

# ***TAGRM***

## **M2600 COMPOST TURNER**

### **OPERATION MANUAL**



**NANNING TAGRM CO.,LTD.**

## **Introduction**

Dear customers:

Firstly, thank you very much for purchasing TAGRM compost turner. In order to make you correctly master and operate compost turner, familiar understanding of its maintenance, to make good operation of compost turner, please read the instruction carefully before using it.

Series M model compost turners are the specialized machines for composting fermentation in land. The series machines have advantages of little investment, low consumption, high output & instant effect, which is worth popularizing. Series M model compost turners are self-propelled; It is an ideal equipment for transforming agricultural waste, animal excrement, and organic biological waste to high quality of microbial organic fertilizer by using high modern technology.

The manual should be kept by the operator and read repeatedly.

- The contents of this operation manual include: correct operation, simple maintenance and daily inspection.
- Before operation, please read this manual carefully to ensure safe and effective handling of materials through proper driving and maintenance.
- Due to product improvements, the contents of this manual may differ from the actual situation as the machine development.
- When drivers sell equipment, please bring this manual with machine together.
- If you have any questions, please contact our after-sales department.

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## Warning signs

 <b>DANGER</b>	 <b>DANGER</b>
	 <p>危險區域 請勿靠近 DANGEROUS ZONE Keep Clear</p>
<p>ROLLING KEEP HANDS AWAY 機器运转中请注意手</p>	
 <b>DANGER</b>	<b>柴油</b> Diesel oil
	 <p>注入口 injection port</p>
<p>危險注意 禁止碰觸 DANGEROUS DO NOT TOUCH</p>	 <b>CAUTION</b>  <p>此處定期加黃油 ADD INFUSE GREASE REGULARLY</p>

## **I.Safety Caution**

This chapter mainly introduces the basic safety regulations and warnings of the equipment in normal operate.

### **1.The main purpose of compost machine**

The main purpose of compost turner is to mix, pulverize, and increase the oxygen of the materials in pile; in addition, if the turner is equipped with a bacteria sprinkling device, it can also spray the bacteria.

### **2.Operation place and working site of compost turner**

#### (1) Ground condition

The operation place of compost turner should be flat and solid concrete floor with good ventilation.

#### (2) Climatic conditions

The compost turner should be carried out in a covered factory building, and the working environment temperature should be between 8-40 °C.

#### (3) Measures to cope with cold and hot weather

Oil: oil adapted to ambient temperature;

Coolant: use coolant adapted to ambient temperature

### **3.Safety caution before operate**

(1) Only those who are familiar with the operation manual are allowed to operate compost turner.

(2) Keep the cab and base plate clean.

#### **! Note**

① ) The base plate and cab should be kept clean at all times in order to find out hydraulic system failures in time.

② Regular maintenance

③ Strictly prohibited to be used as a transport machine

④ Site transfer request carry transport

⑤ Strictly forbidden to climb road

#### **4.Safety caution during operation**

##### **(1) Precautions before start machine**

###### **! Attention**

- The shift lever is in neutral position
- Roller clutch to the "Disengaging" position
- Depress the clutch pedal or brake pedal
- Adjust the seat for hand and foot manipulation
- Make sure no body is around

##### **(2) Violation operation are prohibited**

###### **! Attention**

- Put the throttle at idle position before starting
- The throttle is in idle position when the roller clutch engaging
- The roller is at the lowest position when the roller clutch engaging
- After roller clutch engaging, slowly raise the throttle

###### **➡ Attention**

- Do not engage the roller clutch at non-idle speed

## II. Work range size

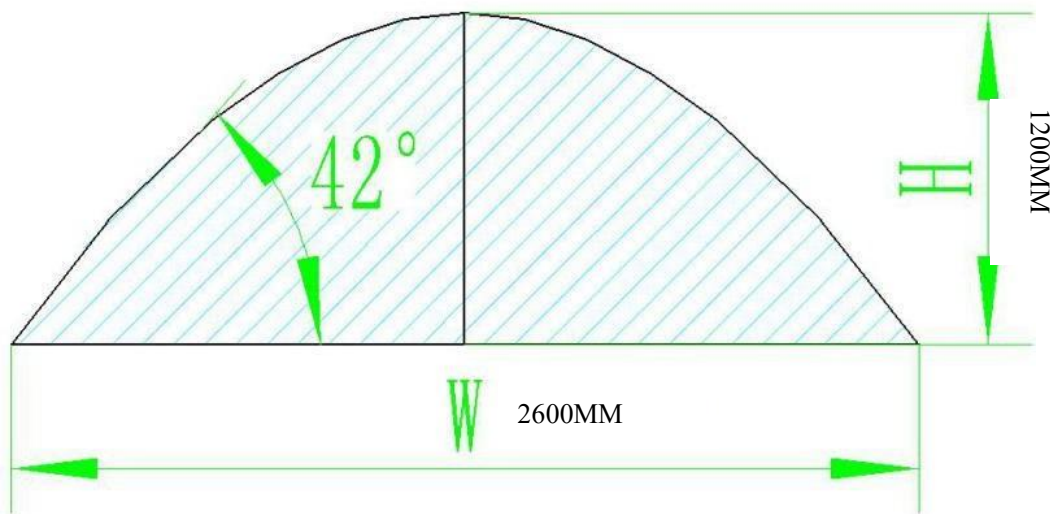
Working range compost pile:

W : width of pile

H : height of pile

42 ° refers to the natural pile angle of the material; the pile section is natural stacking (approximately parabolic), and it is not artificially trimmed.

