

## Safety Instruction

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#### 1. Be sure to read this manual carefully before installation

Operators and maintenance personnel must read and be familiar with the manual carefully before installing, operating and maintaining the machine. Incorrect installation, operation and maintenance of the machine may lead to serious injury or death.

#### 2. Read and understand all safety statements

- ※ Read and be familiar with all safety signs and statements before work;
- ※ Comply with all occupational safety regulations, local laws and regulations and other professional guidelines during operation;
- ※ Good working habits should be followed during assembly, maintenance and operation.

#### 3. Familiar with machine and tools

- ※ Be familiar with and understand the performance and parameters of the machine before operation;
- ※ Before operation, the machine and tools should be carefully checked, and the operation can only be carried out when all devices are debugged normally.
- ※ Ensure that the machine is firmly installed, replace the parts that may be damaged, and ensure that all hydraulic joints and hydraulic devices are firmly connected;
- ※ Ensure that all safety signs are posted in the right place and the fonts are

clear.

#### 4. Wear protective clothing

During operation, wear safety clothes and protective glasses or masks to prevent spatter from causing harm to human body.

#### 5. Do not modify the equipment in any form

#### 6. Safe maintenance of machines

※ During maintenance, the equipment must be lowered to the level ground, away from traffic and other dangerous places; If you need to raise the maintenance of machinery and tools, you must use a solid object can be used in advance cushion stability;

※ During maintenance, special tools should be used according to the operating procedures. If a special tool is not available, a similar tool may be used, but a special tool must be used whenever a common tool can cause damage of one kind or another to the part concerned.

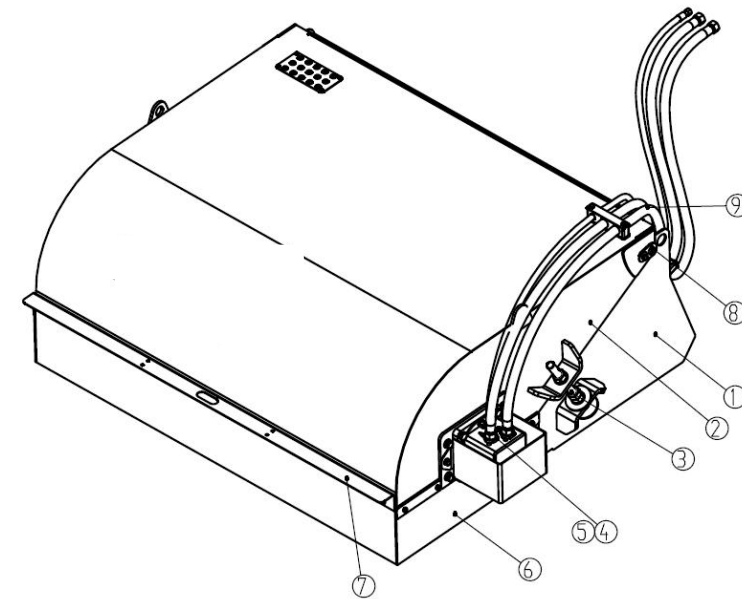
#### 7. Safe operation of the machine

※ Do not operate under the condition of drunk or drug reaction;

※ If anyone enters the dangerous area, stop the operation of the machine and tools immediately. When stop the operation, please put the machine and tools flat on the ground.

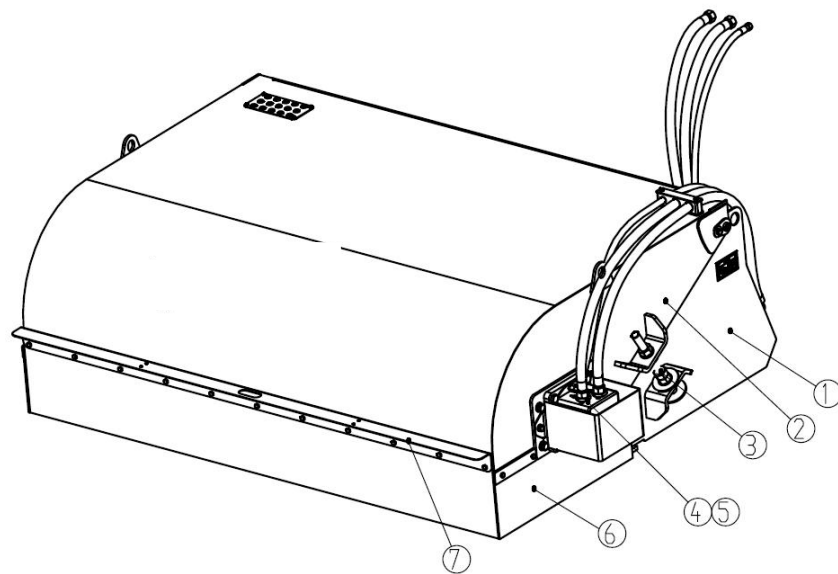
### Products Instruction.

