED BUSH	79220006	1
36	HEX HEAD BOLT M18x190L	10260410	4
37	HEX HEAD BOLT M16x160L	10260406	3
38	NYLOCK NUT M18	10280020	4
39	SPRING WASHER 18MM	10270006	4
40	NYLOCK NUT M16	10280005	22
41	SPRING WASHER 16MM	10270005	22
42	HEX HEAD BOLT M16x120L	10260037	1
43	PIN 50x280L	10020053	2
44	SPRING DOWEL SLEEVE 10x75	10020079	2
45	HEX HEAD BOLT M30x90L	10260467	8
46	NYLOCK NUT M30	10280115	8
47	SPRING WASHER 30MM	10270049	8
48	HEX HEAD BOLT M16x65L	10260017	8
49	HEX HEAD BOLT M16x40L	10260374	2
50	HYDRAULIC CYLINDER ASSY. 1T	10450015	1
51	CRUMBLER ASSEMBLY		1
52	HEX HEAD BOLT M16x60L	10260380	8
53	BASE PLATE SPRING ATTACHMENT	79220015	1
54	GREASE NIPPLE M10x15L	10300005	5
55	HEX NUT M 48x5P	10280270	1
56	STROKE CONTROL SEGMENT	10301204	1



	FRONT GAN	FRONT GANGASS. WITH GANG BOX & SCRAPER	GANG BOX	S SCRAPER					
SR NO	DESCRIPTION	,	PART NO	Ō.			QT.	-ج	
		12x12	14x14	16x16	18x18	12x12	14x14	12x12 14x14 16x16 18x18	18x18
—	GANG BOX ASSY. FRONT	77850001	77850003	20005877			_		
2	SCRAPER HOLDING FLAT FRONT	77890001	77890002	77890003					
က	SCRAPER ASSY. FRONT		7790002	102		12	14	16	18
4	SQ. AXLE ASSEMBLY	74530001	74920001	74890002	74530001		2		က
2	SQ. AXLE ASSEMBLY	74530001	74890001	74890001	74530001				
9	BIG CHAPPEN		10360006	90		2		က	
7	NOTCHED DISC-26" (SQ. HOLE-42MM)		10240041	41		12	14	16	18
∞	BEARING HUB ASSY.		74520001	101		4		9	
တ	PLAIN SPOOL 42 SQ. (9")		10340018	118		9	2	7	
10	DISC WASHER		10270022	122		2		က	
11	SMALL CHAPPEN		10360008	80		2		က	
12	PLAIN NUT 40X6G1 3/8 1 1/2 P (BSW THREAD)		10280050)50		2		က	
13	GANG LOCK PLATE		74830003	03		2		က	
14	SPRING WASHER 10MM		10270002	102		2		က	
15	HEX HEAD BOLT M10X35X1.5P		10260053)53		2		က	
16	HEX HEAD BOLT M12x70L		10260407	201		3		2	
17	HEX HEAD BOLT M12x75L		10260277	77		12	14	16	18
18	NYLOCK NUT M12x1.75P		10280025	125		15	19	21	23
19	SPRING WASHER 12MM		10270003	003		15	19	21	23
20	HEX HEAD BOLT M16x40L		10260120	20		8		12	
21	SPRING WASHER 16MM		10270005	005		8		12	
22	PLAIN WASHER 16MM		10270020)20		8		12	
23	U-CLAMP		77840003	103		15	19	21	23

