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MANUAL & PART LIST

HR SERIES



WECAN GLOBAL Co., LTD.

www.wecan21.com/eng

◆ OPERATIONAL SAFETY ◆

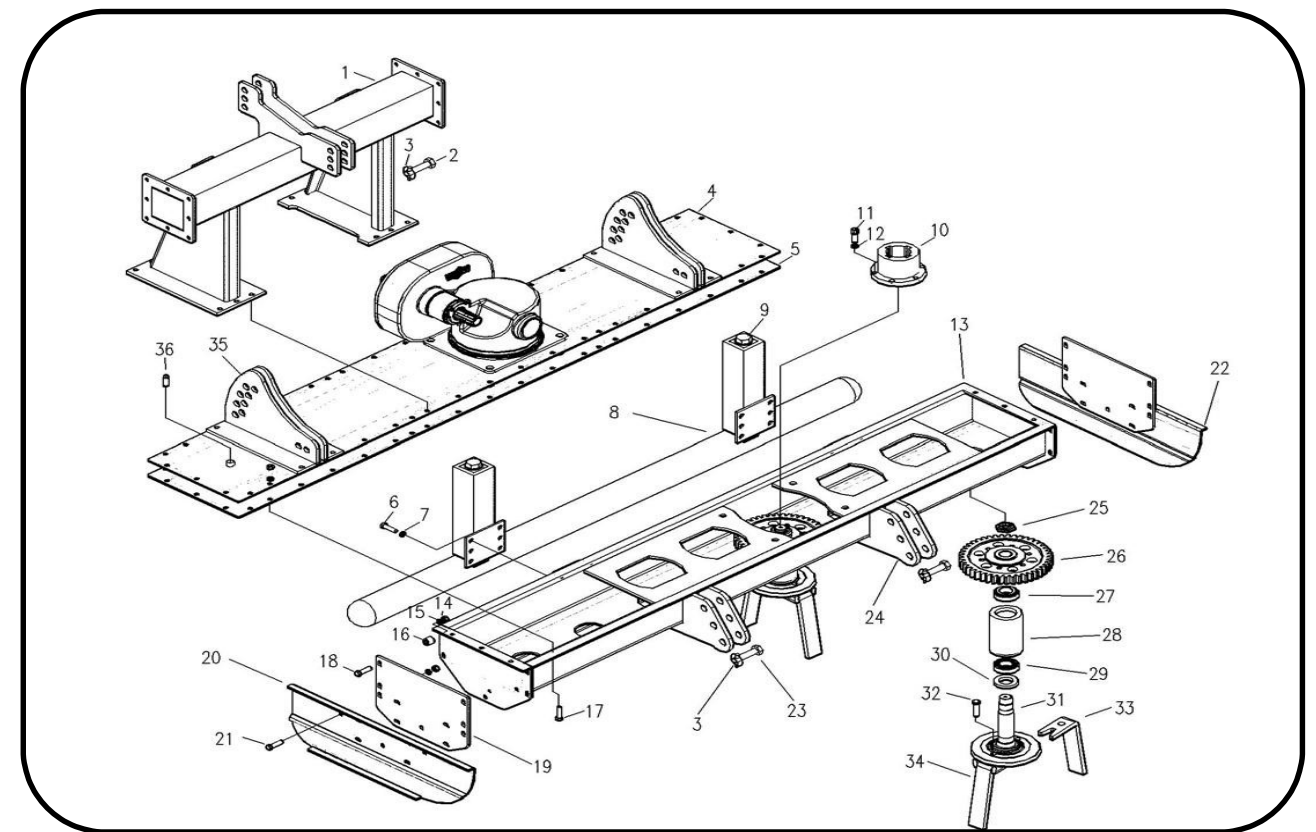
Before use

1. Before using your WECAN Power Harrow please take the time to read this operator's manual and note all the operational and safety decals on the machine.
Spending this time will not only ensure safer operation it will also ensure a longer machine life and cheaper operating costs.
2. Ensure that you wear the right clothing and safety equipment. Loose clothing and item like ties and loose belts can get caught in moving equipment such as PTO shafts and cause serious injury.
3. Machine-work is a one-man operation, there should be no bystander or children nearby.
4. Ensure that all safety covers are in place and in good working order, especially the PTO shaft cover.
5. Before starting the machine, check the PTO shaft to ensure both ends are correctly fitted and there is no free play in the universal joints.
6. Check the entire machine and tighten any nuts.
