



# FHM

**FARMER-HELPER  
MACHINERY COMPANY**

## EF SERIES FLAIL MOWER



## OPERATION & PARTS MANUAL

**Please read these instructions carefully before using!  
Always grease all fittings and be sure to always check and fill  
with oil before operating! Retain this manual for future  
reference. Uses Approximately 1 quart 80-90 gear lube**

[www.Betstco.com](http://www.Betstco.com)



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**RUGGED LABOR SAVING EQUIPMENT SINCE 1995**

*Specifications subject to change without notice.*

Revision 1-2016

## FOREWORD

The purpose of this manual is to assist you in operating and maintaining your Flail Mower. Read it carefully before operating and maintaining the Flail Mower, it furnishes the specifications, construction, instructions and also maintenance information. Some information may be general in nature due to unknown and varying conditions. However, thru experience and these instructions, you should be able to develop operating procedures suitable for your particular situation.

“Right” and “Left” as used throughout this manual are determined by facing the direction the machine will travel when in use.

Please note that the contents of this operations manual may be a little bit different from the Flail Mower that you actually purchase. This is due to the continuous improvement and development of the Farmer-Helper series Flail Mower, however, the specifications and structure of the Flail Mower shall be subject to change without notice.

Thank you very much for purchasing our products. We cordially welcome all the suggestions, advises and comments on our products from the users so that we may make necessary improvements on our products continuously to meet the requirements of every specific market. [Support@Betstco.com](mailto:Support@Betstco.com)

We strived to make these operations manual as correct as possible. However, we do not guarantee the accuracy or recentness of the information herein due to having translated the manual to English. We assume no liability for errors or omission.

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ADD OIL BEFORE OPERATING!

GREASE ALL FITTINGS BEFORE OPERATING!

## CHAPTER 1 SAFETY INFORMATION

### PLEASE NOTE

**Make sure all potential operators of this equipment review this manual and all safety messages contained within.**

#### 1.1 Safety First

Read this service manual before using the machine.



**This safety alert symbol indicates important safety messages in this manual. When you see this symbol, carefully read this message that follows and be alert to the possibility of personal injury or death.**

This machine is designed for pulverizing grass and short bramble, and shall be used in the indicated purpose. You take the responsibility if the machine is used in any other purposes.

For safety of personnel and good performance of the machine, you shall check the performance of the machine and the tractor before starting the machine.

All persons and animals shall keep away the machine when you start it.

The operator shall not put on too loose clothes during operating the machine.

Do not touch the rotor when the machine rotates.

Keep away the machine when it moves.

When the tractor and the machine are moving on the road, always keep the machine off.

Before repairing the machine, stop all movable parts and the tractor, keep the key with yourself.

Always keep the machine in a good state, if necessary, repair or change the defective parts.

Don't use the machine to transport personnel.

Don't modify the machine.

Pay attention to the sharp and pointed parts during repairing the machine.

All protective parts shall be guaranteed to be in good state before starting the machine.

Don't leave the tractor when moving the machine; and always take away the key of the tractor with you.

The machine shall be operated in the recommended speed.

Don't stay between the tractor and the machine.

Don't start the machine in a closed place (due to the smoke from the tractor).

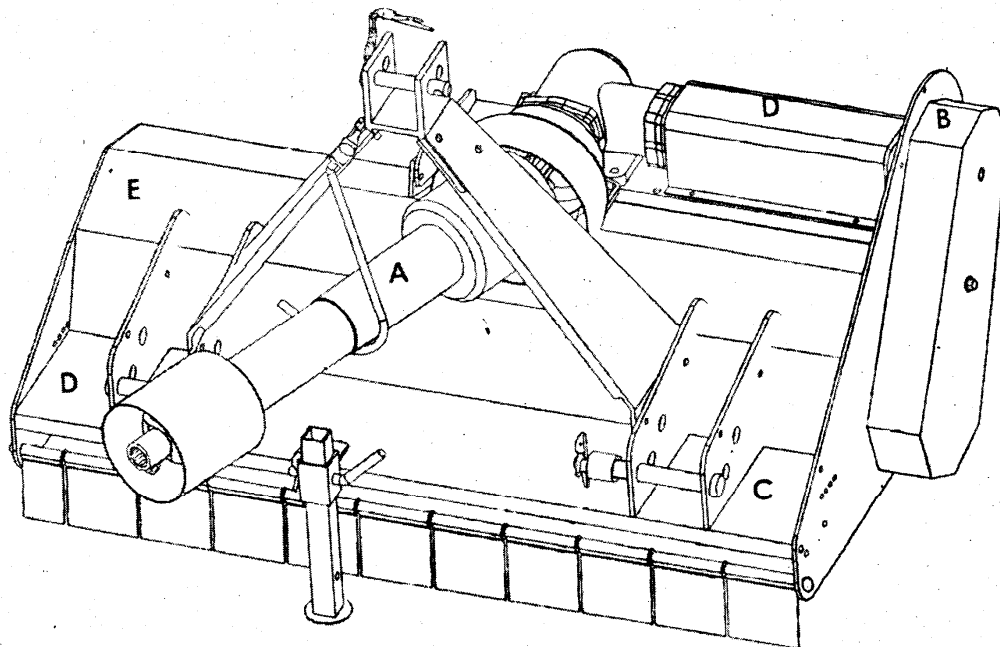
## 1.2 Safety Signs

### 1.2.1 Care of Safety Signs

1. Keep safety signs clean and legible at all times.
2. Replace safety signs that are missing or have become illegible.
3. If a component with a safety sign(s) affixed is replaced with a new part, make sure new safety sign(s) are attached in the same locations as the replaced components.
4. Safety signs are available from your authorized Distributor or Dealer Parts Department or the factory.

### 1.2.2 Safety Signs locations

The types of safety signs and locations on the equipment are shown in the illustrations that follow. Good safety requires that you familiarize yourself with the various safety signs, the type of warning and the area, or particular function related to that area, that requires your **SAFETY AWARENESS**.