M2600COMPOST TURNER WORKING PILE SIZE



## III. Parameters

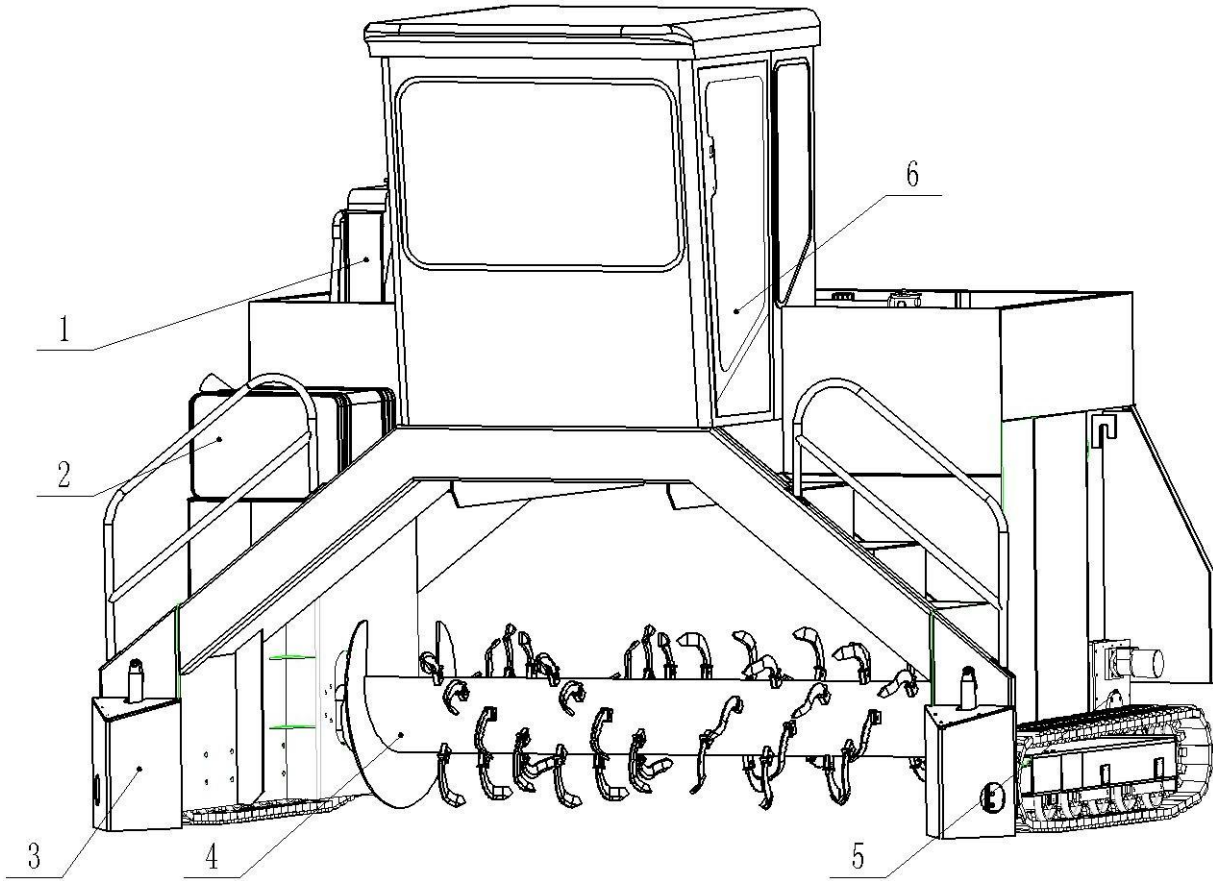
M2600 compost turner:

Model	M2600		Ground clearance	130mm	
Rate Power	68KW		Ground pressure	0.46Kg/cm <sup>2</sup>	
Rate speed	2200r/min		Working width	2600mm	Max.
Fuel consumption	<235g/KW-h		Working height	1200mm	Max.
Battery	24V	2x12V	Pile shape	Triangle	45°
fuel capacity	40L		Forward speed	L: 0-8m/min H: 0-24m/min	
Track tread	2830mm	W2	Rear speed	L: 0-8m/min H:0-24m/min	
Feed port width	2600mm	W3	Turning radius	1875mm	min
Oversize	3400x2330x2850mm	WlxLlxHl	Drive mode	Hydraulic	
Weight	2600kg	Without fuel	Working capacity	720m <sup>3</sup> /h	Max.
Diameter of roller	497mm	With knife			



