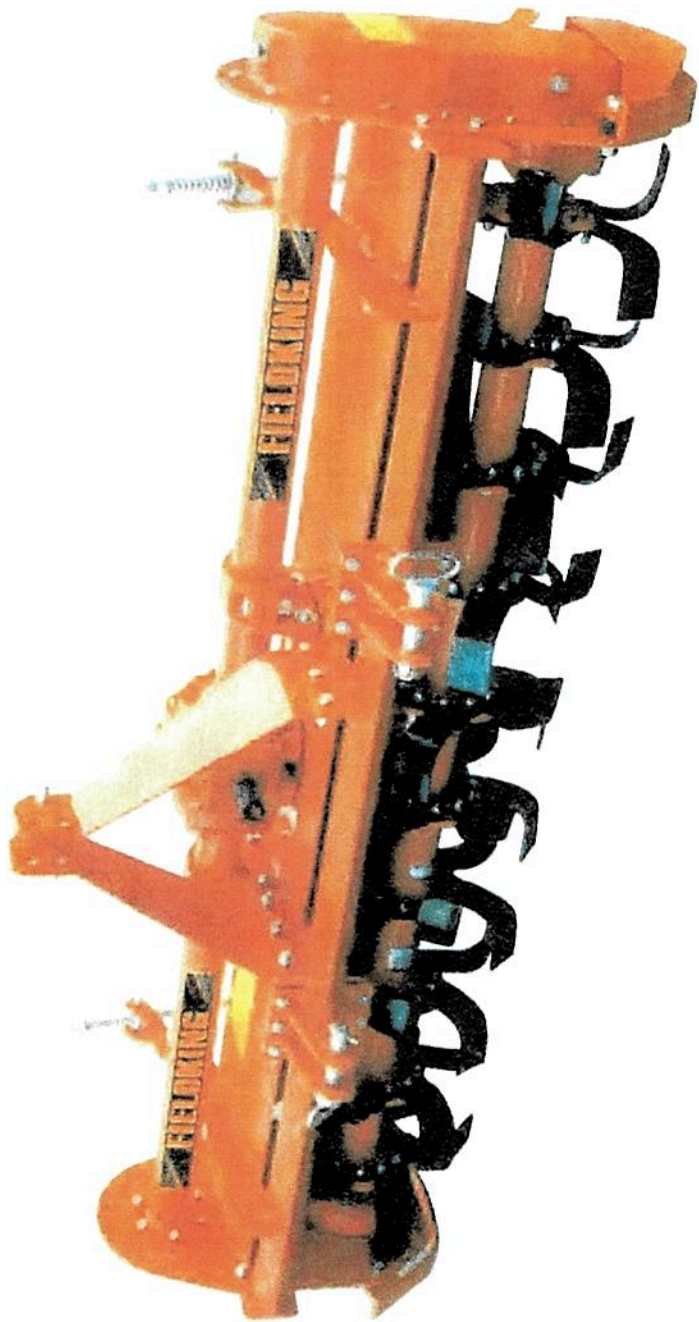


FIELDKING

Hobby Rotary Tiller



➤ [Operator Manual](#) ➤ [Service Manual](#) ➤ [Part Catalogue](#)

PURCHASER / OPERATOR'S RESPONSIBILITY

1. Read and understand the information contained in this manual.
2. Operate, lubricate, assemble and maintain the equipment in accordance with all instructions and safety procedures in this manual.
3. Inspect the equipment and replace or repair any parts that are damaged or worn out which under continued operation would cause damage, wear to other parts, or cause a safety hazard.
4. Return the equipment or parts to the authorized "FIELDKING" dealer, from where it was purchased, for service or replacement of defective parts that are covered by warranty. (The "FIELDKING" Factory may inspect equipment or parts before warranty claims are honored.)
5. All costs incurred by the dealer for traveling to or transporting the equipment for warranty inspection and claims will be borne by the customer.