A



B



C



D



E



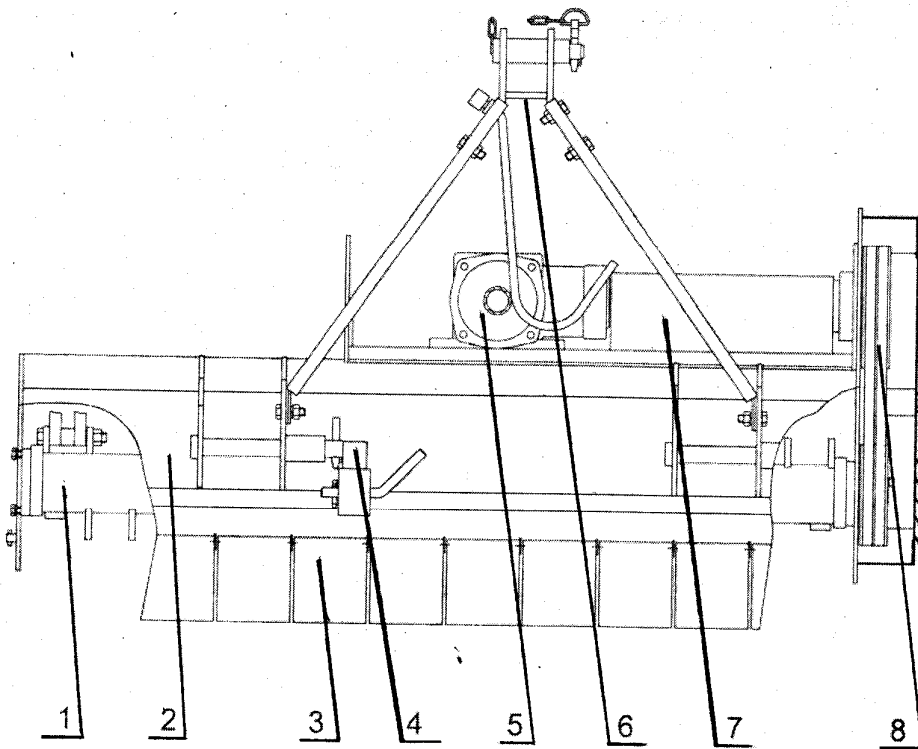
## CHAPTER 2 SPECIFICATIONS

### 2.1 Brief Introduction

**HANMEY** series Flail mower is designed for pulverizing grass and short bramble, and shall be used in the indicated purpose.

The Flail mower consists of a rotating shaft with many blades attached to it. The blades cut the grass while traveling over the working area. Rotational power to the shaft is provided by the tractor PTO through the gearbox in the center of the machine.

The Flail mower attaches to the 3 point hitch on the tractor.



**Figure 2.1 Components of the Flail Mower**

1. Blade axle
2. Blade axle cover
3. Combined fender
4. Supporting frame
5. Gearbox assembly
6. Suspension bracket
7. Transmission shaft
8. Belt wheel and belt

## Farmer-Helper EF Series Standard Grass Flail Mowers Specifications

SPEC	FH-EF85	FH-EF95	FH-EF105	FH-EF125	FH-EF155	FH-EF175
Working Width	33"	37"	41"	48"	60"	68"
Overall Width	37"	41"	45"	52"	64"	72"
Min. HP Req.	14 HP	15 HP	16 HP	20 HP	24 HP	28 HP
Hitch	Cat I	Cat I	Cat I	Cat I	Cat I	Cat I
Gear Box Rating	45 HP	45 HP	45 HP	45 HP	45 HP	45 HP
Changeable Cutting Offset From Center*	Left 2.5" or Right 1.75" from center	Left 2.13" or Right 2.3" from center	Left 0.38" or Right 3.9" from center	Left 0.25" or Right 4" from center	Right 1.75" or Right 6" from center	Right 5.75" or Right 10" from center
Grass Blades	30 Blades	32 Blades	36 Blades	42 Blades	54 Blades	60 Blades
OPTL. Mulch Blades	15 Mulch Blades	16 Mulch Blades	18 Mulch Blades	21 Mulch Blades	27 Mulch Blades	30 Mulch Blades
Housing Thickness	4 MM	4 MM	4 MM	4 MM	5 MM	5 MM
Rotor Dia.	3"	3"	3"	3"	4 1/2"	4 1/2"
No. of Belts	2	2	2	2	3	4
3pt. Conn. Width	19 3/4" - 27 1/2"	19 3/4" - 27 1/2"	19 3/4" - 27 1/2"	19 3/4" - 27 1/2"	19 3/4" - 27 1/2"	19 3/4" - 27 1/2"
DriveLine Type	Series 4 1-3/8" SPL w/QD x 1-3/8" SPL w/Shear Bolt	Series 4 1-3/8" SPL w/QD x 1-3/8" SPL w/Shear Bolt	Series 4 1-3/8" SPL w/QD x 1-3/8" SPL w/Shear Bolt	Series 4 1-3/8" SPL w/QD x 1-3/8" SPL w/Shear Bolt	Series 5 1-3/8" SPL w/QD x 1-3/8" SPL w/Shear Bolt	Series 5 1-3/8" SPL w/QD x 1-3/8" SPL w/Shear Bolt
Warranty	2 Years	2 Years	2 Years	2 Years	2 Years	2 Years
Weight	285 lbs	318 lbs	386 lbs	417 lbs	527 lbs	626 lbs
Crated Weight	310 lbs	343 lbs	409 lbs	442 lbs	552 lbs	651 lbs

\* 3-Point Hitch may be attached in two positions to change offset when looking at mower from operators seat.



## CHAPTER 3 OPERATION



**CAUTION:** Be familiar with the machine before starting. Read this manual carefully to learn how to operate the machine safely and how to set it to provide maximum field efficiency.

