

# **Safety Operator's Manual**

## **CTL Rotary Hoe**

MODEL: CTL 150  
CTL 160  
CTL 185  
CTL 210


### **IMPORTANT**

READ THESE INSTRUCTIONS BEFORE INSTALLING AND USING  
THIS IMPLEMENT

# CONTENTS

<b>SAFETY INSTRUCTIONS .....</b>	<b>1</b>
<b>OPERATING SAFETY .....</b>	<b>2</b>
Operating before .....	2
During operation.....	4
Operating after.....	5
<b>一. Connecting tractor</b>	
Parts description and function.....	6
Partial assembly.....	8
Connecting tractor.....	11
<b>二. Check before operating</b>	
Check before starting.....	15
Check during engine starting.....	16
<b>三. Lubrication points summary</b>	
<b>四. Operating essentials</b>	
Attentions during in use.....	18
Rotary hoe adjustment .....	19
<b>五. Operation finish</b>	
Seiri and check after operating.....	20
Separate from the tractor.....	20
Storage.....	20
<b>六. Inspection unit and adjustment</b>	
Inspection unit list.....	20
<b>七. Exception handling</b>	
Excepting handling.....	21
<b>八. Product parts list</b>	
Product parts list.....	21
<b>九. Product specification</b>	
<b>十. Wearing parts list</b>	
<b>十一. Warranty Policy</b>	

# SAFETY INSTRUCTIONS

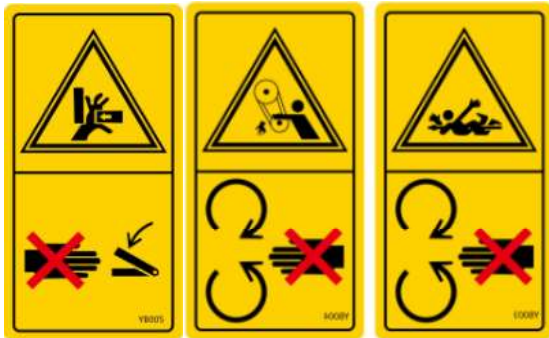
	Before operating the Rotary Hoe read the following safety instructions. Failure to comply with these warnings may result in serious injury or death.
---	--

## WARNING DECALS



### Warning !

Read and understand the operator manual completely before operating your rotary hoe.



### Caution !

Keep hand, feet, hair and clothing away from all moving parts.



### Caution !

Keep all bystanders a safe distance away from machine and tractor.

# OPERATING SAFETY



Failure to comply with these warnings may result in serious injury or death!



Read and understand the operator manual before operating, servicing, adjusting, repairing or removing.

## Operating before



**Warning!**

**Read the instruction before operation**

- ★ Failure to understand warning or caution completely may result in injury before operation.



**Warning!**

**Ensure the instruction is placed around the machine**

- ★ Don't operate especially for you don't know how to operate and the instruction is not around.



**Warning!**

**Don't operate as following conditions**

- ★ It may result in accidents when your body is uncomfortable or not familiar with the machine.  
Don't operate as following conditions
- You can't concentrate to operate because of over fatigue, sick, under the influence of drugs and other reasons.
- After drinking.
- Operator who is unskilled.
- Pregnant women and minors.



**Warning!**

**Select the appropriate clothing**

- ★ The uncomfortable clothing worn by operator will result in serious injury or death.  
Please operate according to a hint of clothing
- Not wear a big jacket and trousers
- The sleeves and hems cannot too big.
- Wear safety helmets
- Don't wear in headscarf or towel .



**Warning!**

**Lend out the machine**

- ★ It's very important to give operating instructions to the borrowers and advise detailed information of warning decals and operating notes.



**Warning!**

**Not allow machine modification**

- ★ Unauthorized modification with device and component of other companies may weaken the function and/or safety and could affect the life of the equipment. Please select and use genuine parts as per the following part list .

### Machine start and starting



#### Warning!

- ★ Ensure that the rotary hoe is connected to the tractor by three-point linkage.
- ★ Ensure that the tractor is in neutral when it is started. Otherwise will cause the machine out of control and accidents.
- ★ Ensure that PTO is cut off then start engine. Otherwise will injure bystanders.
- ★ The tractor head maybe tilt and driver fall as well as injure bystanders when machine start under the high speed gear condition. Please ensure the surrounding is safe, then start machine under the lower speed gear condition and forward.
- ★ Keep the ventilation when start tractor indoors, otherwise tractor exhaust may cause poisoning.

### Tractor mounting operation



#### Warning!

- ★ Keep others away from machine and tractor when it is running or operating.
- ★ Carry out tractor mounting operation on a flat or hard ground.
- ★ Install moderate amount of weight loading according to tractor model and keep a stable center of gravity prior to carry out tractor mounting operation.

### PTO using



#### Warning!

- ★ Don't use PTO without plastic cover shell, or you will be involved in and get injured.
- ★ Cut the engine when dismantle the PTO
- ★ Make sure to fix the plastic casing of chain, or you will be involved in and get injured
- ★ Turn to page 13 to see the specific requirements of PTO.



#### Warning!

- ★ Ensure to connect on the left and right brake pedal when working machines moving.
- ★ The driver and people around will be injured if others on the tractor fall off.
- ★ Emergency braking and turning are forbidden.
- ★ Turning until keep the safe distance between people and blocks.
- ★ Move slowly on the ramps and uneven road.
- ★ Use suitable backing board on the terrain with big drop.
- ★ Do not carry people and luggage on the working machine.
- ★ Ensure to cut off the PTO engine when moving.

## During operation



### Danger!

#### During operation

- ★ Stay away from the machine during operation, or you will be injured.
- ★ Operate abide the specified speed, or the PTO will be damaged and people will be injured.
- ★ Do not carry people and luggage on the working machine. .
- ★ Shift down before into the ramps. High-speed moving on the ramps will slip.
- ★ Concentrate during operation.
- ★ Stay away from the machine.
- ★ Do not close to the bevel, the inclined plane operation will cause the tractor turn over, so slow down the moving and operation speed.
- ★ Cut off the PTO engine and stop the tractor when adjust the machine and remove the debris.
- ★ Park the tractor on the flat field. Cut off the engine after the machine down to

## Operating after



### Warning!

- ★ Make sure to cut off the PTO and tractor engine before cleaning.



### Warning

- ★ The problems of the machine will not be found if regardless of the inspection unit after operation. Inspection unit carefully according to theoperating instruction.
- ★ When using 3-point suspension to raise the machine to do the