INDEX

1. **TECHNICAL DATA**
 - 1.1 Introduction
 - 1.2 Warning signal
 - 1.3 Danger signal
 - 1.4 Personal protective equipment
 - 1.5 Equipment safety guidelines
 - 1.6 Indicator signal
 - 1.7 Identification
2. **SAFETY AND ACCIDENT PREVENTIONS**
3. **INSTRUCTIONS FOR OPERATOR**
 - 3.1 Machines supplied partly broken-down
 - 3.2 Before use
 - 3.3 Hitching to the tractor
 - 3.4 Cardan shaft
 - 3.5 Working depth
 - 3.6 Chain tensioner
 - 3.7 Hoe blades
 - 3.8 In working
 - 3.9 How it works
 - 3.10 Troubleshooting hints for the tractor operator
 - 3.11 Parking
4. **MAINTENANCE**
 - 4.1 Every 8 work hours
 - 4.2 Every 50 work hours
 - 4.3 Every 200 work hours
 - 4.4 Storage
 - 4.5 Lubrication
5. **SERVICING TIPS**
 - Parts Catalogue

NOTE:

BERI UDYOG PVT. LTD reserves the right to modify machine design and specifications provided herein without any preliminary notice. Information provided herein is of descriptive nature. Performance quality may depend on soil quality.

Thoroughly read all the instructions before using the rotary tiller. Contact the technicians of your authorized dealer in case of doubt. The manufacturer declines all and every responsibility for injury/accidents in event of non-compliance of following safety and accident preventing provisions.

- 1) Comply with the instructions given by the danger symbols in this handbook and affixed to the steering hoe itself.
- 2) Never touch any moving part.
- 3) Minor maintenance and adjustments to the rotary tiller must always be carried out when the engine is off and the tractor braked.
- 4) It is absolutely forbidden to carry passengers or any animals on the rotary tiller.
- 5) It is absolutely forbidden for a person without a driving license, untrained person or those in precarious health conditions to drive the tractor with the rotary tiller mounted.
- 6) Strictly comply with all the recommended accident preventing measures described in this handbook.
- 7) Assembly of a rotary tiller on the tractor will shift the weights on the axles. It is therefore advisable to add weights to the front part of the tractor in order to balance the weights on the axles themselves.
- 8) The coupled implement may only be controlled through the cardan shaft complete with the necessary safety devices for overloads and with the appropriate chains. Keep away from the cardan shaft while it is turning.
- 9) Before starting the tractor and implement, always check that all safety devices guarding transport and use are in perfect conditions.
- 10) The instruction labels affixed to the machine give useful advice on how to prevent accidents.
- 11) Always comply with the Highway Code in force in your country, when travelling on public roads.
- 12) Comply with the maximum permissible weight on the axle of the tractor, the total adjustable weight, transport regulations and the highway code.
- 13) Always be familiar with the controls and their operation before starting to work.
- 14) Avoid sharp turns as this may cause implement to ride up on the tractor's wheels and might result in serious injury and damage to your equipment.
- 15) As indicated, couple the implement to a tractor of adequate power and configuration, using a device (lift) conforming to the precautions.
- 16) Take the utmost care during the implement coupling and release phases.
- 17) Any accessories for transport must be equipped with adequate signals and guards.
- 18) Never leave the driving seat while the tractor is moving.
- 19) It is very important to remember that the road holding, steering and braking capacity may be notably influenced by the presence of towed or mounted implement.
- 20) Always take care of the centrifugal force exercised by the position of the center of gravity, when turning corners with the implement mounted.
- 21) Before engaging the PTO, check that the rpm rate is the same as prescribed. Never exchange the 540-rpm rate for 1000-rpm or vice versa.
- 22) It is absolutely forbidden to stand within the operative range of the machine where there are moving parts.
- 23) Before leaving the tractor, lower the implement coupled to the lift unit, stop the engine, engage the hand brake and remove the ignition key from the control panel.

