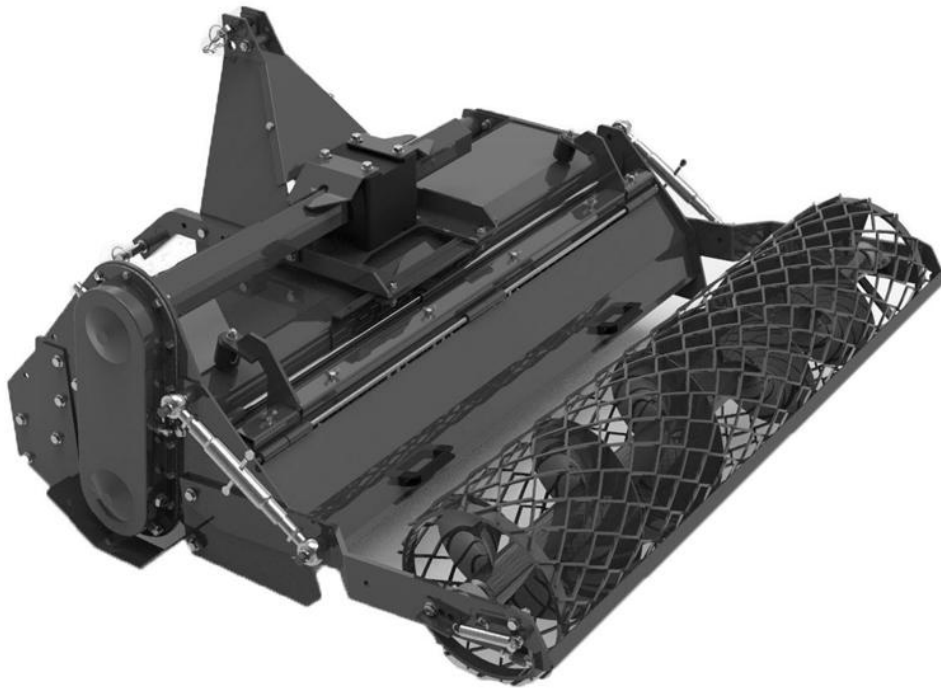


STONE BURRIER STB 61"



⚠ WARNING



- Please read and understand the product manual completely before assembly
- Check against the parts list to make sure all parts are received
- Wear proper safety goggles or other protective gears while in assembly
- Do not return the product to dealer. They are not equipped to handle your requests.

Missing parts or have questions on assembly?

Please call: 1-877-761-2819 or email: cs@tmgindustrial.com

TABLE OF CONTENTS

BRIEF INTRODUCTION	2
SAFETY DEVICE	3
GENERAL INSTRUCTIONS	3
HUNG TO THE TRACTORS.....	5
HUNG TO THE TRACTORS.....	6
OPERATION OF THE MACHINES.....	8
OPERATING THE MACHINE.....	9
LONG-TERM STORAGE	10
STANDARD DATA OF METRIC NUTS AND SCREWS BOLTS.....	15
SPECIFICATION	15
FAULT AND THE REASONS FOR EXCLUSION	16
INSTALLATION STEPS DIAGRAM.....	错误！未定义书签。
EXPLODED VIEW AND PARTS LIST	25

The manual concerns the rotary cultivator (hereafter called "machine") for fields with broken stones. The rotary cultivator is and opposite rotation milling cutter, that is, its rotor turns to its advance in opposite direction. It is suitable for the fields with cobbles. It can bury cobbles (middle dimension) and dregs and residues as well to gain a level field.

BRIEF INTRODUCTION

The user of the machine is responsible for safety of persons in adjacent place.

The operator should know its maintenance and how to harness the machine to tractor rightly.

The operator should make certain that the harness to tractor and use of is in conformity with the law concerned.

The machine shall be operated and maintained only by the skilled person. All instructions concerned shall be observed strictly.

The guarantee conditions are delivered with the machine when purchase of the machine.

The machine shall not be modified by user because all modifications for user violate the guarantee agreement:

The manufacturer reserves the right modifying specifications of the machine and improving its performance without notification.



ATTENTION

Point out [show clearly, demonstrate] potential dangerous situation, if the danger cannot be avoided, which can lead to death or bad physical harm, including presence of dangers when protections are removed.



ATTENTION

Never operate the machine without one or more drawings of protection of safety.



ATTENTION

In order to prevent bad physique harm or death,

- avoid dangerous operation or maintenance
- No touching the machine before you read and learn the operation handbook.
- If you lost the operation handbook, please contact to your retail dealer at adjacent place.

The user of the machine should have technical technology enough to understand all notices and instructions, including drawings figures. The user should know standard concerned to hygiene and prevention of accidents, and tractor with milling cutter, people should maintain and inspect the machine every day. When it works, protection device shall be always installed at good condition.

Personnel for machine maintenance

Technicians are able to intervene mechanisms of the machine

Exclusion of responsibility.

The manufacturer refuses (decline) all responsibilities in the following conditions:

- Operate the machine when it is lacks of mechanisms (parts) and the protection device or when it cannot go.
- Operate wrongly the machine.
- Operate the machine by unqualified person.
- monitor the milling cutter wrongly to the tractor

- lacks of maintenance
- modify or intervene the machine
- Do not observe the instructions of present notice.

You should contact adjacent retail dealer and tell him exactly the type (model) of the machine.

SAFETY DEVICE

No modifying the safety device of the machine, or operator and other persons are at the risk of their life. But for transport the safety device may be removed from the machine.

After receiving the machine, user should install it and pay attention to fixing all parts. If the safety device is not fixed or there is not it, the machine is not permitted to use. A plastic or small chain protection device shall be fixed to Universal joint shaft.

Support for Universal Joint shaft

The shaft may be separated from the control rod of the tractor. To avoid separating itself or turn down, the machine may be equipped with a support.

Driving cab

During work, only driver should sit in the cab for operating the driver, other persons should not approach the tractor, keep in a safety distance.

You get off the tractor after finishing the following procedures:

- Take off the control rod
- Step on the brake
- Stop motor
- Remove key from instrument panel
- Set the machine on the ground

Measure noise of the machine, it shall be lower than 70dB.

GENERAL INSTRUCTIONS

The machine shall be used as a special installation. It is only equipped to the tractor with a Universal joint shaft, forbidding to use it as any other function.

Before harness the machine to the tractor and maintenance etc, read carefully the manual.



DANGER

No wearing necklace no undoing buttons no unfastens necktie and scarf, as they may hook the movement parts. During work driver should wear work clothes: skid shoes noise helmet, protective glasses and gloves etc. If you operate the machine by highway, you should wear reflective clothes.

If you have any questions, please consult the dealer to guarantee your safety.



CARDAN

The protection device shall be fixed well, or it must be replaced before operation. Before work you should inspect if the protection device is good, seeing if its connections are stable, positions are right, both ends of transmission chain are connected to the tractor or the machine stable to aid the protection device turns with Universal joint shaft. Inspect if the Universal joint shaft may turn freely in the protection device. Please connect carefully the tractor to the machine less

harm the protection device.

Keep the grooved parts clean, and apply lubricating oil to keep their good skidding slide performance.

According to the regulations Universal Joint shaft shall be checked following the manual provided by manufacturer.

The proper rotational speed of the control rod shall be determined according to its protection device generally 540 r/m, but it shall be in conformity with the manual of operation.

Adjustment instructions of speed

Inspect all present protection device and safety rotational window are good fixing is right, no permitting unskilled person to use the tractor. Before starting the machine, you should make certain there are no person particularly children and animals, in the operation area, make certain there is no obstacle or body in the area. If necessary, you should clear objects in the area. Do not operate the machine by highway, resident quarter or place where passengers vehicles and animals often past. If necessary, before work or during work, you should make certain that there is no person in the work site.

Before starting tractor, enter the cab. If there is trouble with the machine, you should stop the machine, and notice the dealer and ask he to take proper measures.

When you are intoxicated or take the sedative, hypnotic, dope, narcotic or other medicine which sent forth odor, or can change physiological function or visual reflection, operator should not work with other persons, any other person should not get on the tractor, you should not divert your attention while work and watch carefully and pay attention to your operation. The motor shall be away kept controlled state. When the machine is working, you should make certain that children adults and animals are in safety distance.

Pay attention to fields work, during work the machine shall not cross lest turn over at the slope. Check carefully the constructions concerned from the manufacturer, in particular, max slope for the machine. When the machine works at the slope or change its operation speed or its direction, you should reduce its speed. Do not stop the machine abruptly. If the machine works at moist, slide and adhere fields. It shall go at low speed. Pay attention to anybody which conclude blades. When the machine stops, you stop the motor and take off the key for example, remove ropes, yarn or other bodies from the machine.



Danger

Before getting off the tractor, you should separate the control rod. Stop the machine, take off the key, grasp the brake, you should not approach the machine until it stops. When the machine conclude obstacle, you should stop both the tractor and machine, close the motor remove the key, grasp the brake and inspect its damage. When the blades turns, you keep far away from the moving parts. When tractor is going, do not adjust tension of the transmission chain, but you stop the tractor and adjust it. When the machine works, do not feed lubricating oil to the machine or the control rod.

