FIELDKING

Max Reversible MB Plough



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" max reversible mould board plough. 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 max reversible mould board plough 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 max reversible mould board plough may need new parts to replace which are worn out or broken. If so, go to your dealer and provide him equipment's detail like 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.

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1. INTRODUCTION

This handbook contains the use and maintenance instructions with a list of the spare parts of the Plough.

This Plough is equipped with heavy-duty frame specially designed for deep ploughing/land preparation of rough soil. It is designed to work in all types of soil for basic functions such as soil breaking, soil raising and soil turning. It can handle the toughest ploughing job with outstanding penetration performance.

Regular and satisfactory operations together with economic and long lasting use of the implement depend 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.

2. SAFETY INSTRUCTIONS

2.1 Safety while attaching and detaching

- ➤ Do not let anyone to stand between the machine and the tractor when you back up to hitch.
- > Before leaving the tractor to hitch or unhitch, set tractor parking brakes.
- ➤ Before mounting or dismounting implements on / from the three-point linkage, move the raise-lower control to the position at which accidental rising or lowering cannot take place. Completely lower the machine to the ground before unhitching. Make sure it is on a level and firm surface.
- ➤ In the case of three-point linkage mounting, ensure that the tractor balls and the mounting pins of the implement are of the same category.
- ➤ Never attempt to attach the machine if the pins, tractor hitching balls, tractor draw bar or machine linkage are worn, cracked or not compatible.
- > Remove pressure from hydraulic lines before disconnecting them.
- ➤ When driving on roads with the implement raised, the raise-lower control must be locked to prevent accidental lowering.
- ➤ Before leaving the machine for storage, make sure it is a safe place and that there is no risk to damage whether anything or anyone.

2.2 Safety while connecting hydraulic lines

- > The hydraulic circuit is highly pressurised.
- ➤ Never use your hands to locate a hydraulic leak. Hydraulic fluids escaping under pressure have sufficient force to penetrate the skin, causing severe injury. In case of any injury, see a doctor immediately.

- > When connecting hydraulic rams, the pipes must be connected as directed.
- ➤ Before connecting hydraulic circuit, make sure that there is no pressure on both sides, (tractor and machine).
- ➤ Regularly check hydraulic lines and connections. Replace any damaged or leaking component by an original part with the same specifications. The replacement pipes must comply with the technical specification laid down by FIELDKING.
- ➤ Before any operation on the hydraulic equipment, lower the machine to the ground and release the hydraulic pressure where possible and switch off the tractor engine.

2.3 Safety while operating the machine

- ➤ The operator should familiarize himself / herself with all controls and their functions before starting work.
- > Do not attempt to do any adjustment if you have not perfectly understood its procedure.
- ➤ Always use tools or equipments appropriate to the job you are doing. All related tools are provided along with the implement.
- ➤ Learn how to operate your machine and how to use its controls. Do not let anyone operate without instruction.
- > Do not allow anyone to stand close to the machine.
- ➤ Do not allow anyone to stand close to pivot points. On all pivoting parts actuated by power assistance (e.g. hydraulics), there exists danger of injury by bruising and crushing.
- ➤ Never attempt any operation on machine while it is in motion.
- ➤ Wear close fitting clothing and appropriate safety devices for the job you have to do (heavy leather gloves, safety shoes, earplugs, etc.).
- ➤ Do not extend turnbuckle adjusters too much to avoid any threads damaging or ultimately pulling out.
- ➤ Only one person (the operator) should be in tractor's cab when it is operation. No one on the machine while working or while traveling on the road.
- ➤ If any unusual vibration is heard or felt, stop the machine. Find the problem and solve it before starting operation again.
- ➤ If your machine is equipped with a hydraulic folding mechanism, always use it from tractor's cab, once you are sure that folding area is free from spectators or obstacles.

2.4 Safety for Maintenance

- ➤ Maintenance area should be clean, dry, with enough light and ventilation.
- ➤ Repair, maintenance and cleaning operations as well as adjustments and remedy of function faults should principally be conducted with engine stopped and brakes applied with the engine key removed.
- > For any operation on the machine on raised position, always securely support all

components before starting maintenance.

- > For replacing any parts with cutting edges, always use suitable tools and gloves.
- ➤ Maintenance operations on elements under pressure or under tension require specific procedures and equipments. Only qualified persons shall perform them in appropriate conditions.
- ➤ After servicing, remove all tools, components and parts that were used.
- ➤ Regularly check the tightness of wheel studs, wearing parts' bolts and all other bolts and nuts.
- ➤ Always use genuine parts corresponding to the manufacturer's technical and specification requirements.