- 24) It is strictly prohibited to stand between the tractor and the implement when the engine is running and the cardan shaft is engaging without having first engaged the hand brake and placing a block or stone under the wheels to prevent them from moving.
- 25) Always set the lift control lever to the locked position before coupling or releasing the equipment from the three-point coupling.
- 26) The category of the implement coupling pins should correspond to that of lift coupling.
- 27) Take care when working near the lift links. This is a very dangerous zone.
- 28) It is absolutely forbidden to stand between the tractor and the implement when handling the lift control from outside.
- 29) Fix the side lift links with the relative chains and idlers during the transport phase.
- 30) Set the control lever of the hydraulic lift to the locked position during road transport with the implement raised.
- 31) Only use the cardan shaft recommended by the manufacturer.
- 32) Check the cardan shaft guard frequently and periodically. It must always be in an proper condition.
- 33) Take great care of the cardan shaft guard, both in the transport and working positions.
- 34) The cardan shaft must only be installed or dismantled whilst the engine is off.
- 35) Take great care to ensure that the cardan shaft is correctly assembled and safe, and carefully check the P.T.O. of the rotary tiller and of the tractor.
- 36) Lock the rotation of the protection devices and read the respective cardan shaft instruction manual thoroughly.
- 37) Before engaging the PTO, ensure that there's nobody in the field of action of the machine and that the selected running rate corresponds to the permissible value.
- 38) Never engage the PTO when the engine is on.
- 39) Always disengage the PTO when the cardan shaft is set at an excessively open angle (never beyond 10 degrees) and when it is not in use.
- 40) Only clean and grease the cardan shaft when the PTO is disengaged, the engine is off, the hand brake engaged and the ignition key is removed.
- 41) Rest the cardan shaft on its stand when not in use.
- 42) Refit the protective cap on the PTO shaft after having dismantled the cardan shaft.
- 43) Over use of the machine can overheat the gear box unit and parts of the hydraulic circuit. Never touch these parts immediately after use as they are very hot and can cause burns.
- 44) Never carry out maintenance or cleaning work unless the PTO has been disengaged, the engine switched off, the hand brake engaged and the tractor locked in position by a block or stone under the wheels.
- 45) Periodically check for all nuts and bolts to be fully tightened. Re-tighten them if necessary.
- 46) Always place adequate supports under the implement when servicing the machine or replacing the hoe blades with the implement raised.
- 47) Before working on the rotary tiller rotor, disengage the PTO, switch off the tractor engine, engage the hand brake and check that the blades are still.
- 48) Only use the recommended oils & grease.
- 49) The spare parts must correspond to the requirements established by the manufacturer. Only use genuine spare parts.
- 50) The safety instructions must always be perfectly visible. They must be kept clean and should be replaced if they become illegible. Replacements are available on request from your local dealer.
- 51) The instruction manual must be kept for as long as the machines last.

The steerage hoes are normally equipped with 4 blades per flange. When the soil is dry to clog it is, however, possible to mount 6 hoe blades per flange. The heads of the bolts fixing the hoe blades in place must be on the side of the hoe blades themselves, while the nut with relative washer must be on the flange side. Apply the tightening torques as listed in the chart. If the hoe blades must be changed, remember to set the new blades in the same positions as the dismounted ones.

3.8 IN WORKING

Start working with the PTO at running rate, gradually lowering the steerage hoe into the soil. Never excessively press down on the accelerator pedal when the PTO is engaged. This could be very harmful for both the steerage hoe and the tractor itself. When choosing how much to break up the soil that is to be rotary hoed the following points must be considered:

1. The type of soil (mixed, sandy, clayed etc.)
2. How deep to hoe
3. The forward moving speed of the rotary tiller/tractor.
The soil is best broken up and rotary hoed with a slow forward moving speed of the tractor, with the leveling blade lowered and a blade carrying rotor rotation speed of about 180-210 rpm. The plank helps to produce a well-leveled and smooth surface after hoeing.
If the plank is raised the sods/clog are no longer broken up and there will not be a smooth, level finish.

3.9 HOW IT WORKS

Position the Plank according to how finely broken soil should be. Position the depth of the two skids that are on the sides of the rotary tiller. Start to move the tractor forward gradually lowering the rotary tiller.

After a short distance check whether the soil is being hoed to the depth required, broken up finely enough and levelled enough.

CAUTIONS

In order to prevent breakages or damage, the speed of the tractor must never exceed 2-5 km/hr while the implement is working.