### Wa

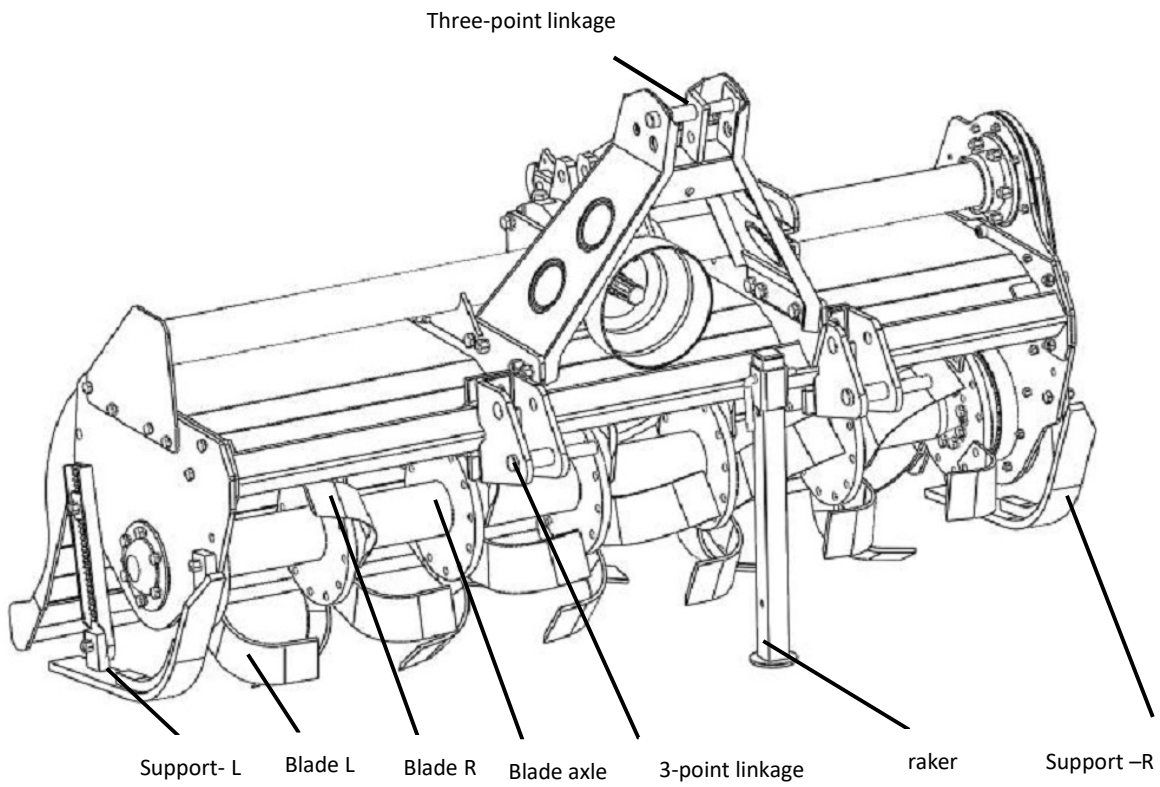
Bad treatment、 Inspection unit、 repair

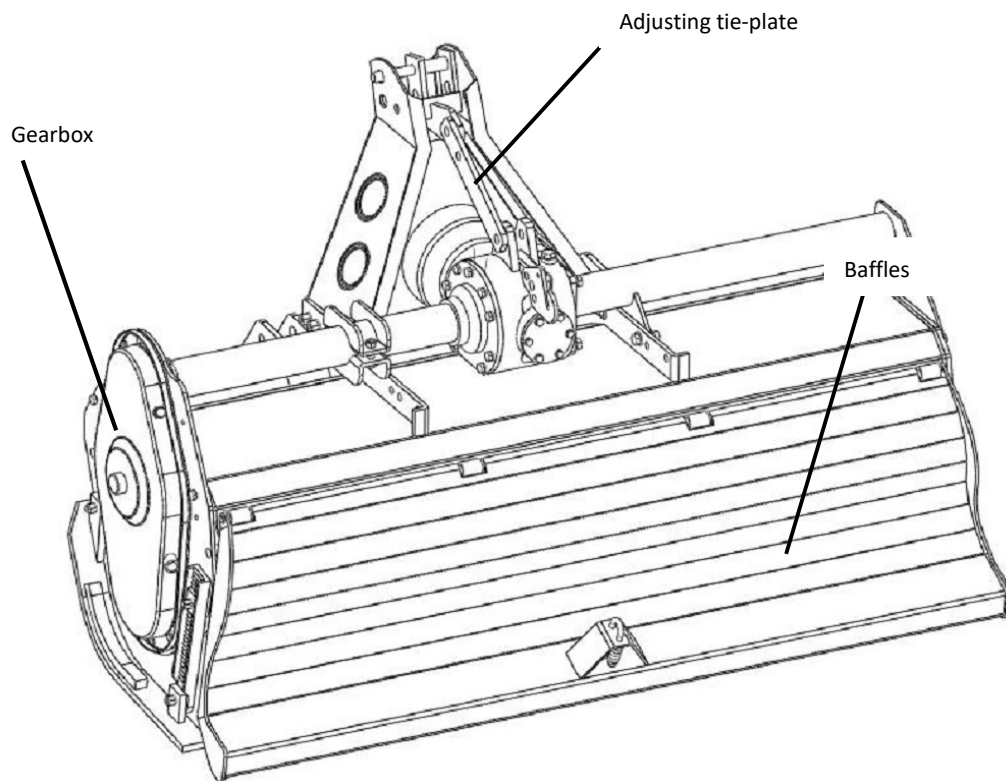
- ★ Maintenance according to the operating instruction, or the machine will be damaged.
- ★ Working with the tractor on the flat and hard field.
- ★ Cut off the PTO engine and stop the tractor when adjust the machine and remove the debris.
- ★ Make the rack and ancillary shoring before drilling in.
- ★ Repair and change the hydraulic joint and hose in time in the condition of without pressure in the original hose.
- ★ The dismantle protective components in order to treat bad, instruction unit and repair should install back. Or they will be involved in the machine and cause the accident.

# 一、Connecting tractor

## 1. Components description and function

机器存放





(1) Three-point linkage

Connect tractor and rotary hoe

(2) Support R&L

It can guide tilling direction and adjust tilling depth as well as avoid blade touch ground directly after operation finished.

(3) R&L blade

To tilling

(4) Blade axle

Drive blade to rotate.

(5) Raker

To avoid blade touch ground directly and keep machine level after operation finished.

(6) Adjusting tie-plate

Connect three-point linkage and gearbox, reduce machine vibration.

(7) Gearbox

Change the output speed of the tractor and transmit power to the blade axle.