2.5 Safety on Highway Transport.

FOR YOUR OWN SAFETY AND THE ONE OF THE OTHER, RESPECT THE FOLLOWING RULES.

All FIELDKING equipments shall be used, complying with the area's current rules and laws concerning safety instructions, accident prevention and provision of Highway Code.

- ➤ Before road transport, always check for wheel studs and wheel mounting brackets, carriage bolt tightness, general tyre state and pressure. Do not drive with low pressure, cuts or damaged tyres or rims.
- ➤ As well as the notes in these instructions, the operator is advised to comply with the generally applicable safety at work regulations and those relating to use of the public highway.
- ➤ When driving on public roads with a raised machine, the lifting control lever should be locked against unintentional lowering.
- ➤ Use all devices required by your area's current laws (lights, reflectors, signs). They might be removed during field operations to prevent any sort of damage. It is the operator's responsibility to comply with current laws and to follow the regulations.
- ➤ Handling behaviour, steer-ability and braking are influenced by mounted implements, trailers and ballast weights. Check for sufficient steer ability and braking.
- ➤ Regularly check hitching pins, change them if necessary. Tractor's ball joint may also wear, do not hesitate to replace them with new ones as per the manufacturer's standards.
- ➤ Drive at reasonable speed complying with local laws to always keep control of tractor and equipment. Pay special attention on irregular or rough roads
- ➤ Tractor used for road transport shall have the same power rating and weight as the one used for field operations.
- ➤ Never attempt any manoeuvre if the area is not free from spectators.
- ➤ If your machine is equipped with a folding mechanism (manual or hydraulic), use it

- making sure folding area is free from spectators and obstacles.
- Follow all safe driving practices when traveling, especially on corners, rough or narrow roads.
- ➤ Before leaving the tractor, lower the machine to the ground. Apply the parking brake, stop the engine and remove the ignition key.
- ➤ Do not allow anybody between the tractor and the implement if the parking brakes are not applied.

3. PREPARATION OF THE TRACTOR

3.1. Tyres

The Pressure – especially in the rear tractor tyres – must be equal. In heavy conditions it may be necessary to add wheel weights and / or water ballast. (See manufacturer's instructions).

3.2. Lift Rods

Adjust lift rods to equal length. (See manufacturer's instructions).

3.3. Top Link

Where there are alternative fitting positions at the tractor for the top link, fit the tractorsided top link as high as possible.

3.4. Check Chains or Sway Blocks of the Three Point Linkage

Chains or sway blocks MUST be adjusted so that the lower link is always free to move sideways during ploughing.

Attention! Some tractors are equipped with automatic "check devices" which require special adjustments. If a tractor suddenly shows side draft or if the L/H and R/H front width of the plough is different, an unlocked "check device" could be the reason for that. In such a case the function of the automatic "check device" must be checked. (See manufacturer's instructions)

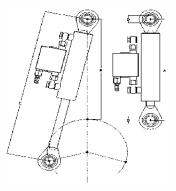
3.5. Hydraulics

For working, the tractor hydraulics must be set a 'Draft' or 'Mixed' Control. See manufacturer's instructions.

3.6. Required Hydraulic Equipment

The hydraulic equipment used in this plough is a double acting cylinder.

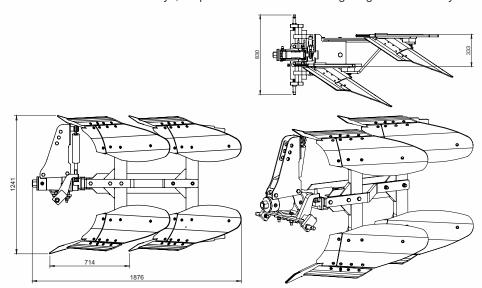




- ➤ The picture shows the location of the pressure control valve of the cylinder.
- ➤ The adjustment of the allen screw will increase / decrease the pressure as per requirement.