3.10 TROUBLESHOOTING HINTS FOR THE TRACTOR OPERATOR

INSUFFICIENT DEPTH

1. Check the positioning of the two depth skids.
2. Move forward slower as the power of the tractor may be insufficient.
3. If the soil is too hard a second or third hoeing may be required.
4. If the hoe blades are rotating on top of the soil instead of cutting into it proceed more slowly.

THE SOIL IS TOO FINELY BROKEN UP

1. Raise the leveling blade.
2. Increase the forward moving speed of the tractor.

THE SOIL IS NOT BROKEN UP FINELY ENOUGH

1. Lower the leveling blade.
2. Reduce the tractor speed.
3. Don't work soil that is too wet.
4. In the rotary hoes fitted with a leveling bar, raise or lower this so as to keep the sods closer to the hoe blades.

CLOGGING UP THE ROTOR

1. The soil is too wet for hoeing.
2. Raise the leveling blade.
3. Reduce the tractor speed.
4. Reduce the number of the hoe blades per flange from six to four.
5. Avoid hoeing where there is long grass.

THE ROTARY HOE BOUNCES OVER THE SOIL OR VIBRATES

1. There are foreign bodies caught between the hoe blades.
2. The hoe blades have been incorrectly assembled thereby not forming. The helix shape or with the blunt edge placed to cut into the soil first instead of the cutting edge.
3. Worn or broken hoe blades.
4. The rotor is deformed because of blows to the central part caused by foreign bodies present during hoeing.

OTHER PROBLEMS

The rotary hoe does not hoe to the same depth over the whole width. E.g. if it hoes too deeply on the right side shorten the right arm of the lift bars and regulate the position of the righthand skid.

WORKING ON A HILL/SLOPE

Where possible always try to 'work up' the slope. If this is not possible avoid hoeing along the contours of the hill and hoe up and down the slope to avoid a terracing effect.

PRACTICAL NOTES

The hoed soil should be on the right of the driver the best system is to hoe the alternate strips.

3.11 PARKING

WARNING

Comply with the following instruction in order to ensure that the implement remains stable when released from the tractor.

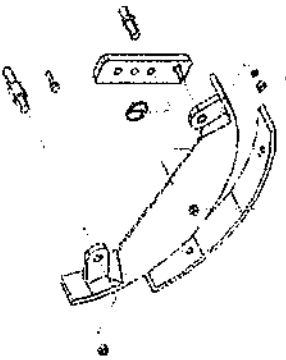
1. Besides supporting the leveling plate and acting as a shock absorber for it during road transport, the spring ram prevents the steerage hoe from over turning when parking.
2. Hold the cardan shaft with a suitable support.

4. MAINTENANCE

The various servicing operation are listed in the following paragraphs.

Lower running costs and longer machine life depend on constant and methodical compliance with these operations.





Solution -

- a) Lose the side skid bolt.
 - b) Shift the hole to the upper side.
2. **Problem**—R. T. is taking on one side more depth.
Cause of problem—linkage is not proper
Solution—Linkage adjustment should be proper.
- a. Tractor linkage should be tight.
 - b. There should not be any play more than 1.5" (38MM).
 - c. At the time of attaching the rotary tiller the R. T should be in proper leveled position.
 - d. Both side skids should be in same bolt position.

3. **Problem**—Gear box is noisy.

Cause of problem—Play in bearing or teeth broken.
Solution—Replace the bearing or bevel gear.



- a) Open the top cover to see the wear of the teeth
- b) If the teeth of the gear is broken the bevel set needs to be replaced.
- c) Pull out the gear box and open the big flange.
- d) Then remove the back plate
- e) Pull out the pinion shaft using hammer or press machine.
- f) Replace the bearing, gear and seals.
- g) Make the filament in the same way using new gasket.
- h) The gear should rotate freely.
- i) Assemble it back the breather valve should be clean and oiling should be checked.

2. **Problem**—Gear shafts are rotating but not the chain/rotor

Cause of problem—Transmission shaft / chain/ RD shaft is broken

Solution—Open the chain cover and replace the part which is broken.

- a. First remove the lock & loose the check nut.
- b. Pull out the sprocket assembly with chain.
- c. If the transmission shaft is broken, follow the same process as above and replace the shaft then assemble the gear box with rotary tiller.
- d. If chain is broken then replace the chain and assemble the sprockets together with chain & then tighten the check nuts.

