



OPERATOR'S MANUAL FMHD



FMHD-70, FMHD-78, FMHD-86, FMHD-94



**CAUTION: Read Manual Thoroughly
Operation**



Before




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2.PRODUCT SPECIFICATIONS

Product Models

Model	FMHD70	FMHD78	FMHD86	FMHD94
Working Width	70"	78"	86"	94"
Weight	1,085 lb.	1,200 lb.	1,315 lb.	1,430 lb.
NO. of Hammers	16	18	20	22
NO. of Belts	4	4	4	5
Tractor HP	40-60HP	40-60HP	50-90HP	50-90HP

	Before operating the Flail Mower, read the following safety instructions. Failure to comply with these warnings may result in serious injury or death.
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3.SAFETY INSTRUCTIONS

CONGRATULATIONS! On the purchase of our Flail Mower. This information is to assist you in preparing, operating and maintaining your Rotary hoe. Please read and understand the information completely before operating your Rotary hoe, paying special attention to all the safety details. Keep this manual handy for a ready reference.

3.1 SAFETY FIRST

YOU are responsible for the SAFE operation and maintenance of your Flail Mower. YOU must ensure that you and anyone else who is going to operate, maintain or work around the Flail Mower is familiar with the operating and maintenance procedures and related SAFETY information contained in this manual. This manual will take you step-by-step through your working day and alert you to all good safety practices that should be adhered to while operating the Flail Mower.

Remember, YOU are the key to safety. Good safety practices not only protect you but also the people

around you. Make these practices a working part of your safety program. Be certain that EVERYONE operating this equipment is familiar with the recommended operating and maintenance procedures and follows all the safety precautions. Most accidents can be prevented. Do not risk injury or death by ignoring good safety practices.

1. Flail Mower owners must give operating instructions to operators or employees before allowing them to operate the machine.
2. The most important safety feature on this equipment is a SAFE operator. It is the operator's responsibility to read and understand ALL Safety and Operating instructions in the manual and to follow these. All accidents can be avoided.
3. A person who has not read and understood all operating and safety instructions is not qualified to operate the machine. An untrained operator jeopardise himself and bystanders to possible serious injury or death.
4. Do not modify the equipment in any way. Unauthorized modification may weaken the function and/or safety and could affect the life of the equipment.
5. Think SAFETY! Work SAFELY!

3.SAFETY INSTRUCTIONS

3.2 GENERAL SAFETY

1. Read the operator's Manual and all safety signs carefully before operating, maintaining, adjusting or removing the Flail Mower.
2. Do not allow passengers to ride on the Flail Mower.
3. Operate only at safe distance from bystanders. Clear the area of people, especially small children, before starting.
4. Stop PTO before dismounting tractor
5. Keep feet and hands from under Flail Mower at all times.
6. Keep all shields in place. If shield removal becomes necessary for repairs, replace the shield prior to use.
7. Do not stay between the tractor and the Flail Mower.
8. Do not approach the Flail Mower until all motion has stopped.
9. All flail hammers have the ability to discharge objects at high speeds, which could result in serious injury to bystanders or passers-by, use with extreme caution.
10. Place all controls in neutral, stop tractor engine, set park brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting, repairing, attaching or removing.

11. Review safety related items annually with all personnel who will operate or maintain the Flail Mower.
12. Do not operate machine if you feel unwell or physically unfit, in which case you should stop working.
13. This machine was designed with safety very much in mind. However, there is no real substitute for caution and attention in preventing accidents. Once an accident has happened, it is too late to think about what you should have done.
14. Use a tractor equipped with a Roll Over Protective Structure (ROPS). Always wear your seat belt. Serious injury or even death could result from falling off the tractor – particularly during a turnover when the operator could be pinned under the ROPS or the tractor.
15. Never exceed the limits of a piece of machinery. If its ability to do a job, or to do so safely, is in question – **DON'T TRY IT**.
16. Clear working area of stones, branches or hidden obstacles that might be hooked or snagged, causing injury or damage.

