Disc Plough



> Operator Manual > Service Manual > Part Catalogue

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.

TO THE PURCHASER

This manual contains valuable information about your new "FIELDKING" disc 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 disc 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 disc 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

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.

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. TECHNICAL DATA

1.1 INTRODUCTION

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

This disc plough is equipped with heavy-duty channel frame specially designed for deep ploughing / land preparation of rough soil.

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.

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. If the implement is not lifted while taking a turn of the tractor no warranty of any breakage of coulter assembly (coulter bearing and coulter disc) would be allowed.
- 6. No warranty will be given if the service and greasing is not done on time.

1.4 WARNING SIGNALS

- 1. Thoroughly read the instruction manual before proceeding with the various operations.
- 2. Keep maintenance and warranty according to this handbook.

2. USAGE INSTRUCTIONS

2.1 BEFORE USE

Before mounting of disc plough make sure that all nuts and bolts are properly secured.

2.2 ATTACHING THE DISC PLOUGH TO THE TRACTOR

- 1. Place the plough duly leveled on the flat piece of land.
- 2. Reverse the tractor to the plough (Do not drag the plough up 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 at the same time 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. You may have to adjust both height and distance at the same time. When the hole at tractor arm and mounting pin are even, 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 discs should all be touching the ground uniformly.

2.3 NOTE

- 1. The plough will work best when the right wheel of the tractor is inside the previously ploughed furrow. Readjust the plough alignments again if necessary.
- 2. To get good results from the plough discs should be replaced when their diameter is reduced to 22".



3. TRACTOR PREPARATION

3.1 INSTRUCTIONS FOR TRACTOR PREPARATION

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

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

3.2 ADJUSTMENTS

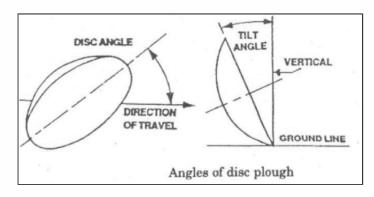
In order to get better results, the following adjustments are necessary.

1. CUTTING ANGLE ADJUSTMENTS

Discs would not cut if they are rolled straight ahead. They must be set at an angle. Provision is made in the plough standard for the adjustment of the horizontal disc angle and vertical tilt angle to obtain optimum disc operation in different soil conditions.

a) Disc Angle

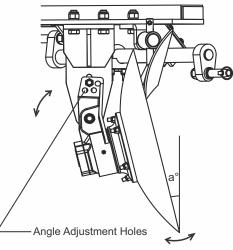
It is the angle which the plane of cutting edge of disc is inclined to the direction of travel. It is normally $42^{\circ} - 47^{\circ}$. Reducing this angle increases the disc rotation with respect to ground speed and reduces the tendency of the plough to over cut. Increasing the disc angle improves the disc penetration.



(3)

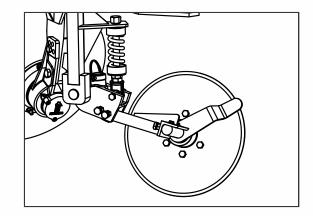
b) TiltAngle

It is the angle which the plane of the cutting edge of the disc is inclined to a' vertical line. It ranges from $15^{\circ} - 25^{\circ}$. Penetration is improved by decreasing the tilt angle in this disc plough. Increasing the tilt angle improves disc penetration in heavy, sticky soils. Decreasing the tilt angle improves disc penetration in loose and brittle soils.



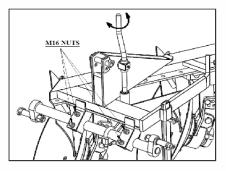
2. COULTER DISC ADJUSTMENT

The Coulter Disc, besides permitting more and better penetration of the disc blades, is also responsible for the tractor and harrow/plough, acting as a rudder, avoiding lateral deviations. For this adjustment rotate the coulter disc assy. clockwise & anticlockwise according to requirement.



