



Victory Tractor Implements

Rotary Tiller



Operator's Manual

HDRT64/HDRT72/HDRT80

Important: Please read these guidelines before assembling and operating this Implement.

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.

- 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.

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, will 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, could 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.

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 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.
- Do not tow a load that is more than double the weight of tractor.

Keep riders off machinery

- Riders obstruct of 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.
- 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

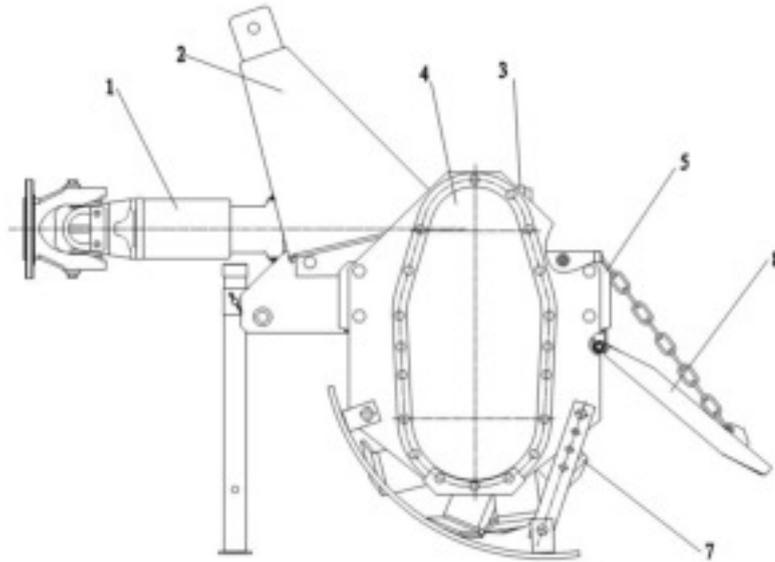
- Protective clothing and equipment should be worn.
- Wear clothing and equipment appropriate for the job. Avoid loose fitting clothing.
- Prolonged exposure to loud noise can cause hearing impairment or hearing loss. Wear suitable hearing protection such as earmuffs or earplugs.
- Operating equipment 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 result.

Structure and their adjustment

These series rotary tillers are tillage equipment by means of the compound motion both of the rotation of the blade and the tractor going forward. Each rotary consists of transmission sets and working parts. Transmission sets include driveline, gearbox, side gear box. Working parts include blade and blade shaft. Headstock, the cover and trailing bar are assistant sets (Fig.1).



1-universal coupling 2-headstock 3-gearbox 4-side gear box 5.right side plate 6-cover 7-blade shaft 8-trailing bar

Safety labels



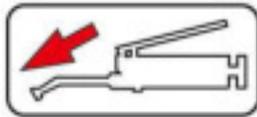
This shows the SAE 90 gear oil is introduced.



This shows the oil level.



This shows the oil drain hole.



This shows the grease position.

Specification

These series rotary tiller, are driven by the power-take –off of tractor. It is a kind of excellent equipment for primary and secondary tillage, it can match with 25-60HP wheel-tractor, working on unplowed and plowed field, surface soil smooth, good coverage with weed and stubble, working depth uniform, efficiency high. It can get the results of multi-ply plowing by one times tilling. It is suitable for plowing in dry field and paddy field in the area of producing wheat and rice.

These series rotary tiller have HDRT64, HDRT72, HDRT80. Being adopted helical bevel gears meshing for main shift gears in the gearbox, whole structure, whole cover and forced trailing bar, they are good rigidity, stable operation, low noise, high efficiency, low oil consume and easy to maintain, etc. the ratio of breaking clod reaches above 95%.

The main parameters of HDRT64, HDRT72, HDRT80 are shown in the table below.

Model	HDRT64	HDRT72	HDRT80
Dimensions (L*W*H)	71"x27"x32"	79"x27"x32"	87"x27"x32"
Structure weight	572 LBS	594 LBS	704 LBS
Working width	64"	72"	80"
Number of flanges	8	9	10
Number of blades per flange	6	6	6
Hitch type	3-point hitch CAT 1 & 2		
Gearbox lubrication	SAE 90 oil		
Rotor diameter	16.5"		
Rotor shaft speed	214 rpm at 540 rpm PTO		
Tractor power (hp)	25-40 HP	30-50HP	40-60 hp

Driveline assembly

The driveline consists of universal joint head, universal joint head for male shaft, the universal joint head for female shaft and joint cross. there are rings on the both ends of joint cross to avoid the movement of joint cross, and there is also a grease hole on the joint cross and the needle bearing can be well lubricated if you inject grease into it frequently. The universal joint head for male shaft and the universal joint head for female shaft are sliding joint and it can be pulled back and forth freely when the rotary tiller rises or falls. It must be noted that the

interval between socket and shaft is in the shortest situation but the socket and the shaft can not contact each other during operating, and if the interval between the socket and the shaft is in the biggest situation, the overlap of socket and shaft must be longer or equal to the 1/2 length of the shaft.

Headstock

The upper hitch point on the headstock must be connected with the control link of the tractor and the lower coupling pin of headstock must be connected with the tension link of the tractor to make the rotary tiller form the stable three-point hitch linkage.

Central gearbox assembly

The central gearbox assembly consists of gearbox front cap, rear cap, first shaft, second shaft and a helical bevel gear pair that transmits the power to side chain box. There is an oil hole for adding oil on the top of the gearbox. And there is a plug for draining oil at the bottom of the gearbox. The helical bevel gear is splined matches the shaft. The gears are tightened with elastic collar, washer and locknut to prevent axial moving.