3.3 OPERATING SAFETY

1. Read and understand the Operator's Manual and all safety signs before operating, servicing, adjusting, repairing or removing.
2. Do not allow riders
3. Install and secure all guards and shields before starting or operating.
4. Keep hands, feet, hair and clothing away from moving parts.
5. Place all controls in neutral, stop tractor engine, set park brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting, repairing, attaching or removing.

3.SAFETY INSTRUCTIONS

6. Place all controls in neutral, stop tractor engine, set park brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting, repairing, attaching or removing.
7. Never start or operate machine unless sitting on tractor seat.
8. Clear the area of bystanders, especially small children, before starting
9. Stay away from PTO shaft and machine when engaging PTO. Keep others away.
10. Use warning lights on tractor when transporting.
11. Do not put hands or feet under machine while tractor engine or machine is running.
12. Do not operate Flail Mower in the raised position.
13. Objects can be thrown out from under machine with sufficient force to severely injure people. Stay away from machine when it is running. Keep others away.
14. Always know what you are hoeing. Never operate Flail Mower in an area that has hidden obstacles. Remove sticks, stones, wire or other objects from working area before starting.
15. Review safety instructions with all operators annually

3.4 STORAGE SAFETY

1. Store the machine in an area away from human activity.
2. Do not permit children to play on or around the stored machine.

3. Store the machine in a dry, level area.
4. Clean grease and oil as required and protect it from the elements

3.5 MAINTENANCE SAFETY

1. Good maintenance is your responsibility. Poor maintenance is an invitation to trouble.
2. Follow good shop practices.
3. Keep service area clean and dry.
4. Be sure electrical outlets and tools are properly grounded.
5. Use adequate light for the job at hand.
6. Make sure there is plenty of ventilation. Never operate the engine of the tractor in a closed building. The exhaust fumes may cause asphyxiation.
7. Before working on this machine, shut off the engine, set the brakes, and remove the ignition Key
8. Never work under equipment unless it is secured by a mechanical stand.
9. Use personal protection devices such as eye, hand and hearing protectors, when performing any service or maintenance work. Use heavy gloves when handling blades.
10. Only use genuine parts for service and maintenance.
11. A fire extinguisher and first aid kit should be kept readily accessible while performing maintenance on this equipment.
12. Periodically tighten all bolts, nuts and screws and check that all pins are properly installed to ensure unit is in a safe condition.
13. When completing a maintenance or service function, make sure all safety shields and devices are installed before placing machine in service.\

4.OPERATION

4.1 CONNECTING WITH THE THREE-POINT LINKAGE OF TRACTOR

The Flail Mower is connected to the tractor by the three-point linkage. Its installing step is as follows:

1. Align the center of headstock by reversing the tractor, raise the link arm to appropriate height, reverse the tractor to make the link arm of tractor joint with the left and right pin of Flail Mower.
2. First install the left lower linkage arm, then install right lower linkage arm, (because the leveling lift rod has screw that can be adjusted length.) finally inert the pins.
3. Install the upper linkage arm, and then insert the pin.
4. Mount the universal coupling, and then insert the pins, poke the cotter pin.

4.2 ADJUSTMENT BEFORE WORKING

1. On a flat surface, lower the implement to the ground. If not sitting level side to side, adjust the vertical linkage arms on the three point linkage till the implement is sitting level on the ground
2. Adjust the top link to reduce the angle at the PTO shaft universal to the minimum at working depth. The angle of the universal should not exceed 10° when it is working and 30 ° when it is lifted for transport. Do not engage and operate the PTO at angle of greater then 10 ° at the universal
3. Adjust the working depth by setting the adjustable skids to the required height