#### IV.How To Operate compost turner

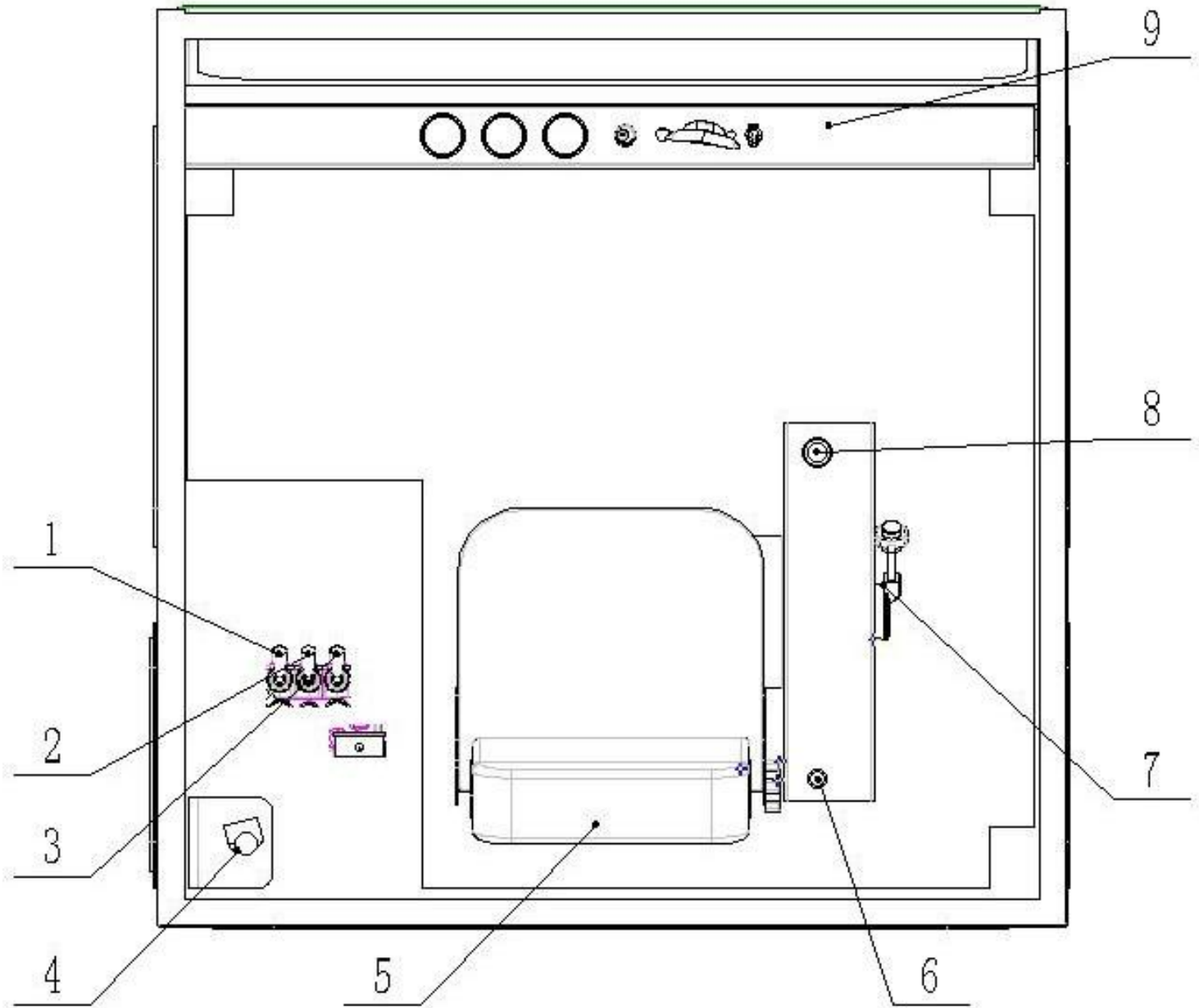
##### 1. Overall structure and main working parts



1	ENGINE	4	ROLLER
2	FUEL TANK	5	WALKING REDUCER
3	SHOVEL	6	CABIN



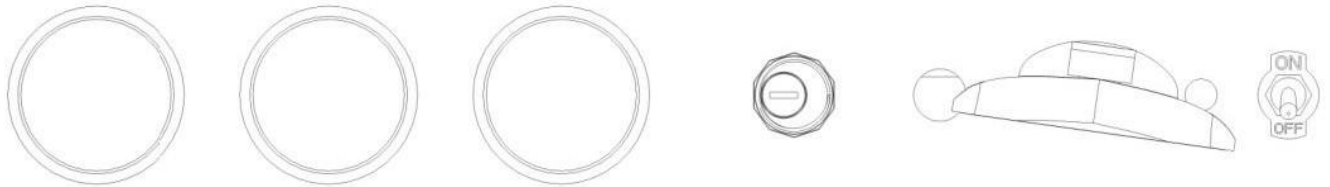
## 2. Cab layout



1	Roller lift lever	6	Flame out switch
2	Shovel lift lever	7	Hand throttle
3	High speed	8	Walking control handle
4	Roller clutch	9	Instrument panel
5	Seat	10	