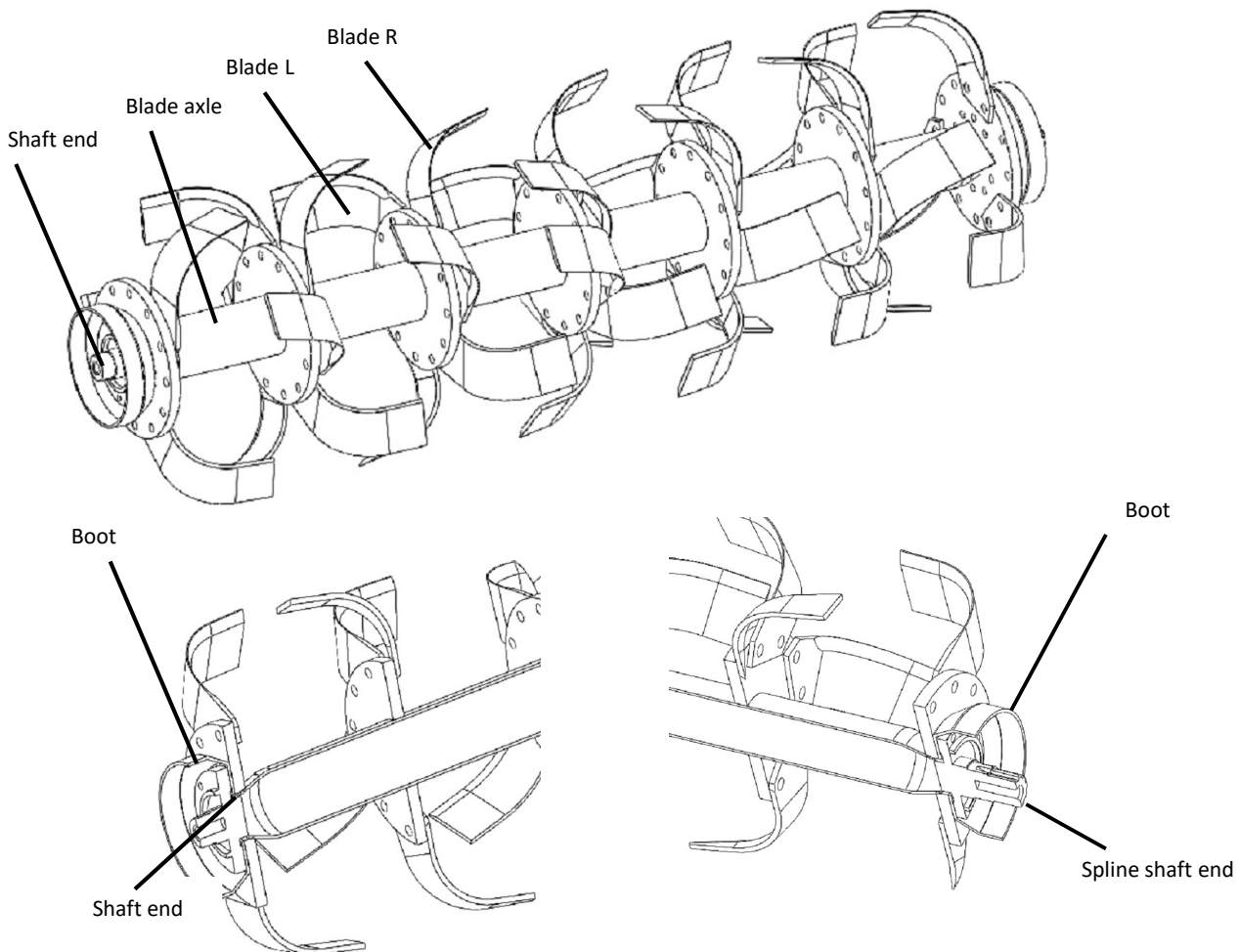
(8) baffles

Crush and smooth lan



## 2. Partial assembly

### Blade axle assembly



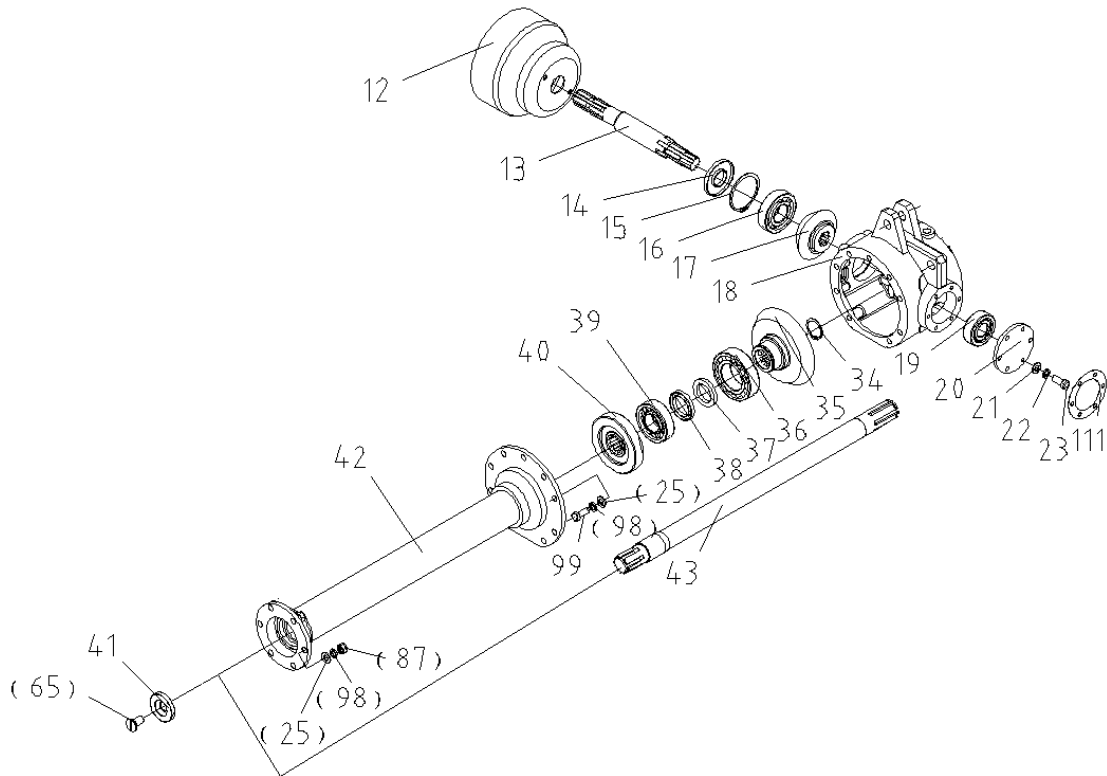
- (1) Check  
Check the appearance of partial assembly and ensure whether it has flaw and damage, blade edge curl. If has, just replace it.
- (2) Assembly parts list  
Ensure all parts without loss according to the explosive view.
- (3) Assemble shaft end, spline shaft end, boot and blade  
Install parts following the order from left to right or right to left, tighten bolt and nut. The both sides of shaft end are installed priority then the blade.
  1. Ensure that shaft end, spline shaft end are concentric with blade axle when installed.
  2. Ensure that shaft end, spline shaft end are concentric with blade axle when installed.
  3. When install the left and right blades, after the knife shaft radial installation of a column, then rotate 15 degree and install the second column. Cross installation the left and right blades, and avoid the blades neglected or countered. During installation, should use elastic cushion and a locking nut type screw. There are 3 blades on the both ends of the cutter shaft, and they are countered from left to right.

#### (4) Inspection after installation

After installation, check whether the direction of the blades are in step with the direction of the practical work, check whether the blades are loose.

Rotate the cutter shaft by hands, check whether the cutter shaft has a problem with pulsation and whether the rotation are flexible and reliable.

### Gearbox installation



#### (1) Check

1. Check the tooth surface of bevel gear inside the gearbox is flawed;
- 2, Seal (14,37,38); skeleton oil seal assembly should check whether the inner wall of debris, scratches, dust and sand casting, etc., should use special tooling to skeleton oil seal smoothly pushed into the housing sit hole;
- 3, Bearing (16, 19, 39, 41); shaft, bearing body size is processed in accordance with the drawings
- 4, Other components should be with no flaws appearance damage;
- 5, Replace the parts promptly if there is any problem

## (2) Assembled parts details

According to details provided by the exploded diagram, confirm the necessary parts are complete.

### (3) Assembling the gearbox

1. The installation, install vertical gear of gearbox priority, Item 12-111 parts;
2. To avoid scratches during installation, lubricate the surface of shaft and the bearing body.
3. Hammer and sleeve are the common tools, gently use them.
4. Generally using a conical or tapered shoulder frock on the skeleton oil seal assembly.
5. Threaded shaft with groove and spline, need special assembly tools to protect oil seal lip seals to prevent damage by the corners, threads, grooves, spline shafts, etc

### (4) Inspection after the installation

After the installation is complete, rotate the gearbox by manual to see if there is abnormal noise problem in the rotation, the rotation is flexible and reliable, if so, you can adjust by increasing or decreasing the gasket (111, 110).

## 3. Connecting tractor

### (1) Three-point linkage



Warning!

