

"D" FLAIL BRUSH & FIELD MOWER/MULCHER



FHM

FARMER-HELPER MACHINERY COMPANY



Save This Manual for Future Reference

OPERATION & PARTS MANUAL

**Please read these instructions carefully before using! You must fill with oil before operating! Uses Approximately 3 quarts 80-90 gear lube
GREASE ALL FITTINGS BEFORE OPERATING!**

www.Betstco.com

BETSTCO

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RUGGED LABOR SAVING EQUIPMENT SINCE 1995

Specifications subject to change without notice.

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**RETAIN THIS MANUAL FOR FUTURE OPERATOR'S TO READ AND
FOR PARTS AND MAINTENANCE INFORMATION**

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Important Safety information

Safety at all times

Thoroughly read and understand the instructions given in this manual before operation. Refer to the “Safety Decal”, 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.

- Operator should be familiar with all functions of the unit.
- Operate implement from the driver’s seat only.
- Make sure all guards and shields are in place and secured before operating the implement.
- Do not leave tractor or implement unattended with engine running.
- Dismounting from a moving tractor could cause serious injury or death.
- Do not stand between tractor and implement during hitching.
- Keep hands, feet, and clothing away from power-driven parts.
- Wear snug fitting clothing to avoid entanglement with moving parts.
- Watch out for wires, trees, etc., when raising implement. Make sure all persons are clear of working area.
- Turning tractor too tight may cause implement to ride up on wheels. This could result in injury or equipment damage.

Look For The Safety Alert Symbol

The **SAFETY ALERT SYMBOL** indicates there is a potential hazard to personal safety involved and extra safety precaution must be taken. When you see this symbol, be alert and carefully read the message that follows it. In addition to design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training of personnel involved in the operation, transport, maintenance and storage of equipment.

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, may result in death or serious injury. This signal word is limited to the most extreme situations, typically for machine components that, for functional purpose, cannot be guarded.



WARNING

Indicates a potentially hazardous situation which, if not avoided, may 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.

For you protection

- Thoroughly read and understand the “safety label” section, read all instructions noted on them.

Shutdown and storage

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

Use safety lights and devices

- Slow moving tractors, self-propelled equipment, and towed implements can create a hazard when driven on public roads. They are difficult to see, especially at night.
- Flashing warning lights and turn signals are recommended whenever driving on public roads. Use lights and devices provided with implement.

Transport machinery safely

- Comply with state and local laws.
- Maximum transport speed for implement is 20 mph. Do not exceed. Never travel at a speed which does not allow adequate control of steering and stopping. Some rough terrain may require a slower speed.
- Sudden braking can cause a towed load to swerve and upset. Reduce speed if towed load is not equipped with brakes.
- Use the following maximum speed - tow load weight ratios as a guideline:
20 mph when weight is less than or equal to the weight of tractor.
10 mph when weight is double the weight of tractor.
- **"IMPORTANT:** Do not tow a load that is more than double the weight of tractor.

Keep riders off machinery

- Riders obstruct the operator’s view, they could be struck by foreign objects or thrown from the machine.
- Never allow children to operate equipment.

Practice safe maintenance

- Understand procedure before doing work. Use proper tools and equipment. refer to operator’s manual for additional information.
- Work in a clean dry area.
- Lower the implement to the ground, put tractor in park, turn off engine, and remove key before performing maintenance.
- Allow implement to cool completely.
- Do not grease or oil implement while it is operation.
- Inspect all parts. Make sure parts are in good condition and installed properly.
- Remove buildup of grease, oil or debris.
- Remove all tools and unused parts from implement before operation.

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.

Wear protective equipment

- Protective clothing and equipment should be worn.
- Wear clothing and equipment appropriate for the job. Avoid loose fitting clothing.
- Prolonged exposure to loud noise can cause hearing impairment or hearing loss. Wear suitable hearing protection such as earmuffs or earplugs.
- Operating equipment safely requires the full attention of the operator. Avoid wearing radio headphones while operating machinery.

Avoid high pressure fluids hazard

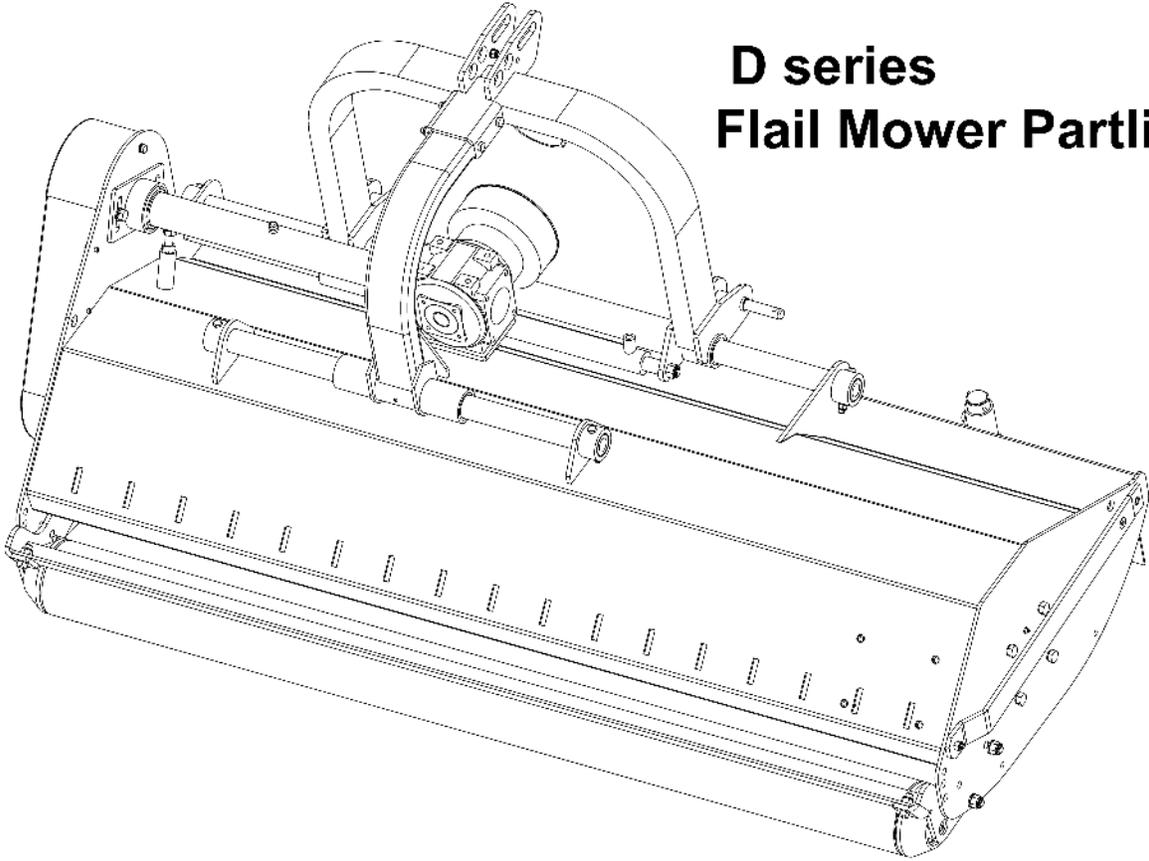
- Escaping fluid under pressure can penetrate the skin causing serious injury.
- Avoid the hazard by relieving pressure before disconnecting hydraulic lines.
- Use a piece of paper or cardboard, not body parts, to check for suspected leaks. Wear protective gloves and safety glasses or goggles when working with hydraulic systems.
- If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be treated within a few hours or gangrene may occur.