4. 3 DRIVE BELTS ADJUSTMENT



Loose the screw C and D,
Tension the belts using the bolt A and B

4. 4 STARTING OF THE FLAIL MOWER

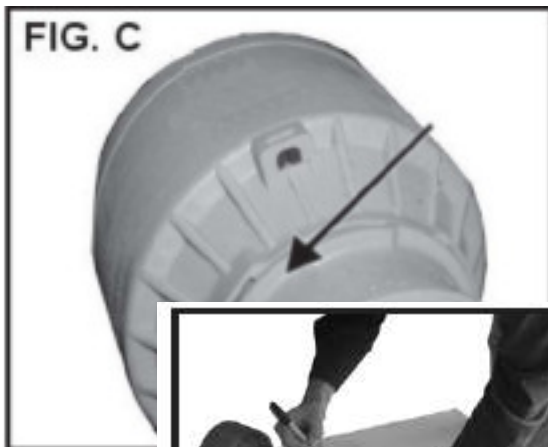
First, check the level of the gear oil in the gearbox,
grease the PTO Shaft

and the bearing seat of the rotor shaft. Then check for the looseness of all connecting bolts and nuts, if loose, tighten it at once. If a crack or bent blades are found they must be replaced.

Starting tractor: Lift the hoe so the skid clear the ground, engage the PTO and run at low revs to ensure there is no jamming.

Use PTO speed1(540RPM) & select low creeper gear.

5.SIZING PTO SHFAT



STEP 1

where marked. (Figure 1-A & 1-B)

Cutting the PTO shaft to length.

NOTE: Be sure to cut equal lengths of each PTO shaft section. Clamp end of PTO shaft in a vice and cut off shield
Figure 1-A

STEP 2 Using cut section of the shield as a guide cut shaft off the same amount. (Figure 2)



Figure 1-B

F



STEP 3 Repeat steps 1 and

2 for other PTO shaft
section.

STEP 4 Use a file to deburr PTO shafts. Clean up all chips, burrs and filings from both ends of the PTO shaft.

Figure 2

6.MAINTENANCE & LUBRICATION

Maintenance & Lubrication

6.1Maintenance

Proper servicing and adjustment is the key to the long life of any implement. With careful inspection and routine maintenance, you can avoid costly downtime and repair the parts on your rotary tiller. Do not alter the tiller in a way which will adversely affect its performance.

Check all bolts and pins after using the unit for several hours and on a regular basis thereafter to ensure they are tight and secured. Replace worn, damaged, or illegible safety labels by obtaining new labels from the dealer.

 **CAUTION**

For safety reasons, each maintenance operation must be performed with tractor PTO disengaged, Flail Mower lowered completely to the ground or onto support blocks, tractor engine shut off, and ignition key removed.

6.2.Storage

Clean, inspect, service, and make necessary repairs to the Flail Mower when parking it for long periods and when parking it at the end of a working season. This will help ensure that the tiller is ready for field use the next time you hook-up to it.

 **DANGER**

Always disconnect main driveline from tractor PTO and secure tiller in the up position with solid supports before servicing underside of tiller. PTO can be engaged if tractor is started resulting in damage to Flail Mower, bodily injury, or death.

1. Clean off any dirt and grease that may have accumulated on the Flail Mower. Scrape of compacted dirt and then wash surfaces thoroughly with a garden hose.
2. Check the tines for wear and replace if necessary.
3. Inspect the Flail Mower for loose, damaged or worn parts and adjust or replace if needed.
4. Lubricate as noted in “**Lubrication**”
5. Drain and refill gearbox and Gear case oil. Be sure to replace all oil plugs.
Drain oil in gearbox by removing the bottom drain plug or right-hand cap.
Drain oil in Gear case by removing the bottom plug and tipping tiller backwards.
6. Replace all damaged or missing decals.
7. Store tiller on a level surface in a clean, dry place.
Inside storage will reduce maintenance and make for a longer life.
8. Repaint parts where paint is worn or scratched to prevent rust.