### 3.1 Checking Before Operating



**ATTENTION:** Only use universal joint conforming to CE standard and protect them properly.

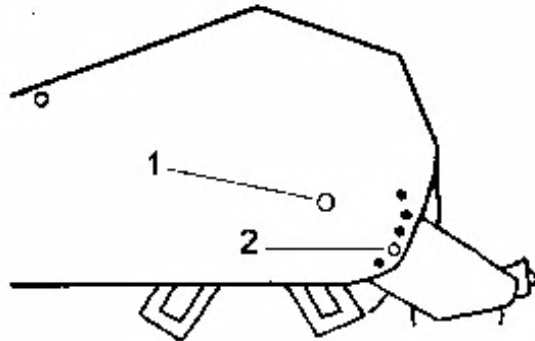
Before operating the machine, the following areas should be checked off:

1. Before starting up the machine, check and Lubricate all grease points, all lubricated parts inside the machine.
2. Use only an agricultural tractor of horsepower within limits of the machine specified.
3. Check that the machine is properly attached to the tractor. Be sure retainers are used on the mounting pins.
4. Be sure extra weights are mounted on the front of the tractor.
5. Check the oil level in the gearbox. Add as required.
6. Check that the tractor PTO shaft turns freely and that the machine driving shaft can telescope easily.
7. Check the blades. Be sure they are not damaged or broken and swing freely in their mount. Repair or replace as required.
8. Check and tighten the blade bolts.
9. Check for entangled material in all rotating parts. Remove this material.
10. Install and secure all guards, doors and covers before starting.
11. Before installing the universal joint, the tractor and the machine motor shall be stopped and the key be taken away. The universal joints shall be installed in good state, with proper protective parts.
12. The chain on the protective parts of the universal joint shall be guaranteed in good condition, in case, automatic rotation occurs.
13. All other persons shall leave the ground before connecting the driving power from the tractor. Keep the output of the tractor at 540 RPM.
14. Before cleaning, repairing and lubricating the machine, stop the motor and take away the key with you.
15. When the universal joint is not connected with the tractor, they must be connected again through the frame to protect the joint from damaging.
16. Don't approach the machine when the machine runs.

### 3.2 ADJUSTING HEIGHT

To get the most out of your Flail Mower, it should be set within the recommended height. For saving fuel and power, and reducing wear on the machine, the cutting height must be regulated correctly.

When regulating the working height, loosen screw (1), remove the screws (2) on both sides; adjust the roller height (see following drawing) to desired position. The lowest hole is the highest working height. Return screws (2) to the selected screw holes; tighten screw (1) and screws (2).



### CUTTING HEIGHT ADJUSTMENT

The flail mower cutting height depends upon the height of roller, height of adjustable skids, and length of top center link.

On uneven terrain the roller and skids should both be touching the surface of cutting area.

On fairly even terrain the only rear roller needs to be touching the cutting surface.

On Rough and Rocky terrain it is recommend that you cut high with all parts of the mower 3" above the ground. To achieve lowest cutting height in this type of terrain, raise roller and skids so mower can be operated with 3 pt in fixed position, remember change in elevation may require you to adjust cutting height to insure blades do not make contact with the surface.

To adjust height of roller or skids, remove bolts and nuts that affix them, lift or lower both sides in equal measurements, replace bolts and re-tighten.

The top center link can also be used to adjust cutting height and aggressiveness of the blades. In level grass areas the top link should be adjust so the mower sits on a slightly lifted horizontal plane. In dense or rough terrain the mower should sit in a slightly higher horizontal plane. By adjusting the top center link length

you will notice the front of the mower pivots on the rear roller.

#### To Begin Mowing

Clear the Area to be mowed of objects and debris that might be picked up and thrown by the mower blades.

Grass is best cut when dry. Mowing wet grass can cause plugging resulting in grass clumps behind the mower.

Grass should be cut frequently as smaller clippings deteriorate faster.

If cutting extremely tall grass, it is best to raise the cutting height and mow the area, then lower the cutting height and mow a second time at the desired height.

Normal mowing speed will be between 2-5 mph and you will need to maintain tractor PTO speed to produce a clean cut so select a tractor gear and range that will maintain this combination. The quality of cut or degree of debris pulverization will be better at lower ground speeds and cutting denser ground cover or heavier brush may create the need to slow down. Remember to look back often.

**Always check Gear Oil Level before mowing.**

Engage PTO driveline at 540 RPM selection, Tractor engine RPM should be at least 1200 RPM, or as defined by tractor manufactures' "PTO RPM RANGE"

At low engine rpm's you may experience jerking in the mower, increase the engine rpm until there is no jerking and the blade rotor rotates at a constant speed.

Most cutting is performed with the 3pt lift system in the float position.

If the blades are touching the surface while in float position, either adjust cutting height or raise mower with 3pt lift into fixed height position. See Cutting Height Adjustment.

At first begin mowing at a slow forward speed. Mower knives will cut better at a faster blades speed and slower travel speed.

After mowing 50 feet, stop and check to see that the mower is adjusted properly for the cutting conditions.

**Do Not** make sharp turns or attempt to back up while the mower is on the ground.

**Do Not** engage PTO with mower raised off the ground.

**3.3 Regulating the Tension of Driving Belt**



**ATTENTION:** The machine shall always stand still for regulating the tension.

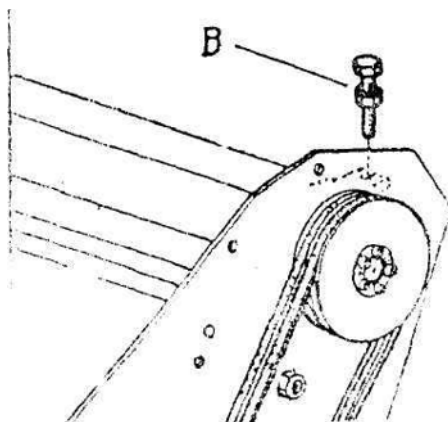
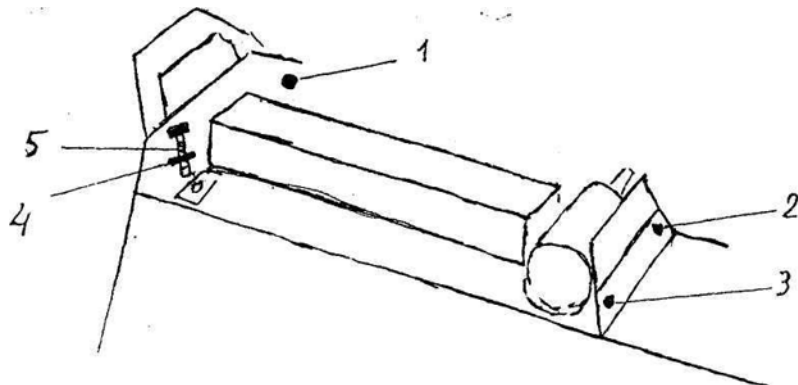
Remove the driving belt cover.