No smoking!



ATTENTION

Before getting on the tractor, you should remove soil from your shoe soles, keep steps, handle, pedal (brake, clutch and accelerator) good state without oil, dirty, soil or snow lest skid. Before unloading the machine from the tractor, they shall be supported on ground and keep balance, then remove the tractor and pay attention to its balance.

Instructions for driving on the highway

When you drive the tractor on highway, you should observe transportation rules and other all regulations concerned, you should open mode signal light, flash and keep in conformity with the highway transportation law. In particular, you should not drive the tractor and the machine with soil, dirty on the highway lest remain (left) pollutants on the highway. Before transport, you should put the control rod to the dead position.

Instructions for maintenance



Danger

You should stop the machine and separate the control rod of the tractor for maintenance. The maintenance should be done by professionals, and consult the adjacent dealer:

Never use inflammable essence or other inflammable liquids, such as detergent. The user should use commercial fire-proof and no toxic solvents approved by the authority. No using the compressed air or high-press water to clean the machine, you should wear protection glasses. Welding shall not be permitted without instructions of the manufacturer or the authority. Before welding, separate the machine from the tractor. When the maintenance ends, inspect if the machine, brake, shafts, bolts, screws, nuts are be fastened, and fix the protection device.

If you want to dismantle joints, pipes or hydraulic parts, inspect if the oil is not lower than the pressure regulated, when low pressure the oil oozing can lead to had harm. When you are hurt as oil leakage from the hydraulic equipment, you should see doctor at once. The liquid also penetrate into your skin, even which comes from invisible holes. When finding hydraulic liquid leak out, you should dispose it with a card or board, no touching it with your hand.



ATTENTION

Operate the machine in plentiful air. If adjusting the machine, you should do it in a closed place, for example, trial run after repair to ensure ventilation proper lest harm air gathers excessively in the air pipe to harm the operator.



DANGER

Before driving the machine on the road, you should ensure there is stone and other body on the ground hooking the rotor, before transferring the machine, you should put the control rod to the dead position.

Recommendation Importance:
Every day before working, stop engine, release clutch, and carry out the following check steps (Read Operation Manual and Instruction carefully)
1. Check the scale of lubrication (if necessary , fill 90# oil)
2. Lubricate the transom of universal joint
3. Lubricate marked positions
4. Check the screws on blades to make sure they are tightened and work normally. (Installed before the gear box)

HUNG TO THE TRACTORS

Related primary important points for using machines



DANGER

Working machines should be hung horizontally to prevent hurts

When hanging machines to tractors, your hands and feet should be far away from the blades.

No person is allowed to stand between machine and tractor.



ATTENTION

Machines should fit their tractors.

Stability, main part and size of machine should meet the standard of related tractor.

Operator must make sure that tractors are suitable.



PRECAUTION

Before using the machines, check the lubrication level of the gear box. Add lubrication of the same type, and check and lubricate rotating stand.

Check blades for rotary tillage to make rotary cultivators turn freely.

In case of overuse, the blades will be replaced.

Read all advice and dangerous items in manual. Replace parts if necessary.

Check tractors to keep their nice working situations.

Read the manual when you have problems.

HUNG TO THE TRACTORS

Let tractor close with the machine, aim at it and connect with bolts.

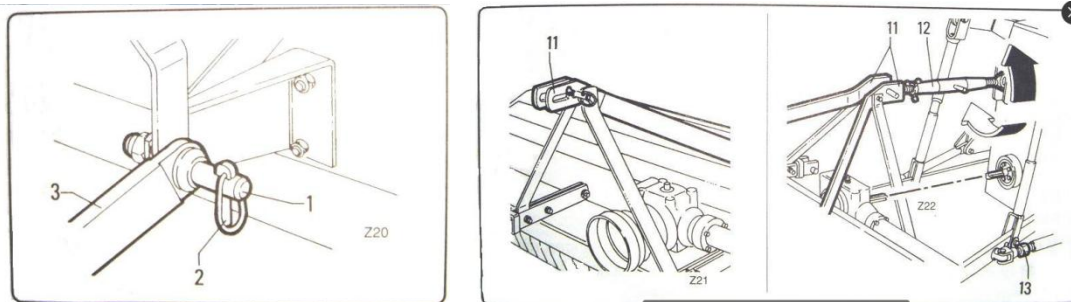
Stop tractor engine, take down key from the side and park it well.

Disassemble connecting shaft ball from blade hook I axle

Tighten with security pin 2.

Install the upper rod 12 of the 3-point suspending hooks until control rod of the machine is parallel to the ground.

Measure the arm of tractor and install the machine on sides. Blades must have the same distances on both sides of the machines.



Install Universal Joint shafts to check the connection and separation between tractors and machines.

If the safety structure get guarantee, install machine instead of tractor.

Make sure the length of universal joint is right.

Min. length of each position is 180mm.

When in the maximum position, the travel of the universal joint must be 25mm. To guarantee the right course, correct adjusting is necessary.



DANGER

Universal joint should get coupled and locked up.

In the special groove for control rod, side of tractor is the same with that of the machine.

Unsealed shaft can be released by itself, which will cause personal hurts and serious mechanical problems.



PRECAUTION

If Universal joint needs replacing, purchase Universal joint with the same features listed in part list. Unqualified Universal joint will break themselves.

If it is too long, follow the steps below to shorten.

Make the machine close to tractor in a min. distance and then stop the tractor.

Universal joint is separated into two parts. Connect the female end to the control rod of the tractor; connect the male end to the control rod of the breaking machine, and fix it to a proper position.

Parallel and maintain Universal joint

Mark the position or shorten the two half axles. Measure each half axle to 25mm. See Fig please.

Firstly, cut protection I in the drawing. Use 2 as a reference for cutting notches.

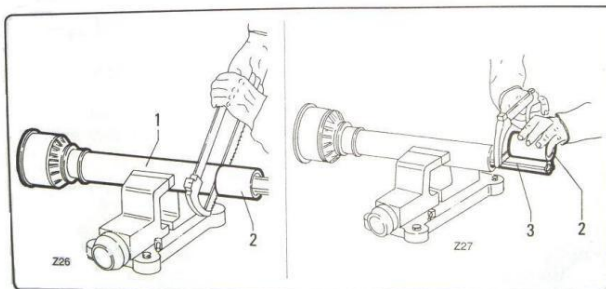


fig. 4.3.2

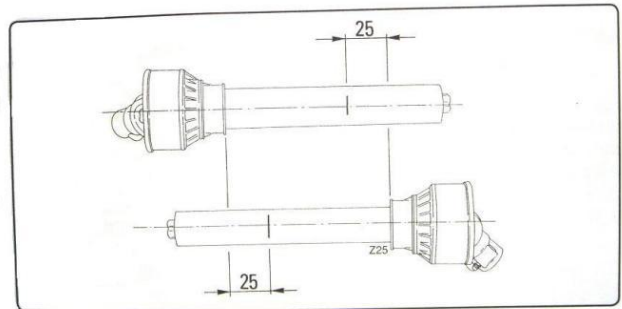


fig. 4.3.1

Deal with the other half axle in the same way.

Clean out terminal plates of axle, and take away scraps.

Lubricate the two steel parts, install to get a Universal joint.

Lift slightly to check right sizes; lower the machines.

The axle cannot touch the pipe bottom or exceed the terminal end. Follow the above specified numbers (25 and 180mm)

Once meeting problems, read the instruction and contact axle manufacturer.

Important

Universal joint may include security device to eliminate power charge. In this way, you can't be hurt from machine operation, even in the case of over resistance during working.

Security device should contain the following symbols:

- Be attention to the break of a couple of bolts.
- Be attention to the abrasion of a couple of plates.

This device should be installed and used at proper time by specialists.

Read manual and consult with Universal joint suppliers.

If the manual is lost, contact the supplier.

OPERATION OF THE MACHINES

Walking on roads



ATTENTION

Before the machine hung to tractor walks on public roads, you should be clear about local traffic.

If walking in evening or on uneven roads, some ancillary blades should be installed according to instructions.

Maintain the machine during traveling

During traveling, take note about the machine maintaining, and release the clutch.



DANGER

Do not lean or climb the machine during operation.