#### 1、Description of product structure:



020260

Speces	Model	020260	020272	020284
Overall Length (mm)		1450	1450	1450
Overall Width (mm)		1817	2129	2466
Overall Height (mm)		680	680	680
Overall Weight (kg)		430	470	510
Bucket Capacity (m <sup>3</sup> )		0.39	0.46	0.56
Working width (mm)		1530	1830	2130
Brush Diameter (Φ)		660	660	660
Working pressure(Mpa)		14-21	14-21	14-21
Working Flow (L/min)		60-80	60-80	75-90



020272/020284

### P 2.1 Product structure diagram

- ①—bottom bucket      ②—Cover      ③—adjuster bolt  
 ④— spindle assembly      ⑤—Hydraulic motor      ⑥—Dustproof rubber sheet  
 ⑦—Protective beam      ⑧—connection pin      ⑨—hydraulic tubes

### 2、 Technical performance index

#### T 2.1 Product technical parameter table

### 3、 Main Features

This Sweeper attachment can be installed on skid steer loaders, small loaders and other machines, it can clean dirt and waste on the road surface, quickly clean parking lots, sidewalks, docks, warehouses and ports and other sites. It can collect garbage in the collection hopper, then dumping to the specified location. It can easily solve the road cleaning problem before paving, efficient completion of cleaning operations, construction effect is good and high efficiency.

1、 Adopt hydraulic drive, it can realize positive and negative direction cleaning, bucket bottom with replaceable wear-resisting plate to extend the service life of the bucket.

2、 The brush adopts a new type of 6/4 mixed brush, of which: plastic wire for high elastic, wear-resistant, diamond shaped Polyethylene propylene engineering material, steel wire using high elastic, wear-resistant material

32SiMnTi, greatly improving the service life of the brush and cleaning effect.

3、 The motor end is designed with anti-winding device to prevent wire from winding the motor and reduce the service life of the motor.

4、 Unique anti-overturning design can effectively prevent overturning of the upper cover which will damage the cab.

5、 Optional edge brushes can be used for roadside, wall and gutter cleaning

6、 High pressure atomization dust removal system can be selected to achieve the effect of dust removal and dust suppression.

## Operation Instruction

**Before using this product, please read the relevant content of "safety instructions" carefully.**

### Before operation:

1, operate in a safe zone. Check all controls on host machine and tire pressure are normal.

2. When sweeper is connected to the power source, the oil circuit of host machine should be kept disconnected.

3. Ensure that the sweeper is firmly connected with the host machine.

4. Ensure that all hydraulic joints and hydraulic devices are firmly connected.

6. Replace damaged parts or tubes.

7. Determine the pressure of power source. If the pressure fails to meet the requirements, the working performance of the sweeper will be affected

8. Remove all items that may be damaged by flying debris from the sweeping area.

9. Always wear appropriate clothing, such as a long-sleeved shirt with buttoned cuffs; Wear protective goggles or face masks and dust masks.

### During Operation:

1. Adhere to all government regulations, local laws and regulations during operation.

2. For any reason, before leaving operating area, the operator must lower sweeper to the ground, stop the engine, start the parking brake and pull out the key.

3, the non-operator away from the sweeper to prevent injury.

4. When operating sweeper on rough terrain, the speed should be reduced to avoid the jump of sweeper and reduce the damage to sweeper.

5. Don't be close to people, buildings, vehicles or other easily damaged items during.

6. Adjust sweeper speed and the host machine speed according to the actual road conditions.

### Operation Sequence:

1. After starting host machine, connect the quick change mechanism on host machine with sweeper hitch bracket, and pull the rocker to pin them down.

2. Connect hydraulic quick couplers on host machine and sweeper, and

ensure that quick couplers are connected correctly.

**★Note:**

**In order to improve service life of hydraulic motor, the motor drain pipe should be directly returned to host machine oil tank as far as possible.**

**3、 Brush roll adjustment**

Keeping appropriate amount of brush compression can make the cleaning effect better, the adjustment method can refer to the following steps

① Put sweeper on flat road which needs to work.