Loosen screws 1. 2. 3. 4.

Tighten the driving belt with screw 5.

Tighten the screws 1. 2. 3. 4.

Put back the driving belt cover.



The recommended moving forward speed is 1.5 km/h, according to the grass height, thickness and working condition.

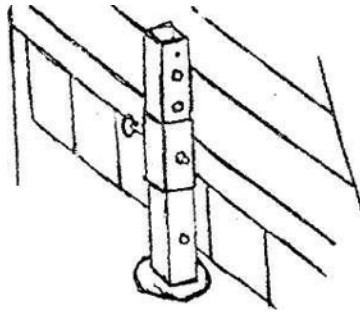
The driving belts are tightened by hand at the regulating point B up to the correct tension. Tighten all screws after regulating.

The driving belts shall be replaced when they are not in a good condition.

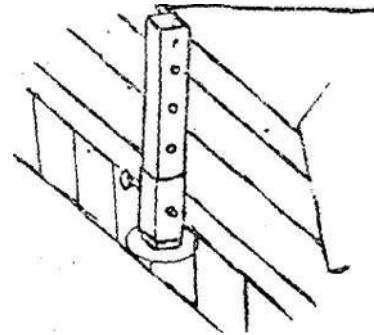
### 3.4 Starting up

- : Before starting the machine, control and adjust the following items:
  - Drive belt tension.
  - Oil level of gearbox.
  - Point of lubrication.
  - All bolts, nuts and screws.

Storage  
Position



Operating  
Position

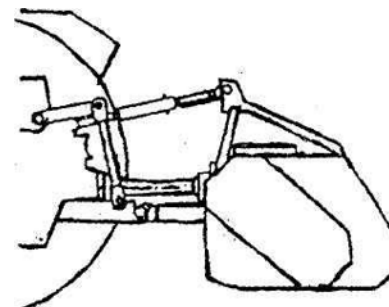
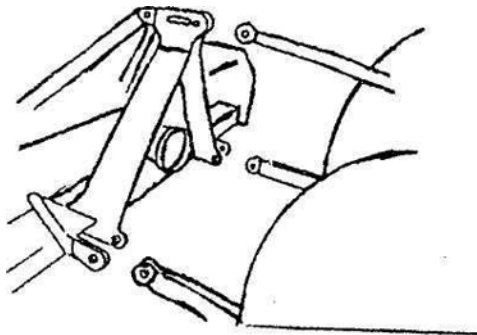


In order to keep the machine stable, lower the adjustment stand when the machine is stopped (see above drawing).



**ATTENTION: When transferring the moving state of the machine to the working state, do not stand between the machine and the tractor.**

The machine coupling is equipped with 3 pins so that the machine can be coupled with all tractors with universal coupling with 3 pins. Each telescopic pole on the machine can be adjusted properly according to the type of the tractor. Keep the Flail mower away the tractor with a certain distance. The universal joint shall be tense and the largest distance in the closed state shall be 5/10 cm.



Moving the lifting arm, and putting it between axes, insert the joint pins and fix them with pins. Fix the lifting arm with chain and tensioning device so as to prevent lateral movement of the machine. Connect the universal joint to the PTO shaft of the tractor on the side of the tractor. In any event, it cannot produce a collision in any position. While connecting 3 points, pay attention to that the PTO shaft of the tractor shall be parallel with the ground. It is very important to keep the machine driving axle and the PTO shaft of the tractor in parallel.

The machine shall be lifted from the ground before moving the machine.

## CHAPTER 4 SERVICE AND MAINTENANCE

### 4.1 Service

#### 4.1.1 FLUIDS AND LUBRICANTS

##### 1. Grease:

Use multi-purpose lithium based grease.

##### 2. Gear Box Oil:

Use 80-90 dual-purpose oil or equivalent for all operating conditions.

Each Gearbox Capacity: 0.85 liter/1 quart

##### 3. Storing Lubricants:

Your machine can operate at top efficiency only if clean lubricants are used. Use clean containers to handle all lubricants. Store them in an area protected from dust, moisture and other contaminants.

#### 4.1.2 GREASING

Use a hand-held grease gun for all greasing.

Wipe grease nipple with a clean cloth before greasing, to avoid injecting dirt and grit.

Replace and repair broken nipples immediately.

If nipples will not take grease, remove and clean thoroughly. Also clean lubricant passageway. Replace nipple if necessary with a new one.

### 4.2 Maintenance



All maintenance, repairing, cleaning and lubricating shall be conducted when the implement is disconnected from tractor or tractor motor is turned off and the key is removed from the tractor.

By following a careful service and maintenance program for your machine, you will enjoy many years of trouble-free operation.

The mower life is based on normal operating conditions. Severe or unusual conditions may require more frequent maintenance.

#### 4.2.1 8 HOURS OR DAILY MAINTENANCE

Check and tighten all nuts and bolts as required.

Check the blades and fix or replace damaged parts if necessary. Do not install damaged, worn and unbalanced blades. Replace sleeves as they become worn.

##### **NOTE:**

**The operator shall put on gloves and use suitable tools before changing blades.**

Check the oil in the gearbox. Fill to the fill line if it is not.

Press grease into each grease nipple three to five times.

Clean the implement; take away all grass and mud.