In using, the bearing clearance and the gear backlash will be changed because of wearing of bearings and gears, so you must adjust them (if necessary).

Adjustment of helical bevel gear backlash:

A proper backlash is the one of the condition for working normally. If the backlash is too large, it will result in the strong collision and loud noise.

Precaution:

Helical bevel gear backlash must be adjusted after the clearance of bearing on the first shaft has been adjusted. For retaining the clearance of bearing in which have been adjusted, for pinion, the total thickness of adjusted shims of the front and the hind bearing seat on the first shaft must keep up. For example, when moving the pinion forward, the decrease –the adjusted shims of the hind –bearing seat on the first shaft must be added to the front bearing seat on the first shaft, vice versa. For large helical bevel gear, when moving it rightward, you must decrease the shims of the bearing seat of the large bevel gear.

In general, just move the pinion forward when you do it.

Adjustment of the bearing axial clearance on the second shaft

When the axial displacement was occurred very distinctly on the second shaft, you must adjust it in time as following steps: first, loosen washer and screw down the lock nut, then adjusts the displacement of the bearing on the second shaft until there was no distinct axial movement and easy to rotate the shaft.

Finally, lock the jam nut with the washer. This prevents the bearing from loosening.

Side gear box assembly

The side chain box consists of chain box, two chain wheels, chain tension units, second shaft and left side plate assembly. Adjustment of the chain: Loosen and screw down the adjustable screw to adjust the tension of the chain, keep the right tension. In general, it can be pressed down 10 mm at another side of chain.

The side gearbox consists of side gearbox, three shafts and left side plate assembly.

Right side plate assembly

The right side plate assembly consists of right side plate, right head of cultivator shaft, right side bearing and bearing seat.

Cover assembly

A specific purpose of the cover is warding off clod, safeguarding the driver and still farther breaking the clod. When rotary tiller is working, if the gap between the blade edge and the cover is too large, the clod would be thrown to the front of the cultivator shaft, so that it will be cultivated once more, therefore the power of the tractor will be wasted; if the gap is too small, it is easy to congest, recommend gap is 30-45 mm.

Cultivator shaft assembly

The cultivator shaft assembly consists of cultivator shaft, blade disc and blade.

Trailing bar

The function of the trailing bar is still farther breaking the clod and flattening the cultivated land. It was connected with cover. You can obtain different effect of land surface by adjusting the height of the trailing bar. In general, if the soil is dry, to set lower, if the soil is wet, to set higher. When you remove the mud and the weed on the cultivator shaft, assemble the blades, long-distance transport; you should set the bar at the highest.

Methods of operating

Installation of headstock with the main body

Before being put in the container, the equipment is parted with the main body. The users refer to Fig.1, simply to fix it on the main body with the bolts in the affix pouch. Pay attention to fitting the spring washers on the bolts, and fastening them firmly.

The methods of blade mounting

To meet the requirement of agricultural technique, the blades are adopted different fixing methods, so that a variety of tillage effects can be gotten. Blades should avoid mounting in reverse and making the back of the blades enter into soil, the parts will be damaged because of overload.

The left-bent blades and the right-bent blades work in a stagger state on whole blade shaft. Only a blade enters into soil at the same time. This arrangement is suitable to flat plowing, so the blade shaft operates stable; the surface of plowed field is smooth.

Connecting with the three-point linkage of tractor

The connecting way of rotary tiller with the tractor is three-point linkage. The steps are as follows:

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

It must be taken attention to mounting order of the universal coupling.

Adjustment before working

1. Adjustment of horizontal level

Put it down to make the blade tips near the ground, observe that the height between the right and left blade tips and the ground is same or not. If not, it is necessary that the right linkage arm of tractor be adjusted to level off the blade shaft, which ensures the uniformity of working depth.

2. Adjustment of longitudinal level

Fall the tiller to tillage depth desired, observe that universal coupling and PTO shaft are level or not.

If the angle of universal coupling is too large, adjust the control link to make it nearly level, which can maintain that universal coupling and the tiller work in the good condition.

3. Add gear oil

Check the oil for two gearboxes before working. The top gearbox need around 1.2L gear oil, the side gear box need around 3.9L gear oil. The SAE 90 gear oil is introduced.

Cultivating route

When working in a piece of larger land, in land plowing is adopted to reduce the empty time in turn land, to raise work efficiency. The width of the plot selected is whole number multiple of the working width or near as possible, so as to decrease repeat tilling. The width of the plot is commonly 15m or so, if too wide, the empty time in turn land will be longer, the efficiency be less, the repeat times of idle motion be more, the mud depth be longer. The flat tillage in the medium and small fields refer to the in land plowing.

Starting of the tiller

Firstly, filling with gear oil in the gearbox and the side chain box, injecting grease to the crosshead and the bearing seat of the blade shaft. Then check for the looseness of all connecting bolts and nuts, if loosing, fastening it at once. If the crack and deforming are found in the blades, they must be replaced.

Starting tractor: rise the tiller and the blade tip must be away from ground 150mm-200mm, and joint universal coupling, then run in 1-2 minutes, gear the operating gear position and increase the fuel throttle , control the leveling handle to make the tiller enter into the soil gradually until the normal tillage depth at the same time.

Selecting of forward speed

The selecting principle of tiller forward speed: the tractor cannot overload constantly; the performance of breaking soil meet the needs of agriculture requirement, furrow bottom and the soil surface are smooth. Not only be tillage quality ensured, but also the rated power of tractor be made good use of, and the purpose of rising work efficiency must be attained.