Safety Labels

Your mower comes equipped with all safety labels in place. They were designed to help you safely operate your implement. Read and follow their directions.

1. Keep all safety labels clean and legible.
2. Replace all damaged or missing labels. To order new labels contact Betst Products.
3. Some new equipment installed during repair requires safety labels to be affixed to the replaced component. When ordering new components make sure the correct safety labels are included in the request.
4. Refer to this section for proper label placement. To install new labels:
 - a. Clean the area the label is to be placed.
 - b. Spray soapy water on the surface where the label is to be placed.
 - c. Peel backing from label. Press firmly onto the surface.
 - d. Squeeze out air bubbles with the edge of a credit card.

D series Flail Mower Partlist



B



C



D



E



Introduction

Betstco welcomes you to the growing family of new product owners. This implement has been designed with care and built by skilled workers using quality materials. Proper assembly, maintenance, and safe operating practices will help you get years of satisfactory use from the machine.

Application

The Flail Mowers are designed for Category 1 - three point hitch or quick-hitch system mounting. These fixed bar flail mowers are ideal for ripping, leveling, finish grading, and backfilling applications at feedlots, outdoor arenas, building sites, and maintenance operations on farm and ranch lanes or roadways.

Using This Manual

- This operator's manual is designed to help familiarize you with safety, assembly, operation, adjustments, troubleshooting, and maintenance. Read this manual and follow the recommendations to help ensure safe and efficient operation.
- 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 Betst Products. Manuals can also be printed from our website www.betstco.com.

Terminology

“Right” or “Left” as used in this manual is determined by facing the direction the machine will operate while in use unless otherwise stated.

Definitions

Note : A special point of information that the operator must be aware of before continuing.

Important : A special point of information related to its preceding topic. The intention is that this information should be read and noted before continuing.

Owner Assistance

The Warranty Registration card should be filled out by purchaser upon receipt.

If repair parts are required contact Betstco. The parts on your machine have been specially designed and should only be replaced with genuine parts.

Serial Number Plate

For prompt service always use the serial number and model number when ordering parts. Be sure to include your serial and model numbers in correspondence also.

Section 1: Assembly and Set-up

Tractor Requirements

This mower is designed with a 3-Point category I hitch. Tractor horse power rating should not exceed 80 PTO horse power.

Assembly

Refer to the parts illustration.

Tractor Hook-Up

1. Be certain that tractor draw bar will not interfere. Move draw bar ahead or remove if required. Draw bar should also be checked for clearance when unit is being raised for the first time.
2. Align lower link arms of tractor to hitch clevises on mower. Insert lower hitch pins into lower ball swivels and attach lynch pins.
3. Attach tractor top link to upper floating hitch on mower with pin supplied. Secure with lock pin.
4. Adjust tractor top link in or out to place upper hitch pin vertically above or slightly behind lower hitch pins to allow mower flotation. The mower should be run with the back 15 degrees lower than the front.

Driveline Installation

1. Slide driveline end with extended safety cone over splined shaft of gearbox and secure with attaching device.
2. Slide driveline over tractor's splined PTO shaft and secure with locking device of driveline.
3. Driveline should now be moved back and forth to ensure that it is secure on the PTO shaft of the tractor and mower gearbox.
4. Attach chain from the driveline shield to one of the upper hitch braces to ensure that the shield does not rotate.
5. Should driveline require shortening:
 - a. Hold the half-shafts next to each other in the shortest working position and mark them.
 - b. Shorten inner and outer guard tubes equally.
 - c. Shorten inner and outer sliding profiles by the same length as the guard tubes.
 - d. Proper overlap is a minimum of one-half the length of each tube, with both tubes being of equal length.
 - e. Round off all sharp edges and remove burrs. Grease sliding profiles.



CAUTION

Tractor PTO shield and all mower guards must be in place at all times during operation!

Section 2: Operating Instructions

Transporting

NOTE: Always disengage PTO before raising mower to transport position.

1. When raising the mower to transport position, be sure that driveline does not contact tractor or mower. Adjust and set the tractor's 3-point hitch lift height so that the driveline does not contact mower deck in the fully raised position.
2. Be sure to reduce tractor ground speed when turning, leaving enough clearance so that the mower does not contact obstacles such as buildings, trees or fences.
3. Select a safe ground travel speed when transporting from one area to another. When traveling on roadways, transport in such a way that faster moving vehicles may pass safely.
4. When traveling over rough or hilly terrain, shift tractor to a lower gear.