**IMPORTANT : CHECK THE OIL LEVEL ONLY WHEN THE UNIT IS COLD AND THE MACHINE IS LEVEL**

#### 4.2.2 SEASON MAINTENANCE

Check the machine as below, in addition to, daily maintenance.

Check the oil in the gearbox; replace it if it is contaminated.

Check the bearings of the blade spindles. Is mud and water entering because oil seals are damaged? If so, disassemble and clean, replace them if it is necessary. And then add grease to them.

#### 4.2.3 ANNUAL MAINTENANCE

Clean mud and grass from the machine thoroughly.

Check and clean blade axles. Replace oil seals and add grease to them.

Check all blades, replace them if they are worn-out or damaged.

Repair the side skirts; they need to be repaired to original condition. Replace or repair damaged or broken protective devices.

Remove the drive shaft from the machine and take it apart. Check and replace any components that are damaged or worn. Re-install the drive shaft on the machine. It should telescope easily and the guard turn freely on the shaft

Drain the oil in the gearbox out thoroughly. Check and clean the box. Refill with new gear oil to the required level.

The oil shall be drained off after 50 hours of use, the first time. Thereafter, the oil shall be drained off every 250 hours. The oil should be changed yearly even if not used 250 hours.

The draining procedure is as follows: remove the gear box from deck. Remove fill plug, turn upside down and drain oil out. After all oil is out, reinstall gearbox and fill with gear oil to the required level..



**ATTENTION: DO NOT FORGET TO DISCONNECT THE BATTERY CABLES FROM THE TRACTOR BATTERY IF YOU ARE WELDING ON THE MOWER WHEN IT IS CONNECTED TO THE TRACTOR.**

#### 4.3 Storage

The machine inside and outside shall be cleaned carefully so as to avoid corrosion.

Do not spray water on the rolling bearing if you clean the machine with a high pressure sprayer.

Check and clean the PTO driveline, driving belt press roller and replace them if they are

not in good condition.

Spread oil on all parts rubbed and damaged for anti corrosion.

Store the machine in a dry, level area. Support the frame with planks if necessary.

#### 44 Operation After Storage

Before the machine is started up, check the following items:

Check oil level and add to if required.

Check and tighten all screws and nuts.

Check the blade condition. Replace as required.

Check the air hole on the gearbox. If it is blocked, clean or open the hole with compressed air.

Do not spread oil or grease on the driving belts. If there is oil or grease on them, wipe the belts clean, because this will cause sliding and premature wear.



**ATTENTION: Check the machine every 10 hours. Repair the damaged parts or replace the blade according to the manufacturer's recommendation, to keep the machine balancing.**

Check all tightening parts and replace them if necessary.

Don't remove the protective parts on some points and protect the machine.



**ATTENTION: In the case of vibration, stop the machine and check the blade. If the blade breaks or is damaged, replace it with same type of the blade. If the machine vibrates still, contact support at Betst Products, llc.**

**E-mail: [support@betstco.com](mailto:support@betstco.com)**

## CHAPTER 5 ILLUSTRATED PARTS CATALOGUE

This manual contains a parts list for your machine. It is divided into major sections, which correspond to the groups shown in the Table of Contents and the accompanying illustration.

The first page of each major section lists the contents of that section, each of which consists of enlarged views and related numbered listings.

### When ordering parts

Always give your dealer the Model of your machine to assist him in ordering and obtaining the correct parts. Use the enlarged view and numbered listing of the area of interest to exactly identify the required part.

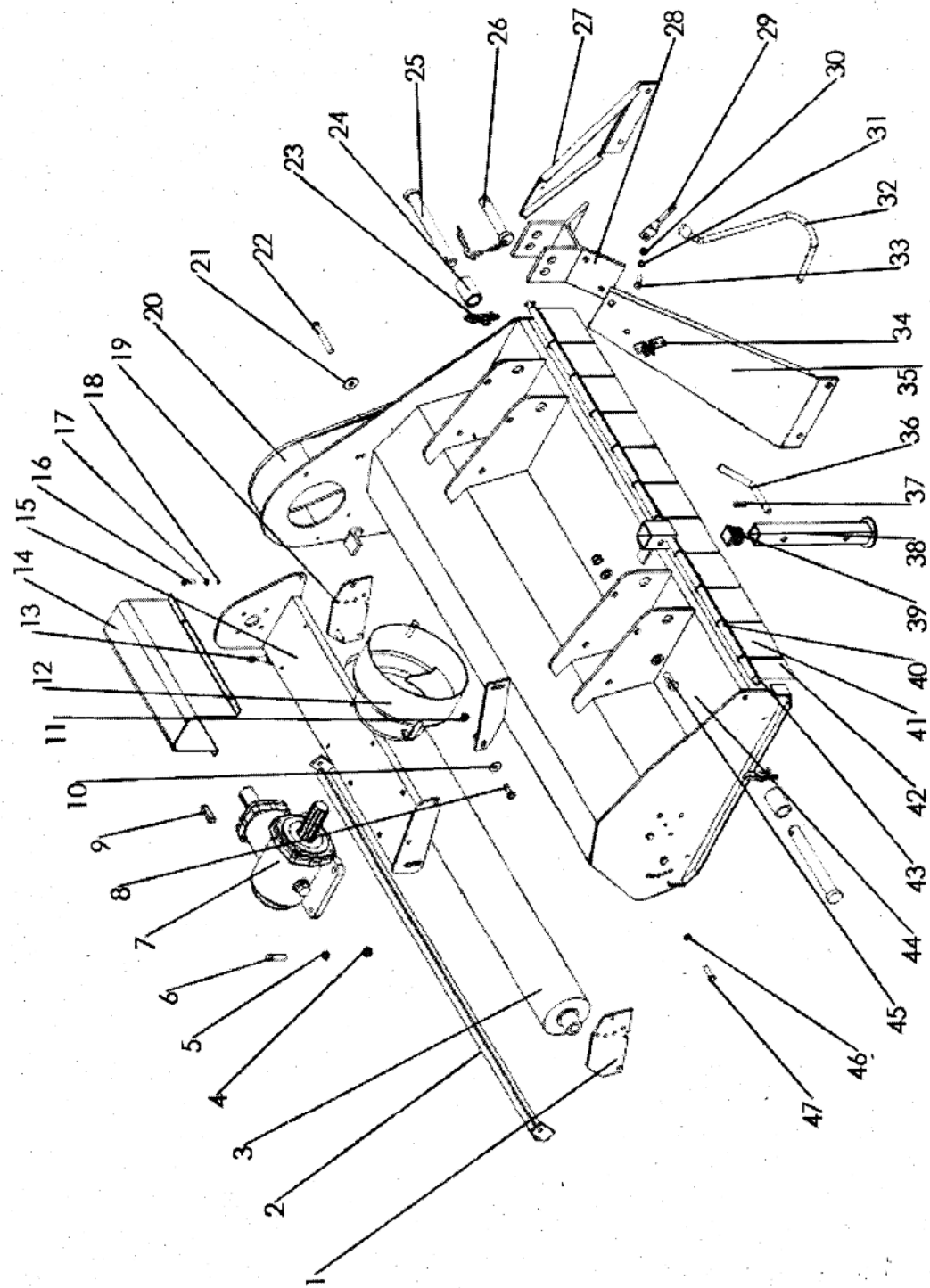
To order parts email [parts@Betstco.com](mailto:parts@Betstco.com) or call 1-541-895-3083