Generally, rotary tilling directly:2km/h-5km/h, harrowing:5km/h-7km/h; if the unit draft of the soil is bigger, can select lower gear; contrarily select higher gear; when working in dry fields, select lower gear; when working in paddy fields, select higher gear.

Operating of headstock

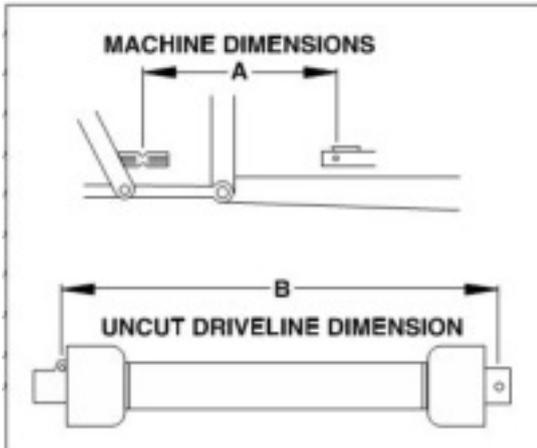
- 1) Using position control when the tiller works. The handle of draft control must be put in the position marked "up".
- 2) When the handle of position control moves forward, the tiller fall down; contrarily the tiller rise.
- 3) After the tiller reaching to required depth, using the position hand-wheel to block it, in favor of that the tiller falls the same depth every time.
- 4) The details refer to the instruction of matching tractor.

DRIVELINE DIMENSION

A PTO driveline is supplied with the machine. To accompany the variety of 3 point hitch geometry available today, the driveline can be too long for most machines or too short for others. It is very important that the driveline be free to telescope but not to bottom out when going through its working range. If the driveline bottoms out, the bearings on both the machine and tractor PTO shaft will be overloaded and fail in a short time.

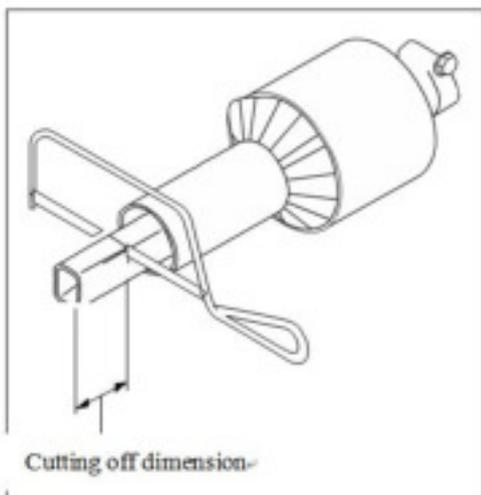
1. To determine the proper length of the driveline, follow this procedure:

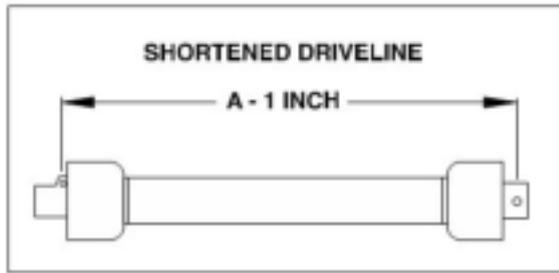
- a. Clear the area of bystanders, especially small children.
- b. Attach the chipper to the tractor (see section), but do not attach the driveline.
- c. Raise the machine until the input shaft is level with the tractor PTO shaft.
- d. Measure the dimension between the locking grooves on the tractor PTO shaft and the machine input shaft.
- e. Measure the same dimensions on the compressed driveline.
- f. If the compressed driveline dimension exceeds the machine dimension, the driveline will have to be cut.



2. When cutting the driveline, follow this procedure:

- a. Subtract the machine dimension (A) from the uncut driveline dimension (B) or (B-A). This dimension determines how much too long the driveline is.
- b. Add another inch (25 mm) to the dimension to be sure it doesn't bottom out, to determine (C) the cut off dimension.
- c. Use a hacksaw to cut dimension (C) from both ends. Cut both the plastic tubes and the metal cores.
- d. Use a file to remove the burrs from the edges that were cut.
- e. Assemble the 2 ends of the shaft.
- f. Make sure the shaft can telescope freely. If it does not, separate the 2 parts and inspect for burrs or cuttings on the shaft ends. Be sure it telescopes freely before installing.





Maintenance

To ensure that the tiller works properly, higher efficiency and prolonging the serve life, it is important that maintenance must be done properly.

Daily maintenance (after 10 hours operating)

1. Check, tighten up all of the joint bolts and nuts, tighten them up or replace them if necessary.
2. Check the lubricant oil in the gearbox and the side chain (gear) box, keep the oil level desired.
3. Check universal joint cross, pin, grease cup on the bearing seat, inject grease into the cup.
4. Check the blades to see if the blades are disable and their fasten bolts are loose, should replace or tighten them if necessary.
5. Check the side gears; adjust it if necessary.

Season maintenance (after one season operating)

Besides performing the proceeding of daily maintenance, the following must be done also:

1. Replace lubricating oil. It can be done in advance or delayed if necessary.
2. Check universal joint cross. If it is seriously worn, replace it.
3. Check the bearings in the both ends of the blade shaft to see if turbid water enter it because of the faults of oil seals. Disassemble it to clean, replace the oil seals and inject enough grease.
4. Check all bearings; adjust or replace them if necessary.
5. Check helical bevel gears; adjust them if necessary.

Yearly maintenance (after one year operating)

1. Remove all dust and filth away from the tiller.
2. Drain out gear oil and disassemble the tiller to check on. If bearings be worn seriously or go wrong, it must be replaced; the parts must be cleaned before assembled. Final, add new oil to standard oil level.
3. Disassemble and clean the bearings and their seat of blade shaft, replace the oil seals and inject enough grease.
4. Disassemble and clean the universal joint cross assembly, and clean the roller pins of the universal joint, replace them if necessary.
5. Check the fastener and the cotter pins, etc. If the part is rusty or worn seriously, or the disable, it must be replaced.