CAUTION

When traveling on public roads, whether at night or during the day, use accessory lights and devices for adequate warning to operators of other vehicles. Comply with all Federal, State, and local laws.

Mowing Instructions

1. Clear area to be mowed of objects and debris that might be picked up and thrown by the mower blades.
2. Grass is best cut when it is dry. Mowing wet grass can cause plugging resulting in grass clumps behind the mower.
3. Grass should be mowed frequently as shorter clippings deteriorate faster.
4. If mowing extremely tall grass, it is best to raise cutting height and mow the area, then lower cutting height and mow a second time at the desired height.

Operating Instructions

Proper servicing and adjustments are the key to the long life of any machine. With careful and systematic inspection of the mower, costly maintenance, time and repair can be avoided.

Before beginning to mow, the following inspection should be performed:

1. Check oil level in gearbox.
2. Check that all plugs in gearbox have been replaced and tightened properly.
3. Be sure all mower knives, bolts and nuts are tight.
4. Be certain all guards and shields are in place and secure.
5. Grease driveline shaft and all other grease fittings.
6. Clear area to be mowed of rocks, branches and other foreign objects.
7. Lower mower to ground. Set tractor throttle at approximately 1/4 open. Engage PTO to start blades rotating.
8. Operate with 540 rpm PTO tractor.
9. At first begin mowing at a slow forward speed and shift up until the desired speed is achieved - maintaining 540 PTO rpm.
10. Mower knives will cut better at a faster blade speed than at reduced throttle.
11. After mowing the first 50 feet, stop and check to see that the mower is adjusted properly.
12. **Do not** make sharp turns or attempt to back up while mower is on the ground.
13. **Do not** engage PTO with mower in the fully raised position. **Do not** engage PTO at full throttle.

Section 3: Adjustments

Leveling the Mower

NOTE: Tractor and mower should be on level ground.

Leveling can be adjusted at the tractor's 3-point arms and center link.

Cutting Height Adjustment

The machine's cutting height depends upon the position of the rear roller.

1. Remove the bolts that fix the roller on both sides.
2. Lift or lower both sides of roller in equal measurements.
3. Replace bolts and re-tighten.

3-Point Hitch Adjustments

The 3-point hitch system on this mower has been designed for front to back flotation when mowing on uneven terrain. Adjust tractor's top center link to place the upper hitch pin vertically above or slightly behind the lower hitch pins. The mower should be run with the back 15 degrees lower than the front.

The hitch can also be adjusted from side to side by turning the adjustment handle. Turn handle until you have achieved your desired location.



CAUTION

Engage parking brake, shut off tractor, remove key and disengage PTO before making any height adjustments!

Belt Tension



CAUTION

Belt drive system under spring tension; use care to avoid bodily harm!

The belt tension should be checked after the first 20 hours of use. And then after every 40 hours of use.

1. Tension on the belt can be adjusted with the belt tension bolt. Turn the bolt until desired tension is achieved. When the belt has the correct tension the gearbox should be adjusted so that the gearbox extension is running straight (parallel) with the flail mower. Loosen bolts at the bottom of the gearbox and move gearbox until gearbox extension is running straight.
2. Excessive tension on the belt may lead to premature failure of belt and drive components.



CAUTION

Excessive tension on the belt may also lead to a safety hazard to the operator or bystanders.

Section 4: Maintenance and Lubrication

Maintenance

Proper servicing and adjustment is the key to the long life of any farm implement. With careful and systematic inspection, you can avoid costly maintenance, time and repair.



CAUTION

For safety reasons, each maintenance operation must be performed with tractor PTO disengaged, mower lowered completely to the ground and tractor engine shut off with ignition key removed.

- After using the mower for several hours, check all bolts to be sure they are tight and check drive belt tension.
- Replace any worn, damaged or illegible safety decals by obtaining new decals from Betst Products.

Knife Replacement

IMPORTANT: Make sure that the knife is the same length as the others on the mower. This will keep the rotor rotation balanced.

1. Remove bolt and nut.
2. Remove old knife.
3. Install new knife and existing bolt.
4. Secure with nut.

V-Belt Installation



CAUTION

Belt drive system under spring tension; use care to avoid bodily harm!

1. Remove belt guard fender and belt cover.
2. Disengage belt tension by loosening belt tension bolt until belt can be removed.
3. With tension relieved from belt remove old belt from pulleys.
4. Tighten belt tension bolt.
5. Reinstall belt guard and belt guard fender.

Storage

At the end of the working season or when the mower will not be used for a long period, it is good practice to clean off any dirt or grease that may have accumulated on the mower and any of moving parts.

1. Clean as necessary.
2. Check knives for wear and replace if necessary.
3. Inspect mower for loose, damaged or worn parts and adjust or replace as needed.
4. Store unit inside if possible for longer life.
5. Repaint parts where paint is worn or scratched to prevent rust.
6. Replace all damaged or missing decals.

Lubrication

Driveline Shaft U-Joints



Type of Lubrication: Multi-purpose Grease

Roller Bearing (Both)



Type of Lubrication: Multi-purpose Grease

Cutter Rotor Bearing (Both)



Type of Lubrication: Multi-purpose Grease

Gearbox



Type of Lubrication: SAE 90W Gear Lube

Check oil level in gearbox by removing the plug located on the right hand side. Oil should be level with bottom of plug hole. Add oil if necessary by removing top fill plug and side plug. Add oil until it flows from side plug hole.

Do not overfill!

IMPORTANT: Mower should be level when checking oil in gearbox!