3. Width Of Cut Adjustment

Every disc plough has a particular width of cut ranging from 18-25 cm's depending on the diameter of the blade. However to suit various draft and penetration requirements the width of cut for the front disc can be adjusted with the help of drawbar. Width of cut also depends upon drawbar position. For adjustment of drawbar first loosen M16 nuts as shown below then rotate handle clockwise & anticlockwise according to requirements.



4. 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, lengthen 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.

5. Additional Weight Adjustment

Penetration is improved by adding additional weight on disc plough. An additional sliding weight is provided at the back end of disc plough. For adjustment loosen hex head bolt M12 of as shown. Then slide weight on channel forward or reverse direction as per requirement.



6. Tightening The Bearing

Bearings must be kept tight. Tighten the castle nuts until the disc binds the hub.

7. Scraper Adjustments

Scrapers are set low enough to catch and turn the furrow slice before it falls away from the disc. For deeper ploughing, the scraper has to be set a little higher. For sticky soils, set them closer to the disc. The research study data reveals that mould board type scraper performs the best, but in sticky soils use of hoe type scraper is better.

3.3 WARNING FOR DRIVER

- 1. Before ploughing check all nuts and bolts of the disc 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. Make sure that the shocker spring is tight.
- 6. Lift the disc plough on every turn.
- 7. Be vigilant about the tree roots and stones.
- 8. Keep proper distance from disc plough when disc plough is in working.
- 9. Lift the plough before approaching the road.

3.4 SAFETY

Understanding the machine safety labels



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 ploughing with disc plough take care that nobody stands near it.



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



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.

3.5 DRAFT OF DISC PLOUGH

The disc plough is lighter in draft than the mouldboard plough, turning same volume of soil in similar conditions. In very hard soil, some extra weight is added which increases the draft.

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

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3.6 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.
- 2. Reducing the tilt angle. A correctly tilted disc plough tends to penetrate better.
- 3. If the ground is covered with trash, set the disc in almost vertical position and add weight to the plough. In such soils notched disc gives better results.

4. MAINTENANCE

4.1 MAINTENANCE INSTRUCTIONS

If you work the disc plough on stony land then maintenance also increases. Please follow these rules to get the best results.

- 1. If disc plough is new then after first two hours of working tighten all nut bolts.
- 2. Check the plough adjustments if the steering is hard.
- 3. Check the scraper adjustments frequently.
- 4. If the soil has entered in grease nipple, then change the nipple
- 5. After every fifty hours grease all greasing points with grease gun and tighten all nuts and bolts.
- 6. After three hundred hours, open the hub of disc plough & cleanse it with diesel oil, pump in new grease & replace its seal.
- 7. Constantly check for loose nuts and bolts.
- 8. Sharpen the disc if the blades are dull. Blunt blades increase the draft considerably.
- 9. When the diameter of disc is reduced to 24" it is desirable to change the degree of hub by loosening the mounting bolts.
- 10. Discs cannot work beyond 22" diameter. They must be replaced for effective ploughing.
- 11. Keep the bearings lubricated as per the instructions given in the manual.
- 12. Coat the disc blades for rust prevention with the used oil in slack season.

4.2 STORAGE OF MACHINE AFTER WORK

- 1. Wash the disc plough after work.
- 2. Replace the worn out nuts and bolts.
- 3. If disc plough 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 plough.

4.3 LUBRICATION

Please take care that high quality grease is used in bearing housings, coulter hub & bushes.

4.4 INSTRUCTION FOR DRIVER

- 1. When disc plough is ready for use don't stand between disc plough & the tractor.
- 2. Properly fit the three point linkage as mentioned above & lock with lynch pin.
- 3. In case of scraper touching the discs, loosen the scraper bolt and readjust the scraper.
- 4. Never turn the tractor to the right or left when the plough is engaged in the soil.
- 5. Never reverse the tractor when the plough is engaged in the soil.