<b>Torque Values Chart</b>													
in-tpi <sup>1</sup>	Bolt Head Identification						mm x pitch	Bolt Head Identification					
	 Grade 2		 Grade 5		 Grade 8			 Class 5.8		 Class 8.8		 Class 10.9	
	N · m	ft-lb <sup>3</sup>	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							

<sup>1</sup> in-tpi = nominal thread diameter in inches-threads per in.  
<sup>2</sup> N · m = newton-meters  
<sup>3</sup> ft-lb= foot pounds  
<sup>4</sup> 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.

**5.1 Flail Mower Assembly**



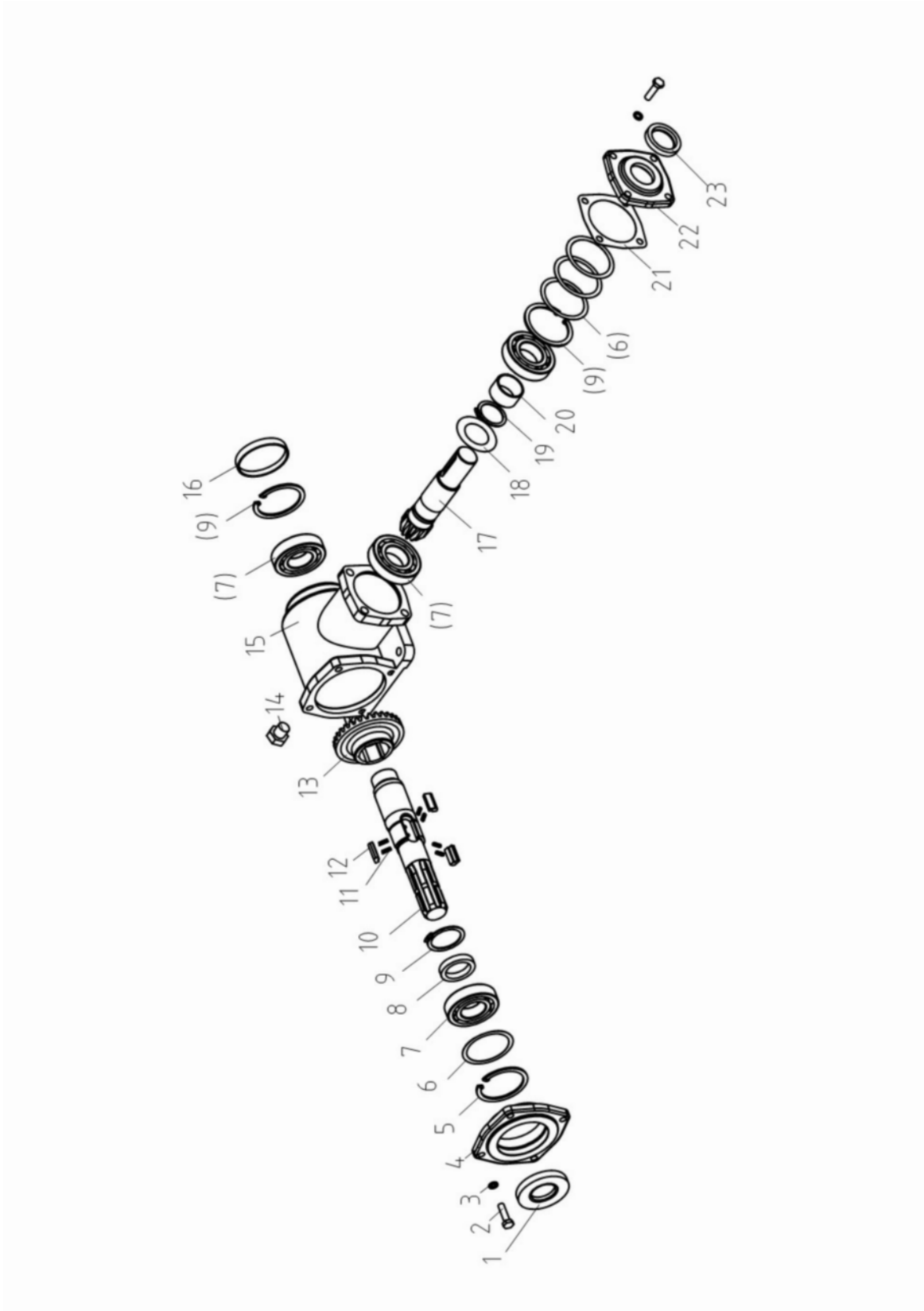
**Flail Mower Assembly**

Ser.No	Part No	Name and Specification	Quantity	Remarks
1	EF 100.00.023	Hanging Plate (left)	1	
2	EF100.00.024	Mud shield	1	
3	EF 100.00.025	roller	1	
	EF100.00.165	Copper sheath	2	
4	GB 6184-86	Lock nut M10	14	
5	GB 97.1-85	Plain washer 10	16	
6	GB 5783-86	Hex.head bolt M10×35	4	
7	SL100A	Gearbox	1	
8	GB 5783-86	Hex.head bolt M8×25	14	
9	GB1096-79	Key 10×45	1	
10	GB 96-85	Large washer 8	4	
11	GB 6184-86	Lock nut M8	8	
12	EF100.00.112	Guard shade	1	
13	GB 5783-86	Hex.head bolt M10×70	1	
14	EF100.00.108	Guard cover	1	
15	EF100.00.015	Gearbox seat	1	
16	GB 29.2-88	Bolt M6×16	4	
17	GB 97.1-85	Plain washer 6	4	
18	GB 93-87	Spring lock washer 6	4	
19	EF100.00.022	Hanging plate(right)	1	
20	EF100.00.021	Belt cover	1	
21	GB 96-85	Large washer 10	1	
22	GB 5780-86	Hex.head bolt M10×80	1	
23	200.56.011	Lock pin	2	
24	EF100.00.106	spacer	2	
25	EF100.00.014	pin	2	



**Flail Mower Assembly**

Ser.No	Part No	Name and Specification	Quantity	Remarks
26	EF100.00.019	Pin weldment	1	
27	EF100.00.020	Suspension plate(right)	1	
28	EF100.00.018	Bracket	1	
29	EF100.00.107	Fixing plate	1	
30	GB 6184-86	Lock nut M12	8	
31	GB 97.1-85	Plain washer 12	17	
32	EF100.00.017	Pothook	1	
33	GB 5783-86	Hex. head bolt M12×35	1	
34	EF100.00.105	Pothook splint	2	
35	EF100.00.016	Suspension plate(left)	1	
36	EF100.00.111	Bent pin	1	
37		R pin	1	
38	EF100.00.027	Supporting frame	1	
39	EF100.00.117	Cover	1	
40	EF100.00.123	Pitman	1	
41	EF100.00.122	Wide fender	10	
42	EF100.00.121	Fender	1	
43	GB879-86	Pin 4x20	2	
44	EF100.00.013	Blade axle cover	1	
45	GB 5783-86	Hex.head bolt M12×30	7	
46	GB 93-87	Spring lock washer 8	14	
47	GB 5783-86	Hex. head bolt M8×20	6	