- ★ In the process of connection, when the tractor is moving, if there is people between the tractor and working machine, it may cause injury accident. Be sure no people stand between the tractor and working machine during the tractor moving.

Lower lifting pin types	
CTL150	I 、 II
CTL160	I 、 II
CTL185	I 、 II
CTL210	I 、 II

### (2) Connection and adjustment

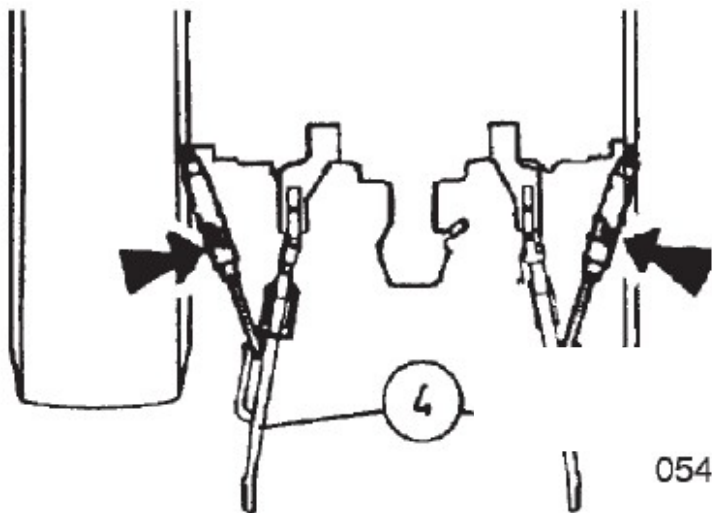


**Caution!** Make sure the tractor is fixed in the process of connection

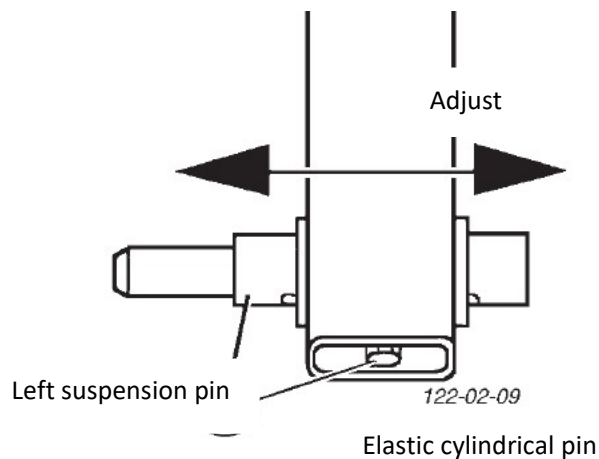
a. Start the tractor engine, tractor and machine head lower link under suspension corresponds to the position of the pin, rewind, stop, stop the engine, put up parking stalls.

b. Connect Left towing arm, the left arm on the tractor towing the working machine is left hanging inserted pin, the locking detent. Right arm pulling the same way.

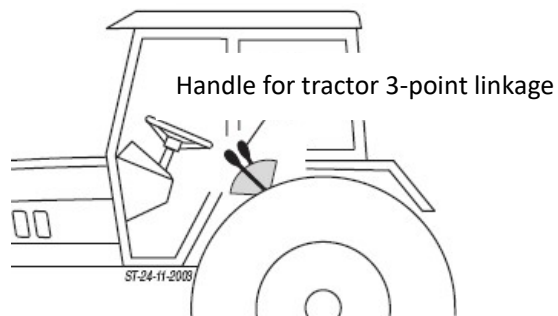
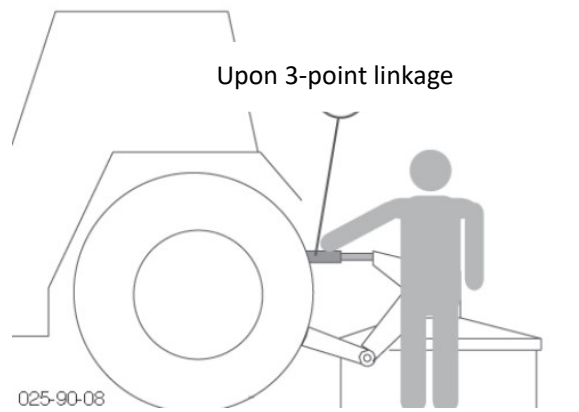
c. Adjust the towing arms in the same height, as shown below:



a. If the magnitude of the tractor towing arms is too narrow, adjust the left suspension pin inward as below



b. Adjust angle, to obtain the most appropriate cutting angle, adjust the upon 3-point linkage suspension to ensure the suitable cutting angle.



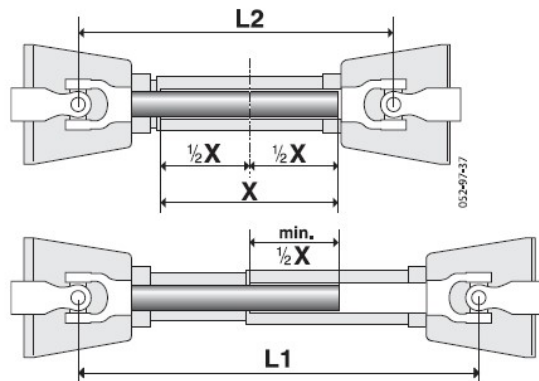
#### 4. PTO installation



**Danger !**

- ★ If you use no plastic cover to protect the coupling, it is possible to be involved in the occurrence of injuries. Do not use no plastic casing coupling.
- ★ If you use damaged couplings, injuries may occur entangled. Couplings if damaged, replace it immediately. Please check if coupling have damage before using.
- ★ When connected to the tractor and rotary hoe, as a third party do not pay attention, inadvertently let the power output shaft rotation, injuries may occur, after you cut off the power and stop the tractor engine PTO can be connected to the tractor.

(1) Confirm coupling length



The minimum overlap of inner and outer coupling tube 1 / 2X size should be 220mm, if the size less than 100mm, pls change the coupling

L1: The maximum length of connection to the tractor.

L2: The minimum length of the connection to the tractor

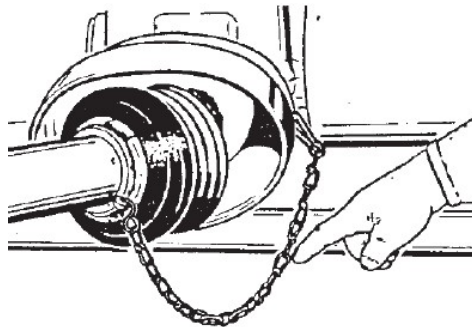
X: The overlap length.