Driveline Profiles



Type of Lubrication: Multi-purpose Grease

Section 5: Specifications & Capacities

Farmer-Helper "D" Series Brush and Flieid Mulcher Specification				
Model	FH-D-160	FH-D-180	FH-D-200	FH-D-220
Working Width	63 inches	71 inches	79 inches	87 inches
Overall Width	71 inches	79 inches	86 inches	95 inches
Min. HP Req*	35 HP	40 HP	45 HP	50 HP
Hitch	Cat I & II			
Gear Box Rating	65 HP	65 HP	80 HP	80 HP
Cutting Offset	18" - 36" Adjustable	24" - 42" Adjustable	30" - 48" Adjustable	36" - 54" Adjustable
Hammer Blades	14 Hammers	16 Hammers	18 Hammers	20 Hammers
Housing Thickness	Reinforced 8 Gauge	Reinforced 8 Gauge	Reinforced 8 Gauge	Reinforced 8 Gauge
SidePlate Thickness	5/16"	5/16"	5/16"	5/16"
Roller Dia.	5 7/8"	5 7/8"	5 7/8"	5 7/8"
Rotor Shaft Dia.	5.5 Inches	5.5 Inches	5.5 Inches	5.5 inches
Blade Swing	16 inches	16 inches	16 inches	16 inches
No. of Belts	4	4	4	4
3pt. Conn. Width	30 1/2" - 41 1/2"	30 1/2" - 41 1/2"	30 1/2" - 41 1/2"	30 1/2" - 41 1/2"
DriveLine Type	Series 5 Quick Connect, Shear Bolt, 6-Spline			
Warranty	2 Year	2 Year	2 Year	2 Year
Net Weight	850 lbs	965 lbs	1045 lbs	1160 lbs
Crated Weight	972 lbs.	1090 lbs.	1175lbs.	1295 lbs.

Section 6: Troubleshooting

Problem	Solution
 CAUTION Do not try to clean rear discharge area when mower is running. Bodily harm may occur!	
Belt slipping	Unplug and clean mower deck.
	Remove belt guard shields and clean sheaves.
	Replace belt.
Patches of uncut grass	Mow at full throttle (540 PTO rpm), check PTO speed and tractor engine.
	Shift transmission to a lower gear.
	Tighten belts.
Excessive vibration	Replace missing knives.
	Replace knives.
	Replace drive belt.
Gearbox noisy	Replace pulleys or align.
	Remove belt guard shields & clean debris from belt area & sheaves.
	Check lubricant level.
Knives scalping grass	Raise cutting height by adjusting roller.
	Change mowing pattern.
	Reduce speed turns.
Uneven cut	Shift to a lower gear.
	Level mower.
	Replace missing knives.
Tractor loaded down by mower	Mow at full throttle (540 PTO rpm).
	Shift to a lower gear.
	Clean mower.

Section 7: Appendix

Bolt Torque

The tables shown below give correct torque values for various bolts and cap screws. Tighten all bolts to the torques specified unless otherwise noted. Check tightness of bolts periodically, using bolt torque chart as a guide. Replace hardware with the same length bolt.

ENGLISH TORQUE SPECIFICATIONS

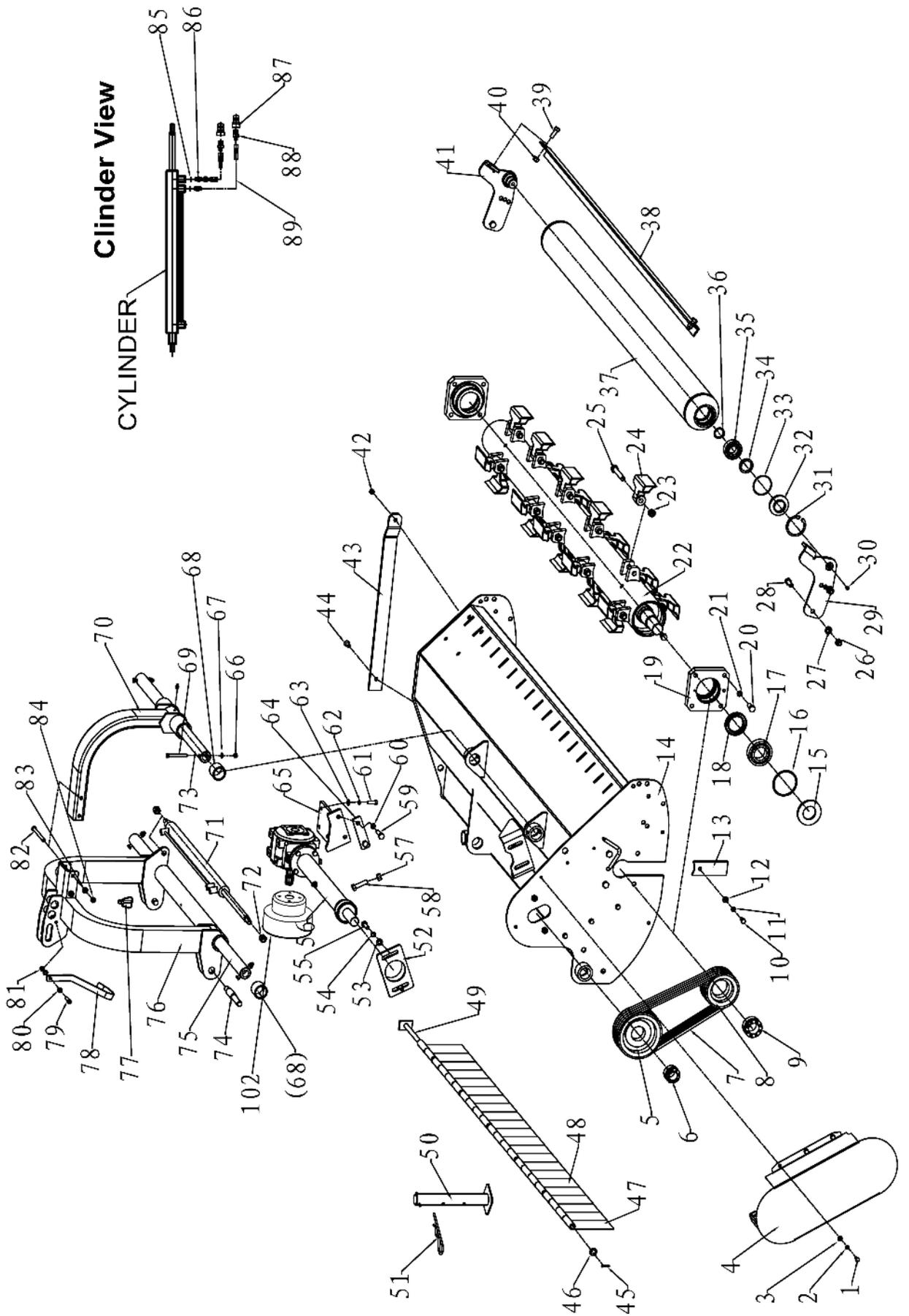
Torque Values Chart													
in-tpi ¹	Bolt Head Identification						mm x pitch ⁴	Bolt Head Identification					
	Grade 2		Grade 5		Grade 8			Class 5.8		Class 8.8		Class 10.9	
	N · m	ft-lb ³	N · m	ft-lb	N · m	ft-lb	N · m	ft-lb	N · m	ft-lb	N · m	ft-lb	
1/4" - 20	7.4	5.6	11	8	16	12	M 5 X 0.8	4	3	6	5	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							