6. Check the blades to see if there is crack, wear and tear on them, or loss. It must be replaced or added if necessary.
7. Check the blade holder, replace or repair them if necessary.
8. Repair the cover and the trailing bar.
9. The rotary tiller must be placed indoor as possible during it parks, and be raised to make the blade tips leave the ground. The blades and processing surface revealed must smeared oil to prevent from rusty. The surface in which the paint broken off must be painted with the primitive colors to prevent from rusty.

Lubrication sites

Lubrication sites	Purpose
Oil check screw plug	Check the oil level of the gearbox and the side chain (gear) box (injection should continue until oil overflows out from the oil check hole).
Ventilate screw plug	Ventilation of the side chain (gear)box
Grease cup of the joint cross	Inject the grease into the joint cross (so that lubricate the roller needle Of the joint cross)
Grease cup of the bearing seal on the cultivator shaft	Inject the grease into the bearing and the oil seals of the cultivator Shaft(lubricate the bearings and the oil seals)

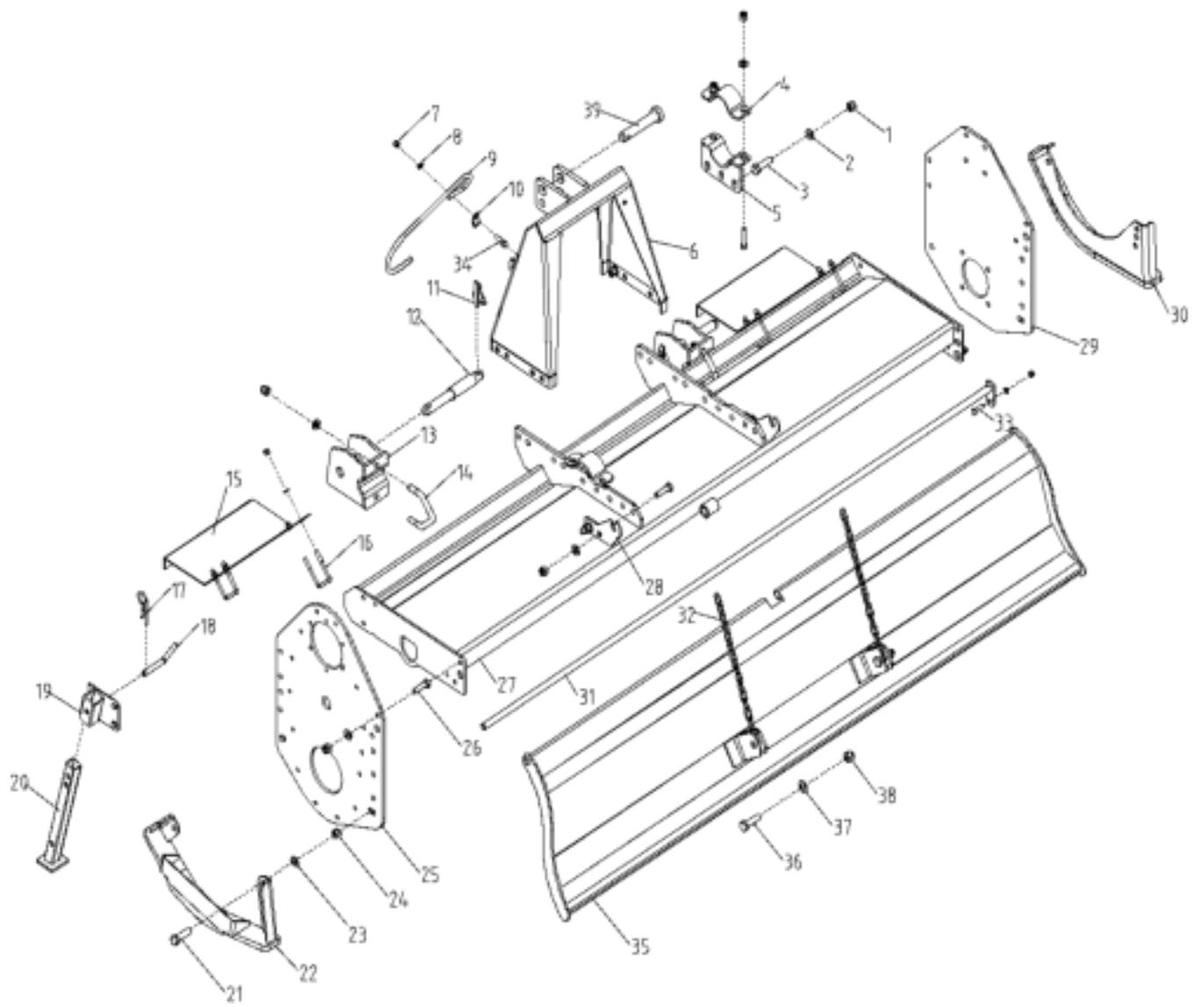
Trouble shouting

Problem	Cause	Solution
Universal coupling inclined too much	Rotary tiller failed horizontal Level	Adjust the horizontal level of The tiller
	One side sway chain of tractor is too short	Adjust the chain
Universal coupling injured	Direction mistaken	Re-assemble correctly
	Grease deficient	Rinse neeble and inject grease sufficiently
	Angle of universal coupling is Too big or is gripped	Limit the rising position and re-lock the position
	Rotary tiller fallen down the soil sharply	Fall the tiller down the soil smoothly
Noise in gearbox	The clearance between the two Helical bevel gears is too large	Adjust this clearance
	Bearing injured	Replace bearing
	Tooth of gear broken	Replace gear
Noise in side gear box	Foreign matter dropped in side gear box	Take foreign matter out of the side gear box
	Bearing on the third shaft injured	Replace bearing
	Bearing on the middle shaft injured	Replace bearing
Trouble rotation of cultivator shaft	Gear or bearing injured or gripped	Replace gear or bearing
	There was no clearance between the two helical bevel gears	Adjust the clearance of the helical bevel gear pair
	Out of shape of left side plane	Correct side plane
	Cultivator shaft crooked or out of shape	Correct or replace cultivator shaft
	Cultivator shaft crooked or out of shape	Clear away grass or soil