### 3. Instrument panel

OIL PRESSURE GAUGE    WATER TEMP    TACHOMETER    STARTING SWITCH    FUEL LEVEL INDICATOR    LAMP SWITCH



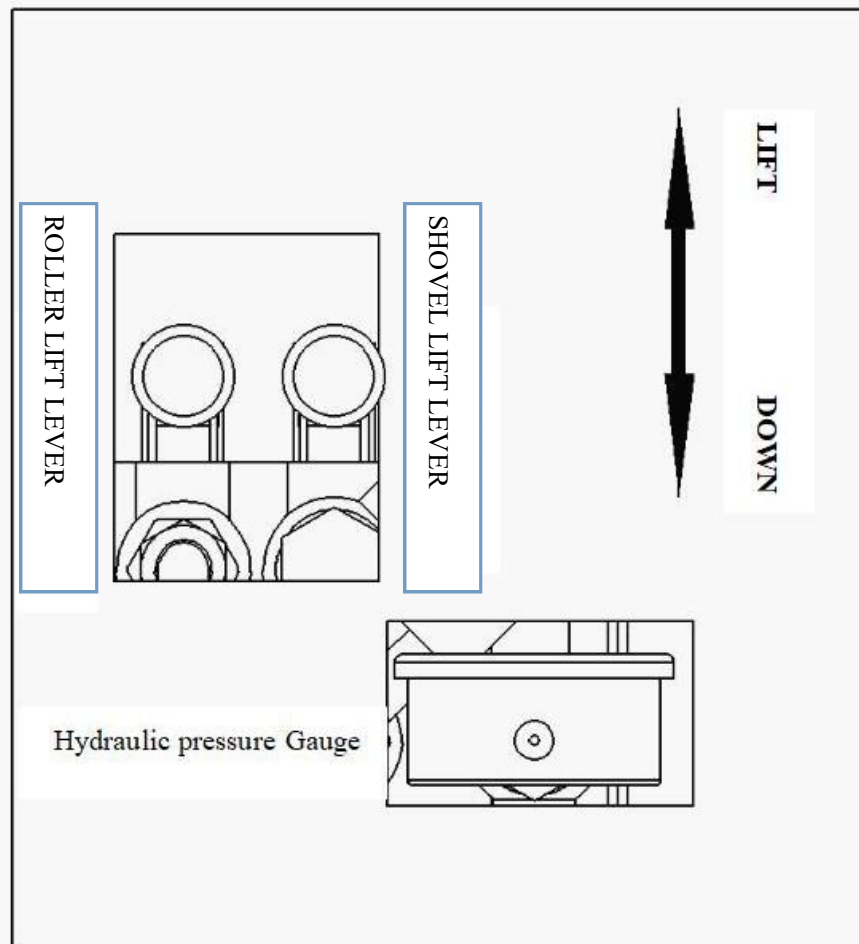
#### STARTING SWITCH:

- (1) OFF    The key is inserted or pulled out, at this position all vehicles are powered off
- (2) ON    When in this position, the circuit is closed and the key is in this position after the engine started
- (3) STA    Turn the key to this position to start the motor
- (4) Press the icon button to activate the corresponding function

#### Notes

- After finish working, the key should in the OFF position or removed, otherwise it will cause battery power leakage.
- Do not turn the switch to "STA" when the engine is running, it may damage for the starter motor.
- Each starting time should not exceed 15 seconds, wait about 20 seconds before starting again.