7. Before checking any aspect of the machine, stop the PTO, switch off the engine apply the brakes and remove the key, If working under the machine is requires, raise the machine and place safety stands under both sides before doing any work under the machine.(This is a critical area as children have been known to play on tractors and cause serious injury when precautions like these are not taken)
8. Ensure that the tractor is well balanced. Some tractors are light on the front, and since the weight of machine is on the rear, when raised, the front of tractor may be lifted – sometimes to a dangerous extent. Correct the problem by fitting front weights; if weights cannot be fitted, water ballast the front tires.

When using the Power Harrow

1. While still stationary, engage the PTO and briefly run the machine to ensure it is operating correctly.
2. Before moving, identify the location of other workers and obstacles in the field.
3. Do not operate the machine beyond its specified ground speed and PTO RPM as this may shorten the working life of the machine.
4. When checking the universal joints or fitting/removing the PTO shaft, always stop the tractor engine and apply the brakes.

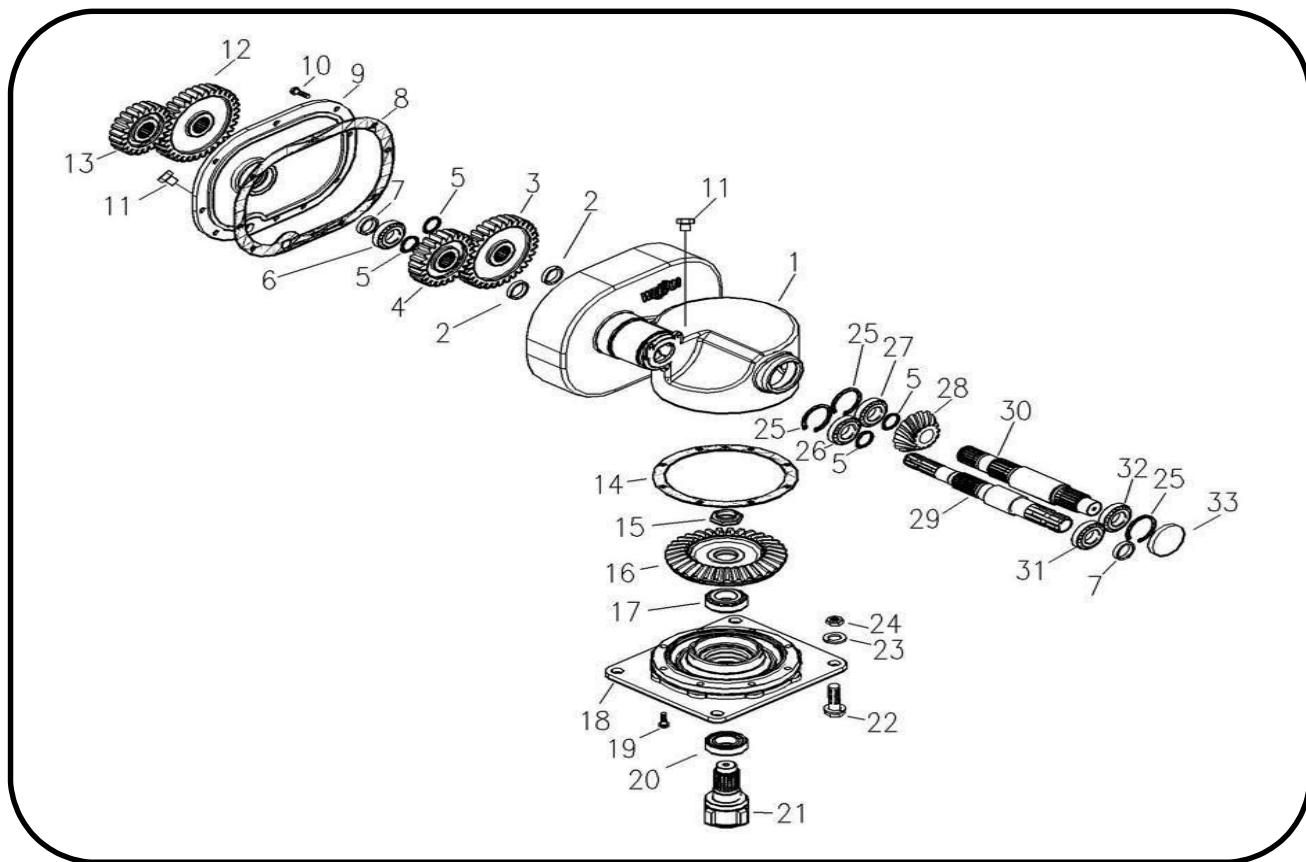
◆ HR PART LIST (Top-cover, Rear-cover Group) ◆