Blade slot injured	Cultivator shaft twined with grass or hold soil seriously	Clear away the stone from the field
	Blade run foul of stone so that it suffers too much force	Assemble the blades correctly
	Blade assembled on opposite direction so that it suffers too much force	Fall the tiller down the soil smoothly
Blades crooked or broken	Rotary tiller fallen down the soil sharply so that it suffers too much force	Replace the blades and clear away The stones from the field
	Blades run foul of stone	Rise the tiller and do not plough when the tractor turns a corner in the field
	Doing plough when tractor turns a corner in the field	Fall the tiller down smoothly

Parts Illustrations

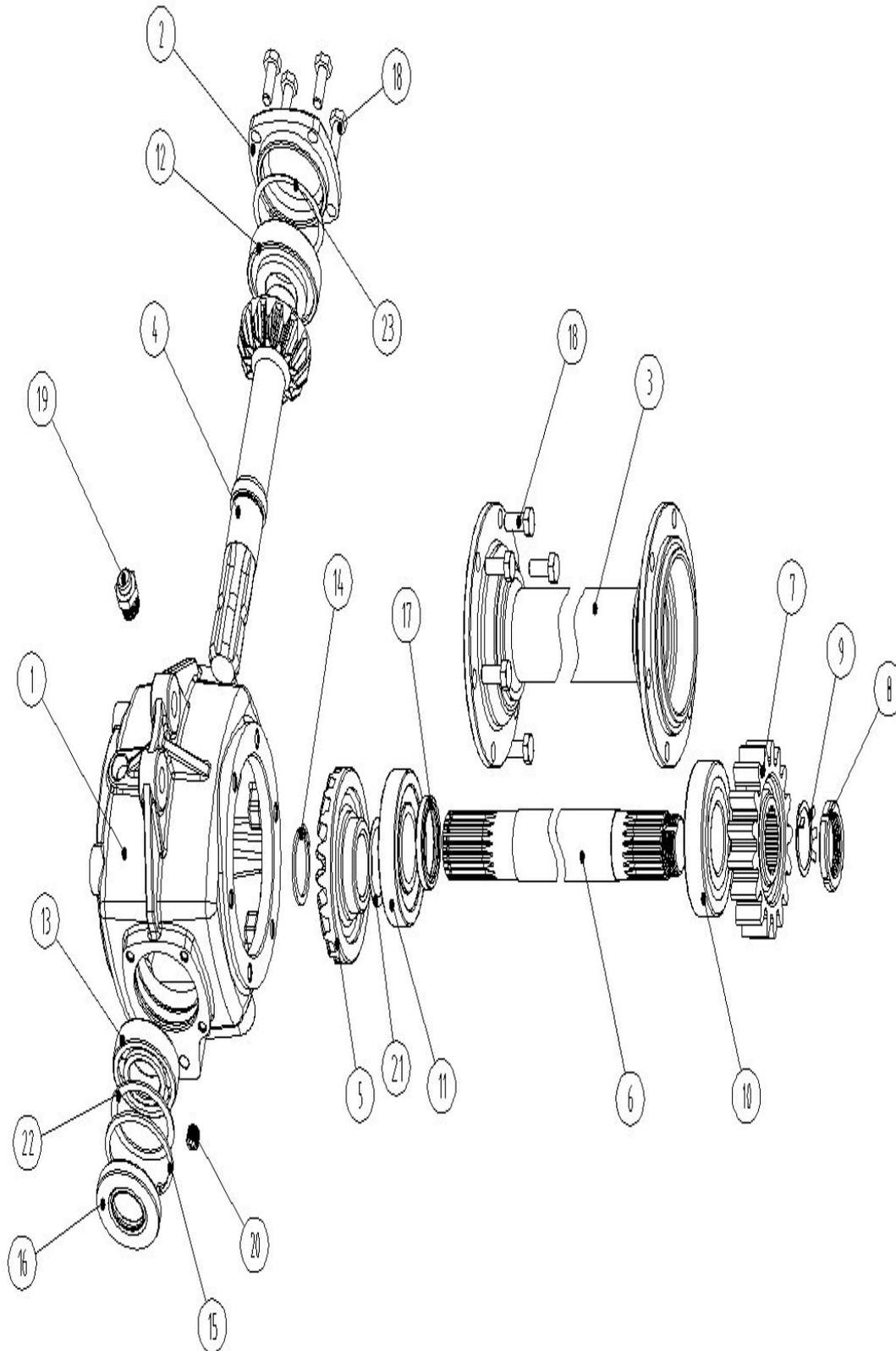
1GR185.01.001 Rotary Tiller Covering Assembly