Prepare for working blades



ATTENTION

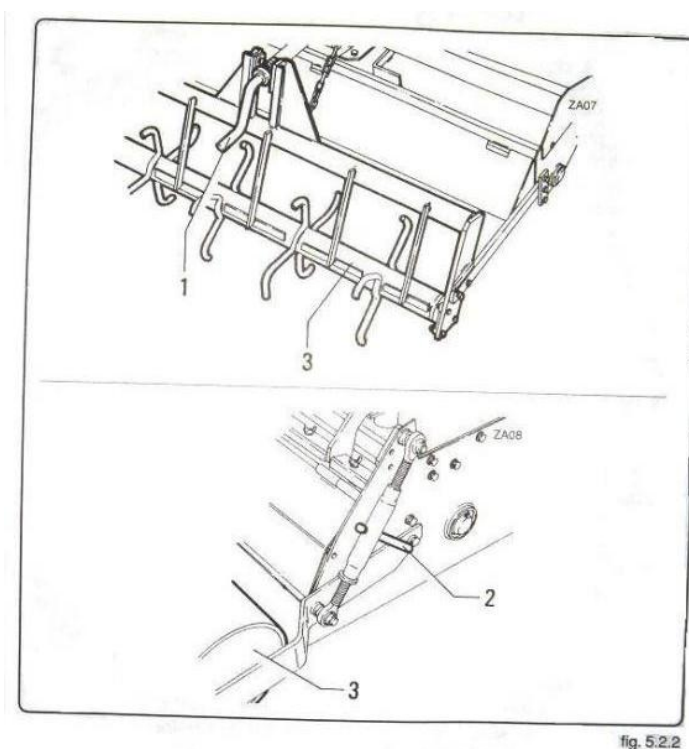
Check the tractor to keep its working power not beyond stated max. Value.

Check the clutch speed to meet the requirements of the machine.

Compare these values with that of clutch shaft.

Adjust depth with a measuring tape

Lift leveling bar 3 with crank 1 or rod 2 (to increase depth) or drop it (to reduce working depth).



OPERATING THE MACHINE



DANGER

To use milling cutters, check all security protecting devices before working. Raise them correctly and keep them in a proper situation.

If malfunction happens, stop the machine and replace the security parts.

You can go to the nearest help center for help.

When the milling blades begin to work, take a serious check to make sure no adults, kids and animals around.

In operating area, no articles or sundries.

No people are allowed to enter the operation area. That should be far away from roads, houses and crowds.

Adjust needed height, check oil fuel and the first scale of the lubrication used before.

Before using the machine, get familiar to the machine, especially the speed of the working machine.

- Lower blades to the earth and then operate the blades.
- Keep people far away.
- Operate the clutch.
- Lay the tractor horizontally.

Important

Do not turn the machine over and do not allow the blade to cut too deeply into the ground.

Machines and tractor parts have malfunctions.

During operating, keep the machine horizontal. Check the depth with rule.

When tractor walks ahead, clutch has a speed of 540r/second.

The raveling speed of the tractor depends on the earth depth and ideal speed.

Best working speeds are 1.5km/hour and 2.5km/hour.

Beyond the speed, don't gear up to lower down the gears smoothly.

During operation, the slower walking the larger soil grains.

During operations, rise a little for turn and moving ahead.

After operating for several meters, stop the machine and raise the blades from the soil.

After operating for several meters, stop the machine, do some adjusting and then restart the machine.



DANGER

Every time adjusting the machine, release the clutch, stop the engine, take down the key, and hold the parking brake well.

Don't be close to the rotating blades until they stop completely.

When the clutch is engaged, don't lift the machine in a soil depth of 250mm to avoid card an breaking or any dangerous operation.

Max. Supporting inclination is 35 degree when card and is connected to the clutch. However it is recommendable that it be smaller than 25-30 degree.

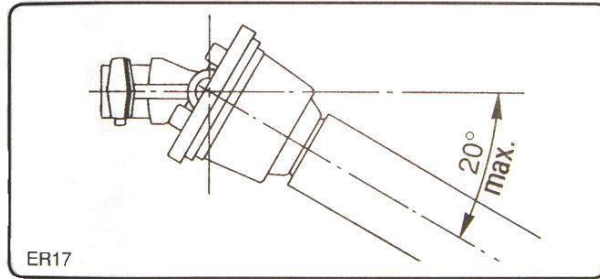


fig. 5.3.1

During working, the gear case may stay without operation due to hot oil. The surface may touches hot, which is not malfunction. It is important to check the oil at a proper scale.

Use milling cutters (follow related regulation.)

Milling cutters are used to smash soil blocks for seeding.

Implanting remained grasses onto the soil for initial preparation of seeding.

Making the soil solid and compacted.

Usually during operating, these milling cutters cannot be used on the soil full of stones, while very small stones don't make troubles to the machine. Otherwise, working on stony soil for long time can break the blades or machines, which can't get our maintaining service as in guarantee periods.

Important

Lift the blades in case of meeting large stones to avoid damaging blades.

Move 3-point suspending milling blades with hands.

Milling cutters can be used when tractor diverges.

Steps to move the milling cutters from sides:

- Don't screw down to release nut 1.
- Drive 3-point trailer with hands to move in needed positions. Tighten nuts.

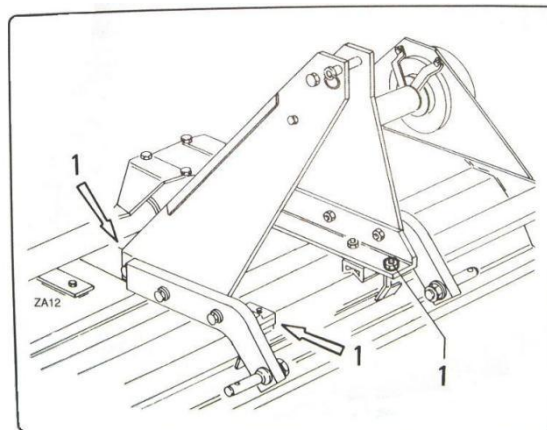


fig. 5.6.3

LONG-TERM STORAGE

Cleaning blades

Store the machine at a place far from kids and animals. Fix it to avoid turning down or moving.

Check in phases

Couple the machine onto tractor in the way of digital operation.

When troubles happen during coupling onto the tractor, take the following steps:

- Release the clutch.
- Hold brake tightly.
- Stop engine.
- Take down keys.

If operating milling cutters, do protection well.

To avoid the danger caused by tractor hydraulic structure, lower the machine in case of trouble. If you have to work below it, support the machine toward the machine.

Clean grease to keep other articles away.

If the oil needs filling or clear out, new filled oil should meet the requirements of manufacturer.



ATTENTION

Keep the lubrication beyond the touch of kids.

Read the instructions of lubrication.

Oil the right bearing of rotor 1 (see fig. below). Check the lubrication of the right bearing 2 (see fig. below), the nearing of lubrication dish.

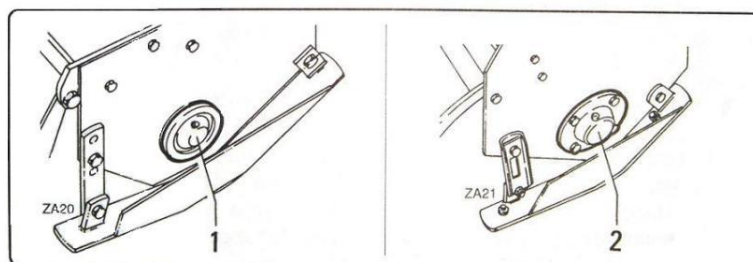


fig. 7.4.1

Check Universal Joint, and lubricate its transom.

Check the guard plate of blades.

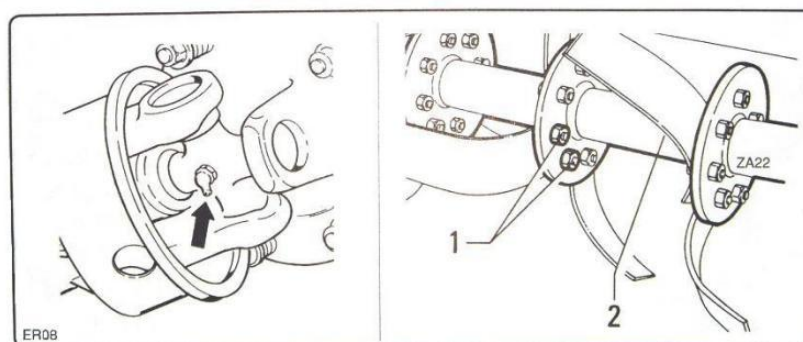
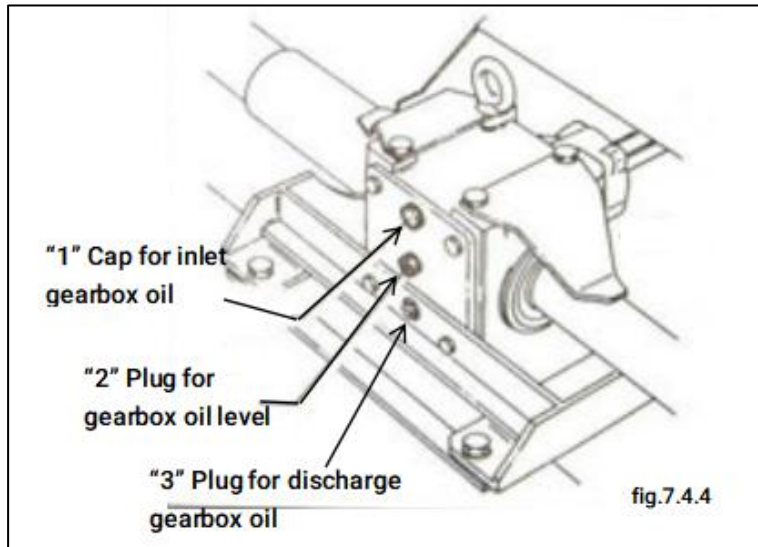


fig. 7.4.2

50 working hours

- Check the abrasion of the blades. Replace them if necessary.
- Disassemble and clean the Universal Joint axle.
- Before reassembling the Universal Joint, lubricate the moving parts.
- Check the brake of gear case.