(2) Turn the brush roller at a low speed,down sweeper at minimum,and operate it about 1 minute.

(3) Raise sweeper and reverse host machine, start the brake, close the power source, check the cleaning trace, cleaning width should be about 150mm, the length is equivalent to the length of brush roller.

(4) If the cleaning width is not near the reference value, it can be adjusted by the screw at both ends of sweeper to adjust the compaction amount of the brush so as to change the sweeping width.

**★Note:**

**To improve the service life of brushes, adjust the bolts on both sides as evenly as possible**

4、 Start sweeper to make the brush roll start rotating. Lower sweeper to the ground, make bottom bucket cutting blade onto the ground, the bottom bucket back end is slightly lifted off ground, then host machine sweeps as it moves. In order to get a better cleaning effect, please try to reduce the driving speed.

**P 3.1 Sweeping diagram**

5、 In order to reduce brush wear it should be reduces down action on sweeper.

Check brush wearing after using for a period, and the brush compaction amount should be adjusted properly by adjusting the bolt to ensure better cleaning effect.

6. After cleaning, stop roller brush rotating, lift sweeper a certain distance from ground, transport sweeper to the unloading place. The bucket can be slightly closed to prevent the material in the bottom bucket from falling out during transportation. During transportation, it is forbidden to lift sweeper too high off the ground to prevent accidents.

7. After transporting to unloading area, lift sweeper to tip the bucket and make the material pour out. When unloading, it is strictly prohibited to knock bucket, brute force operation.

8. Low speed and moderate driving speed of brush roller can better remove sand and gravel on hard ground.If driving too fast will raise dust, affect operator's sight.

9. Sweeping width should be smaller than road width. Driving speed can be appropriately reduced if particle ratio is large.

10、 **Start and close sweeper at idle speed.**

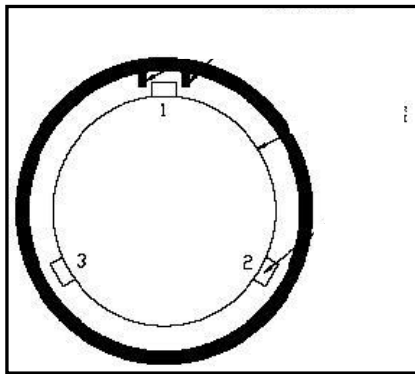
**Parts Replacement**

**1、 Brushes Replacement:**

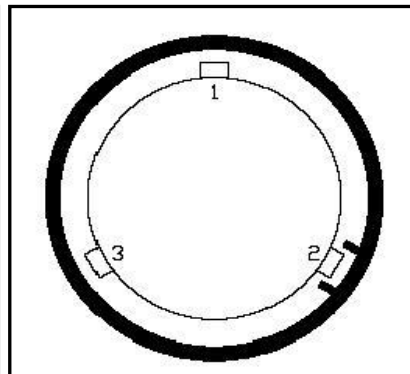
① Remove the motor fixing plate and bearing fixing plate on both sides of

sweeper, and remove core shaft from the upper cover.

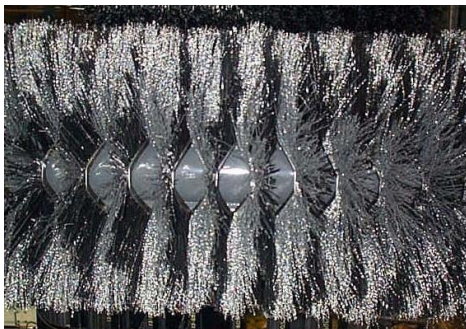
- ② Remove bearing fixing plate and bearing from the mandrel.
- ③ Remove the brush baffle.
- ④ Remove the old brushes from the mandrel.
- ⑤ Stand mandrel shaft (the motor touch the ground). Then cross brushes onto the mandrel shaft in turn as shown in P4.1 and P4.2. Install the brush baffle and tighten it.
- ⑥ The mandrel after brush assembly is shown in P4.3.
- ⑦ Install the mandrel into upper cover, brushes replacement work is over.



P 4.1



P 4.2



P4.3 Effect of brushes after assembly

## 2、Cutting Blade Replacement

After a period of use, if cutting blade is worn out, it should be replaced in time to prevent the bottom bucket from being worn out.