Gearbox Assembly

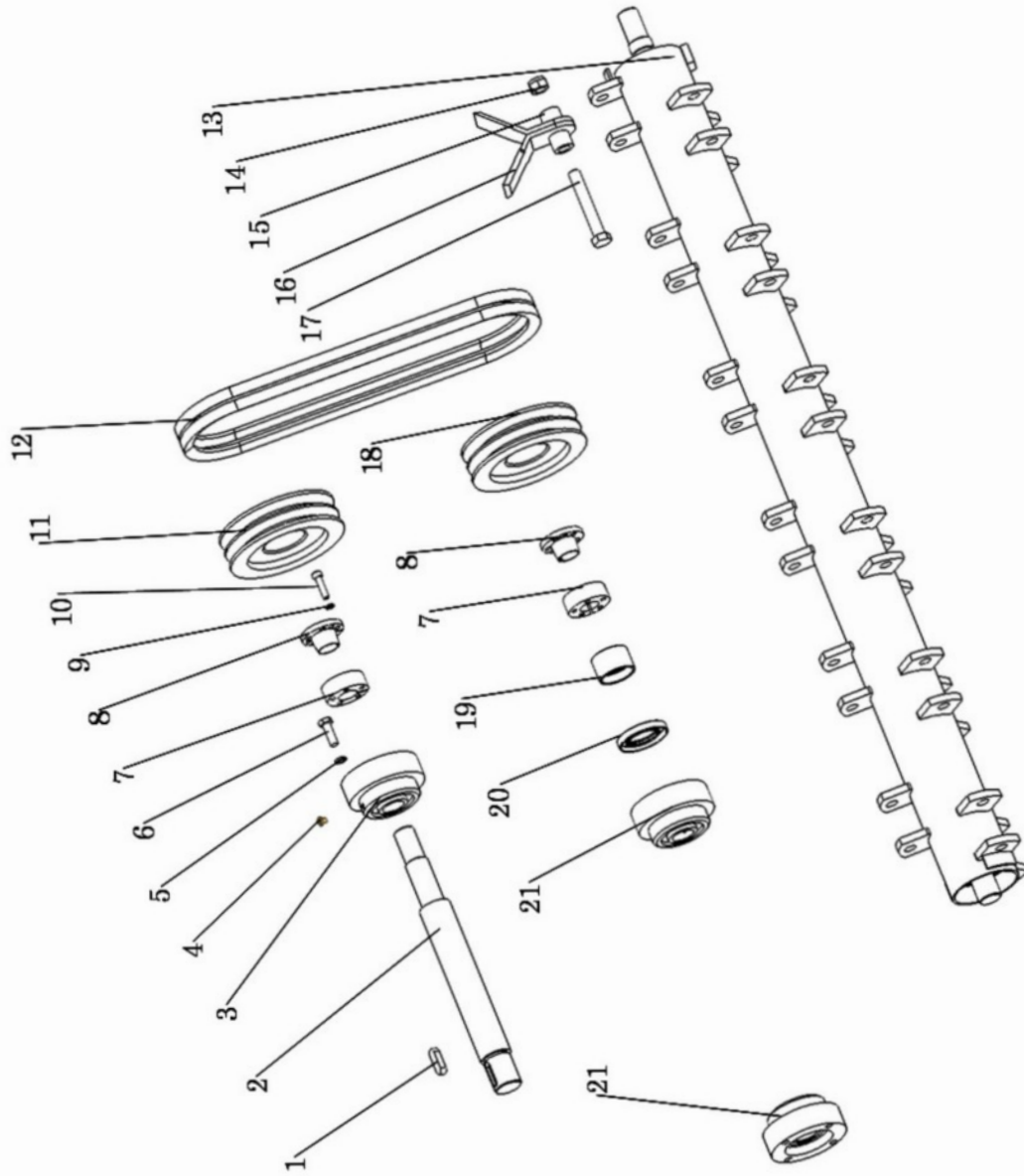
**2. Gearbox Assembly -SL100A**

NO.	Part NO.	Name & Specifications	Quantity	Remark
1	8.7.1.00152	Oil seal	1	
2	BAA00069	Bolt	8	
3	BCB00068	Spring washer	8	
4	SL100.7	Rear cover(large)	1	
5	8.5.2.00131	Circlip	3	
6	0.248.7502.00	Adjusting washer	optional	
	0.248.7503.00			
	0.248.7505.00			
	0.248.7510.00			
7	BZA00174	Bearing	4	
8	SL100.24	Sleeve	1	
9	8.5.1.00712	Circlip	1	
10	SL100.1A	Input shaft	1	
11	19.M.SP.R.VRL	Spring	6	
12	SL100.11A	Key	3	
13	SL100.12A	Angle gear	1	
14	0.107.7100.01	Relief bolt	1	
15	SL100.15	Deck	1	
16	8.7.0.00744	Block cover	1	
17	SL100.22	Gear shaft	1	

**2. Gearbox Assembly -SL100A**

NO.	Part NO.	Name & Specifications	Quantity	Remark
18	0.259.7502.00	Adjusting washer	optional	
	0.259.7503.00			
	0.259.7505.00			
	0.259.7510.00			
19	8.5.1.00583.00	Circlip	1	
20	SL100.18	Sleeve	1	
21	SL100.19	Paper washer(small)	1	
22	SL100.20	Rear cover(small)	1	
23	8.7.1.01319	Oil seal	1	

### Blade Axle and Transmission Parts



**Blade Axle and Transmission Parts**

Ser.No	Part No	Name and Specification	Quantity	Remarks
1	GB1096-79	Key 10x30	1	
2	EF100.00.113	Transmission shaft	1	
3	EF100.00.030	Bearing UC205	1	
4	GB1152-89	Grease nipple M6	1	
5	GB 93-87	Spring lock washer 8	12	
6	GB 5783-86	Hex. head bolt M8x25	12	
7	EF100.00.114	Inner swellable sleeve	2	
8	EF100.00.115	Outer swellable sleeve	2	
9	GB 93-87	Spring lock washer 6	10	
10	GB 70-85	Hex. head bolt M6x25	10	
11	EF100.00.116	Belt wheel (large)	1	
12	GB 1171-74	Belt A930	2	
13	EF100.00.011	Blade axle	1	
14	GB 6184-86	Lock nut M12	18	
15	EF100.00.101	Spacer	36	
16	EF100.00.102	Blade	36	
17	GB 5782-86	Hex. head bolt M12x80	18	
18	EF100.00.110	Belt wheel (little)	1	
19	EF100.00.109	Sleeve	1	
20	GB 13871	Oil seal 40x55x8	1	
21	EF100.00.012	Bearing UC205	2	





## Farmer-Helper Brand LIMITED WARRANTY

Unless otherwise stated on purchase invoice, Betst Products, Ilc. warrants to original Purchaser that Farmer-Helper 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.

Betst Products, Ilc. obligation under this warranty is to repair or replace defective product upon approval by; Betst Products, Ilc., 83371 Melton Rd. N., Creswell OR 97426 that Warranty Claim is Valid. Product shall be returned upon request of Betst Products, Ilc. Transportation charges to be prepaid by buyer. **Gasoline or diesel engines used to powered Farmer-Helper 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.**