The oil must reach the lower edge of the hole of level plug “2” fig.7.4.4 in versions without a dipstick. Top up the level by pouring oil through plug “1” .

Check the gear case on the side of the lubrication scale.

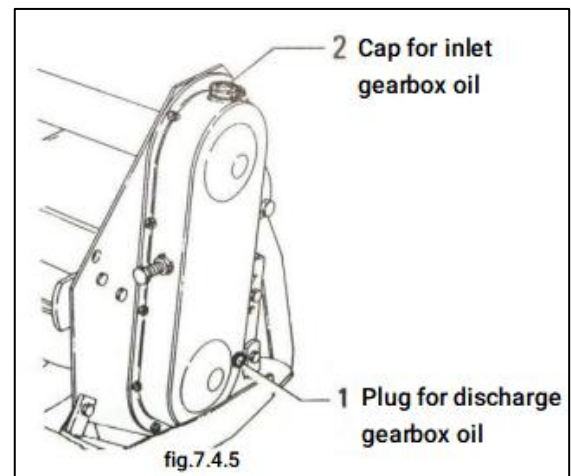
Lift bonnet1. Check the lubrication to make it reach the lower side of bonnet notch.

Consult paragraph 7.6 for the oil specifications.

Check the level of the oil in the side transmission housing.

Remove level plug “1” fig.7.4.5 and check that the oil reaches the lower edge of the plug housing.

If necessary, top up the level through plug “2” , using oil with the characteristics specified.



IMPORTANT:

The controller of level shall effect on flat ground and stop in less than 10 minutes.

All 250 hours of work.

- Drain away oil from the multiplier.
- Drain away oil from case at the transmission side.

Drain away oil from reduction

After the first 50 hours of work, you should drain away oil fed in the first time, then drain oil for all 250 hours of work.

Tension of transmission chain

Tense transmission chain. When the motor of tractor is stopped, you should take off the key, grasp the brake, loose the control rod.

Adjust the tension of side transmission chain regularly [periodically], its procedure is as follows.

- Twist nut of safety device of tension screw 2 of transmission chain a few of rotations.
- Twist screw 2 as so as possible by hand, meanwhile turn rotor support 3 by hand or food .

- Adjust the tension max as so as possible, loose the screw 2 one rotation, and keep the nut of safety device 1 tight state.
- Turn rotor a few times by hand to inspect if rotational resistance is too excessive, repeat the above-mentioned procedure to adjust the tension of chain.

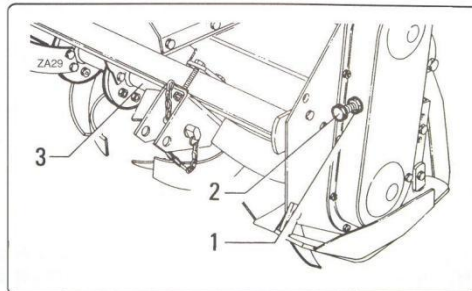


fig. 7.5.2

Replace the blades.



Danger

The following operations listed shall be done separating the machine from the tractor:

Left the machine a bit to necessary distance (height) to finish those operations and bear it on.

- High strength support to work safely.
- If blade 4 has been damaged, folded or worn off, please replace it.
- Notice, new blade must be re-fixed to the original position where has been replaced replace a blade once lest error.

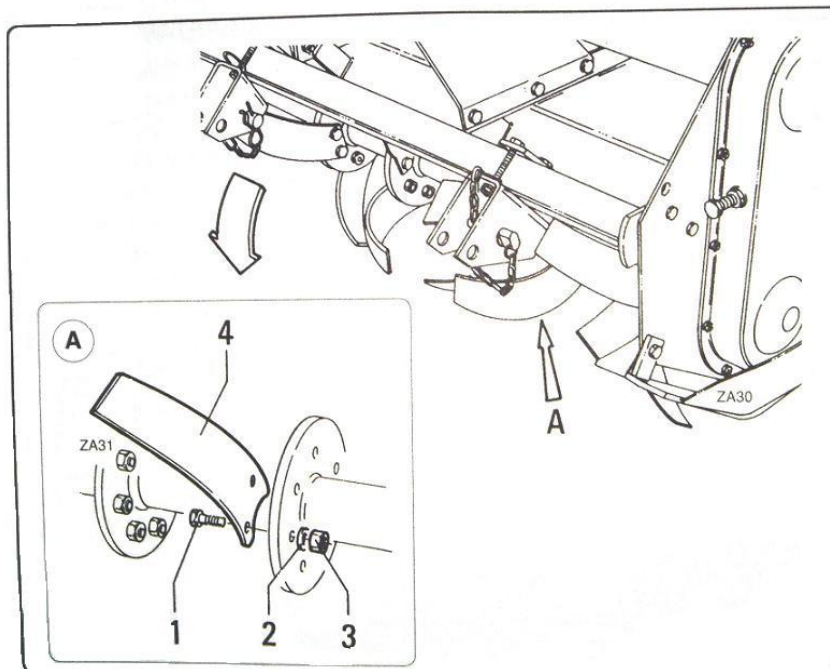


fig. 7.5.3



Pay attention to add the oil

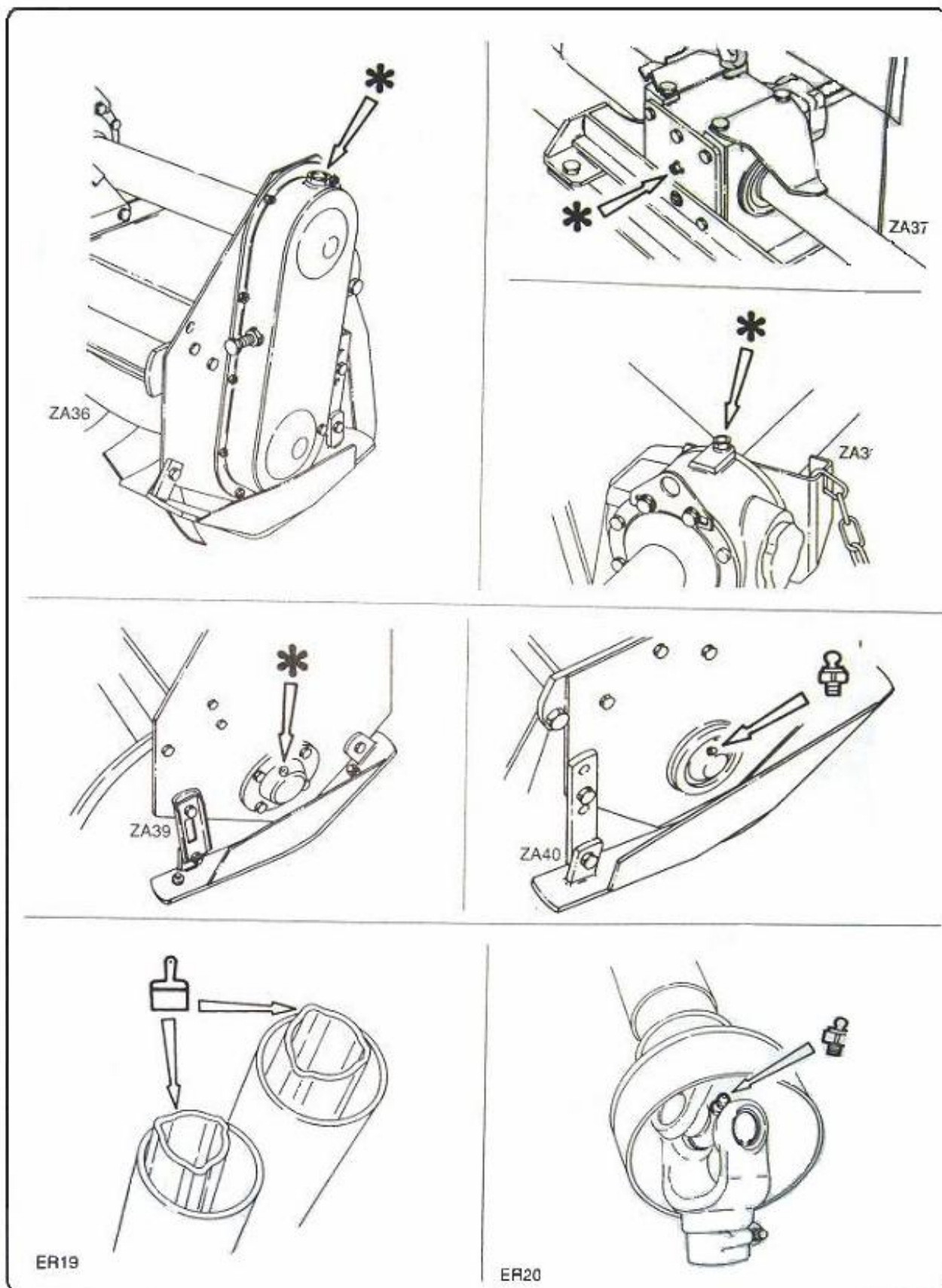


fig. 7.6.1

STANDARD DATA OF METRIC NUTS AND SCREWS BOLTS.