Replacement method:

- ① Take out adjusting bolt from the upper cover and bottom hopper, turn the upper cover up to a certain height. (Pay attention to safety measures to prevent the cover from falling off suddenly)
- ② Remove old one and install the new cutting blade.

## Maintenance Instructions

A personnel shall be arranged for daily maintenance of the sweeper, content of daily maintenance is shown in the table below.

Maintenance content	Maintenance frequency	Note
Check safety label	Before each use	Replace damaged or blurred labels in time
Nameplate Label	Before each use	Incomplete or missing nameplate will not be guaranteed
Inspect brushes for wear	Before each use	Adjust or replace brush in time
Inspect hydraulic tubing	Before each use	Replace damaged or

and joints for leaks or damage		potentially dangerous tubing and joints in time
Fill lubrication point with butter or oil	Before each use	Bearing grease nozzle filling butter; The connection between bearing and shaft is filled with oil to prevent corrosion.
Check hydraulic oil level and cleanliness of host machine	Before each use	Clean host machine hydraulic system regularly
Check whether sweeper connecting bolt is loose	Before each use	Tighten loose bolts, nuts, etc.
Check whether the structural parts are deformed and whether the weld bead is cracked	Before each use	If the structural parts are deformed or the weld bead is cracked, they should be repaired before use
Bucket body and brushes should be cleaned with high-pressure water gun	After each use	
Thoroughly clean all dirt, dirt and grease from the surface of sweeper	After each use	

**Table 5.1 Daily maintenance schedule**

**Note:**

- ① **The daily maintenance of the machine can effectively extend the service life of the machine and improve the use efficiency of the product.**
- ② **When replacement spare parts , only parts approved by the manufacturer can be selected.**
- ③ **Please pay attention to nameplate protection on sweeper, the product nameplate incomplete or lost will not be guaranteed.**

### **Storage Instructions.**

- 1, before storage, it should be clean soil, dirt, grease on product . Hydraulic tubes, motor interface affix with seals.
2. The product should be stored in a dry and non-corrosive environment to avoid corrosion on product.
3. When warehousing, the brush shall not land onto the ground to prevent brushes from long-term bending and deformation, which will affect use effect of the brush.
4. When warehousing, each lubrication point should be filled with butter, and the connection between bearing and shaft should be filled with oil to prevent corrosion.
5. It is forbidden to store heavy objects on sweeper, which may cause deformation of it and affect the performance of its working condition.
- 6, brush material polypropylene, it should be away from drama heat or flame, polypropylene brush can not be directly stored in the place of direct sunlight.

7. Maintain sweeper regularly.

### Sweeper Failure and Troubleshooting

fault phenomenon	possible reasons	elimination methods
Sweeper motor is not working	hydraulic tubes are not connected to host machine	Connect hydraulic tubing to host machine
	Host machine pipeline blockage	Clean host machine pipelines
	Sweeper pipeline blockage	Clean sweeper pipelines
sweeper runs slowly	Host machine fuel supply is insufficient	Increase machine throttle appropriately
	Host machine hydraulic oil supply is insufficient	Increase hydraulic oil to host machine
	Sweeper motor seal problem	Replace seal ring or motor
	Hydraulic oil filter of host machine is blocked	Replace hydraulic oil filter element
	The mandrel is entangled with something	Clean mandrel
motor runs but mandrel not work	Motor and mandrel connection problem	Check the connection

Motor spill problem	sealing ring damaged	Replace seal ring or motor
	Joints loose or damaged	Fasten or replace the joint
	Hydraulic tubes loose or damaged	Fasten or replace hydraulic tubes
	Motor drain tube is not connected	Connect motor drain tube
brushes speed down or stop	Brush compaction is too large	Adjust brush compaction according to operation instructions
	Host machine is running too fast	Lower machine speed
	Motor damaged	Replace motor
Brushes wear too fast	Brush compaction is too large	Adjust brush compaction according to operation instructions
hydraulic oil temperature is too high	Host machine hydraulic oil supply is insufficient	Increase hydraulic oil to host machine
	Hydraulic tubes blockage	Clean hydraulic tube
	radiator blockage	Clean radiator
	Hydraulic oil or filter dirty	Replace hydraulic oil or filter element



	Brush compaction is too large	Adjust brush compaction according to operation instructions
	Motor damaged	Replace motor
Hydraulic quick connector leaks oil	quick connector loose or damaged	Reconnect quick connectors

**Table 7.1 Troubleshooting reference table**