***Betst Products, Ilc. assumes no responsibility for outside labor.***

PERMISSIBLE BY APPLICABLE LAW, BETST PRODUCTS, LLC. 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, BETST PRODUCTS, LLC. 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. • BETST PRODUCTS, LLC. 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 BETST PRODUCTS, LLC. FOR ANY GENERAL, SPECIAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE SALE OR USE OF ANY PRODUCTS SOLD BY BETST PRODUCTS, LLC OR AN AGENT THEREOF. BETST PRODUCTS, LLC. 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 PRODUCTS. NO OTHER WARRANTY IS APPLICABLE, EITHER EXPRESSED OR IMPLIED, IN FACT OR BY LAW,

This warranty shall not be interpreted to render Betst Products, Ilc., 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. Betst Products, Ilc., agent(s) of Betst Products, Ilc. shall not be liable for any consequential, special, incidental or punitive damages resulting from or caused by any such defects.

Betst Products, Ilc. 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.**

## FARMER HELPER MACHINERY 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 Betst Products, 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 Value-Leader 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 FARMER-HELPER PRODUCTS SHOULD HAVE READ OPERATIONS MANUALS AND SAFETY MANUALS.**

**Owners Signature:** x \_\_\_\_\_ **Date:** \_\_\_\_/\_\_\_\_/\_\_\_\_

**You must sign this warranty and mail or fax copy to Betst Products, 83371 Melton Rd N.#3, 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.**

**Fax to 1-904-216-2059**

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

**Fax to 1-904-216-2059**

Revised 9-20-14

## 2 YEAR EXTENDED WARRANTY & REGISTRATION

### Farmer Helper Machinery Branded Products

#### 2 YEAR EXTENDED WARRANTY

2 Year Extended Warranty amends to original Recorded Manufacturers 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. This Warranty Extension is the soul responsibility of Betst Products, Ilc.

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

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

##### *EXTENDED WARRANTY REGISTRATION*

Product & Model # : \_\_\_\_\_

Serial #: \_\_\_\_\_

Owner Name: \_\_\_\_\_

Betst Products 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..~~

**Owners Signature:** x \_\_\_\_\_

Date: \_\_\_\_\_

**You must sign this extended warranty and email to support@betstco.com or Fax to 1-305-397-1780 or mail copy to Betst Products, 83371 Melton Rd N.#3, 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 Betst Products 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 Betst Products.

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

Revised 9-20-14