For RD shaft: the process will be different

- e. First open the flange bolt of the rotor on both side (RD shaft and Dead shaft) and remove the rotor.
- f. Loosen the check nut of RD shaft and hammer it till it gets out from the RD shaft hub & then replace the RD shaft and tight the check nut. Take care of the seal as it should not be harmed with this replacement.

The same process be followed for dead shaft replacement.

3. **Problem**—Oil leakage from the RD shaft hub or dead hub.

Cause of problem—Seal is wearing out needs to be replaced it.

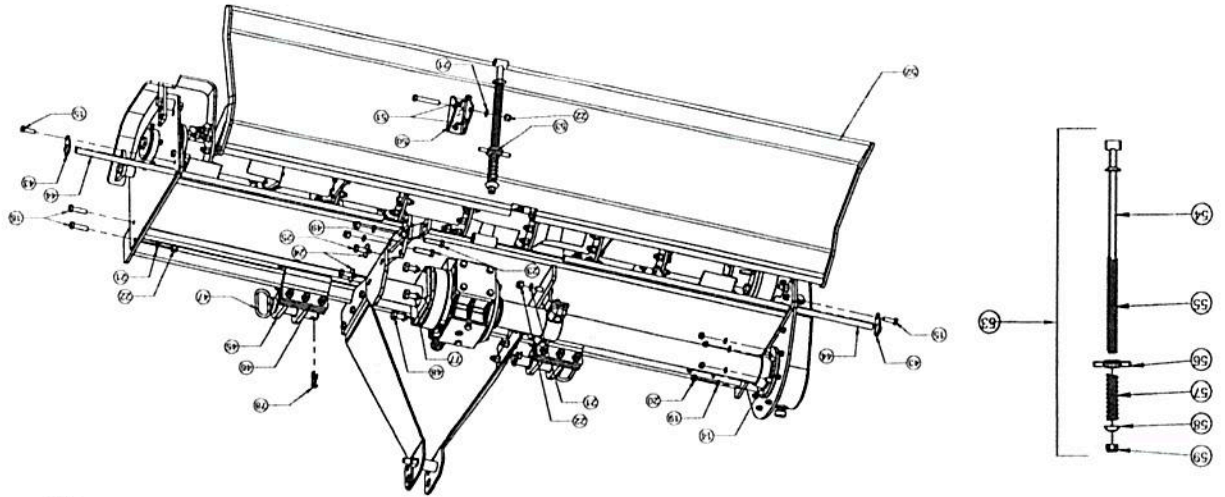
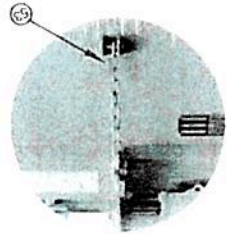
Solution—Open the hub assembly as before



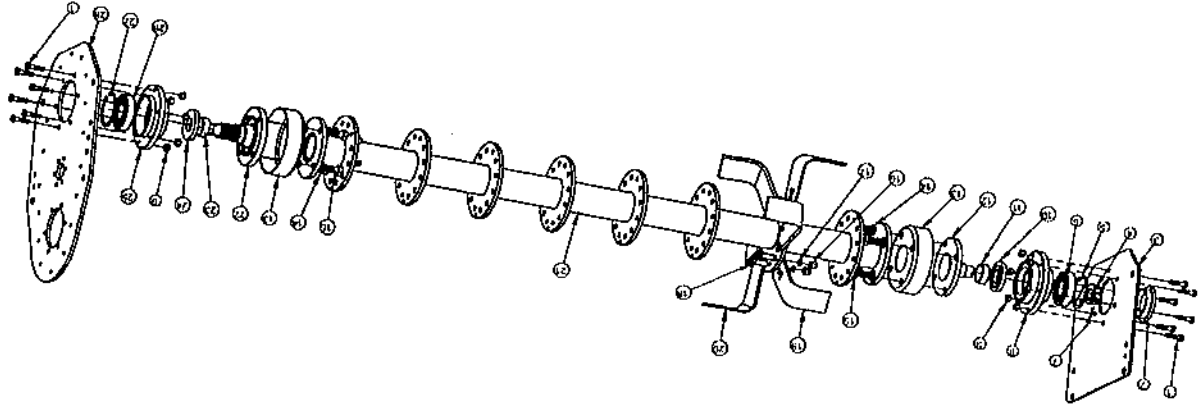
- a. Take out the hub from the plate by loosening the bolts
- b. Remove the lock and pull out the shaft.
- c. Pull out the seal from both shaft and hub then replace it with new one
- d. Inspect the position of bearing and hub if it is ok. Clean it and assemble as before.
- e. Proper greasing is very necessary in assembly processes.