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

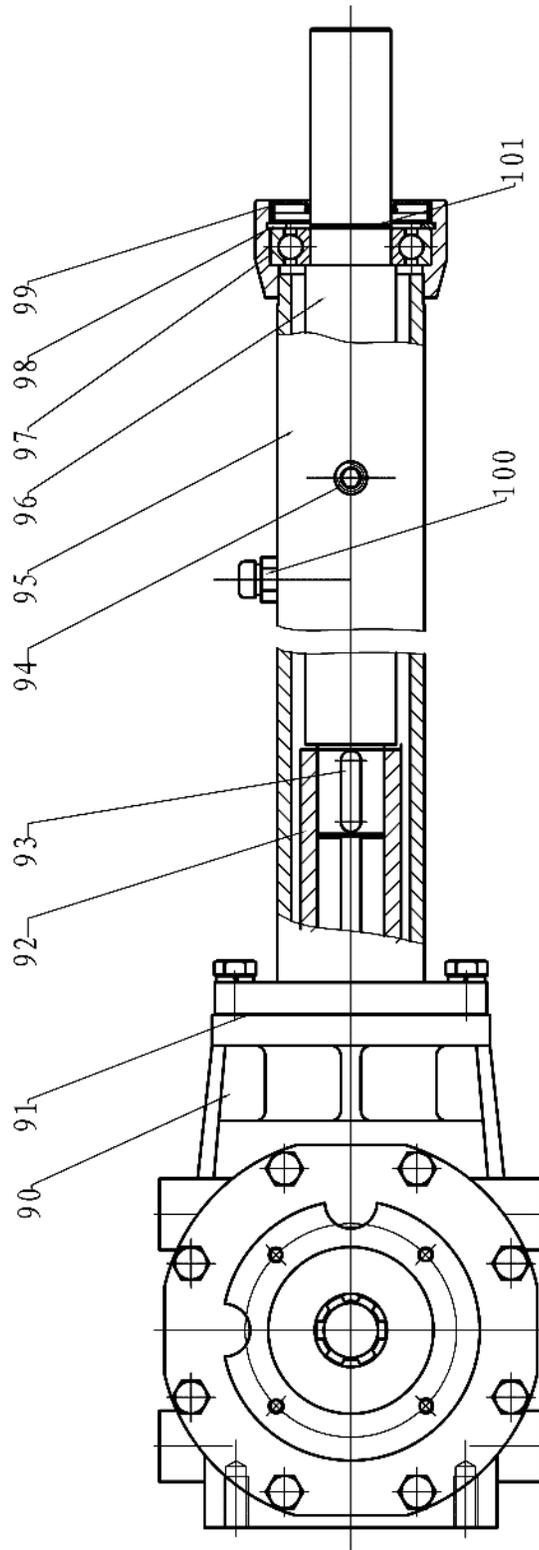
Torque tolerance + 0%, -15% of torquing values. Unless otherwise specified use torque values listed above.

Torque figures indicated above are valid for non-greased or non-oiled threads and heads. Therefore, do not grease or oil bolts or cap screws unless otherwise specified in this manual. When using locking elements, increase torque values by 5%.

D series Flail Mower Partlist



Transmission Assembly



DM220/200/180/160/140/120-MOWER PARTS LIST

REF.	PART NUMBER	DESCRIPTION	名称及规格	QTY.	REMARKS
1	GB5783-M10x20	BOLT M10x20	螺栓M10x20	6	
2	GB93-10	LOCK WASHER 10	弹垫圈10	6	
3	GB97.1-10	PLAIN WASHER 10	平垫圈10	6	
4	D220.012	COVER,PULLEY,WDT	带轮罩焊合件	1	
5	FLP180.111	PULLEY,DRIVING	大带轮	1	
6	REACH 04-4065	REACH 04-4065	胀套4065	1	
7	GB11544-SPB1370	V-BELT SPB1370	V带SPB1370	4	
8	FLP180.112	PULLEY,DRIVEN	小带轮	1	
9	REACH 04-5080	REACH 04-5080	胀套5080	1	
10	GB5783-M12x25	BOLT M12x25	螺栓M12x25	1	
11	GB93-12	LOCK WASHER 12	弹垫圈12	1	
12	GB97.1-12	PLAIN WASHER 12	平垫圈12	1	
13	D220.101	PLATE	侧封板	1	
14	D220.011	DECK,WDT	机罩焊合件	1	D220
	D200.011	DECK,WDT	机罩焊合件	1	D200
	D180.011	DECK,WDT	机罩焊合件	1	D180
	D160.011	DECK,WDT	机罩焊合件	1	D160
	D140.011	DECK,WDT	机罩焊合件	1	D140
	D120.011	DECK,WDT	机罩焊合件	1	D120
15	GB13871-60x110x10	SEAL 60x110x10	油封60x110x10	2	
16	GB893.1-110	RETAINING RING 110	孔用挡圈110	2	
17	GB281-512	BEARING 512	调心轴承512	2	
18	GB13871-70x100x10	SEAL 70x100x10	油封70x100x10	2	
19	D220.110	BEARING SEAT	轴承座	2	
20	GB5783-M16x40	BOLT M16x40	螺栓M16x40	8	
21	GB93-16	LOCK WASHER 16	弹垫圈16	8	
22	D220.019	ROTATOR,WDT	刀轴焊合件	1	D220
	D200.019	ROTATOR,WDT	刀轴焊合件	2	D200
	D180.019	ROTATOR,WDT	刀轴焊合件	3	D180
	D160.019	ROTATOR,WDT	刀轴焊合件	4	D160
	D140.019	ROTATOR,WDT	刀轴焊合件	5	D140
	D120.019	ROTATOR,WDT	刀轴焊合件	6	D120
23	GB889.1-M18	LOCK NUT M18	锁紧螺母M18	20	
24	D220.111	BLADE	锄刀	20	
25	GB5782-M18x115	BOLT M18x115	螺栓M18x115	20	
26	GB889.1-M16	LOCK NUT M16	锁紧螺母M16	4	
27	GB97.1-16	PLAIN WASHER 16	平垫圈16	4	
28	GB5783-M16x50	BOLT M16x50	螺栓M16x50	4	
29	D220.020	BRACKET,LEFT	滚轮左座焊合件	1	
30	GB1152-M10x1	ZERK M10x1	油杯M10x1	6	