Nm=recommended twisting force N/m

Screw Diameter	Class 5.8	Class 8.8	Class 10.9
mm	Nm	Nm	Nm
6	6.5	10	15
8	15.5	24.5	35
10	32	50	20
12	53	85	119
14	84	135	190
16	128	205	288
18	177	283	398
20	250	400	562
22	332	532	748
24	432	691	971

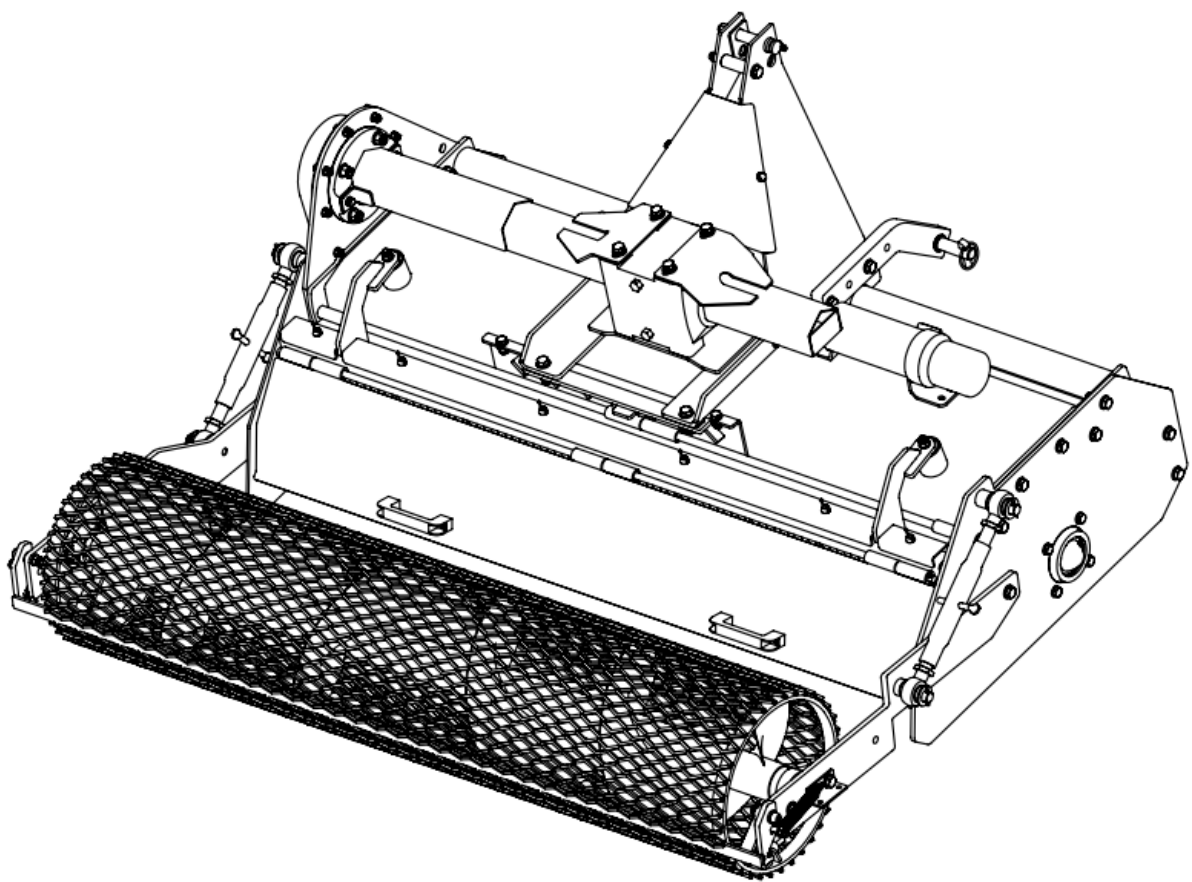
SPECIFICATION

MODEL	TMG-TSB61
Dimensions(mm)	1760*1330*920
Weight(kg)	405
Working width(mm)	1550
Working depth(mm)	120
Power Required(hp)	35-45
Packing Size(mm)	1870*880*790

FAULT AND THE REASONS FOR EXCLUSION

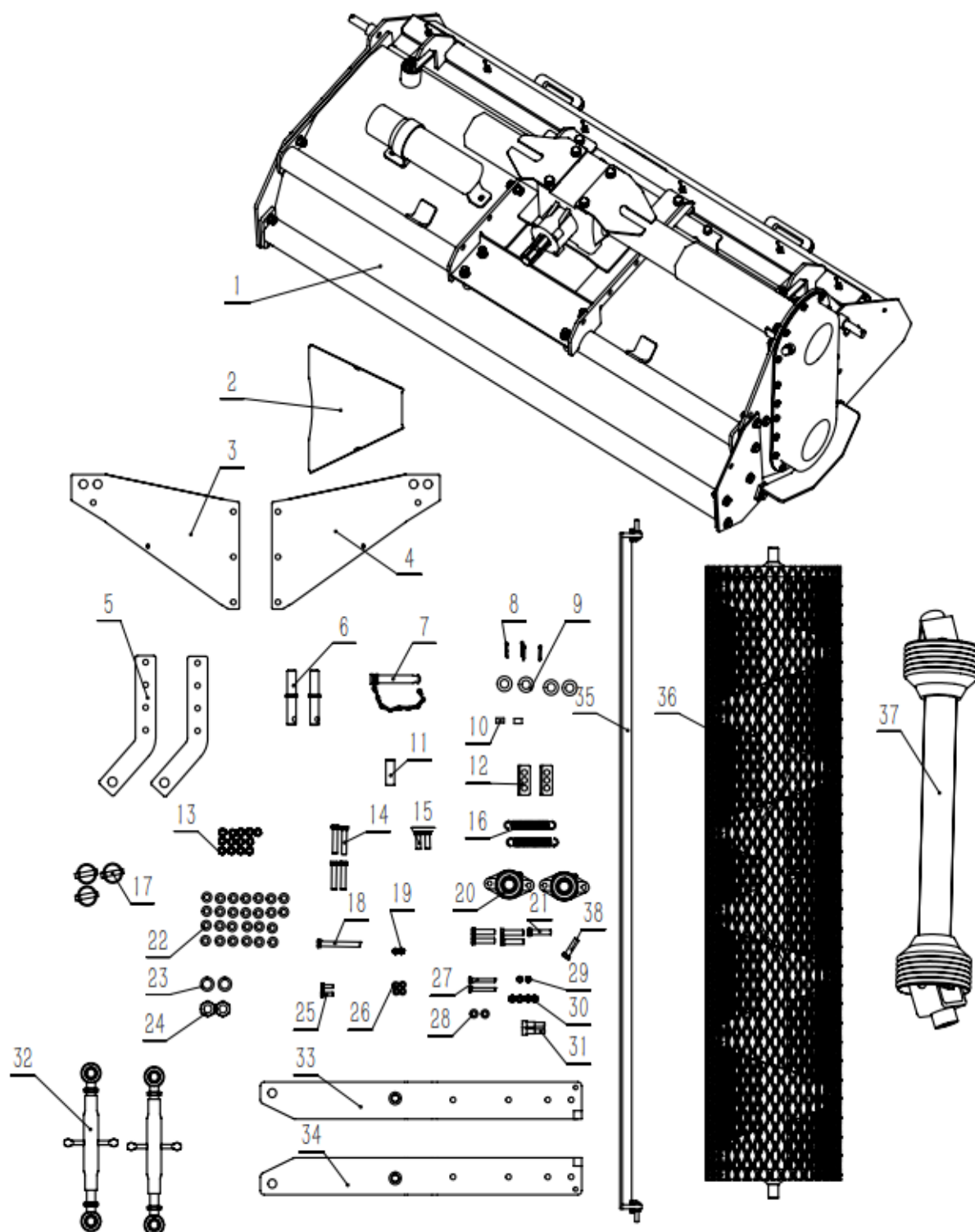
Machine failure	cause	Remade
--Machine with noise	--Work pieces are too louse --Lack of oil in the reduction or case of side transmission --Reckoned rotations of the control rod are not right --Transmission chain is too loose	
--Support is overheat	--Rotor end is winded by grass or soil	Clear rotor and get rid of impurities
--Work depth is not enough	--Run speed is too fast --There is not enough power output by motor -- Soil is two hard -- Teeth deep soil instead of rotation	--Reduce motor speed of tractor --Reduce speed --Carry out more passages -- Reduce the speed of advancement.
--Rolling rotor is blocked (it does not turn)	--Transmission chain is too tight --There are impurities in the rotor	--adjust the tension of transmission chain -- Remove the impurities. If necessary replace damaged blades. Before work make certain that the rotor is not damaged again. If it breaks down, notify the dealer for repairing.