No.	Part No.	Part Name	Spec.
1	WR108 – 801	Mast Group	
2	WR108 – 855	Top Link Pin	d25
3	WR108 – 857	Category Pin	d10
4	WR108 – 607	Body Case Cover	
5	WR108 – 671	Packing	
6	WR108 – 953	Bolt	M14*1.5*45mm
7	WR108 – 950	Nut	
8	WR108 – 901	Leveler Group	
9	WR108 – 902	level Controller	
10	WR108 – 668	Couple Ring	
11	WR108 – 666	Hexagonal Bolt	M16*1.75*60mm
12	WR108 – 659	Spring Washer	
13	WR108 – 608	Body Case	
14	WR108 – 650	Nut	
15	WR108 – 659	Spring Washer	
16	WR108 – 677	Spacer	
17	WR108 – 653	Bolt	M12*1.25P*35mm
18	WR108 – 653	Bolt	M12*1.25*65mm
19	WR108 – 320	Side Plate	
20	WR108 – 312	Skid Group(LH)	

No.	Part No.	Part Name	Spec.
21	WR108 – 353	Bolt	M12*1.25*30mm
22	WR108 – 311	Skid Group(RH)	
23	WR108 – 675	Lower Link Pin	d28
24	•	Lower Link	16T
25	WR108 – 374	Hard lock Nut	
26	WR108 – 301	Drive Gear	43T
27	WR108 – 370	Taper roller Bearing	32009 XJ
28	WR108 – 310	Bearing Case	
29	WR108 – 370	Taper roller Bearing	LM 503349
30	WR108 – 363	Oil Seal	
31	WR108 – 305	Rotor Drive Shaft	
32	WR108 – 553	Bolt	M16*1.75*65mm
33	WR108 – 502	Blade(LH)	
34	WR108 – 501	Blade(RH)	
35	WR108 – 904	Roller Holder	12T
36	WR108 – 673	Oil Cap	15A소켓

◆ *HR PART LIST (Gear Box Group)* ◆



No.	Part No.	Part Name	Spec.
1	WR108 – 102	Gear Box	
2	WR108 – 177	Spacer	
3	WR108 – 110	Change Gear	32T
4	WR108 – 110	Change Gear	24T
5	WR108 – 156	Snap Ring	
6	WR108 – 170	Taper roller Bearing	30207J
7	WR108 – 163	Oil Seal	
8	WR108 – 171	Packing	
9	WR108 – 104	Gear box rear Cover	
10	WR108 – 153	Bolt	M12*1.25*30mm
11	WR108 – 173	Plug Bolt	
12	WR108 – 110	Change Gear	34T
13	WR108 – 110	Change Gear	22T
14	WR108 – 171	Packing	
15	WR108 – 174	Hard lock Nut	
16	WR108 – 107	Bevel Gear	33T
17	WR108 – 170	Taper roller Bearing	32213
18	WR108 – 103	Gear box Base	
19	WR108 – 153	Bolt	M12*1.25 DP25
20	WR108 – 170	Taper roller Bearing	32211J

No.	Part No.	Part Name	Spec.
21	WR108 – 101	Drive Shaft	
22	WR108 – 153	Bolt	M25 2P
23	WR108 – 172	Plane Washer	
24	WR108 – 150	Nut	
25	WR108 – 156	Snap Ring	
26	WR108 – 170	Taper roller Bearing	30309J
27	WR108 – 170	Taper roller Bearing	32309J
28	WR108 – 117	Pinion	14T
29	WR108 – 112	Input Shaft	
30	WR108 – 118	Pinion Shaft	
31	WR108 – 170	Taper roller Bearing	30209J
32	WR108 – 170	Taper roller Bearing	30308C
33	WR108 – 115	Oil Seal	90mm*8.9