3.7 Attaching the plough to the tractor

- 1. Place the plough duly leveled on even land.
- 2. Bring the tractor backwards to the plough (don't drag the plough towards the tractor).
- 3. Attach the left arm of the tractor to the plough first.
- 4. Attach the central arm to the plough. To attach, turn the screws on both sides to an equal length. If the arm is too short or too long, turn the screw to adjust both simultaneously until aligned with the hole on the central arm.
- 5. To attach the lower right arm, turn the screw until the mounting pin is at the same level as the hole on the tractor arm. If the gap between hole and mounting pin is too close or too distant, turn the control arm in or pull it away to an appropriate distance respectively. You may have to adjust both height and distance at the same time. When the hole at tractor arm and mounting pin are at even levels, insert the pin in the hole and lock it with the lynch pin.
- 6. After attaching the plough lift it and adjust the control arm parallel to the ground. When you look from both rear or sideways, the points should all be touching the ground uniformly.



4. USES

4.1 Instructions For Tractor Preparation

The following are typical instructions for preparing a tractor for operation.

- 1. The horsepower of tractor selected should match that of the implement.
- 2. Adjust the front and rear wheel track width.
- 3. Provide adequate front end ballast for tractor stability.
- 4. All plough adjustment should be carried out.
- 5. Select load and depth control setting according to tractor operator's manual.

4.2 Adjustments

In order to get better results, the following adjustments are necessary.

4.2.1. Cutting Angle Adjustments

Provision is given in the plough standard for the adjustment of the horizontal angle and vertical tilt angle to obtain optimum point operation in various soil conditions. Tilt Angle is the angle which the plain of the cutting edge makes with the vertical line. It ranges from 100 - 150. Increasing the tilt angle improves point penetration in heavy, sticky soils. Decreasing the tilt angle improves point penetration in loose and brittle soils.



4.2.2 Adjustments For Deeper Ploughing

The depth of the plough can be obtained by the position and draft control levers of the tractor hydraulic system. However more depth can be obtained by:

- 1. Adding extra weight to the Plough.
- Reducing or increasing, as per the soil, the tilt angle. A correctly tilted Plough tends to penetrate better.
- 3. If the ground is covered with trash, set the plough in almost vertical position and add weight to the Plough. In such soils notched Plough gives better results.

4.2.3. Leveling the plough

The level of the plough is controlled by the tractor top link. If the rear end of the plough beam is higher than the front end of the beam, extend the top link. If rear end of the plough beam is lower than the front end, then shorten the top link. Lateral leveling is controlled by adjusting the length of the tractor right lower link. These adjustments must be made with the plough prior to operation.

4.3 Warning For Driver

- 1. Before ploughing check all the nuts and bolts of the Plough.
- 2. Don't plough on stony soil.
- 3. Tractor should be in high first gear.
- 4. If soil is hard then plough the field at least twice.
- 5. Lift the Plough on every turn.
- 6. Be vigilant about the tree roots and stones.
- 7. Keep proper distance from Plough when working.
- Lift the plough before approaching the road.

4.4 Danger

Before ploughing with plough make sure that nobody stands near it.

4.5 Draft of The Plough

The type of the soil is the greatest external factor to be considered in drafting of any plough. In very hard ground, it is often necessary to add weight to the wheels to force the plough into the soil.

The bearing conditions of the bearing housing will also affect the draft. Keep bearing in smooth conditions i.e. apply the grease whenever necessary.

Draft is affected by the depth and width of cut per bottom for complete plough too. Speed is also another factor which increases the draft, doubling the speed increases the draft by about 20 -25%.

5. MAINTENANCE

5.1 Maintenance Instructions

If you use the Plough on stony land then maintenance also increases. Please follow these rules to get the best results:

- 1. If Plough is new then after first two hours of working tighten all the nut-bolts.
- 2. Check the plough adjustments if the steering is hard.
- 3. After every fifty hours of use tighten all nuts and bolts.
- 4. Regularly check for loose nuts and bolts.
- Sharpen the bar point and blades if the blades are blunt as they increase the draft considerably.

5.2 Storage of Machine After Work

- 1. Clean the Plough after work
- 2. Replace the worn out nuts and bolts.
- If the Plough is not to be used for long time then apply a layer of used oil for rust prevention after cleaning it.

These steps will increase the life of your Plough.