HOBBY ROTARY TILLER COMPLETE ASSEMBLY			
SR. NO.	DESCRIPTION	ITEM CODE	QTY.
43	PLANK ROD SUPPORT PLATE	70020050	2
	PLANK ROD		
	PLANK ROD 1.4 MTR.	10160058	
	PLANK ROD 1.6 MTR.	10160059	
44	PLANK ROD 1.8 MTR.	10160060	2
	PLANK ROD 2.0 MTR.	10160078	
	PLANK ROD 2.20 MTR.	10160079	
	FRONT LINK BRACKET UPPER CLAMP	10120010	
45	FRONT LINK BRACKET UPPER CLAMP CAT-I (SHEETMETAL TYPE) QUICK HITCH TYPE	10120026	2
	FRONT LINK BRACKET UPPER CLAMP CAT-II (SHEETMETAL TYPE) QUICK HITCH TYPE	10120023	
46	FRONT LINK BRACKET LOWER CLAMP	10120011	2
47	TILLER PIN 28X145 WITH HANDLE	10020047	2
48	HEX HEAD BOLT M14X35X2	10260372	4
49	FRAME SHOCKER HOLDING CLAMP	70020012	2
50	SHOCKER PLANK ATTACHMENT U CLAMP	10220051	1
51	CSK BOLT M10X35X1.5MM	10260027	2
	PLANK ASSEMBLY		
	PLANK ASSEMBLY 1.4 MTR.	79650002	
	PLANK ASSEMBLY 1.6 MTR.	79660002	
52	PLANK ASSEMBLY 1.8 MTR.	79670002	1
	PLANK ASSEMBLY 2.0 MTR.	73100005	
	PLANK ASSEMBLY 2.20 MTR.	73100006	
	PLANK CHAIN	10300318	1
53	SHOCKER ASSEMBLY	79820001	1
	SHOCKER ASSEMBLY (2.0M & 2.20M)		2
54	SHOCKER ROD WITH LOWER CUP (MINI)	10160061	1
55	SOCKER BIG SPRING (MINI)	10210027	1
56	SHOCKER ROD BUSH (MINI)	10070102	1
57	SHOCKER SMALL SPRING (MINI)	10210026	1
58	SHOCKER SPRING CUP UPPER NEW	10180040	1
59	NYLOCK NUT M12X1.75 MM	10280025	1

Chain (Optional)