1GR185.01.001 Rotary Tiller Covering Assembly Parts List

REF	PART NUMBER	DESCRIPTION	QTY
1	GB/T889.1-2000	Nut M12	24
2	GB/T97.1-2002	Plain washer 12	24
3	GB/T5782-2002	Bolt M12*40	20
4	1GR185.01.302	Fixed block	2
5	1GR185.01.016	U-block Welding Joints	2
6	1GR185.01.013	Hanging weldment	1
7	GB/T889.1-2000	Nut M8	10
8	GB/T97.1-2002	Plain washer 8	10
9	1GR185.01.301	hook	1
10	1GR185.01.307	Shrapnel	1
11	FEL300.111	Lock pin 12	2
12	AM80.01.101	Lower suspension pin	2
13	1GR185.01.020	Lower suspension weldment	2
14	1GR185.01.308	Hoop	2
15	1GR185.01.303	Two folded plates	2
16	1GR185.01.306	Square hoop	4
17	1GN230.01.104	R pin \varnothing 3.2	3
18	1GR185.01.305	Foot pin	1
19	1GR185.01.012	Connecting plate weldment	1
20	1GR185.01.019	Supporting frame	1
21	GB/T5782-2002	Bolt M10*35	20
22	1GR185.01.017	Limiting depth linkage plate(R)	1
23	GB/T97.1-2002	Plain washer 10	12
24	GB/T889.1-2000	Nut M10	12
25	1GR185.01.021	Big lateral plate weldment	1
26	GB/T5782-2002	Bolt M10*30	8
27	1GR185.01.014	Cover weldment	1
28	1GR185.01.304	Chain hanging plate	2
29	1GR185.01.102	Small side plate	1
30	1GR185.01.018	Limiting depth linkage plate(L)	1
31	1GR185.01.015	Long pin welded joint	1
32	1GN230.01.017	Link	2
33	GB/T5782-2002	Bolt M8*30	1
34	GB/T5782-2002	Bolt M8*25	1
35	1GR185.01.011	Big dam-board weldment	1
36	GB/T5782-2002	Bolt M14*50	2
37	GB/T97.1-2002	Plain washer 14	2
38	GB/T889.1-2000	Nut M14	6
39	1GR185.01.309	Upper suspension pin \varnothing 25	1
	EFGC125.123	Upper suspension pin \varnothing 19	1