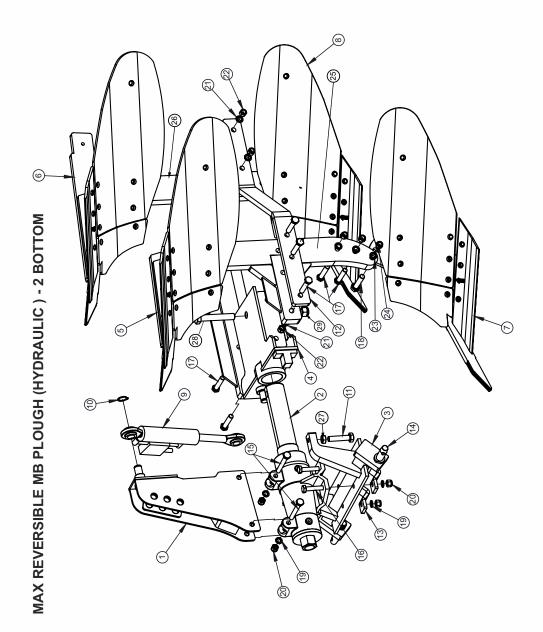
5.3 Instruction For Driver

- 1. When plough is ready to use don't stand between plough & the tractor.
- 2. Properly fit the three point linkage as mentioned above & lock with the lynch pin.
- 3. Never turn or reverse the tractor when the plough is engaged in the soil.

6. TROUBLE SHOOTING

Penetration and Depth Guidance of the Plough & Slippage

Malfunction	Reason	Remedy
Plough does not stay in the ground.	a) Penetration force is too low.b) Drawbar is fitted too deep.	a) Increase the distance between point and frame (not more than 10-30 mm).b) Fit drawbar to the upper position.
Plough does not penetrate into the ground.	a) Penetration angle of the shares is too small.b) Drawbar is fitted too deep.c) Top link is fitted too high at the headstock.	 a) Increase the distance between the point and the plough frame (not more than 10-30 mm). b) Fit drawbar to the upper position at the head stock. c) Fit top link in a deeper position.
Tractor shows too much slippage.	a) Drawbar is fitted too deep b) Draft control is not adjusted correctly.	a) Fit drawbar to the upper position. b) Adjust draft control again.



MAX REVERSIBLE MB PLOUGH (HYDRAULIC) - 2 BOTTOM			
SR. NO. PART NAME		ITEMCODE	QTY.
1	HEADSTOCK ASSEMBLY	76330041	1
2	MAIN AXLE ASSEMBLY	76340039	1
3	DRAWBAR ASSY	76340069	1
4	CONNECTOR LINK ASSY	76340070	1
5	FRONT FURROW ASSY-LHS	71200074	1
6	REAR FURROW ASSY-LHS	71200075	1
7	FRONT FURROW ASSY-RHS	71200076	1
8	REAR FURROW ASSY-RHS	71200077	1
9	HYDRAILIC CYLINDER 1 TON 160SX365L	10450044	1
10	CIRCLIP A30 LIGHT	10390023	2
11	HEX HEAD BOLT M24X110X3P FULL THREAD	10260042	2
12	EXTENSION LINK FLAT	76340083	1
13	DRAWBAR LOWER CLAMP	10620018	2
14	HITCH PIN 32 MM	10020023	2
15	HEX HEAD BOLT M16X135X2P	10260368	2
16	HEX HEAD BOLT M16X90X2P	10260393	4
17	HEX HEAD BOLT M18X90X2.5P	10260351	15
18	HEX HEAD BOLT M20X90X2.5MM	10260432	4
19	SPRING WASHER 16MM	10270005	6
20	NYLOCK NUT M16X2P	10280005	6
21	SPRING WASHER 18MM	10270006	15
22	NYLOCK NUT M18X2.5P	10280020	15
23	SPRING WASHER 20MM	10270016	4
24	NYLOCK NUT M20X2.5P	10280021	4
25	FRONT TYNE ASSEMBLY	76340078	1
26	REAR TYNE ASSEMBLY	76340079	1
27	HEX HEAD NUT M24X3P	10280114	2
28	HEX HEAD BOLT M24X150X3P	10261015	1
29	NYLOCK NUT M24X3P	10280075	1

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.
- 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

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- 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

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
1 committation and delivery encode were explained and performed
Signature
Delivery Date
•
0

FIELDKING

WARRANTY CARD

Customer Copy

CUSTOMER NAME Mr./ Mr	rs :	
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



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marketing@fieldking.com, exports@fieldking.com, www.fieldking.com

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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



FIELDKING

WARRANTY CARD Dealer Copy

CUSTOMER NAME Mr./ Mrs	3 :	
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