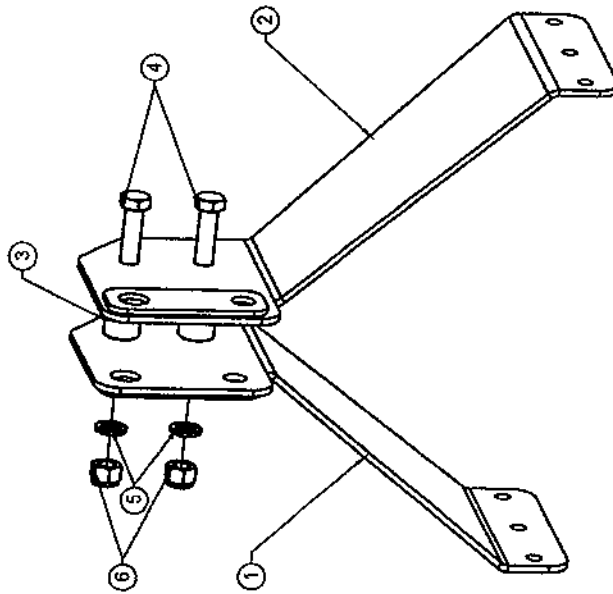
SIDE PLATE & ROTOR ASSEMBLY			
SR. NO.	DESCRIPTION	ITEM CODE	QTY.
1	HEX HEAD BOLT M10x1.5Px35	10280353	12
2	DEAD HUB CAP	10150014	1
3	SIDE PLATE SMALL DEAD HUB SIDE	70080016	1
	SIDE PLATE BIG DEAD HUB SIDE (6MM)	70010020	
	SIDE PLATE BIG DEAD HUB SIDE (8MM)	70080027	
4	CASTLE NUT M80x1.5P	10280093	1
5	INTERNAL CIRCLIP B80	10390005	1
6	BEARING 6307	10050090	1
7	SPLIT PIN 1/8"x2.5INCH	10020097	1
8	DEAD HUB	10090033	1
9	PLAIN NUT M10x1.5P	10280036	12
10	OIL SEAL 50x75x15	10010004	1
11	DEAD HUB BUSH 40x50x19	10070043	1
12	DEAD AXLE SHAFT	10110007	1
13	ROTOR COVER	10150003	2
14	SPRING WASHER 16MM	10270005	8
15	HEX HEAD BOLT M16x1.5Px35	10260369	8
16	NYLOCK NUT M12x1.75P	10280025	12 PER FLANGE
17	SPRING WASHER 12MM	10270003	12 PER FLANGE
18	HEX HEAD BOLT M12x40x1.75P	10260355	12 PER FLANGE
19	HOE LHS (L TYPE)	10080036	3 PER FLANGE
	HOE LHS (C TYPE)	10060030	3 PER FLANGE
	HOE RHS (L TYPE)	10060037	3 PER FLANGE
	HOE RHS (C TYPE)	10080031	3 PER FLANGE
HOBBY RT ROTOR ASSEMBLY COMPLETE			
21	HOBBY RT ROTOR ASSEMBLY COMPLETE 1.4 MTR.	79680001	1
	HOBBY RT ROTOR ASSEMBLY COMPLETE 1.6 MTR.	79690001	1
	HOBBY RT ROTOR ASSEMBLY COMPLETE 1.8 MTR.	79700001	1
	HOBBY RT ROTOR ASSEMBLY COMPLETE 2.0 MTR.	79700003	1
	HOBBY RT ROTOR ASSEMBLY COMPLETE 2.20 MTR.	79700005	1
22	RD SHAFT 14S	10290013	1
23	RD SHAFT BUSH 55x65x24	10070002	1
24	OIL SEAL 65x85x16	10010136	1
25	RD HUB	10090032	1
26	BEARING 6309	10050042	1
27	CIRCLIP 100 MM	10390007	1
	SIDE PLATE BIG RD SIDE CHAIN TYPE	70080015	1
28	SIDE PLATE BIG RD SIDE GEAR TYPE	70080017	1