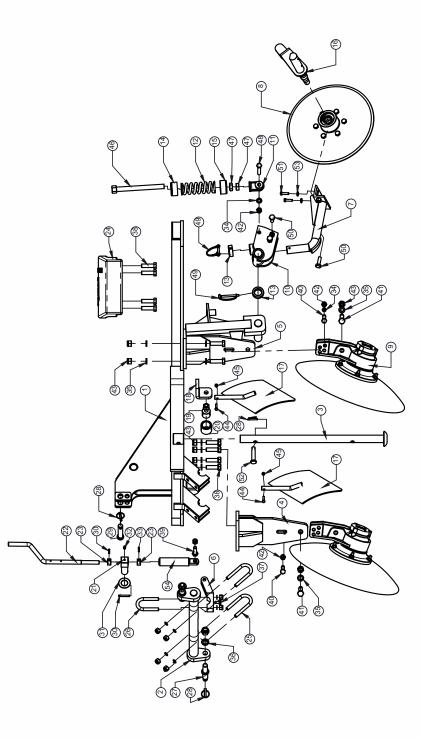
5. TROUBLE SHOOTING

TROUBLE SHOOTING			
SR. NO.	DEFECT	REASON	REMEDY
1	LOW PENETRATION	- BLUNT DISC - PLOUGH TOO LIGHT - MORE TILT ANGLE	- SHARPEN THE EDGE - PUT ADDITIONAL WEIGHT - SET THE TILT ANGLE
2	HEAVY DRAFT	- BLUNT DISC - FURROW TOO WIDE	- SHARPEN THE EDGE - REDUCE THE TILT ANGLE
3	EXCESSIVE SIDE DRAFT	- IMPROPER HITCHING	- HITCH PROPERLY
4	LESS SCOURING	- DEFECTIVE SCRAPER - LOOSE BEARING	- ADJUST THE SCRAPER - SET THE BEARING
5	UNEVEN FURROW	- DISC ANGLE NOT UNIFORM - HITCHING DEFECTIVE	- SET THE DISC ANGLE - SET THE HITCHING

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



Sr. NO.	PART NUMBER	PART NO.	QT	Ύ.
SI. NO.	PART NOMBER	FKMDPD-2 FKMDPD-3	2B	3B
1	MAIN FRAME ASSEMBLY	76240001	1	1
2	DRAWBAR ASSY. (WITH SLOT)	76250001	1	1
3	STAND ASSEMBLY (DOMESTIC DISC PLOUGH)	72160002	1	1
4	LEG ASSEMBLY	76270001	1	2
5	COLTER LEG ASSEMBLY.	76270008	1	1
6	DRAWBAR ADJUSTMENT BRACKET ASSY.	76310001	1	1
7	TAPER ANGLE SHAFT ASSY.	72190010	1	1
8	COLTER DISC ASSY. (DOMESTIC DISC PLOUGH)	76300001	1	1
9	SPINDLE ASSY. (DISC RIDGER)	72120001	2	3
10	COLTER ASSEMBLY HOLDER	72200002	1	1
11	COLTER SPRING HOLDER	76280008	1	1
12	SPRING OD 65 WD 13 H 190	10210033	1	1
13	COLTER HOLDER SHAFT BUSH	76280009	2	2
14	UPPER SPRING CUP ASSEMBLY	76280004	1	1
15	LOWER SPRING CUP ASSY.	76280005	1	1
16	COLTER HUB SHAFT ASSY.	72200004	1	1
17	SCRAPER WITH SCRAPER ROD ASSY.	71280005	2	3
18	SCRAPER MOUNTING FLAT	76320002	2	3
19	SCRAPER BOLT	71280003	2	2
20	SCRAPER BUSH	10070032	2	2
20	ADJUSTMENT ROD HOLDING PIN	76320003	1	1
22	ADJSUTING ROD	76320003	1	1
23	ADJUSTING ROD BUSH	76320004	1	1
23	DISC PLOUGH WEIGHT	76320005	1	1
24	U-CLAMP M16X2X67X153L	76320000	2	2
26	U-CLAMP M16X2X67X133L	76320007	1	1
20	HITCH PIN 32MM	10020023	2	2
28	LINCH PIN 10MM	10020023	3	3
20	PIN 25x120MM	10020022	1	1
30	SPRING PIN M8x60MM(L)	10020035	1	1
30	PLAIN WASHER 36MM		1	1
		10270025		1
32	GREASE NIPPLE M10x6x1.5P	10300095	1	
33 34	SPRING PIN M6x45MM(L)	10020116	1 3	1
-	SPRING WASHER 16MM	10270005	-	
35	SPRING WASHER 20MM	10270016	2	3
36	SPRING WASHER 25MM	10270007	2	
37	HEX HEAD BOLT M12x45x1.75P	10260129	1	1
38	HEX HEAD BOLT M20x70x1.75P	10260505	12	16
39	HEX HEAD BOLT M16x65x2P	10260017	1	1
40	HEX HEAD BOLT M16x100x2P	10260403	2	3
41	HEX HEAD BOLT M20x110x2.5P	10260445	2	3
42	NYLOCK NUT M16x2P	10280005	3	4
43	NYLOCK NUT M20x2.5P	10280021	2	3
44	HEX HEAD BOLT M8x45x1.25P	10260446	2	3
45	NYLOCK NUT M8x1.25P	10280027	2	3
46	HEX HEAD BOLT M24x3Px270L	10260619	1	1
47	PLAIN NUT M24x3P	10280162	2	2
48	HEX. BOLT M16x110X2P	10260366	1	1
49	R-PIN 8X3 INCH	10020076	2	2
50	HEX HEAD BOLT M16x50x2P	10260358	6	6
51	HEX HEAD BOLT M10x45x1.5P	10260005	2	2
52	PIN (19 x 90 L)	10020026	1	1
53	PLAIN WASHER 10MM	10270009	2	2
54	ADJUSTMENT ROD HOLDER ASSEMBLY	76290001	1	1