31	GB893.1-88	RETAINING RING 88	孔用挡圈88	2	
32	D220.112	BLOCK	密封座	2	
33	GB3452.1-82.5x3.55	O-RING 82.5x3.55	O形圈82.5x3.55	2	
34	GB13871-48x62x8	SEAL 48x62x8	油封48x62x8	2	
35	GB281-508	BEARING 508	调心轴承508	2	
36	GB894.1-40	RETAINING RING 40	轴用挡圈40	2	
37	D220.021	ROLLER,WDT	滚轮焊合件	1	D220
	D200.021	ROLLER,WDT	滚轮焊合件	2	D200
	D180.021	ROLLER,WDT	滚轮焊合件	3	D180
	D160.021	ROLLER,WDT	滚轮焊合件	4	D160
	D140.021	ROLLER,WDT	滚轮焊合件	5	D140
	D120.021	ROLLER,WDT	滚轮焊合件	6	D120
38	D220.113	SCRAPER	刮泥板	1	D220
	D200.113	SCRAPER	刮泥板	1	D200
	D180.113	SCRAPER	刮泥板	1	D180
	D160.113	SCRAPER	刮泥板	1	D160
	D140.113	SCRAPER	刮泥板	1	D140
	D120.113	SCRAPER	刮泥板	1	D120
39	GB5783-M14x40	BOLT M14x40	螺栓M14x40	2	
40	GB889.1-M14	LOCK NUT M14	锁紧螺母M14	2	
41	D220.022	BRACKET,RIGHT	滚轮右座焊合件	1	
42	GB889.1-M12	LOCK NUT M12	锁紧螺母M12	2	
43	D220.107	PLATE,PROTECTION	侧挡板	1	
44	GB2673-M12x35	SUNK SCREW M12x35	沉头螺钉M12x35	1	
45	GB91-4x32	COTTER 4x32	开口销4x32	1	
46	GB97.1-18	PLAIN WASHER 18	平垫圈18	5	
47	D220.102	FLAP	挡板	17	
48	D220.103	FLAP,GAPPED	缺口挡板	5	
49	D220.013	ROD,WDT	挡杆焊合件	1	D220
	D200.013	ROD,WDT	挡杆焊合件	1	D200
	D180.013	ROD,WDT	挡杆焊合件	1	D180
	D160.013	ROD,WDT	挡杆焊合件	1	D160
	D140.013	ROD,WDT	挡杆焊合件	1	D140
	D120.013	ROD,WDT	挡杆焊合件	1	D120
50	D220.014	SUPPORTING BAR,WDT	撑脚焊合件	1	
51	D220.104	CLAMPING PIN	卡销	1	
52	D220.018	BRACKET,WDT	调节座焊合件	1	
53	GB97.1-14	PLAIN WASHER 14	平垫圈14	2	
54	GB93-14	LOCK WASHER 14	弹垫圈14	2	
55	GB5783-M14x40	BOLT M14x40	螺栓M14x40	2	
56	D220.004	TRANSMISSION,ASM	传动箱总成	1	D220
	D200.004	TRANSMISSION,ASM	传动箱总成	1	D200
	D180.004	TRANSMISSION,ASM	传动箱总成	1	D180
	D160.004	TRANSMISSION,ASM	传动箱总成	1	D160
	D140.004	TRANSMISSION,ASM	传动箱总成	1	D140
	D120.004	TRANSMISSION,ASM	传动箱总成	1	D120
57	GB6170-M16	NUT M16	螺母M16	1	