6.MAINTENANCE & LUBRICATION

6.3. Lubrication

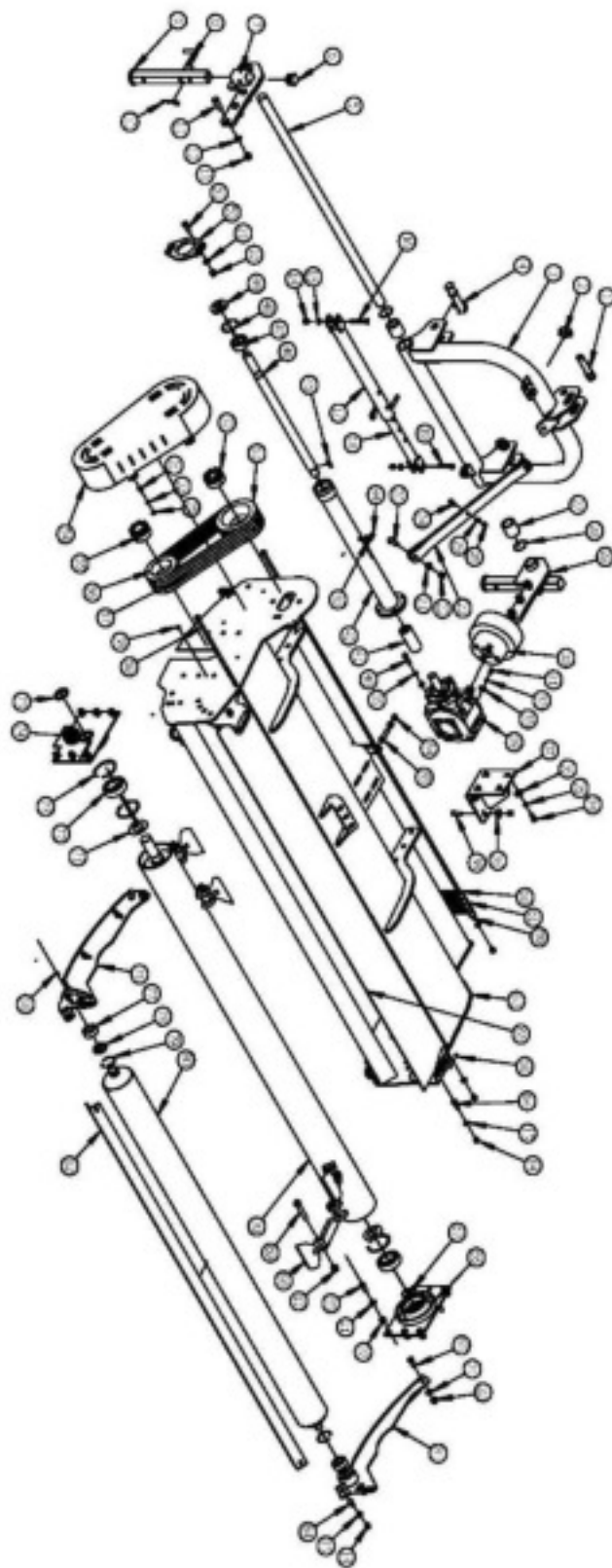
Lubrication Parts	Time
Driveline U-Joint	8 hours
Driveline Shaft	20 hours
Bearing Of Rotor Shaft	8 hours
Gearbox	50 hours



IMPORTANT:

Flail Mower should be level when checking oil level in Gearbox. Check oil level in gearbox by removing lower plug. Oil should reach bottom of plug hole. Add recommended oil as needed. Retighten plug when oil is level with bottom of hole.