(2) The connection of coupling

a. Coupling connect to the rotary hoe end

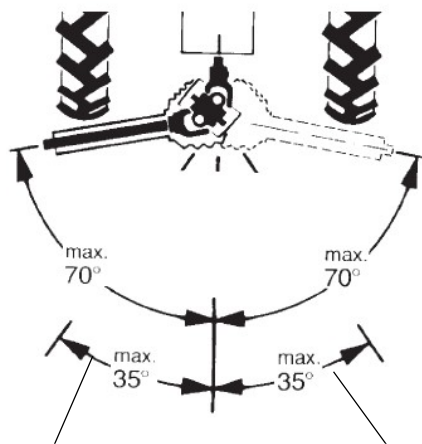
Coupling with keyway end connect to the rotary hoe input shaft until the lock pin is exposed to in the original location.

b. Fixed coupling plastic cover



After connection, fixed the chain to prevent the plastic cover rotation

Max rotation angle of coupling



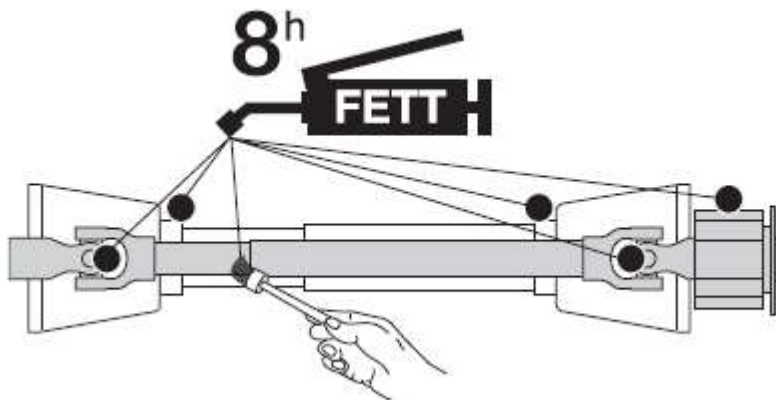
Max rotation angle in installation

Max rotation angle in working



Note! If the shaft beyond its maximum operating angle of rotation at work, there will be unexpected injury accident. Be sure to fix the tractor three-point suspension before use.

c. Coupling lubrication and maintenance



Proper grease lubrication and maintenance will greatly enhance the transmission efficiency of the tractor. After eight hours of continuous operation coupling, check above the pointed position should be oiling and lubrication.

→  
→. Check before operating

## 1. Check before operating

1. Check the various parts of the tractor

Please check the parts according to the manual

2. Check the connection site

(1) Fix connection pin of three-point suspension

(2) Check the stand foot retract

3. Check the coupling

(1) Whether the coupling ends effectively connected with the machine and tractor

(2) Security chain is valid is fixed.

(3) Plastic protective cover is complete.

(4) Security chain sag length is appropriate.

4. Rotary hoe machine inspection

(1) The cutter blade bolts are tightened.

(2) Whether the gearbox rotation is normal, the hydraulic oil in gearbox not exceed the volume of 1/3,if less need to add gear oil.

(3) The various parts of the bolts and nuts are tightened.

(4) The oil in each parts should be adequacy



## 2. Check during engine starting



**Danger !**

- ★ If start the engine when the PTO does not cut off the power ,it may cause harm to the people around. Always switch off the PTO and then start the engine.
- ★ When starting the engine, if it does not lower the mower is approaching, has no intention of falling or rising, people around may cause injury. Keep machine is approaching low before starting the engine.

### 1. Check the drive system

1. The new machine or machine long unused, you must first idling operation.

(1) Start the tractor engine and low speed transfer to PTO.

(2) The engine speed was adjusted to 1000 rev / min mode, idling about 5 minutes.

(3) if the above normal, the rotational speed was adjusted to 500-540 rev / min mode, idle for about 5 minutes.

If the drive system has a problem, you can refer tractor manual investigation.

### 2. Check the tractor hydraulic system

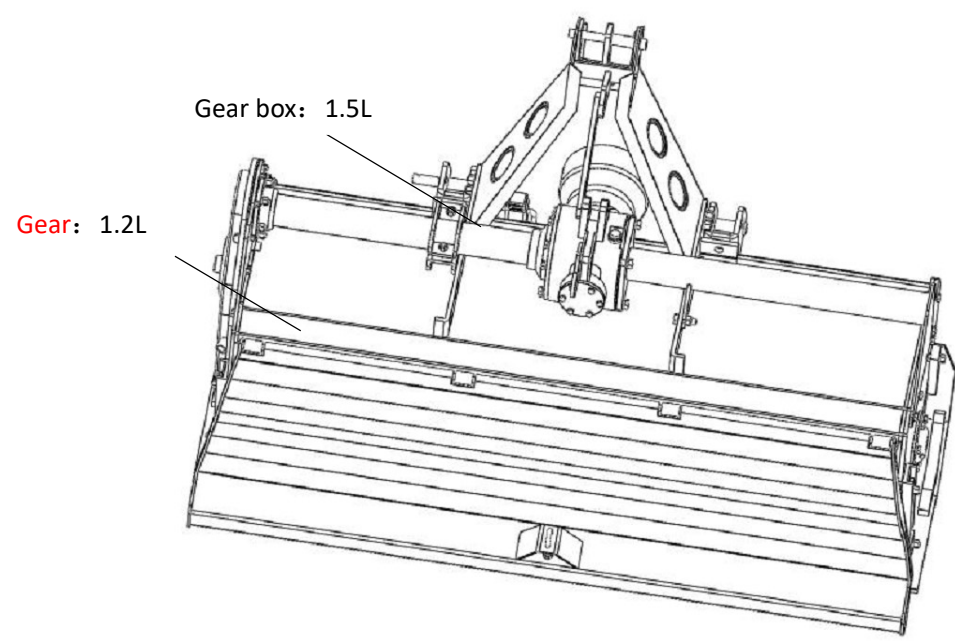
Operate tractor three-point suspension lift handle and hydraulic output handle, lifting and turning the machine to ensure no problems.

If you have questions, please contact the tractor dealer.

→  
→  
→ . Lubrication points summary

Total 3 points  1J

Blade axle: #2 grease



- ★ Fuel and smear with clean oil
- ★ Release the original gearbox oil when refueling. ◦
- ★ Designated parts have been oiling, please confirm before use.

1. Gearbox

Change the oil in gearbox after the new hoe put in use after 50 hours

Make routine inspection per 50 hours

Gear oil、 grease oil #

Lubrication points	Oil #	Change time
gearbox	SAE90 GL-5	300 hours/season
Blade axle nozzle	2# grease	Before use

## 四 . Operating essentials



### Danger!

- ★ Don't touch blade when in operation, injuries may occur.
- ★ In high-speed rotating operation, the stone will fly out, take close attention to yourself and the problem around.



### Warning

- ★ Exceed the PTO speed may cause injury accident, make sure to operate within the specified speed.
- ★ Keep low-speed operation in tilt ground.  
Note the front and surroundings while driving,

### 一、 Attentions during in use

1. When start job, lift the rotary tiller, make sure accelerate the blade axle to the rated speed, and then drop the tiller until the blade buried to the desired depth. Do not accelerate the shaft or drop the tiller after buried the blade, to avoid overloading the tractor or damaging the blades.
2. Within the job, should try to drive slowly, so that can guarantee the work quality, crushing clouds and reduce mechanical wear and tear, pay attention to whether there is any noise or metal percussion sounds, and observe the pulverizes, deep tillage situations, if there is any exception should immediately stop work and check, after the exclusion can continue operations
3. Stop work when turn a corner, raise the tiller until the blade off the ground, and reduce tractor throttle to avoid damage to the blade. When raise rotary tiller, make sure the universal -joint tile angle less than 30 degrees, it may cause noise if over the degrees and then premature wear or damage

4. When drive in reverse, crossing the ridge and transfer to other land, should raise the tiller to the highest position, and cut off the power to avoid any damages, if more to far away , make sure to use lock device fix the machine well.
5. After working, should maintenance the machine, remove dirt and debris, check the connection fastening case, each point lubricant filling oil, to prevent aggravating wear.

## 二、 Rotary hoe adjustment

1, Side adjustment, park the tractor with rotary hoe in flat ground, drop the rotary hoe until the blade 5cm from the ground, check the the tip for sides blades have the same distance to ground, in order to ensure the blade axle in straight level, tillage depth evenly.