REAR GANG ASS. WITH GANG BOX & SCRAPER



SR. NO. 1 G. C.		ANG ASS. WILL	KEAK GANG ASS. WITH GANG BOX & SCKAPEK	KAPEK					
SCR PLAN NUT	NOIFGIGOSSIG		PART NO	Ö			Ø	QTY.	
SCR PLAIN NUT	NO.	12x12	14x14	16x16	18x18	12x12	14x14	12x12 14x14 16x16 18x18	18x18
SCR PLAIN NUT	GANG BOX ASSY. REAR	77850002	77850004	77850006			Ì	_	
PLAIN NUT	APER HOLDING FLAT FRONT	77890001	77890002	77890003	1		`	_	
PLAIN NUT	SCRAPER ASSY. REAR		77900002	02		12	14	16	18
PLAIN NU"	SQ. AXLE ASSEMBLY	74530001	74920001	74890002	74530001		2		က
PLAIN NU	SQ. AXLE ASSEMBLY	74530001	74890001	74890001	74530001	,	`		
PLAIN NU.	BIG CHAPPEN		10360006	90		2		3	
PLAIN NU	N DISC-26" (SQ. HOLE-42MM)		10240034	34		12	14	16	18
PLAIN NU	BEARING HUB ASSY.		74520001	01		4		9	
PLAIN NU	PLAIN SPOOL 42 SQ. (9")		10340018	18		9	2	7	
PLAN NUT	DISC WASHER		10270022	22		2		3	
PLAIN NUT	SMALL CHAPPEN		10360008	80		2		3	
	F 40X6G1 3/8 1 1/2 P (BSW THREAD)		10280050	150		2		က	
	GANG LOCK PLATE		74830003	03		2		က	
里 -	SPRING WASHER 10MM		10270002	02		2		က	
	X HEAD BOLT M10X35X1.5P		10260053	153		2		3	
	HEX HEAD BOLT M12x70L		10260407	.07		3		2	
	HEX HEAD BOLT M12x75L		10260277	77		12	14	16	18
	NYLOCK NUT M12x1.75P		10280025	25		15	19	21	23
19	SPRING WASHER 12MM		10270003	03		15	19	21	23
20 F	1EX HEAD BOLT M16x40L		10260120	20		∞		12	
	SPRING WASHER 16MM		10270005	105		8		12	
22	PLAIN WASHER 16MM		10270020	120		8		12	
23	U-CLAMP		77840003	03		15	19	21	23

OIL SEAL 80x110x13T BEARING HUB GASKET BEARING-30214 BEARING HUB BEARING HUB ASSEMBLY

DELIVERY CHECKLIST

Dealer Pre-Delivery (Please Tick)

1. Dealer Pre-Delivery Checklist

- 1. The customer or person responsible has been given the operator's manual.
- 2. The customer undertakes to read the complete operator's manual and understands all aspects of the manual before operation of the machine.
- All safety, operational and maintenance information have been explained and demonstrated.
- 4. All greasing and oil points, stickers, guarding and ID plate have been identified and physically pointed out.
- The customer agrees that it is his responsibility to read and carry out the safety, maintenance and operation as per this operator's manual.

Customer Delivery (Please Tick)

2. Customer Delivery Checklist

- 1. The customer or person responsible has been given the operator's manual.
- 2. The customer undertakes to read the complete operator's manual and understands all aspects of the manual before operation of the machine.
- All safety, operational and maintenance information have been explained and demonstrated.
- 4. All greasing and oil points, stickers, guarding and ID plate have been identified and physically pointed out.
- The customer agrees that it is his responsibility to read and carry out the safety, maintenance and operation as per this operator's manual.

Please Complete all Dealer information Below

Dealer Information
Dealer's Name
Address
StatePostcode
Phone Fax
Email
Service Person
I confirm that the pre-delivery service was performed on this machine.
Signature
Date
Comments

Please Complete all Customer Information Below

Customer Information
Customer's Name
Address
StatePostcode
Phone Fax
Email
Delivery Person
I confirm that all of the delivery checks were explained and performed.
Signature
Delivery Date
Comments

Customer's Signature

WARRANTY CARD

Customer Copy

CUSTOMER NAME Mr./ Mrs	:	
ADDRESS	:	
MOBILE NO.	:	
Email	:	
NAME OF IMPLEMENT	:	
MODEL NO.	:	
YEAR OF Mfg.	:	
SERIAL NO.	:	
REGISTRATION NO.	:	
DATE OF PURCHASING	:	
NAME OF DEALER	:	

CE Beri Udyog Pvt. Ltd.

Dealer's Signature

WARRANTY CARD

Company Copy

CUSTOMER NAME Mr./ Mrs	: :	
ADDRESS	:	
MOBILE NO.	:	
Email	:	
NAME OF IMPLEMENT	:	
MODEL NO.	:	
YEAR OF Mfg.	:	
SERIAL NO.	:	
REGISTRATION NO.	:	
DATE OF PURCHASING	:	
NAME OF DEALER	:	

Customer's Signature Dealer's Signature



WARRANTY CARD Dealer Copy

CUSTOMER NAME Mr./ Mrs	3 :	
ADDRESS	:	
MOBILE NO.	:	
mobile ito.	•	
Email	:	
NAME OF IMPLEMENT	:	
MODEL NO.	:	
YEAR OF Mfg.	:	
SERIAL NO.	:	
REGISTRATION NO.	:	
DATE OF PURCHASING	:	
NAME OF DEALER	:	

Customer's Signature Dealer's Signature