7.PARTS LIST



7.PARTS LIST

S/N	Part No.	Name & Specification	Qty	Remarks
1	KDK240-111	Upper Pin	1	上悬挂销轴
2	SP11	Slotted Spring Pin	3	圆环弹性圆柱销φ11
3	KDK200-024	Mounting Frame	1	悬挂焊合件
4	KDK240-110	Lower Pin	2	下悬挂销轴
5	KDK200-103	Slide Rail	1	导轨
6		Tube Plug	2	方管塞 40*40
7	KDK200-012	Right Lower Linkage	1	右侧板焊合件
8	EFGC175-116	Pin For Support Leg	3	撑脚销
9	KDK200-026	Support Leg	2	撑脚管焊合件
10	RP4	R Pin 4	3	R销φ4
11	GB/T 5781	Hexagon Bolt M16x50	6	六角头螺栓M16x50
12	GB/T 97.1	Plain Washer 16	6	平垫圈 16
13	GB/T 889.1	Nylon Nut M16	6	六角锁紧螺母 M16
14	GB/T 889.1	Nylon Nut M12	5	六角锁紧螺母 M12
15	GB/T 97.1	Plain Washer 12	5	平垫圈 12
16	GB/T 5782	Hexagon Bolt M12x80	1	六角头螺栓 M12 x 80
17	KDK200-023	Slide Inside Tube	1	悬挂外调节管焊合件
18	KDK200-025	Slide Outside Tube	1	悬挂内调节管焊合件
19	GB/T 5782	Hexagon Bolt M12x70	1	六角头螺栓 M12 x 70
20	GB/T 5781	Hexagon Bolt M14x50	2	六角头螺栓 M14 x 50
21	GB/T 97.1	Plain Washer 14	14	平垫圈 14
22	GB/T 889.1	Nylon Nut M14	14	六角锁紧螺母 M14
23	KDK200-106	Connecting Plate	2	悬挂连接拉杆
24	GB/T 5781	Hexagon Bolt M10x30	1	六角头螺栓M10 x 30
25	GB/T 97.1	Plain Washer 10	5	平垫圈 10
26	GB/T 889.1	Nylon Nut M10	1	六角锁紧螺母 M10
27	KDK200-105	Nylon Slide Bush	2	导轨尼龙
28	GB 893.1-86	Circlips For Hole 58	2	孔用弹性挡圈 58
29	KDK200-013	Left Lower Linkage	1	左侧板焊合件
30		PTO Cone	1	防尘罩
31	GB/T 5781-2000	Hexagon Bolt M10x20	6	六角头螺栓 M10 x 20
32	GB 93-87-200	Spring Washer 10	6	弹簧锁紧垫圈 10
33	GB/T 96.1-2000	Plain Washer 10	2	平垫圈 10
34	GB/T 5781-2000	Hexagon Bolt M12x30	4	六角头螺栓 M12x30
35	GB 93-87-2000	Spring Washer 12	8	弹簧锁紧垫圈 12
36	GB/T 96.1-2000	Plain Washer 12	8	平垫圈 12
37	KDK200-017	Gearbox Holder	1	齿轮箱安装板焊合件
38	GB/T 5781-2000	Hexagon Bolt M12x40	4	六角头螺栓M12x40
39	EFGC175-025	Gearbox	1	齿轮箱组件
40	GB/T 70.1-2000	Hexagon Socket Head Bolt M12x45	4	内六角圆柱头螺钉 M12x45
41	EFGC175-105	Shaft Couple	1	轴套
42	KDK200-018	Shaft Tube	1	转轴管套焊合件
43		Exhaust bolt	1	放气螺栓
44	NPT3-8-18	Oil Plug NPT3/8-18	1	油堵 NPT3/8-18
45	GB/T 1564-2003	Key A 10 x 8 x 40	1	平键 10 x 8 x 40
46	KDK180-119	Shaft	1	传动轴
47	GB/T 296-94	Bearing 3207	1	滚动轴承 3207
48	GB 893.1-86	Circlips For Hole 72	1	孔用弹性挡圈 72
49	OS35A72A10	Oilseal 35x72x10	1	油封 35x72x10
50	KDK200-108	Adjusting Plate	1	连接板
51	GB/T 5781-2000	Hexagon Bolt M14x40	2	六角头螺栓M14 x 40
52	KDK240-123	Taper Lock 35x80	1	大涨紧套 35*80
53	KDK200-121	Big Pulley	1	大皮带轮
54	KDK200-001-501	Pulley Cover	1	皮带轮罩