58	GB5783-M16x60	BOLT M16x60	螺栓M16x60	1	
59	GB5783-M14x50	BOLT M14x50	螺栓M14x50	2	
60	GB93-14	LOCK WASHER 14	弹垫圈14	2	
61	GB5783-M12x35	BOLT M12x35	螺栓M12x35	4	
62	GB93-12	LOCK WASHER 12	弹垫圈12	4	
63	GB97.1-12	PLAIN WASHER 12	平垫圈12	4	
64	D220.109	PLATE	垫板	1	
65	D220.017	MOUNTING,WDT	齿轮箱座焊合件	1	
66	GB889.1-M10	LOCK NUT M10	锁紧螺母M10	4	
67	GB97.1-10	PLAIN WASHER 10	平垫圈10	4	
68	D220.115	BUSH	衬套	4	
69	GB5782-M10x90	BOLT M10x90	螺栓M10x90	4	
70	D220.016	SLIDING FRAME,WDT	移动架焊合件	1	
71	D220.040	CYLINDER,SMB	油缸	1	D220
	D200.040	CYLINDER,SMB	油缸	1	D200
	D180.040	CYLINDER,SMB	油缸	1	D180
	D160.040	CYLINDER,SMB	油缸	1	D160
	D140.040	CYLINDER,SMB	油缸	1	D140
	D120.040	CYLINDER,SMB	油缸	1	D120
72	GB889.1-M18	LOCK NUT M18	锁紧螺母M18	4	
73	D220.108	SLIDE WAY,SHORT	短导轨	1	D220
	D200.108	SLIDE WAY,SHORT	短导轨	1	D200
	D180.108	SLIDE WAY,SHORT	短导轨	1	D180
	D160.108	SLIDE WAY,SHORT	短导轨	1	D160
	D140.108	SLIDE WAY,SHORT	短导轨	1	D140
	D120.108	SLIDE WAY,SHORT	短导轨	1	D120
74	D220.105	HITCH PIN,LOWER	下悬挂销	2	
75	D220.114	SLIDE WAY,LONG	长导轨	1	D220
	D200.114	SLIDE WAY,LONG	长导轨	1	D200
	D180.114	SLIDE WAY,LONG	长导轨	1	D180
	D160.114	SLIDE WAY,LONG	长导轨	1	D160
	D140.114	SLIDE WAY,LONG	长导轨	1	D140
	D120.114	SLIDE WAY,LONG	长导轨	1	D120
76	D220.015	HITCH FRAME,WDT	悬挂框焊合件	1	D220
	D200.015	HITCH FRAME,WDT	悬挂框焊合件	1	D200
	D180.015	HITCH FRAME,WDT	悬挂框焊合件	1	D180
	D160.015	HITCH FRAME,WDT	悬挂框焊合件	1	D160
	D140.015	HITCH FRAME,WDT	悬挂框焊合件	1	D140
	D120.015	HITCH FRAME,WDT	悬挂框焊合件	1	D120
77	LP12	LOCK PIN	锁销12	2	
78	D220.106	HOOK	挂钩	1	
79	GB70-M10x40	SCREW M10x40	螺钉M10x40	1	
80	GB97.1-10	PLAIN WASHER 10	平垫圈10	2	
81	GB889.1-M10	LOCK NUT M10	锁紧螺母M10	1	
82	GB5782-M12x140	BOLT M12x140	螺栓M12x140	2	
83	GB97.1-12	PLAIN WASHER 12	平垫圈12	4	
84	GB889.1-M12	LOCK NUT M12	锁紧螺母M12	2	

85	JB/ZQ4454-14	SEALING GASKET	密封垫14	2	
86	BH5.60.109	FITTING	接头14-14	2	
87	QC-R1/2-M	COUPLER,MALE	快换接头R1/2-阳	2	
88	BV160.00.114	ADAPTER	过渡接头	2	
89	D220.041	HOSE	油管	2	

TRANSMISSION ASSEMBLY

90	TS50.300Z.02	GEAR BOX	齿轮箱总成	1	
91	EFGC125.166	GASKET	纸垫	1	
92	EFGC125.167	SLEEVE	连接套	1	
93	GB1096-A10x40	KEY A10x40	键A10x40	1	
94	JB/ZQ4446-R3/8	PLUG R3/8	螺塞R3/8	1	
95	D220.045	TUBE,WDT	轴管焊合件	1	D220
	D200.045	TUBE,WDT	轴管焊合件	1	D200
	D180.045	TUBE,WDT	轴管焊合件	1	D180
	D160.045	TUBE,WDT	轴管焊合件	1	D160
	D140.045	TUBE,WDT	轴管焊合件	1	D140
	D120.045	TUBE,WDT	轴管焊合件	1	D120
96	D220.401	SHAFT	轴	1	D220
	D200.401	SHAFT	轴	1	D200
	D180.401	SHAFT	轴	1	D180
	D160.401	SHAFT	轴	1	D160
	D140.401	SHAFT	轴	1	D140
	D120.401	SHAFT	轴	1	D120
97	GB/T276-6208	BEARING 6208	轴承6208	1	
98	GB893.1-80	RETAINING RING 80	孔用挡圈80	1	
99	GB13871-40x80x10	SEAL 40x80x10	油封40x80x10	1	
100	BV160.20.102	VENT	透气螺栓R3/8	1	
101	GB894.1-40	RETAINING RING 40	轴用挡圈40	1	
102		PTO SHAFT COVER	PTO罩	1	

Farmer Helper Machinery Brand LIMITED WARRANTY

Unless otherwise stated on purchase invoice, Betstco warrants to original Purchaser that Farmer Helper Machinery products are free from major defects in material under normal use and service for a period of Two (2) Years from the date the product is purchased or shipped, whichever is later.

Commercial use 180 days. Use at address that is not yours, is considered commercial use. Consumable, Expendable, Wear Items (Examples: Rubber & plastic parts, hydraulic hoses, belts, tires, cables, blades, tines, wedges, teeth, tips, chains, pins, brushes, filters, etc.) and cracked hydraulic pumps, bent or broken cylinder rods are not covered under this warranty. Warranty does not cover items that have been modified, damaged by abuse or usage not in accordance with design or maintenance.

Betstco obligation under this warranty is to repair or replace defective product upon approval by; Betstco, 83371 Melton Rd., Creswell OR 97426 that Warranty Claim is Valid. Product shall be returned upon request of Betstco Transportation charges to be prepaid by buyer. **Gasoline or diesel engines used to powered Farmer Helper Machinery products are covered by the warranty of the appropriate engine manufacture and Purchaser must look to the engine manufacture for all issues relating to engine operation.**

Betstco assumes no responsibility for labor.