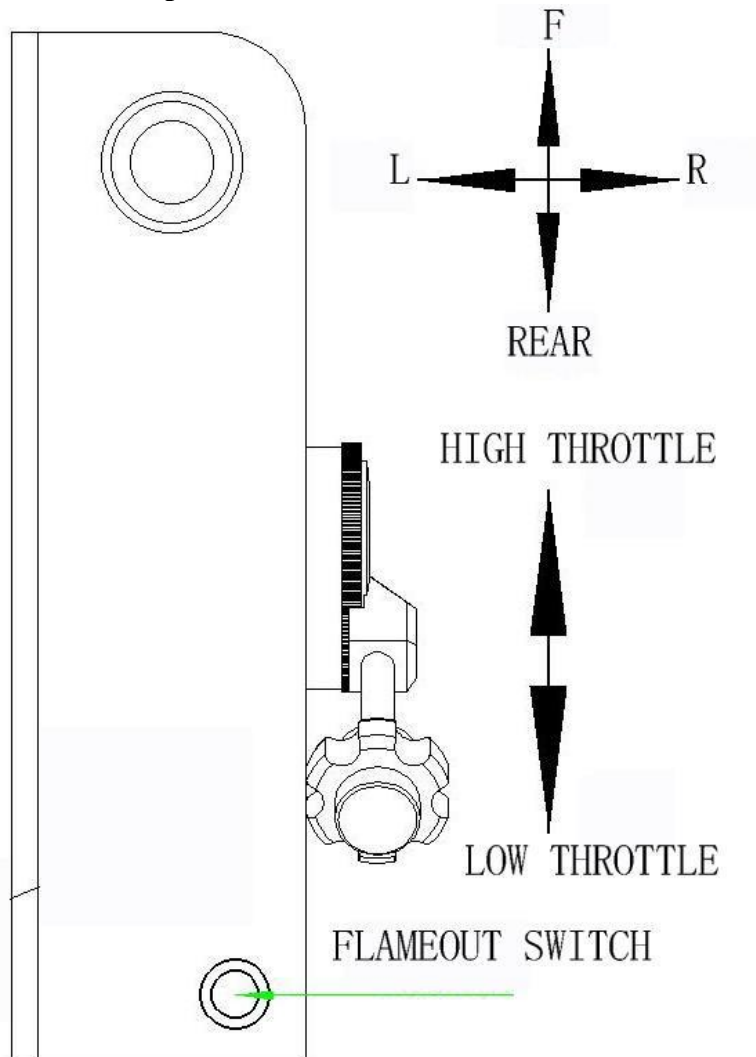
#### 4. Roller and shovel lift lever



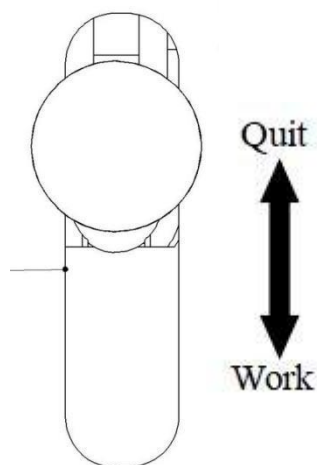
##### Notes

- When the roller is lifting or downing , the Roller switch must be disconnect.
- When the Roller switch press down, the roller must be at the lowest position and the throttle at idle position
- When the roller lifted to specified position,the pressure gauge pointer suddenly increased
- Pressure gauge normally range 5-8MPa

## 5. Control panel



## 6. Roller clutch



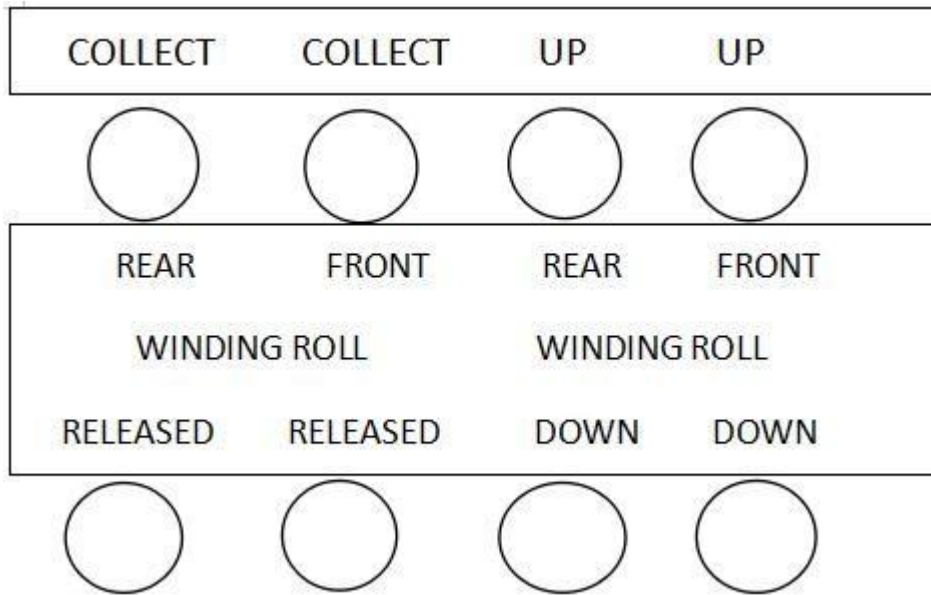
**QUIT** Lever at this position, roller power is disconnected  
**WORK** Lever at this position, roller is working

### NOTE:

When operating the lever, the engine should be in idling condition.

When operating the lever, the roller should be down to bottom.

## 7. Wind cover control system(Optional)



## V. Driving and operation

In order to maintain good performance, safe use and economic operation of your equipment, here are some correct driving operation precautions.

### 1. Operate new machine

The service life of your equipment depends on the right operation of the new machine. During the first 200 hours of operation, please pay attention to the following items.