5. Always use the seat provided on the tractor with safety belt when working and ensure the tractor has a ROPS certified safety frame or cab.
6. Monitor the tractor gauges and listen to the engine and machine for unusual noises, if in doubt stop the tractor and check both the Tractor and machine.
7. If there is a need to get off the tractor, stop the engine, apply the brake and ensure the machine is on the ground. On hilly terrain, also engage the lowest gear in the gearbox after stopping the engine. (there have been cases where, in steep terrain, the handbrake was not enough to hold the tractor)

Driving on the road

1. When driving on the road, ensure that the PTO is stopped before raising the machine to maximum height.
2. Adjust the transport speed to the conditions and gradient of the road and allow for the fact that the weight of the machine in the raised position, and will lighten the front of the tractor. This is particularly important when driving on steep road.
3. When traveling on the road at night, ensure that the width of the machine is within the legal limits for your country. Check if all head lights, tail lights and the rear work lights are on. In some countries, a revolving orange beacon is also required when traveling on the road.

Maintenance after each use

1. After finishing work, wash the machine and check the oil and the transmission. Grease any points fitted with a grease nipple, and where possible. Store the machine under cover.
2. Ensure that the machine is stable when removed from the tractor, and is standing at a height which makes putting it back on the tractor easy. To ensure that playing children are not harmed by any movement of the machine, use props to stabilize any instability of the machine.
3. For long term storage, fully service and check the machine before placing it under cover. (Long exposure to adverse weather can shorten the working life of some components in the machine)

◆ SAFETY & INSTRUCTIONAL DECALS ◆

ATTENTION! BE ALERT! YOUR SAFETY IS INVOLVED!
Replace Immediately If Damaged!



Follow all safety rules and safety decal information.



Blade contact or thrown objects can cause serious injury or death.

Keep bystanders away.



Do not put your hands under or into machine when engine is running.



Do not put your feet under or into machine and keep safe distance.



Do not work under the machine without blocking prevents equipment.



Be extremely careful handling various parts of the machine. They are heavy and hands, fingers could be crushed or pinched between tractor and implement