2, Front and rear adjustment. When drop the rotary hoe to the required depth, observe universal joint angle and the rotary tiller angle is in a near horizontal position. If the angle is too large, adjust the rod, so that rotary hoe in the horizontal position.

3, lifting height adjustment. Rotary job, angle does not allow more than 10 degrees, When drive in reverse, the angles are not allowed more than 30 degrees. Pay special attention when lifting. For increased again rotary hoe, the universal joint power should be removed.

## 五. Operation finish

### 1. Seiri and check after operating

(1) Should organize and clean the rotary machine after the operation of rotary machines, remove the grass clippings, dirt during the job.

(2) After using a rotary tiller should be careful to check some of the parts can be damaged, if parts need to be replaced, should also pay attention to cut off all the power, turn off the tractor firstly.

(3) For the most easily damaged parts must be carefully checked immediately so as not to affect the next use. Particular pay attention to the blades, generally three methods of replacement: outward, inward turn, a mixed installation, to respond to different working environment, pay attention to distinguish; adjust blades and note blade axle speed

### 2. Separate from the tractor

(1) The PTO drive shaft ends will be removed from the tractor and rotary tiller end.

(2) Set flat rotary tiller, separate the tractor suspension with 3-point hitch from rotary tiller.

### 3. Storage

When machine will be placed for a long time, make sure to inspect parts , add oil , and make dust-proof work.

## 六. Inspection unit and adjustment

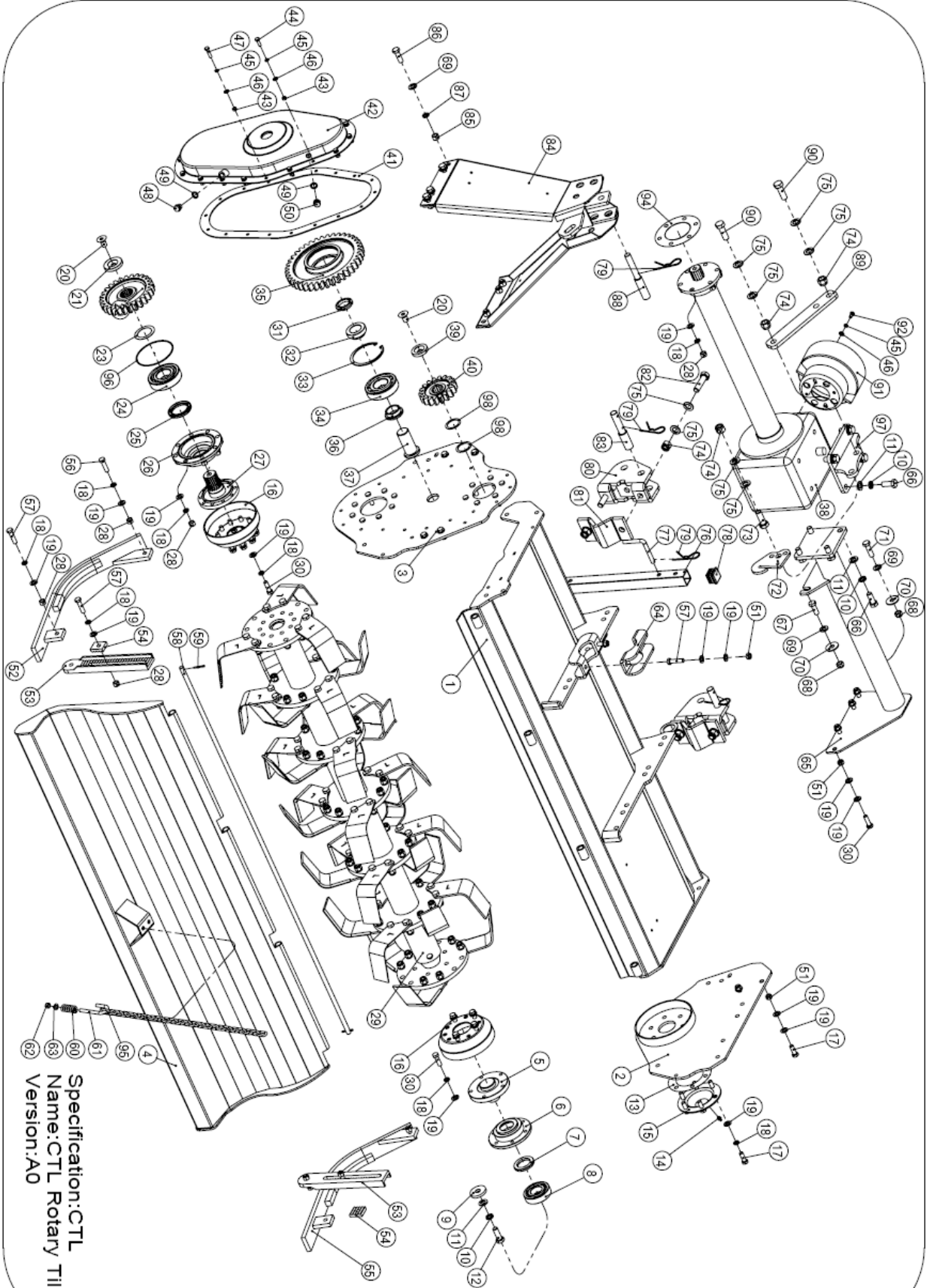
### 1. Inspection unit list

Inspection unit list	Inspection time
blade	Before/in/post the job
Cutter	Before/Post the job
Greasing	59 hours/times
Bolts or nuts loose	1 hour in the new use
Gear oil	50hours in the new use, and per 300hours or seasonal conduct after changing oil

## 七.Exception handling

Item	Exception	Reason	Exception handling
1	Abnormal sound or abnormal	1. Loose blade bolt 2. Loose cutter bolts 3.incorrect oil 4. Gear, bearing damage 5. Overload or soil hardness is high	Screw the bolts  Change Oil Replace damaged Parts Readjust tillage depth
2	uneven soil after tilling and sowing	Adjusting plate position was not coordinated well	Coordinate well the adjusting plate position
3	blade axle not work or rotate slowly	1. Parts installation errors 2.Excessive debris wrapped on the blade axle	Check the blade axle installation Clear debris
4	Curved blade	1.Not replace the deformed blade	Replace the blades in time
6	Coupling abnormal sound	1. No Oil 2. Overload angle is too large	Add lubrication Proper use according to Manual