#### ! Notes

- **Regardless season, the engine should be preheating start before operation.**
- **Maintenance do as request**
- **Don't violation operation or unreasonable operate.**
- **Add lubricating oil, grease and change oil in time.**
- **Don't let the engine run in super high speed.**

### 2. Material accumulation during work beginning

During work beginning, the materials should not be stacked too high or too wide, in case cause damage the engine when the engine is not completed.

#### ! Notes

- **Stacked piles are naturally piled, and the pile angle is generally 42 °. It is strictly forbidden to pile up into rectangles.**

### **3.Before and after engine start**

( 1 ) Before start the engine, confirm the roller button is disconnected, the walking control handle is in the middle position(neutral), the hand throttle is idle, and there is no other person around the equipment.

( 2 ) Turn the key to "STA", start the engine, and release the key after starting.

( 3 ) Increase the throttle properly for 5 minutes, and check the engine rotation (sound or gear) during this process.

( 4 ) After the engine is fully warmed up, operate all working part to check their working conditions.

### **4.Operation**

4.1 First lift the roller and sweeping shovel to the top position and drive the compost turner in front of pile about 1m.

4.2 Drop down the roller and sweeping shovel to the bottom position and adjusted throttle of engine to idle speed.

4.3 Press the roller working button to make the roller start working

4.4 Push the walking control handle forward, and gradually increase the throttle to 3/4 position to mix working.

4.5 During working, adjust the working speed and throttle according to the size of the pile to avoid overload and flame out.

4.6 When working about 1m at the end of the pile,reduce the throttle, and then adjust to idle speed after finish, disconnect the power of the roller; lift the roller and sweeping shovel to the top position after 5s.

4.7 Repeat the above steps to continue working next pile.

### **5.Machine store**

5.1 Before storing, clean and check as following procedures:

5.1.1 According to condition of machine, use a scraper and water to remove the materials adhere to the machine body, and use a cloth and water to remove the attached oil.

5.1.2 When clean the machine body, check the overall status of the equipment, especially check the transmission parts and rotating parts, whether there are sundries in caterpillar track, and whether the roller teeth are missing or broken.

5.1.3 Fill the fuel tank with the specified fuel.

5.1.4 Check for oil leakage.

5.1.5 Add grease if needed.

5.1.6 Check whether the nuts of the crawler and the bolts of the roller mixing knife

are loose.

5.1.7 Check the transmission chain and adjust the chain tightness.

5.1.8 In winter or cold season, drain the cooling water or replace the antifreeze.

### **Warming**

**●As long as it is found that the equipment needs to be repaired, fails or has unsafe factors, it should report the situation to the management personnel and stop using it until it returns to a safe state.**

#### 5.2 Daily storage

5.2.1 Park at the flat ground.

5.2.2 Confirm all buttons in a disconnected state

5.2.3 The key switch is in the "OFF" position to turn off the engine

5.2.4 Remove the key and store it in a safe place.

#### 5.3 Long-term storage

5.3.1 Add rainproof facilities on the basis of daily storage.

5.3.2 The battery is charged once time per month.

5.3.3 The equipment should be start once time at least per week.

## **VI.Regular inspection and maintenance**

### **1.Checking contents**

#### 1.1 Inspection of hydraulic oil, fuel oil and water leakage

Check the hydraulic pipe joints, engine, water tank and drive system for oil or water leaks, touch or visually check with your hands.

#### 1.2 Crawler check

Check the tightness of the crawler, too loose or too strong will reduce the service life of the crawler. Generally, the upper part of the crawler should droop 3-5cm.

#### 1.3 Battery and circuit inspection

Check whether the terminal post of the battery is firm and the wires are in good condition.

#### 1.4 Inspection of Engine oil level and water level



Check that the engine tank coolant is full, and add it in time if necessary.

The engine vernier ruler is located on the left side of the engine body. Pull out the vernier ruler, wipe the ruler head again, insert and pull it out again, and check the oil level is between the two scales or not.

#### 1.5 Inspection of tightening degree of fan belt

Press the middle of the belt. Generally, adults can press down 0.5-1cm, and adjust the tightness if necessary.

#### 1.6 Inspection of Hydraulic oil level

Check the hydraulic oil tank, with a liquid level gauge, generally requires the liquid level not less than 2/3 scale.

#### 1.7 Transmission shaft inspection

Check the fixing bolts of the transmission shaft and tighten them in time; regularly add grease to the expansion joint and the cross shaft.

#### 1.8 Bearing inspection

Check whether the walking parts and roller bearings are out, if there is timely repair, Regularly add grease and check whether the bearing clearance is too large.

#### 1.9 Radiator tank of clutch inspection

Check whether cooling liquid is enough, timely supplement.

#### 1.10 Transmission chain of roller inspection

Press the middle of the chain. Generally, adults can press down 0.5-1cm, and adjust the tightness if necessary.