1GR185.02.001 Rotary Tiller Gear Box Assembly

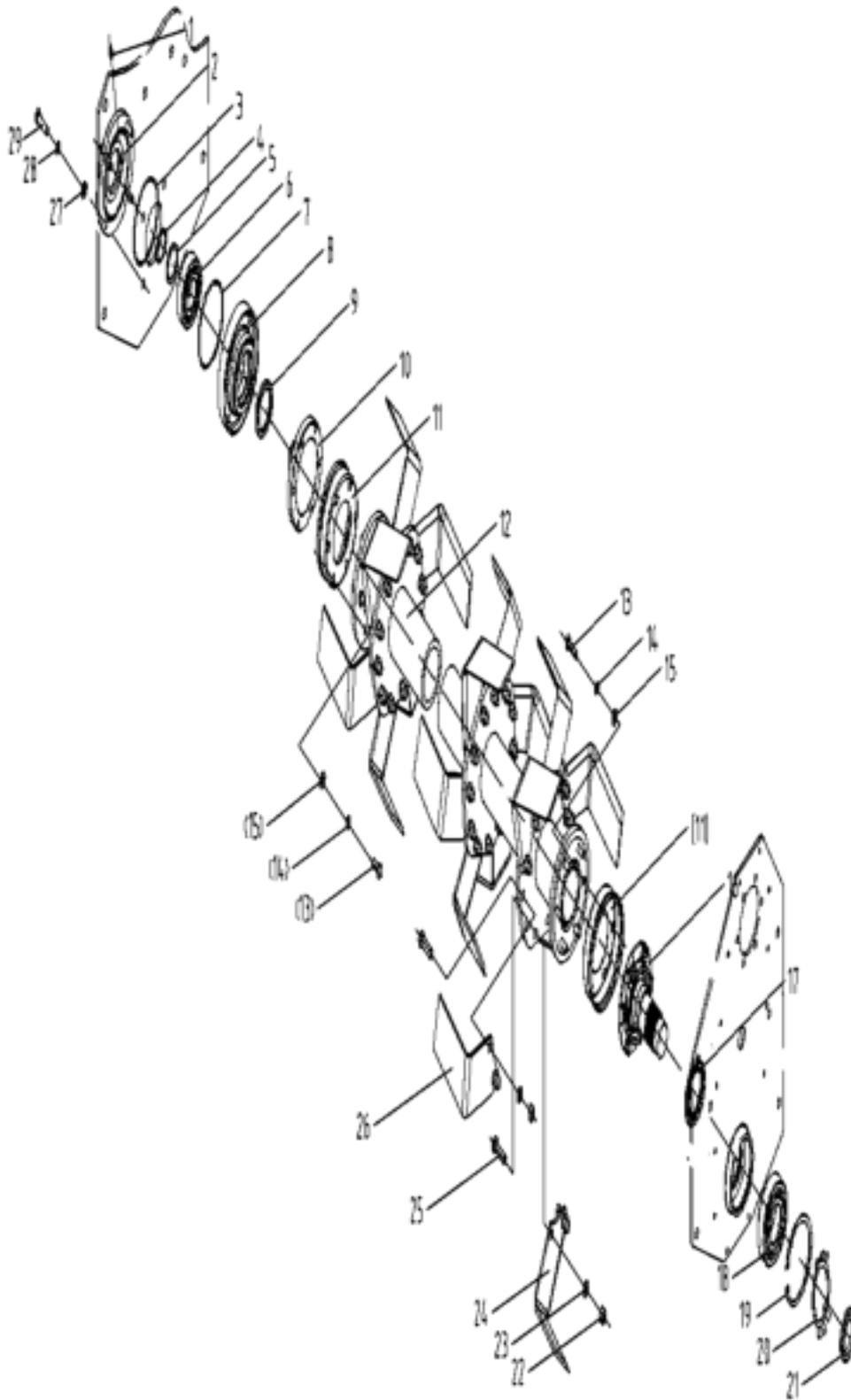


1GR185.02.001 Rotary Tiller Gear Box Assembly Parts List

REF	PART NUMBER	DESCRIPTION	QTY
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1	0.RTD30.2047.00	Gearbox housing	1
2	1.RTD30.1025.00	Solid Cover	1
3	0.RTD30.5015.00	Spacer	1
4	2.RTD30.3055.00	Pinion Shaft	1
5	3.RTD30.2091.00	Forging Gear	1
6	2.RTD30.2095.00	Output Shaft	1
7	3.RTD30.1002.00	Cylindrical gear	1
8	6.5.1.00010	Nut M35*1.5	1
9	6.6.3.00002	Lock Washer 35	1
10	6.1.6.00034	Bearing 6308-2RS	1
11	6.1.6.00011	Bearing 30308	1
12	6.1.6.00008	Bearing 30307	1
13	6.1.6.00003	Bearing 6207	1
14	6.6.4.00003	Snap Ring For Shaft 40*2.5	1
15	6.6.6.00003	Snap Ring For Hole 72*2.5	1
16	6.2.1.00002	Dust lip Oil Seal 35*72*10	1
17	6.2.1.00032	Dust lip Oil Seal 40*54*8	1
18	6.4.1.00001	Hexagon Bolt M10*25	10
19	6.8.2.00003	Oil vent plug 1/2" Gas	1
20	6.8.1.00001	1/4" Gas Solid Plug	1
21	7.313.0033.00	Shim kit 40.3*51.5	1
22	7.CT150.0020.00	Shim kit 58*71.5	1
23	7.313.0038.00	Shim kit 69*79.7	1

1GR185.03.001 Rotary Tiller Blade Shaft Assembly

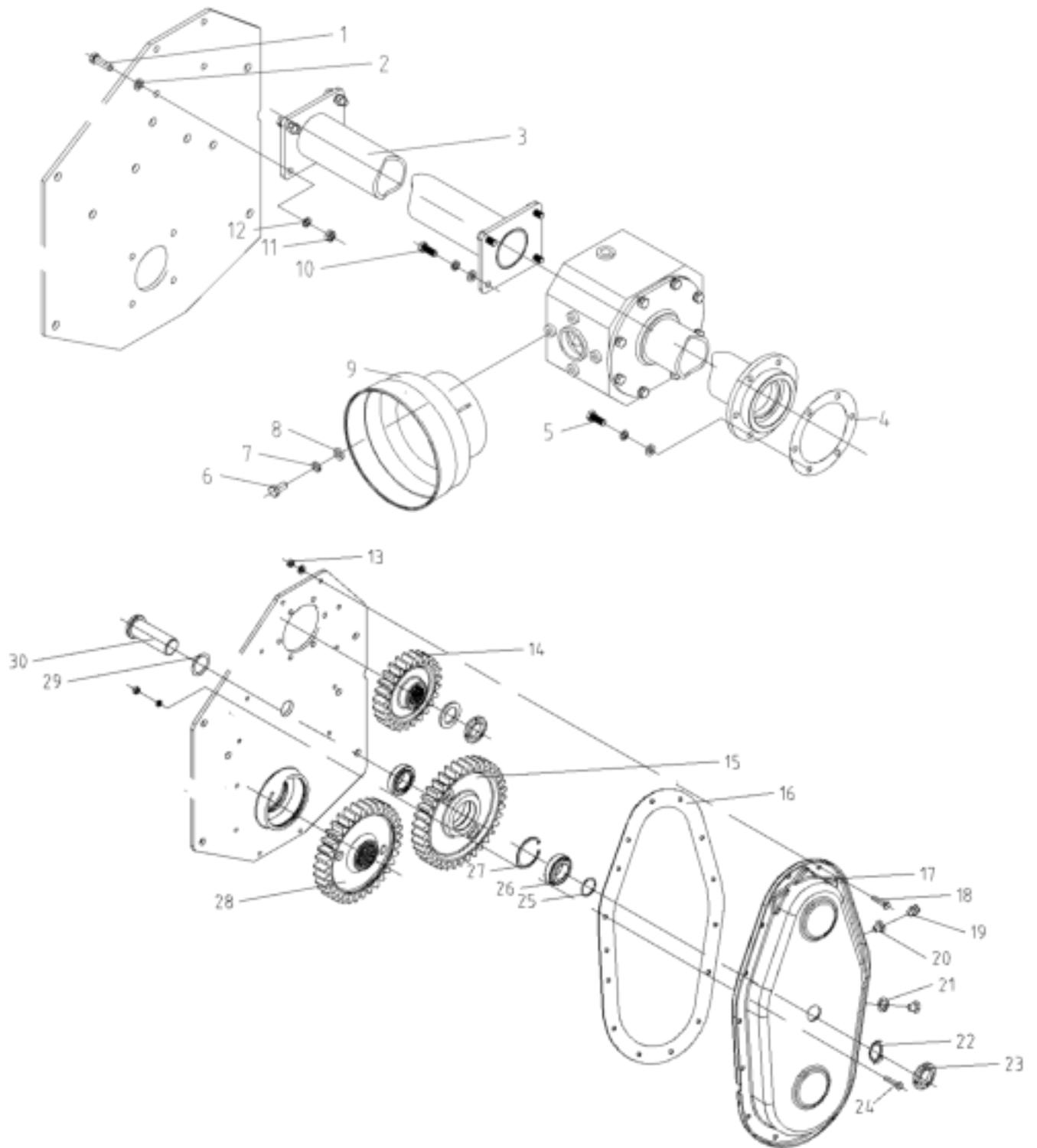


1GR185.03.001 Rotary Tiller Blade Shaft Assembly Parts List

REF	PART NUMBER	DESCRIPTION	QTY
1	JB/T7940.1-1995	Oil cup M8*1	1
2	1GN230.03.101	Side cover	1
3	GB/T3452.1-1992	O-ring 112*119.1*3.55	1
4	GB/T894.1-1986	Circlip 35	1