# 八.Product parts list





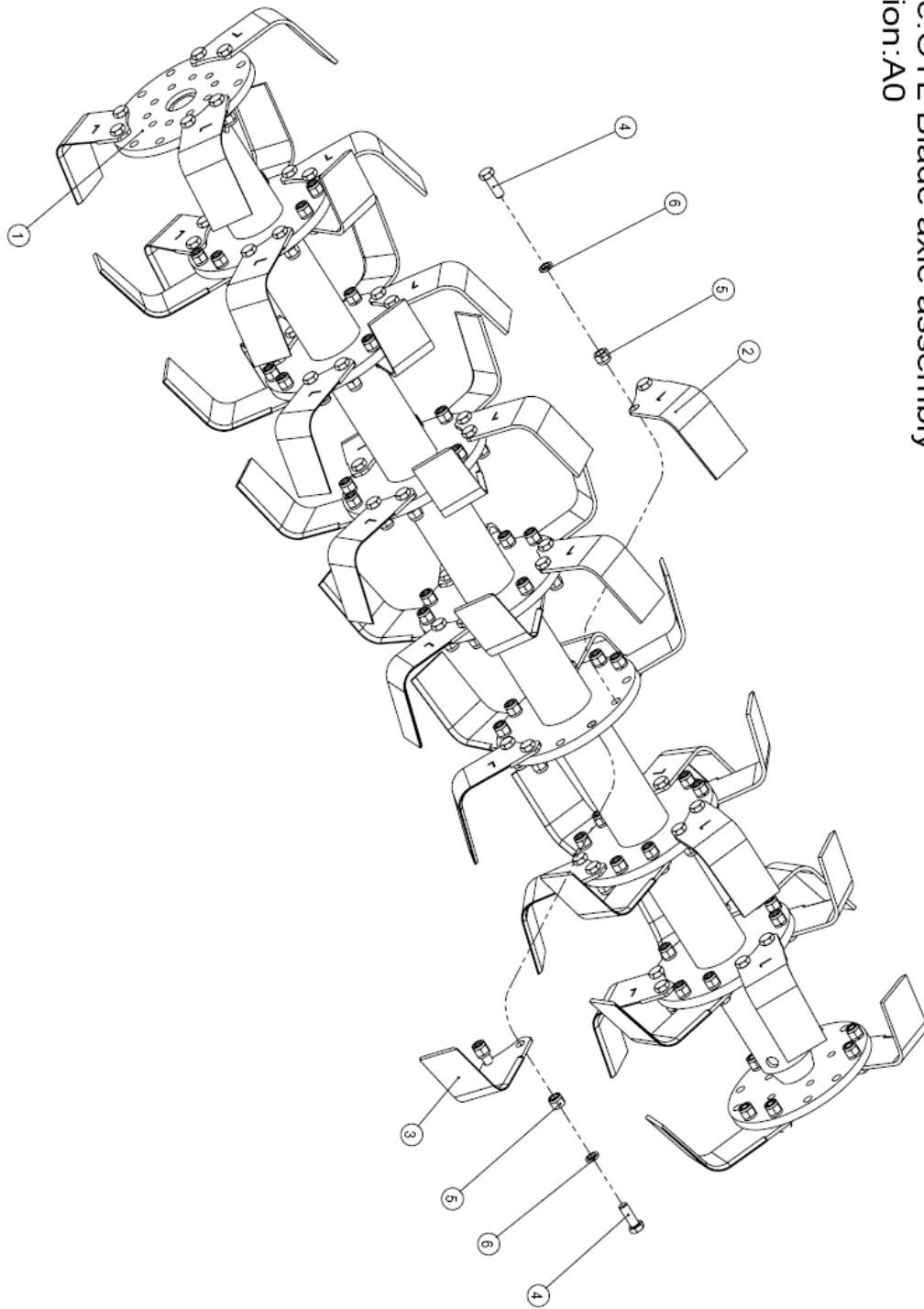
POS.	COD.	Specification	Description	160	210	150	185
1	2020004969	CTL160-012-A1	Panel hood	1	-	-	-
1	2020004971	CTL210-012-A1	Panel hood	-	1	-	-
1	2020004968	CTL150-012-A1	Panel hood	-	-	1	-
1	2020004970	CTL185-012-A1	Panel hood	-	-	-	1
2	2020004977	CTL160-021-A1	Side plate-R	1	1	1	1
3	2020004976	CTL160-020-A1	Side plate-L	1	1	1	1
4	2020001116	CTL160-013	Rear baffle plate	1	-	-	-
4	2020001118	CTL210-013	Rear baffle plate	-	1	-	-
4	2020001115	CTL150-013	Rear baffle plate	-	-	1	-
4	2020001117	CTL185-013	Rear baffle plate	-	-	-	1
5	3150200025	CTL160-111	Shaft head	1	1	1	1
6	3150100019	CTL160-126	Small bearing seat	1	1	1	1
7	3170100031	GB/T 13871.1-2007	TC Oil seal 45x70x8	1	1	1	1
8	3100100055	GB/T 276-94	Deep groove ball bearing 6308 D=90 d=40 B=23	1	1	1	1
9	2000000532	CTL160-132	Washer	1	1	1	1
10	3080500011	GB/T 93-1987	Spring washer 16	9	9	9	9
11	3080100009	GB/T 95-2002	Plain washer 16x3	9	9	9	9
12	3040100107	GB/T 5783-2000	Hexagon head bolt-Full thread M16x45	1	1	1	1
13	3170500032	CTL160-137	Paper pad	1	1	1	1
14	3170400004	JB/T 7940.1-1995	Grease nipple M10x1	1	1	1	1
15	3220400009	CTL160-123	Cover plate	1	1	1	1
16	3220400010	CTL160-121	Dust cover	2	2	2	2
17	3040100069	GB/T 5783-2000	Hexagon head bolt-Full thread M12x35	12	12	12	12
18	3080500009	GB/T 93-1987	Spring washer 12	41	41	41	41
19	3080100007	GB/T 95-2002	Plain washer 12x2.5	65	65	65	65
20	3080200073	GB/T 70.3-2000	HSCS-Countersunk M16x30	2	2	2	2
21	2000000528	CTL160-117	Gear washer	1	1	1	1
22	3160600032	CTL160-109	Bottom spur gear	1	1	1	1
23	2000000529	CTL160-118	Adjustable plate	1	1	1	1
24	3100100057	GB/T 276-94	Deep groove ball bearing 6310 D=110 d=50 B=27	1	1	1	1
25	3170100046	GB/T 13871.1-2007	TC Oil seal 55x80x8	1	1	1	1
26	3150100018	CTL160-130	Bearing seat	1	1	1	1
27	3150200024	CTL160-110	Spline shaft	1	1	1	1
28	3050100007	GB/T 41-2000	Nut M12	20	20	20	20
29	2090000472		CTL160 Blade axle assembly	1	-	-	-
29	2090000474		CTL210 Blade axle assembly	-	1	-	-
29	2090000471		CTL150 Blade axle assembly	-	-	1	-
29	2090000473		CTL185 Blade axle assembly	-	-	-	1