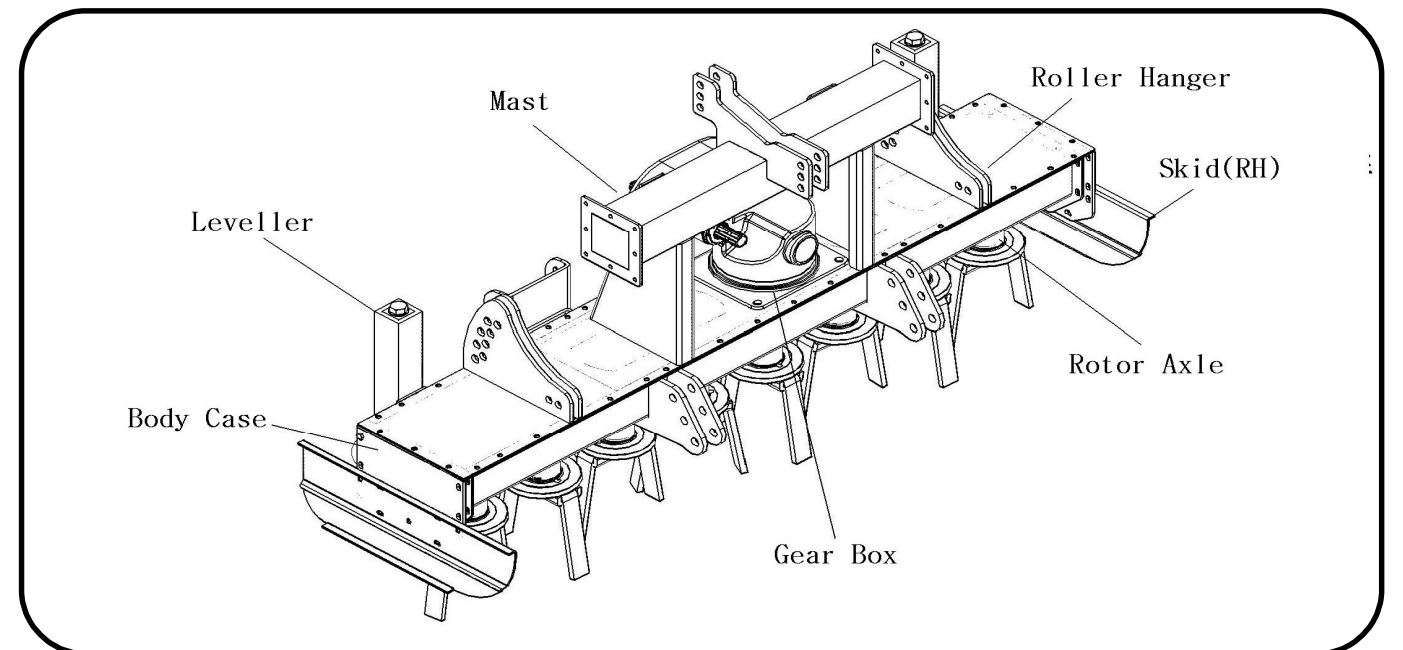


Keep away from rotating parts while in operation.



Do not ride or stay on implement while in operation or when it is being moved.

◆ THE STRUCTURE OF POWER HARROW ◆



◆ CHECKING OIL ◆

Type	Checking Part		Capacity	Lubricant	Checking Frequency				Method
					Daily	50Hours	100Hours	200Hours	
HR	Gear Box		1.2L	Gear Oil SAE 90		△		○	Supplement and change the oil after checking the optimum and viscosity with oil gauge
	Body Case	WR2000HR	15.0L						
		WR2500HR	18.0L						
		WR3000HR	21.0L						

As with all mechanical equipment, the running in period is critical in ensuring a maximum trouble free service life of the machine.

While running in minute, metal particles can be generated from the bedding in of components.

To remove these particles and any other impurities, it is very important that after 50 hours all oils are drained.

As with all oil changes, Gear boxes and gear or chain cases should be drained while the oil is at operating temperature and any impurities are suspended in the oil.

This allows all of them to be removed.

Note on service

- Always use the recommended oil and do not replace it with grease.
- Stop the machine and allow the oil to settle before checking the oil level.
- Always clean around the area where oil level checks are made on both gearboxes and gear cases to avoid contamination.
- Always change oils when they are at operating temperature to ensure removal of any impurities.
- Use only oil from reputable manufacturers and never recycled oil.

◆ TROUBLE SHOOTING CHART ◆

In the even of any problem, it is very important to deal with the problem as quickly as possible to avoid further problems.

To assist with this, the following trouble shooting chart deals with a range of items, the symptoms and the way to rectify the problem for anything not covered by this chart, please consult your local dealer.

Problem	Part	Symptom	Cause	Corrective Action
	Spline	Noisy	Lack of Grease	Grease it
PTO Shaft	Universal Joint	Vibration	Not aligned	Align Joint
		Vibration Breakage	Improper Angle	Operate at correct angles and not in the raised position
Gear Box	Gear / Bearing	Noisy	Lack of Oil	Drain, flush and refill
		Broken Gear or Bearing	Lack of Oil or overloading	Replace parts clean and fill with oil
Chain Case	Chain	Chain Failure	Broken master link	Replace link
			Chain Worn out	Replace Chain
	Chain tension device		Overload / Lack of Oil	Replace faulty parts Drain oil
Gear Case	Gear	Gear failure or noise		
Blade Shaft	Blade	Broken	Stony soil / overload	Replace blades work within capacity
	Flange	broken / Distorted	Hit obstacle or severe overload	Replace shaft
All Parts containing oil		Oil leaks	Loose Bolts Faulty gasket Faulty seal Faulty o-ring	Tighten Replace Replace Replace

◆ DEMENSION AND SPECIFICATION ◆

Model	Body(mm)			Weight (kg)	Flange (pcs)	Blade (pcs)	Working Width (mm)	Tractor (HP)
	Length	Width	Height					
WR2000HR	2016	1080	1366	455	12	12	2000	85~110
WR2500HR	2516	1080	1366	855	16	16	2500	90~135
WR3000HR	3016	1080	1366	1250	20	20	3000	135~150
WR3700HR	3716	1080	1366	1455	24	24	3700	150~175

◆ CHANGE Power Harrow SPEED ◆

Disengage the PTO and lower the machine on the ground.