INSTALLATION STEPS DIAGRAM



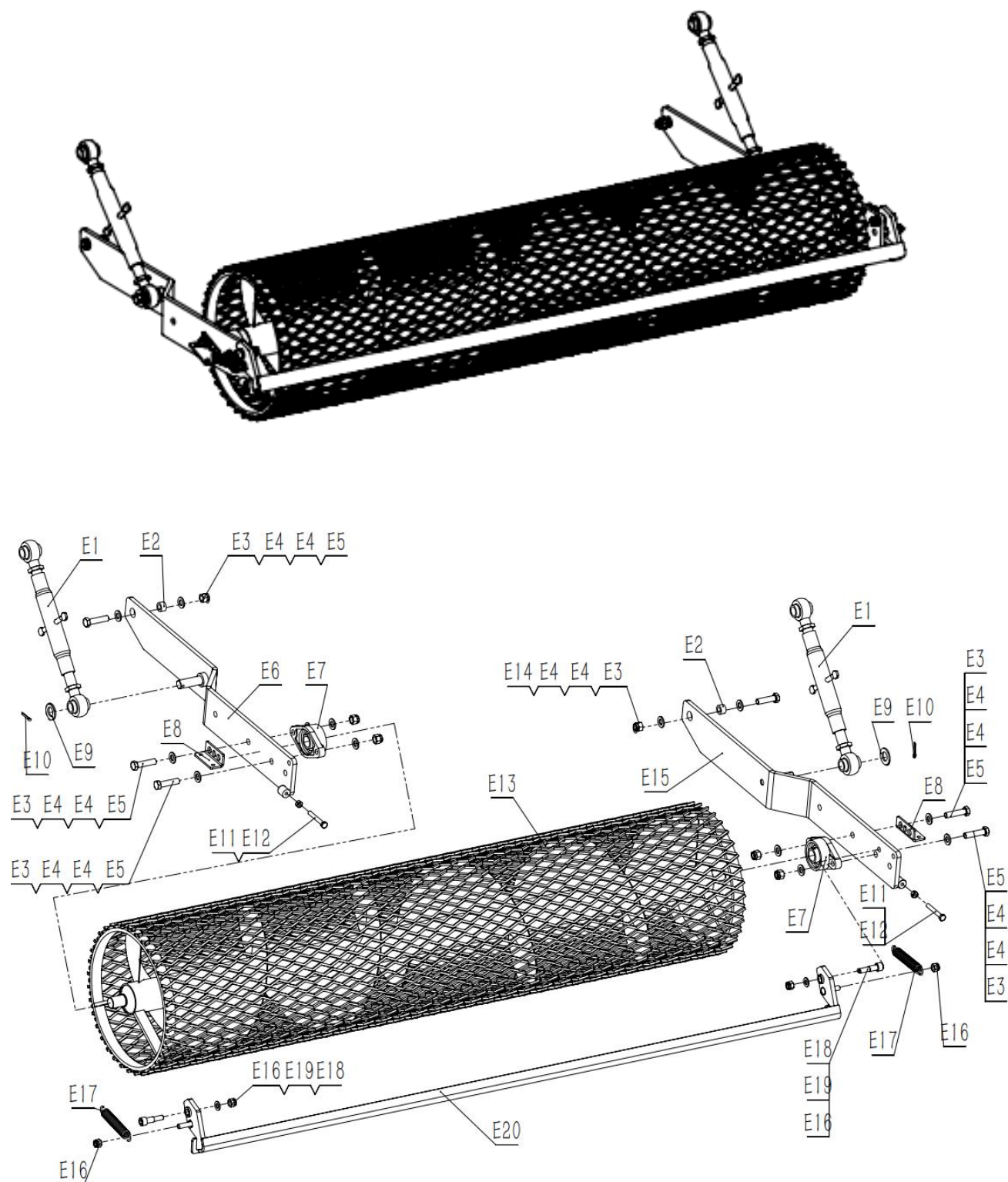
1. Package list

Please check the following components after unpacking



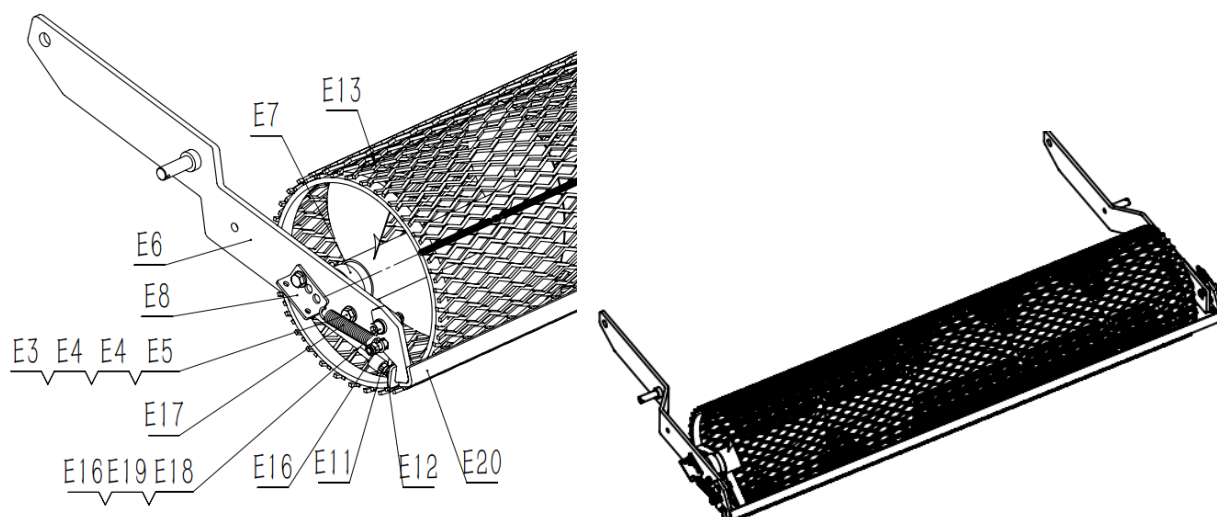
No.	Name & Specification	QTY
1	Host	1
2	Suspension rear connecting plate	1
3	Right suspension plate	1
4	Left suspension plate	1
5	Lower suspension support plate	2
6	Lower hanging pin	2
7	Upper hanging pin	1
8	Cotter pin A 4 x 25	4
9	Plain washer 20	4
10	Spool sleeve	2
11	Hanging spacer	1
12	Spring tension plate	2
13	Lock nut M12	13
14	Bolt M12×60	4
15	Bolt M12×35	2
16	Spring	2
17	Lock pin	3
18	Bolt M12×100	1
19	Lock nut M8	2
20	Bearing with diamond seat UCFLU205	2
21	Bolt M12×50	5
22	Plain washer 12	26
23	Spring washer 22	2
24	Nut M22	2
25	Bolt M8×25	2
26	Plain washer 8	4
27	Bolt M8×60	2
28	Plain washer 10	2
29	Nut M8	2
30	Lock nut M10	4
31	Set screwsM8	2
32	Adjustment lever assembly	2
33	Welded joint for left arm of mesh wheel	1
34	Welded joint for right arm of mesh wheel	1
35	Mud scraper	1
36	Mesh wheel	1
37	PT0 shaft 05B-800	1
38	Bolt M12×45	1

2. Mesh wheel assembly



No.	Name & Specification	QTY
E1	Adjustment lever assembly	2
E2	spool sleeve	2
E3	Lock Nut M12	6
E4	Plain washer 12	12
E5	Bolt M12×50	5
E6	Welded joint for left arm of mesh wheel	1
E7	Bearing UCFLU205	2
E8	Spring Tension Plate	2
E9	Plain washer 20	2
E10	Cotter pin 4×25	2
E11	Nut M8	2
E12	bolt M8×60	2
E13	Mesh wheel	1
E14	Bolt M12×45	1
E15	Welded joint for right arm of mesh wheel	1
E16	Lock Nut M10	4
E17	Tension spring	2
E18	Set screws	2
E19	Plain washer 10	2
E20	Mud scraper	1