POS.	COD.	Specification	Description	160	210	150	185
30	3040100071	GB/T 5783-2000	Hexagon head bolt-Full thread M12×40	19	19	19	19
31	3050900015	GB/T 812-1988	Round nut M39×1 . 5	1	1	1	1
32	2010000409	CTL160-128	Bush	1	1	1	1
33	3080600058	GB 893.1-86	Circlip for hole-type A 110	1	1	1	1
34	3101400004	GB/T 283-94	Cylindrical roller bearing NUP310E D=110 d=50 B=27	1	1	1	1
35	3160600031	CTL160-108	Mid gear	1	1	1	1
36	2010000408	CTL160-127	Bush	1	1	1	1
37	2010000410	CTL160-129	Shaft for mid gear	1	1	1	1
38	3160100606	XHX85.186J.02W	Gearbox	1	-	-	-
38	3160100608	XHX85.186J.04W		-	1	-	-
38	3160100605	XHX85.186J.01W		-	-	1	-
38	3160100607	XHX85.186J.03W		-	-	-	1
39	2000000533	CTL160-141	Gear plate	1	1	1	1
40	3160600030	CTL160-107	Pinion gear	1	1	1	1
41	3170500030	CTL160-135	Cork pad	1	1	1	1
42	2020001104	CTL160-018	Gearbox cover	1	1	1	1
43	3050100004	GB/T 41-2000	Nut M8	18	18	18	18
44	3040100024	GB/T 5783-2000	Hexagon head bolt-Full thread M8×25	16	16	16	16
45	3080500007	GB/T 93-1987	Spring washer 8	20	20	20	20
46	3080100004	GB/T 95-2002	Plain washer 8×1.6	20	20	20	20
47	3040100026	GB/T 5783-2000	Hexagon head bolt-Full thread M8×35	2	2	2	2
48	3040500006	JBZQ 4770-2006	Outer hexagonal plug M16×1.5	1	1	1	1
49	3170300012	M16	Combined sealing gaskets M16	2	2	2	2
50	3170400013	M16*1.5 ( JYG-82 )	Breather plug	1	1	1	1
51	3050500007	GB/T 889.1-2000	Locknut M12	12	12	12	12
52	2020001109	CTL160-023	Skid plate-L	1	1	1	1
53	3220300032	CTL160-112	Adjustable plate	2	2	2	2
54	3220300033	CTL160-125	Small gear plate	2	2	2	2
55	2020001108	CTL160-022	Skid plate-R	1	1	1	1
56	3040100072	GB/T 5783-2000	Hexagon head bolt-Full thread M12×45	2	2	2	2
57	3040100073	GB/T 5783-2000	Hexagon head bolt-Full thread M12×50	6	6	6	6
58	2010000403	CTL160-119	Baffle plate shaft	1	-	-	-
58	2010000405	CTL210-119	Baffle plate shaft	-	1	-	-
58	2010000402	CTL150-119	Baffle plate shaft	-	-	1	-
58	2010000404	CTL185-119	Baffle plate shaft	-	-	-	1
59	3120100092	GB/T 91-2000	Split pin 4*28	2	2	2	2
60	3110200020	CTL160-115	Spring 5*16*55	1	1	1	1

POS.	COD.	Specification	Description	160	210	150	185
61	2010000401	CTL160-116	Spring hook	1	1	1	1
62	3050500004	GB/T 889.1-2000	Locknut M10	1	1	1	1
63	3080100006	GB/T 95-2002	Plain washer 10×2	1	1	1	1
64	2000004999	CTL160-142	Extension tube plate	1	1	1	1
65	2020004973	CTL160-015-A1版	Reinforcement tube	1	-	-	-
65	2020004975	CTL210-015-A1版	Reinforcement tube	-	1	-	-
65	2020004972	CTL150-015-A1版	Reinforcement tube	-	-	1	-
65	2020004974	CTL185-015-A1版	Reinforcement tube	-	-	-	1
66	3040100106	GB/T 5783-2000	Hexagon head bolt-Full thread M16×40	8	8	8	8
67	3040100092	GB/T 5783-2000	Hexagon head bolt-Full thread M14×40	1	1	1	1
68	3050500008	GB/T 889.1-2000	Locknut M14	2	2	2	2
69	3080100008	GB/T 95-2002	Plain washer 14×2.5	9	9	9	9
70	3080200011	GB/T 96.2-2002	Large plain washer 14×3	2	2	2	2
71	3040100095	GB/T 5783-2000	Hexagon head bolt-Full thread M14×50	1	1	1	1
72	2000000530	CTL160-120	Plate	1	1	1	1
73	3040100130	GB/T 5783-2000	Hexagon head bolt-Full thread M18×50	1	1	1	1
74	3050500010	GB/T 889.1-2000	Locknut M18	7	7	7	7
75	3080100010	GB/T 95-2002	Plain washer 18×3	14	14	14	14
76	2020001102	CTL160-016	Raker	1	1	1	1
77	2010000017	EF175-116	Raker pin	1	1	1	1
78	3210200004	BCR140-114	Square pipe plug 41×41	1	1	1	1
79	3120400008	3.5	R pin 3.5	4	4	4	4
80	2020001103	CTL160-017	Hitch bracket-lower	2	2	2	2
81	2000000526	CTL160-113	Lower hang plate	2	2	2	2
82	3040300097	GB/T 5782-2000	Hexagon head bolt M16×70	4	4	4	4
83	2010000407	CTL160-124	Hitch pin-lower	2	2	2	2
84	2020001105	CTL160-019	Hitch bracket	1	1	1	1
85	3050100009	GB/T 41-2000	Nut M14	7	7	7	7
86	3040100094	GB/T 5783-2000	Hexagon head bolt-Full thread M14×45	7	7	7	7
87	3080500010	GB/T 93-1987	Spring washer 14	7	7	7	7
88	2010000406	CTL160-122	Hitch pin-upper	1	1	1	1
89	2000000527	CTL160-114	Pulling plate	1	1	1	1
90	3040100132	GB/T 5783-2000	Hexagon head bolt-Full thread M18×55	2	2	2	2
91	3210300014	EF175-127	PTO guard	1	1	1	1
92	3040100021	GB/T 5783-2000	Hexagon head bolt-Full thread M8×16	2	2	2	2
93	3160200039	T5S-BS-07-07-1000	Drive shaft	1	1	1	1
94	3170500031	CTL160-136	Paper pad	1	1	1	1



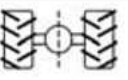




POS.	COD.	Specification	Description	160	210	150	185
95	3130100023	8*30*28 ( 24节 )	Chain ( 24 loops )	1	1	1	1
96	3170200037	内径125线径3	O-ring125x3	1	1	1	1
97	2020004978	CTL160-026	Connecting plate	1	1	1	1
98	2000004900	CTL160-143	Washer	2	2	2	2
99	2000004987	CTL160-144	washer	1	1	1	1

Specification:CTL  
Name:CTL Blade axle assembly  
Version:A0



POS.	COD.	Specification	Description	210	185	150	160
1	2020001122	CTL210-014	Blade axle	1	-	-	-
1	2020001121	CTL185-014	Blade axle	-	1	-	-
1	2020001119	CTL150-014	Blade axle	-	-	1	-
1	2020001120	CTL160-014	Blade axle	-	-	-	1
2	3220100037	LG180.116	Blade-L	24	21	18	18
3	3220100038	LG180.117	Blade-R	24	21	18	18
4	3040200024	GB/T 5786-2000	Hexagon head bolt-Full thread M14x1.5x40	96	84	72	72
5	3050600006	GB/T 889.2-2000	Locknut M14x1.5	96	84	72	72
6	3080500010	GB/T 93-1987	Spring washer 14	96	84	72	72

## 九. Product specification

MODELLO												
	cm.	inc.	cm.	inc.		HP	KW	cm.	inch.		N.	Kg.
CTL150	164	64.5	150	59	75-75	35/70	25/52	18	7	7	380	837
CTL160	174	68.5	160	63	80-80	35/70	25/52	18	7	7	390	860
CTL185	194	76.3	185	73	90-90	45/70	33/52	18	7	8	430	948
CTL210	224	88.1	210	82.6	105-105	45/70	33/52	18	7	9	480	1056

Note: All technical parameter are subject to change without notice.

## 十. Wearing parts list

Item	Part No.	Material Code	Name & Description	Qty	Located
1	LG180.116	11010200034	Blade-R	18/18/21/ 24	Blade mounted plate
2	LG180.117	11010200035	Blade-L	18/18/21/ 24	Blade mounted plate
3		11011500039	Deep groove ball bearing 6310	1	Blade axle
4		11011500037	Deep groove ball bearing 6308	1	Blade axle
5		11011200038	Oil seal 45*70*(8)	1	Blade axle
6		11011200048	Oil seal 55*80*(8)	1	Blade axle