SR. NO.	DESCRIPTION	PART NO.	QTY.
1	C.S.K. BOLT M12x40x2P	10260052	5
2	PLAIN DISC 26"x6MM	10240039	-
e	SPINDLE	10380001	-
4	SPRING WASHER 12MM	10270003	5
5	PLAIN NUT M12x1.75P	10280028	5
9	OIL SEAL 150.5x140.5x18T	10010009	-
7	BEARING-32213	10050012	٢
8	GREASE NIPPLE 10x15x1.5P	1030005	٢
6	BEARING HOUSING	10090009	-
10	BEARING-32209	10050013	٢
11	CASTEL NUT M36x2P	10280071	٢
12	SPLIT PIN 4x65MM	10020055	٢
13	GASKET	10040020	٢
14	BEARING HOUSING CAP	10180011	٢
15	ALLEN BOLT M10x35x1.5P	10260093	с

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SPINDLE ASSEMBLY

	Dealer Pre-Delivery (Please Tick)	Please Complete all Dealer information Below
1.	Dealer Pre-Delivery Checklist	Dealer Information
1.	The customer or person responsible has been given the operator's manual.	Dealer's Name
2.	The customer undertakes to read the complete operator's manual and understands all aspects of the manual before operation of the machine.	Address State Postcode Phone Fax
3.	All safety, operational and maintenance information have been explained and demonstrated.	Email Service Person
4.	All greasing and oil points, stickers, guarding and ID plate have been identified and physically pointed out.	I confirm that the pre-delivery service was performed on this machine. Signature
5.	The customer agrees that it is his responsibility to read and carry out the safety, maintenance and operation as per this operator's manual.	Date Comments
	Customer Delivery (Please Tick)	Please Complete all Customer Information Below
2.	Customer Delivery (Please Tick) Customer Delivery Checklist	Please Complete all Customer Information Below Customer Information
2. 1.		Customer Information Customer's Name
	Customer Delivery Checklist The customer or person responsible has	Customer Information
1.	Customer Delivery Checklist 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.	Customer Information Customer's Name Address StatePostcode
1. 2.	Customer Delivery Checklist 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	Customer Information Customer's Name Address State

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DELIVERY CHECKLIST

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	:	

Customer's Signature

Dealer`s Signature



Corporate Office : Plot No. 235-236 & 238-240, Sec-3, HSIIDC, Karnal- 132001 (Haryana), India J +91-184-2221571/ 72/ 73 ☆ marketing@fieldking.com, exports@fieldking.com, www.fieldking.com

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



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WARRANTY CARD Dealer 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



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