SIDE PLATE & ROTOR ASSEMBLY

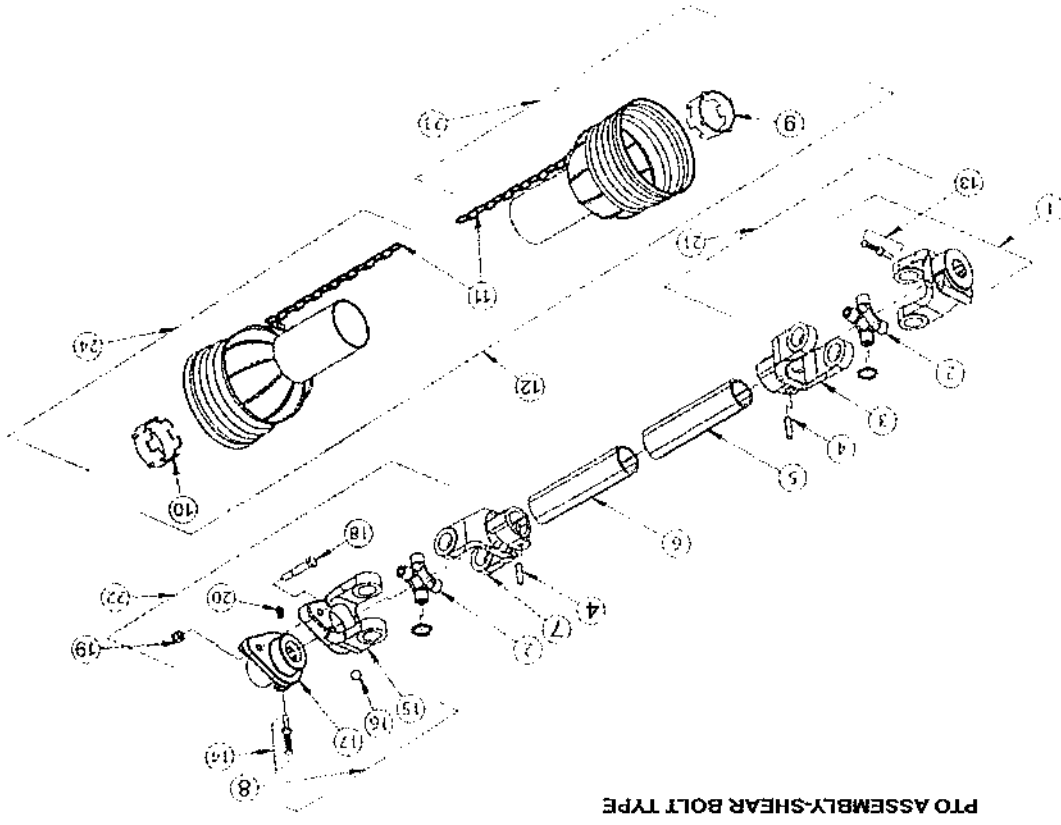
HOBBY RT 3-POINT LINKAGE ASSEMBLY (QUICK HITCH TYPE) (79780006)

(1.40 Mtr. to 2.20 Mtr.)



SR. NO.	DESCRIPTION	ITEM CODE	QTY.
1	HOBBY RT TPL PLATE LHS (QUICK HITCH TYPE)	79780007	1
2	HOBBY RT TPL PLATE RHS (QUICK HITCH TYPE)	79780008	1
3	BUSH 17X32X64MM (L)	10070173	2
4	HEX HEAD BOLT 16X105X2MM	10260134	2
5	SPRING WASHER 16MM	10270005	2
6	NYLOCK NUT M16X2MM	10280005	2

HOBBY RT 3-POINT LINKAGE ASSEMBLY (QUICK HITCH TYPE) (79780006)



PTO ASSEMBLY-SHEAR BOLT TYPE

Sr No.	Description	Part Code	
		540 RPM	1000 RPM
1	PTO PUSH PIN YOKE WITH PIN - 38.05, 108 (12X10)	10310073	10310075
2	PTO CROSS JOURNAL SET-38,01	10310065	
3	PTO OUTER TUBE YOKE -38	10310097	
4	DOWEL PIN 10X80 MM	10310097	
5	INNER TUBE	10310039	
6	OUTER TUBE	10310040	
7	PTO INNER TUBE YOKE -38	10310096	
8	PTO COMPLETE SHEAR BOLT YOKE ASSEMBLY (6SPLINE)- 38SBT (12X10)	10310071	
9	GUARD RETAINING COLLAR FOR OUTER TUBE	10310011	
10	GUARD RETAINING COLLAR FOR INNER TUBE	10310012	
11	SAFETY CHAINS	10310013	
12	COMPLETE GUARD ASSEMBLY	10310014	10310047
13	PTO PUSH PIN SET-14X69 (Small)	10310077	
14	PTO PUSH PIN SET-14X91 (Big)	10310078	
15	YOKE FOR B02	10310030	
16	BALL 5/16"	10310017	
17	HUB B02	10310042	
18	HEX HEAD BOLT M10X65X1.5MM SAFETY BOLT	10260046	
19	NYLOCK NUT M10X1.5MM	10280002	
20	GREASE FITTING	10310019	
21	U-JOINT FOR OUTER TUBE	10310020	10310056
22	U-JOINT FOR INNER TUBE	10310021	
23	HALF FEMALE GUARD ASSY	10310048	10310051
24	HALF MALE GUARD ASSY	10310049	10310050