7.PARTS LIST

55	KDK240-125	Taper Lock 45x80	小漲緊套 45*80	1	
56	KDK200-122	Small Pulley	小皮帶輪	1	
57	B817A1245	Belt BX17-1245	BX17-1245	4	
58	DIN 71412 - A	Grease Nipple M10x1	椎形加油嘴 M10 x 1	4	
59	KDK200-030	Rear Door Axle	窗門軸焊合件	2	
60	KDK200-118	Chain	鏈條	N	
61	KDK200-109	Spacer	隔套	N	
62	KDK200-010	Cutting Deck	機罩焊合件	1	
63	KDK200-011	Rear Door	后擋板焊合件	1	
64	GB/T 5781-2000	Hexagon Bolt M12x35	六角頭螺栓 M12x35	4	
65	GB/T 5781-2000	Hexagon Bolt M14x35	六角頭螺栓 M14x35	10	
66	KDK200-020	Left Bearing Block	左軸承座焊合件	1	
67	GB 894.1-86	Circlips For Shaft	軸用彈性擋圈 46	2	
68	AG140-102	Hammer	刀片	N	
69	GB/T 5780-86	Hexagon Bolt M16x90	六角頭螺栓 M16 x 90	N	
70	KDK220-016	Rotor	刀輪焊合件	1	
71	KDK200-112	Dust Washer	防塵墊片	2	
72	GB/T 276-94	Bearing 6309	滾動軸承軸承 6309-2LS	2	
73	GB 893.1-86	Circlips For Hole 100	孔用彈性擋圈 100	2	
74	KDK200-019	Right Bearing Block	右軸承座焊合件	1	
75	OS65A45A5.3	Oil Seal 65x45x5.3	油封65x45x5.3	1	
76	KDK200-015	Left Skid	左墊板焊合件	1	
77	GB/T 281-2000	Bearing 2206	圓心球軸承 2206	2	
78	GB 13871-92	Oil Seal 35x62x6	旋轉軸唇型密封圈 35x62x6	2	
79	GB 893.1-86	Circlips For Hole 62	孔用彈性擋圈 62	2	
80	KDK200-021	Roller	滾筒焊合件	1	
81	KDK200-015-01	Right Skid	右墊板焊合件	1	
82	KDK200-133	Scraper	刮泥板	1	
83	GB/T 5781-2000	Hexagon Bolt M14x60	六角頭螺栓 M14 x 60	2	
84	GB/T 41 -2000	Nut M14	六角螺母 M14	4	

Victory Tractor Implements Warranty FMHD Series Flail Mower Warranty

This Product is warranted to be free of defects in materials and workmanship under normal use and service for a period of two years from the date of purchase, when operated and maintained in accordance with the operating and maintenance instructions supplied with this unit. This warranty does not cover misuse or negligence. Under no circumstances will the manufacturer be liable for any consequential damage or expenses of any kind, including loss of profit. The manufacturer is under no circumstances liable for tractor damage of any kind. The manufacturer is not liable for maintenance of the product.

This warranty is extended only to the original purchaser. Warranty is void if repairs are attempted by anyone other than an authorized Service Center.

If difficulties arise with the product, you should contact Victory Tractor Implements at the contact information below. Only this location is authorized to make repairs to the product or provide for the replacement of defective parts, which will be done at no charge within a reasonable time after the receipt of product. The complete unit or parts should be returned to Victory Tractor Implements. The customer may have to cover the return shipping expense and is responsible for avoiding damage from the transport. In-Transit Damage is not covered by warranty. Please include your purchase receipt with any claim and keep a copy for your own file.

The seller's liability under warranty is limited to the repair of the product and/or replacement of parts and is provided to the purchaser in lieu of all other remedies including incidental and consequential charges. There are no warranties, expressed or implied other than those specified herein.

For the nearest agent please contact:

Centex Group Inc. dba Victory Tractor Implements
65 Pine Av., Suite 857
Long Beach, CA 90802, USA

Website: www.etractorimplements.com

Tel.: 1-562-235-5725 e-mail: sales@etractorimplements.com