## **2.Maintenance items and schedule**

The timetable is set based on standard working hours and operating conditions. If works under tough conditions, please maintenance in advance according machine condition (“●” means replacement)

## 2.1 Maintenance content list

Check Items	Checking contents	Tool	Day (8h)	Month (200h)	Season (600h)	Half Year (1200h)	Year (2400h)
Engine	1. Visual inspection 2. Engine 3. Running condition		○	○	○	○	○
	Sound		○	○	○	○	○
	Exhaust color		○	○	○	○	○
	Clean or replace the air filter			○	○	●	●
Lubrication system	Whether the engine leaks oil		○	○	○	○	○
	Check oil quantity, cleanliness		○	○	○	○	○
	Replace engine oil			●	●	●	●
	Replace the engine oil filter			●	●	●	●
Fuel System	Visually check the oil pipe, oil pump, and oil tank for leaks		○	○	○	○	○
	Check the fuel filter Whether blockage				○	○	○
	Change Fuel Filter				●	●	●
	Fuel tank drainage				○	○	○
	Cleaning the fuel tank					○	○
	Check fuel volume		○	○	○	○	○
cooling system	Coolant volume		○	○	○	○	○
	Leak status		○	○	○	○	○
	Aging condition of rubber hose				○	○	○
	Performance and installation of water tank cover			○	○	○	○
	Clean & replace the coolant				●	●	●
	Check fan belt tension and damage		○	○	○	○	○

## 2.2 Traveling system

Check Items	Checking contents	Tool	Day (8h)	Month (200h)	Season (600h)	Half Year (1200h)	Year (2400h)
Mechanical gearbox	Whether the operation of the gear lever is loose			○	○	○	○
	Check whether leaks		○	○	○	○	○
	Replace oil					●	●
Wheel	Inflation pressure	barometer	○	○	○	○	○
	Crack or damage		○	○	○	○	○
	Abnormal wear and tear		○	○	○	○	○
	Walking wheel bearing			○	○	○	○
	Damage situation of rim, rim spoke and roulette		○	○	○	○	○
Crawler	Check the tightness of the crawler		○	○	○	○	○
	Check nut of guiding wheels condition		○	○	○	○	○
	Check track driving wheel system			○	○	○	○
	Abnormal wear and tear		○	○	○	○	○

### 2.3 Mix roller system

Check Items	Checking contents	Tool	Day (8h)	Month (200h)	Season (600h)	Half Year (1200h)	Year (2400h)
Roller and transmission	Mixing knife and fixing bolt	Torque wrench	○	○	○	○	●
	Roller bearing		○	○	○	○	○
	Drive chain / sprocket		○	○	○	○	●
	Roller power switch clutch		○	○	○	○	●
Reducer	Check for leaks		○	○	○	○	○
	Check oil quantity or change oil				○	○	●
	Transmission gear lubrication			○	○	○	○

### 2.4 Hydraulic system

Check Items	Checking contents	Tool	Day (8h)	Month (200h)	Season (600h)	Half Year (1200h)	Year (2400h)
Oil pump	Check for leaks		○	○	○	○	○
	Operating temperature	thermo meter	○	○	○	○	○
	Coupler			○	○	○	○
Control valve	Check for leaks		○	○	○	○	○
	Measuring pressure	Oil pressure gauge				○	○
Hydro cylinder	Check for leaks		○	○	○	○	○
	Piston rod deformation / smoothness and pressure retention			○	○	○	○
Walking motor	Check for leaks		○	○	○	○	○
	Check for wear				○	○	○