2.1 Installation of mesh wheel assembly



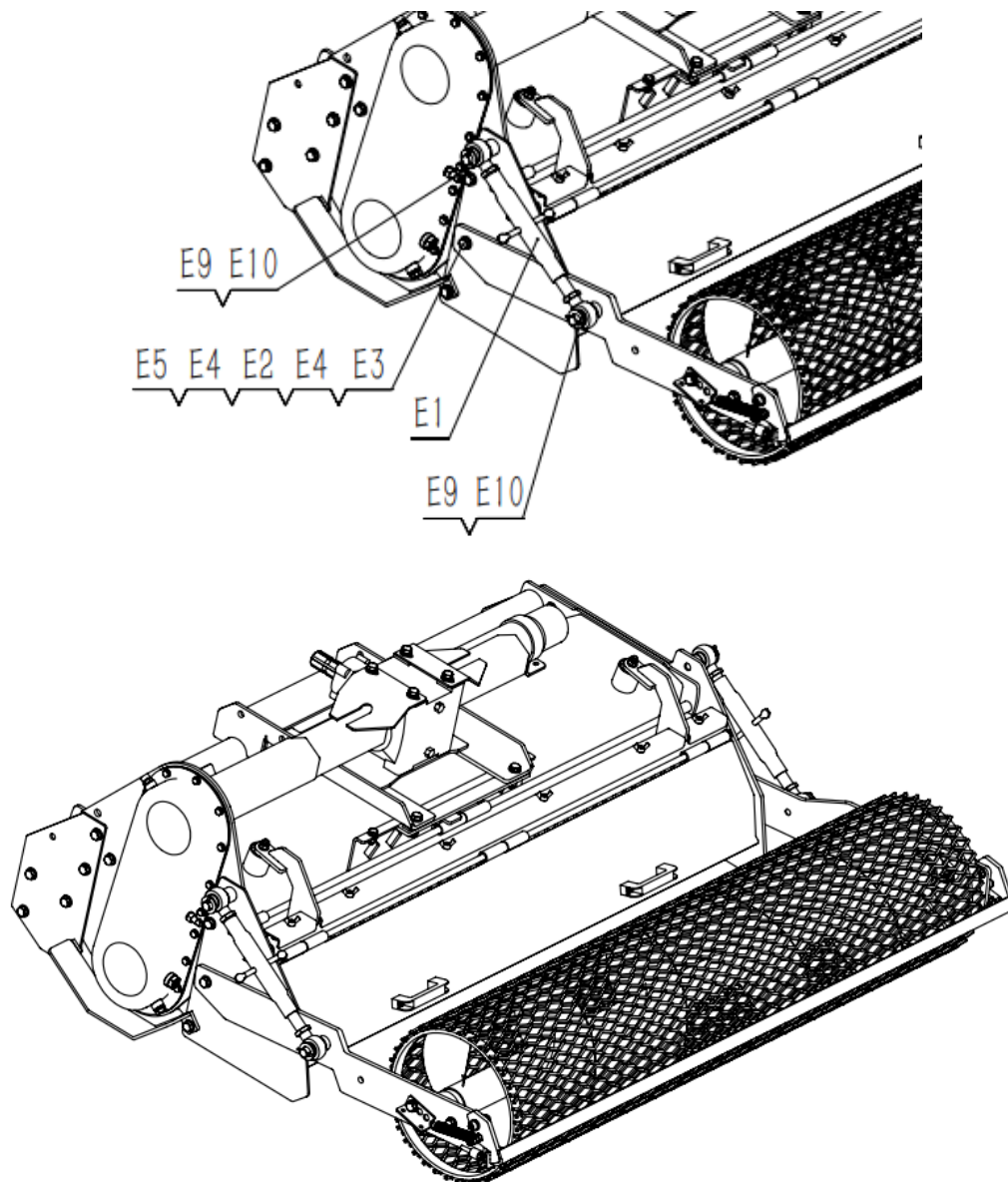
1. Install the bearing (E7) on both ends of the mesh wheel (E13) shaft, and connect the mesh wheel left connecting arm, mesh wheel right connecting arm, spring tension plate (E6,E15,E8) and the bearing (E7) in sequence through the lock nut, plain washer, bolt (E3,E4,E5). Do not tighten the bolts for now.

2. Screw the nut (E11) onto the bolt (E12); screw the assembly into the adjustment sleeves of the left and right connecting arms (E6,E15) of the mesh wheel; connect the scraper (E20) to the left and right connecting arms (E6,E15) of the mesh wheel through lock nuts, plug screws, and plain washers (E16,E18,E19); hook one end of the tension spring

(E17) on the M10*35 bolt of the scraper (E20), screw the lock nut (E16) on the bolt to prevent the hook from slipping, and hook the other end into the hole of the spring tension plate (E8).

3. Adjust the bolt M8*60 (E12) to ensure that the distance between the scraper (E20) and the mesh wheel (E13) is appropriate, and tighten the nut (E11).

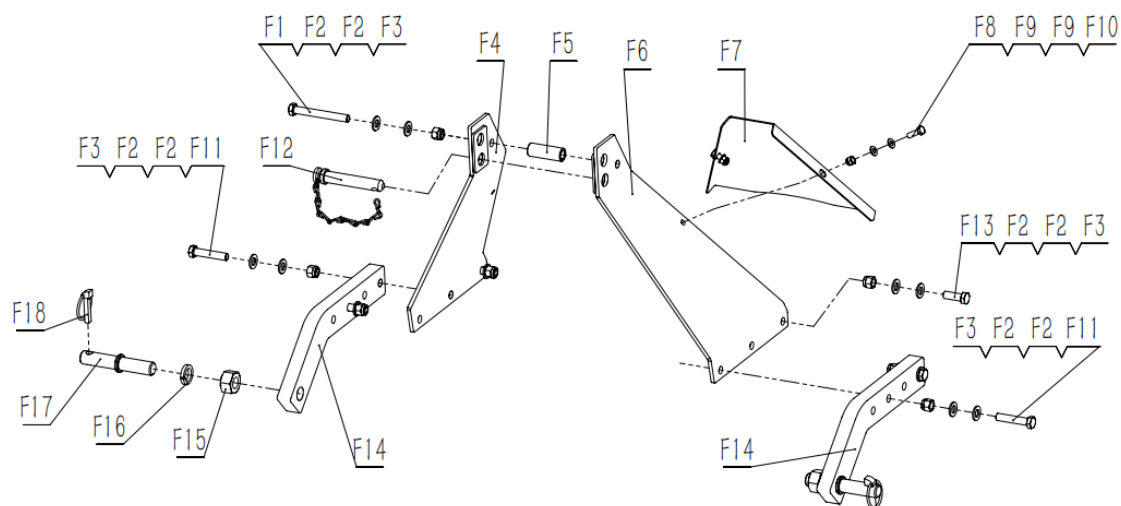
4. Tighten all bolts and nuts; perform the same installation operation on the right side of the mesh wheel.



1. Place the mesh wheel installed earlier close to the main machine, and respectively place the left and right connecting arm(E6, E15) of the mesh wheel close to the rear connecting plate of the main machine and the left plate of the knife shaft, align them with the holes, and install the shaft sleeve, lock nut, plain washer, and bolt 12×50 (E2,E3,E4,E5) in sequence; install the shaft sleeve, lock nut, plain washer, bolt 12×45 (E2,E3,E4,E14), and pre-tightening nut on the right side;

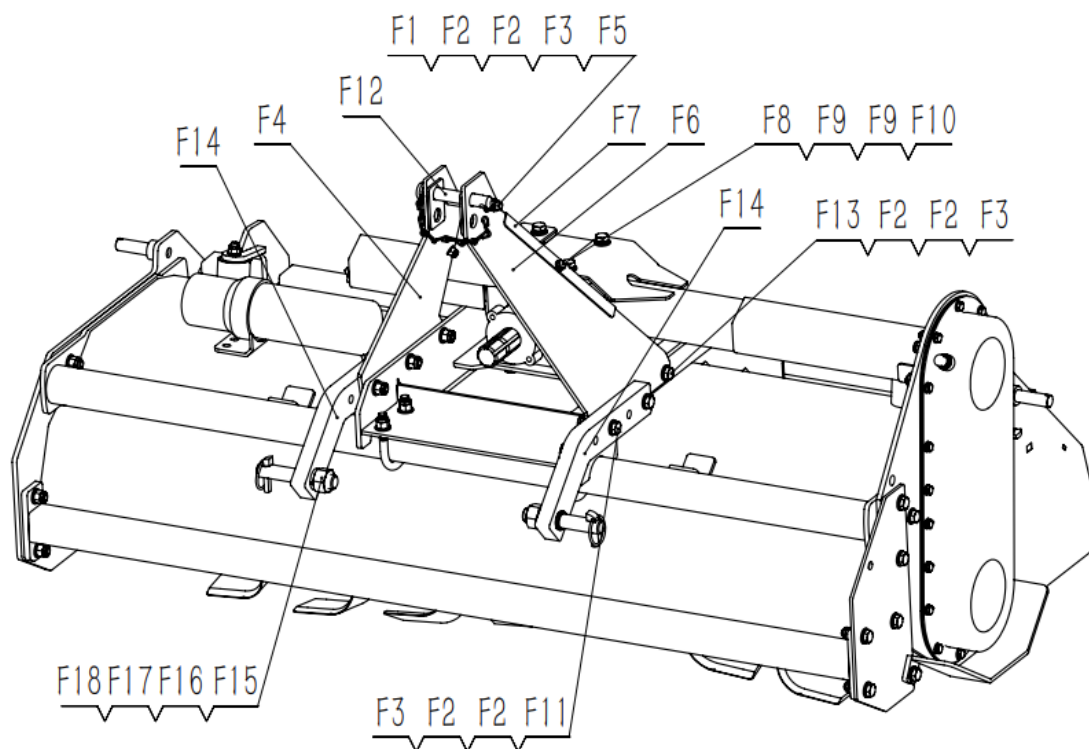
2. Install the adjusting rod assembly (E1) on the rod shafts of the left and right connecting arms (E6,E15) of the mesh wheel, install the plain washer and cotter pin (E9,10), adjust the installation distance of the rod assembly, and install the other end on the connecting pin shaft of the rear connecting plate of the main machine and the left side plate of the knife shaft. At the same time, install the plain washer and cotter pin (E9/10), and tighten all bolts and nuts.