5	1GR135.03.104	Washer (L)	1
6	GB/T276-1994	Bearing 6307	1
7	GB/T3452.1-1992	O-ring 106*113.1*3.55	1
8	1GR185.03.103	Outer side support	1
9	GB/T13871-1992	Oil seal FB45*62*8	1
10	1GR185.03.105	Outer side hub	1
11	1GN230.03.105	Exterior dust cover	2
12	1GR185.03.011	Blades holder rotor	1
13	GB/T5782-2000	Bolt M12*35	12
14	GB/T93-2002	Spring washer 12	12
15	GB/T97.1-2002	Flat washer 12	12
16	1GR185.03.106	Drive side hub	1
17	GB/T13871-2007	Oil seal FB55*72*8	1
18	GB/T276-1988	Bearing 6309	1
19	GB/T893.1-1986	Circlip 100	1
20	GB/T858-1988	Self locking nut 45	1
21	GB/T858-1988	Self locking nut M35	1
22	GB/T889.1-2000	Nut M12*1.25	108
23	GB/T97.1-2002	Flat washer 12	108
24	1GR185.03.102	Left helicoidal blade	27
25	GB/T5783-2000	Bolt M12*1.25*35	108
26	1GR185.03.101	Right helicoidal blade	27
27	GB/T97.1-2002	Flat washer 10	4
28	GB/T93-2002	Spring washer 10	4
29	GB/T5782-2000	Bolt M10*40	4

1GR185.04.001 Rotary Tiller Transmission Assembly



1GR185.04.001 Rotary Tiller Transmission Assembly Parts List

REF	PART NUMBER	DESCRIPTION	QTY
1	GB/T5783-2000	Bolt M10*30	4
2	GB/T97.1-2000	Plain washer 10	16
3	1GR185.04.011	Outer spacer	1
4	1GR185.02.105	Gasket	1

5	GB/T5782-2000	Bolt M10*1*20	6
6	GB/T5783-2000	Bolt M8*16	4
7	GB/T93-2002	Spring washer 8	8
8	GB/T97.1-2000	Plain washer 8	23
9	1G135.02.117	Guard shade	1
10	GB/T5782-2000	Bolt M10*25	4
11	GB/T889.1-2000	Nut M10	4
12	GB/T93-2002	Spring washer 10	10
13	GB/T889.1-2000	Nut M8	15
14	1GR185.04.101	Upper gear	1
15	1GR185.04.102	Central gear	1
16	1GR185.04.104	Drive cover gasket	1
17	1GR185.04.012	Gears cover	1
18	GB/T5783-2000	Bolt M8*25	13
19		Oil breather plug	1
20	1GN230.02.117	Bolt M16x1.5	1
21	JB/T1002-1977	Gasket 16	2
22	GB/T858-1988	Self locking nut 24	1
23	GB/T812-1988	Self locking nut M24*1.5	1
24	GB/T5783-2000	Bolt M8*30	2
25	GB/T3452.1-1992	O-ring 29.5*34.8*2.65	1
26	GB/T297-1994	Bearing 30306	2
27	GB/T893.1-1986	Circlip 42	1
28	1GR185.04.103	Lower gear	1
29	GB/T3452.1-1992	O-ring 34.5*39.8*2.65	1
30	1GR185.04.105	Gear hub	1

Victory Tractor Implements – Warranty

Victory TI warrants to the original purchaser that this Victory product will be free from defects in material and workmanship beginning on the date of purchase by the end user according to the following schedule when used as intended and under normal service and conditions for personal use.

Overall Unit and Driveline: One Year for Parts and Labor

Gearbox: One year on all components.

Blades and Belts: Considered wear items.

This Warranty does not apply to any part or product which in Victory's judgment shall have been misused, or damaged by accident or lack of normal maintenance or care, or which has been repaired or altered in a way which adversely affects its performance or which has been used for a purpose for which the product is not designed. Misuse also specifically includes failure to properly maintain oil levels, grease points, and driveline shafts.

Claims under this Warranty should be made to the designated dealer (or Victory itself) which originally sold the product and all warranty adjustments must be made through an authorized Victory dealer. Victory reserves the right to make changes in materials or design of the product at any time without notice.

This Warranty shall not be interpreted to render Victory liable for damages of any kind, direct, consequential, or contingent to property. Furthermore, Victory shall not be liable for damages resulting from any cause beyond its reasonable control. This Warranty does not extend to loss of crops, any expense or loss for labor, supplies, rental machinery or for any other reason.

No other warranty of any kind whatsoever, express or implied, is made with respect to this sale; and all implied warranties of merchantability and fitness for a particular purpose which exceed the obligations set forth in this written warranty are hereby disclaimed and excluded from this sale.

This Warranty is not valid unless registered with Victory within 30 days from the date of purchase by the end user.

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