PERMISSIBLE BY APPLICABLE LAW, BETSTCO HEREBY DISCLAIMS ALL WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, ANY IMPLIED WARRANTIES WITH RESPECT TO THE PRODUCT PURCHASED, WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, BETSTCO HEREBY EXPRESSLY DISCLAIMS ALL LIABILITY FOR PRODUCT DEFECT OR FAILURE, CLAIMS THAT ARE DUE TO NORMAL WEAR, PRODUCT MISUSE, ABUSE, PRODUCT MODIFICATION, IMPROPER PRODUCT SELECTION, NON-COMPLIANCE WITH ANY CODES, OR MISAPPROPRIATION. • BETSTCO MAKES NO WARRANTIES TO THOSE DEFINED AS "CONSUMERS" IN THE MAGNUSON-MOSS WARRANTY-FEDERAL TRADE COMMISSION IMPROVEMENTS ACT. THE FOREGOING EXCLUSIONS OF IMPLIED WARRANTIES DO NOT APPLY TO THE EXTENT PROHIBITED BY LAW. PLEASE REFER TO YOUR LOCAL LAWS FOR ANY SUCH PROHIBITIONS

THERE SHALL BE NO LIABILITY FOR PRODUCT LIABILITY OR LIABILITY ON THE PART OF BETSTCO FOR ANY GENERAL, SPECIAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE SALE OR USE OF ANY PRODUCTS SOLD BY BETSTCO OR AN AGENT THEREOF. BETSTCO MAKES NO WARRANTIES, EXPRESS OR IMPLIED, (INCLUDING, BUT NOT LIMITED TO, ANY WARRANTY OF MERCHANTABILITY OR FITNESS OF THE PRODUCTS FOR ANY PURPOSE) WITH RESPECT TO THE PRODUCTS COVERED BY THIS AGREEMENT EXCEPT AS IN THIS PARAGRAPH OTHERWISE EXPRESSLY PROVIDED.

THIS IS THE SOLE AND ONLY WARRANTY OF Farmer Helper Machinery PRODUCTS. NO OTHER WARRANTY IS APPLICABLE, EITHER EXPRESSED OR IMPLIED, IN FACT OR BY LAW,

This warranty shall not be interpreted to render Betstco, or any authorized agent liable for injury or damages of any kind or nature, direct, consequential, or contingent, to person or property.

The sole and only remedy in regard to any defective products shall be the repair or replacement thereof as herein provided. Betstco, agent(s) of Betstco shall not be liable for any consequential, special, incidental or punitive damages resulting from or caused by any such defects.

Betstco reserves the right to make improvements in design or changes in specifications at any time, without incurring any obligations to owners of units previously sold.

No one is authorized to alter, modify, or enlarge this warranty nor the exclusions, limitations, and reservation thereof.



WARRANTY VOID IF REGISTRATION IS NOT RECEIVED OR RECORDED ONLINE WITHIN 30 DAYS OF PURCHASE DATE OR SHIP DATE, WHICHEVER IS LATER.

REGISTRATION

Item _____ Model # _____ Purchase Date ____/____/____

Purchased From: _____ Gift Inv#/Order# _____

Owner Name: _____ Serial # (if Applicable) _____

Owner Address: _____

City: _____ County: _____ ST: _____ Zip Code: _____

Phone: _____ Email: _____

Acceptance of responsibility:

I (Purchaser) have read operators manual and Limited Warranty or someone has read/and explained all instructions to me. I understand this warranty does not cover any labor and that all disputes will be settled by binding arbitration. Binding arbitration is conducted by the Better Business Bureau (BBB) located at 4004 SW Kruse Way Place Ste 375 Lake Oswego OR 97035 or the current BBB location closest to Betstco, I acknowledge my Limited Warranty is void if any attempt to repair or replace defective parts has been made by unauthorized personnel. I acknowledge receipt of my Operators Manual and have read the Safe Operation Section. I acknowledge understanding maintenance and safe operation requirements, item specifications, operation, controls, and storage requirements. **I understand that I alone am responsible for proper maintenance, care and safe operation of this Farmer-Helper item.**

I (Purchaser) agree that persons not familiar with the operation of this item should not be allowed to use it. Children especially should not operate or be near Power Products when in use. ANYONE OPERATING VALUE-LEADER PRODUCTS SHOULD HAVE READ OPERATIONS MANUALS AND SAFETY MANUALS.

Owners Signature: x _____ Date: ____/____/____

You must sign this warranty and mail or fax copy to Betstco, 83371 Melton Rd, Creswell OR 97426. If you prefer you may complete your registration on line. This warranty is not effective unless the Purchaser completes Registration and Warranty Form within 30 days of purchase or ship date whichever is later.

Email: cservice@betstproducts.com

NOTE: We may refuse warranty of any kind unless Betstco, receives a completed, legible and signed warranty registration. It is the responsibility of the purchaser to assure that registration document is received by Betstco.

Email: cservice@betstproducts.com



2 YEAR EXTENDED WARRANTY & REGISTRATION

Farmer Helper Machinery Branded Products

2 YEAR EXTENDED WARRANTY

2 Year Extended Warranty amends to original Recorded Warranty Registration the time period of described coverage. Extended Warranty does not apply to Consumable and Expendable Items as described in Product Warranty Registration.

This Amendment does not affect any other part of recorded Warranty Registration or Policy.

No one is authorized to alter, modify, or enlarge this Amendment to original recorded warranty registration.

EXTENDED REGISTRATION & PAYMENT MUST BE RECEIVED WITHIN 30 DAYS OF PURCHASE DATE

EXTENDED WARRANTY REGISTRATION

Product & Model # : _____
Serial #: _____
Owner Name: _____
Betstco Invoice # _____

Acceptance of responsibility:

I (Purchaser) have Read and understand the Extended Warranty or someone has read/and explained all the above to me. I understand this extended warranty does not cover any labor. I have filed my Original Warranty Registration and fully understand my requirements. **I understand that I alone am responsible for proper maintenance, care and safe operation of this tractor implement.**

I (purchaser) also understand that persons not familiar with the operation of this equipment should not be allowed to use it. Children especially should not operate or be near equipment. ANYONE OPERATING EQUIPMENT SHOULD HAVE READ ALL EQUIPMENT OPERATIONS MANUALS AND SAFETY MANUALS.

Owner(s) Signature: x _____

Date: _____

You must sign this extended warranty and email to cservice@betstproducts.com or mail copy to Betstco, 83371 Melton Rd, Creswell OR 97426. This extended warranty is not effective unless the Purchaser faxes or mails this Registration Form within 30 days of purchase. NOTE: The manufacturer may refuse warranty of any kind unless Betstco receives a completed, legible and signed extended warranty registration. It is the responsibility of the purchaser to assure that this registration document is received by Betstco.

To Make Payment for Extended Warranty Call: 1-877-876-7895