## 2.5 Safety devices and accessories

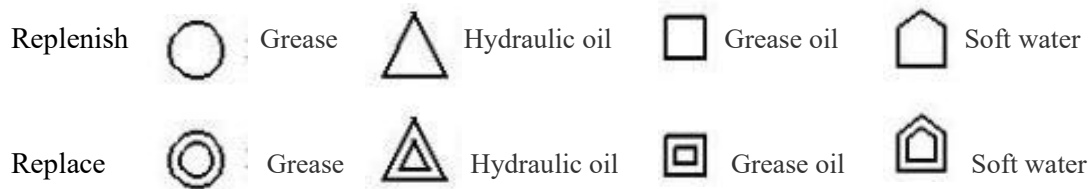
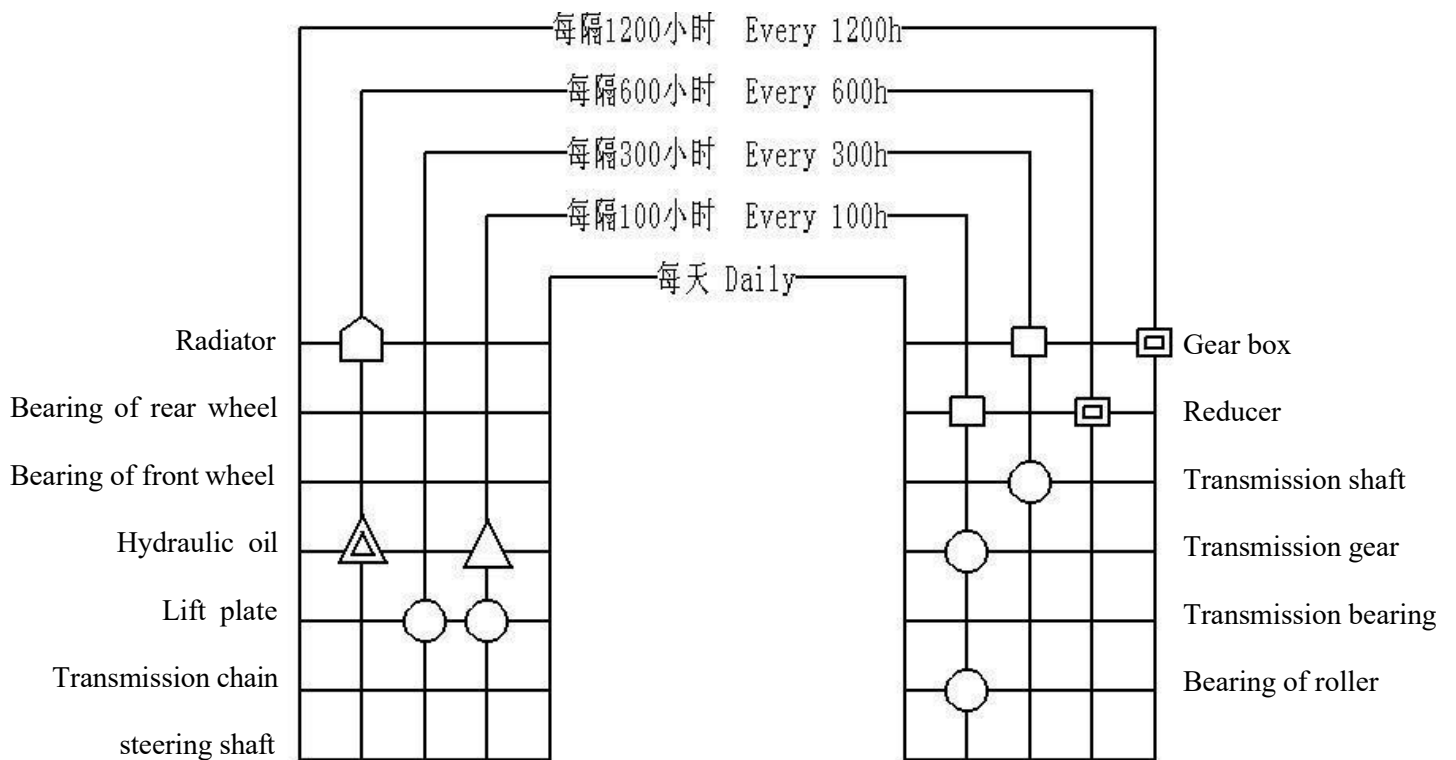
Check Items	Checking contents	Tool	Day (8h)	Month (200h)	Season (600h)	Half Year (1200h)	Year (2400h)
Guard and protect cover	Whether the installation is reliable		○				
Seat	Check if the bolt is loose or damaged					○	○
Machine body	Whether the frame is damaged or cracked						○
	Comprehensive inspection						○
Add grease or change oil	Check all lubrication parts after cleaning	oil gun		○	○	○	○
	Check the oil in the tank						○

## VII.Lubrication

### 1.Lubrication System Diagram

润滑系统提示

#### LUBRICATION SYSTEM DIAGRAM



## 2.Oil standard guide

Name	Brand, code and operating temperature				
<b>Diesel</b>	Diesel Brand	0#	-10#	-20#	-35#
	Temperature (°C)	≥4	≥-5	≥-5~-14	≥-14~-29
<b>Diesel oil</b>	SAE Viscosity Grade	5W/30	10W/30	15W/40	20W/50
	Temperature (°C)	-30~+30	-25~+30	-20~+40	-15~+50
<b>Hydraulic oil</b>	SAE Viscosity Grade	L-HM32 Anti-wear hydraulic oil		L-HM46 Anti-wear hydraulic oil	
	Temperature (°C)	25≥Temperature≥-5		40≥Temperature≥25	
<b>Grease</b>					
<b>Heavy-duty vehicle gear oil</b>	SAE Viscosity Grade	85W/90GL-5		80W/90GL-5	
	Temperature (°C)	-15~+49		-25~+49	
<b>Antifreeze</b>	Code	FD-1	FD-2	FD-2A	FD-3
	Temperature (°C)	≥-25	≥-35	≥-45	≥-50

## VIII. Attachment

- 1, Quality Certificate
- 2, operation manual
- 3, Attachment tools



## Contact Us

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## Warranty Card

Model and specification 产品型号		Mating power 配套动力	
Factory No. 工厂号码		Purchasing date 采购日期	
Sale depart. 销售公司	Name 名称		
	Address: 地址		
	Telephone 电话		Post code 邮编
Maintenance record 维修记录			