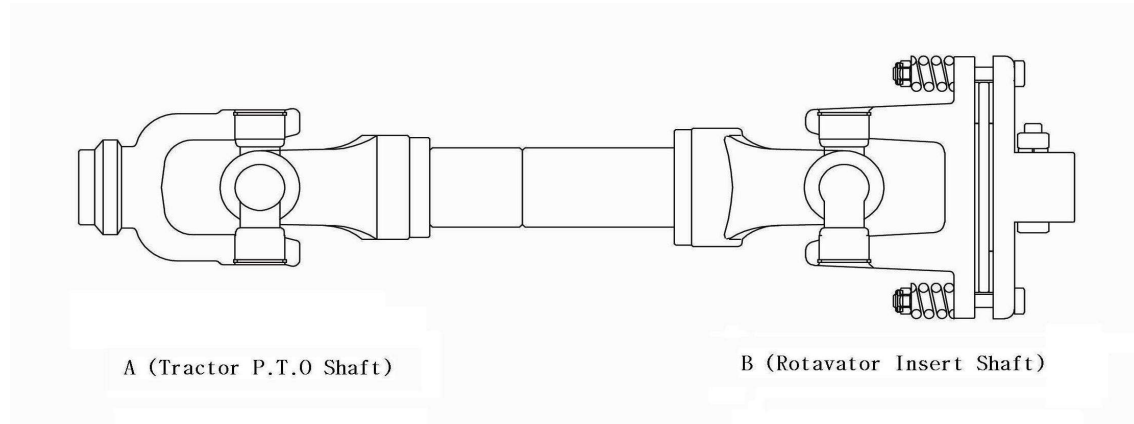
Before doing any mechanical work ensure that the outside of the gearbox is perfectly clean and dry to avoid any contamination of moving parts.

- Drain the oil from the gearbox in a clean container.
- Avoid contamination of the oil by covering the container.
- Remove all nuts from the gearbox side cover and remove the cover.
(ensure that the gears do not fall on the ground)
- Change the gears to the ratio required.
- Wipe the inside of the gearbox side plate and the edge of the gearbox to ensure that the join is perfectly clean.
- Place a light coating of the grease on the mating surface of the gearbox to ensure that the join is perfectly clean.
- Refill the gearbox with oil to the correct level and work the machine for a short time and then check that there are no oil leaks.

Gear Box Chart (*Default)

Speed	Change Gear		Ratio	Power Harrow Speed@ 540 PTO rpm
	Pinion Shaft	Input Shaft		
1 st	34 T	22 T	1 : 0.2745	148 rpm
2 nd	32 T	24 T	1 : 0.3182	172 rpm
*3 rd	24 T	32 T	1 : 0.5656	305 rpm
4 th	22 T	34 T	1 : 0.6556	354 rpm

◆ CONNECTING THE PTO SHAFT ◆



1. Ensure that the universal joints at each end of the PTO shaft are in alignment as shown in the drawing.
If they are not, rectify the problem before attempting to fit the shaft.
(when universal joints on a PTO shaft are not correctly aligned they will cause severe vibration and prolonged use without correction will destroy the PTO shaft)
2. Fit the PTO shaft to the shaft on the machine and ensure that the quick release button or retaining pin/bolt is secure.
3. Now fit the other universal joint to the tractor PTO outlet and again ensure that the quick release button or retaining pin/bolt is secure.
4. Raise the machine aprox"(10cm) of the ground and adjust the sway chains (or bars) so the machine is central behind the tractor and the tractor PTO shaft and the machine input shaft are as near as possible to being in line.
5. Raise and lower the machine gently with the three point linkage to ensure the sway chains are adjusted correctly for a range of heights.
6. As a final check lower the machine until it is just in the ground and engage the PTO and increase revolutions for 540 rpm PTO speed. Check that there is no vibration then starting the tillage.
7. It is very important that the machine is not operated in the raised position as this will damage the universal joints or the PTO shaft or both. Always stop the PTO before raising the machine.
(Some modern tractors have an automatic setting on the PTO and it is recommended that this be used where it is fitted)