3. Suspension assembly



No.	Name & Specification	QTY
F1	Bolt M12×100	1
F2	Plain washer 12	14
F3	Luck nut M12	7
F4	Left suspension plate	1
F5	Hanging spacer	1
F6	Left suspension plate	1
F7	Suspension rear connecting plate	1
F8	Bolt M8×25	2
F9	Plain washer 8	4
F10	Luck nut M8	2
F11	Bolt M12×60	4
F12	Upper suspension pin	1
F13	Bolt M12×35	2
F14	Lower suspension supporting plate	2
F15	Nut M22	2
F16	Spring washer 22	2
F17	Lower suspension pin	2
F18	Lock pin	2

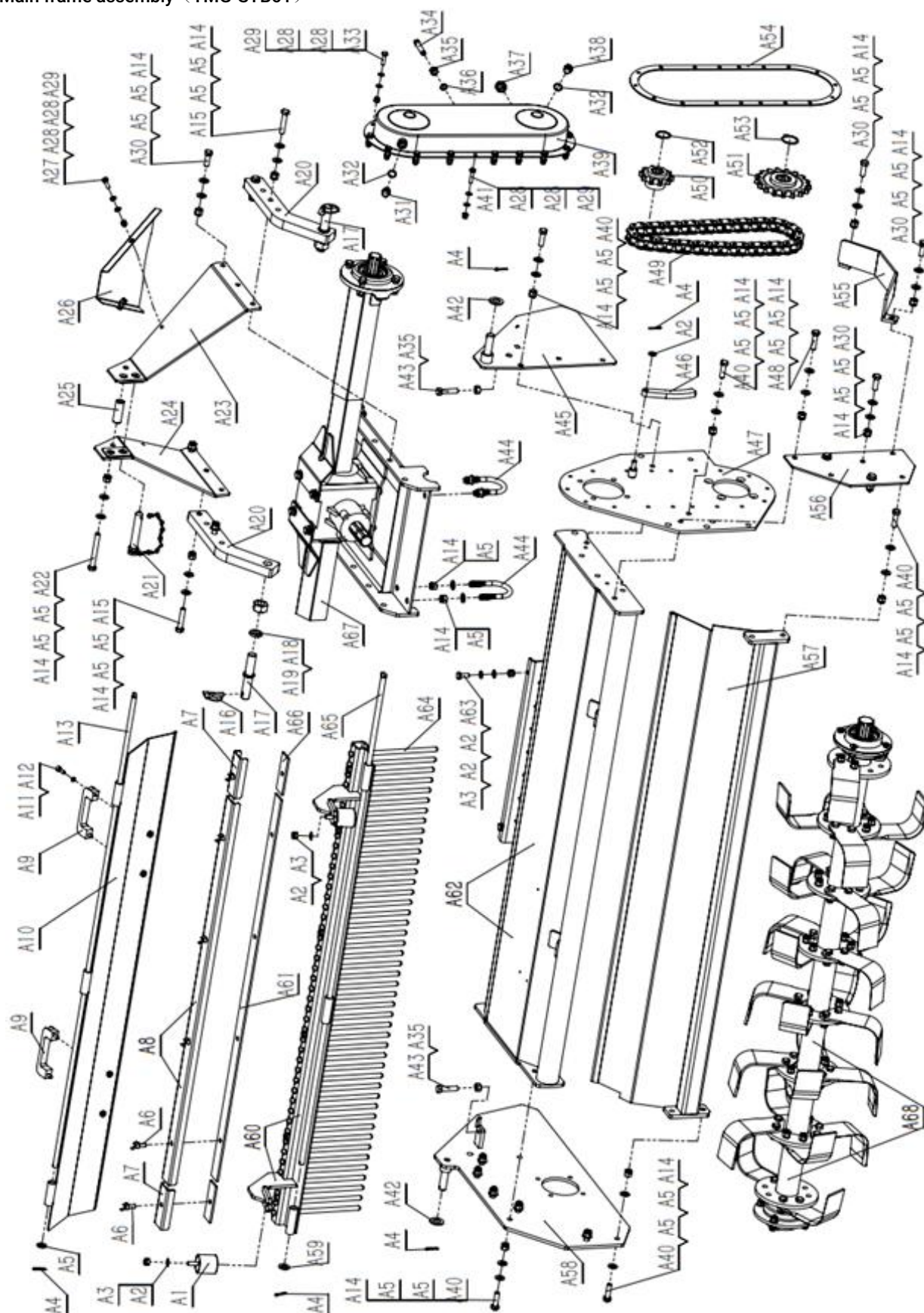
3.1 Installation of suspension assembly



1. As shown in the figure above, install the left suspension plate, right suspension plate, and lower suspension support plate (F4, F6, F14) on the gear box bracket welded parts of the main engine, insert the bolts 12*60 and bolts 12*35 (F11, F13) respectively, install the washers (F2) on both sides, and pre-tighten the mounting parts lock nuts (F3).
2. Install the rear suspension connecting plate (F7) on the back of the left and right suspension plates (F4, F6), install the washers, bolts, and nuts (F8, F9, F10), install the upper suspension pin (F12) on one end of the top hole, and install the bolts, washers, lock nuts, and upper suspension spacers (F1, F2, F3, F5) on the other end. After installation, tighten all bolts and nuts.
3. Install nuts, spring washers, lower suspension pins, and lock pin (F15, F16, F17, F18) on the lower part of the lower suspension support plate (F14) and tighten the nuts.

EXPLODED VIEW AND PARTS LIST

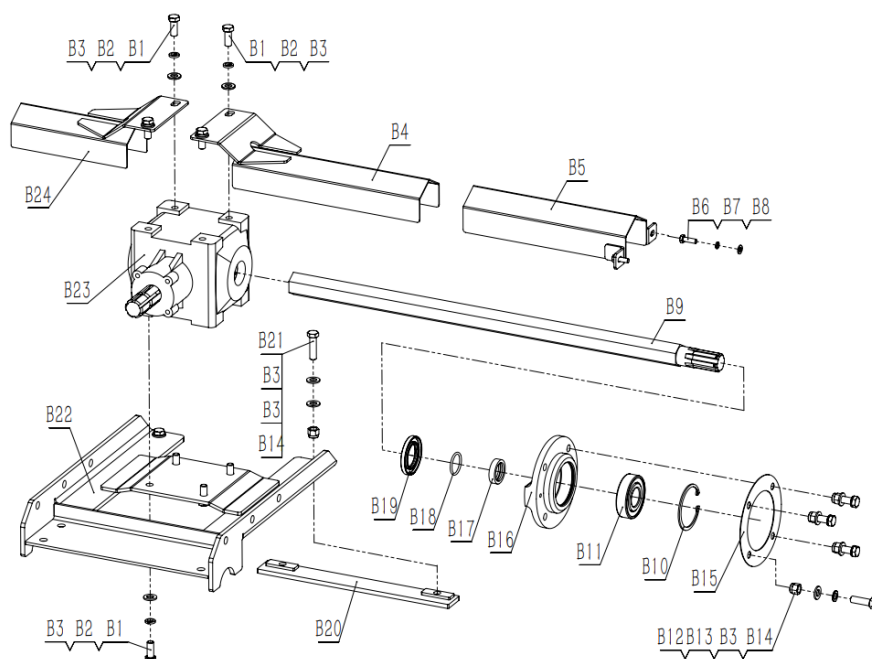
1. Main frame assembly (TMG-STB61)



No.	Name & Specification	QTY
A1	Shock absorber	2
A2	Plain washer 10	7
A3	Lock nut M10	4
A4	Cotter pin A 4 x 25	5
A5	Plain washer 12	51
A6	Butterfly bolt WB10×20	7
A7	Flat soil tooth plate(2)	2
A8	Flat soil tooth plate(1)	1
A9	Plastic handle (center hole 120)	2
A10	Rear plate	1
A11	Spring washer 8	4
A12	Hexagon socket head screw M8×20	4
A13	Rear plate shaft	1
A14	Lock nut M12	27
A15	Bolt M12×60	4
A16	Locking pin assembly	2
A17	lower linkage pin	2
A18	Spring washer 22	2
A19	Bolt M22	2
A20	Lower linkage Support Plate	2
A21	Upper linkage pin	1
A22	Bolt M12×100	1
A23	Right linkage plate	1
A24	Left linkage plate	1
A25	Upper linkage spacer	1
A26	Rear linkage plate	1
A27	Bolt M8×25	2
A28	Plain washer 8	40
A29	Lock nut M8	20
A30	Bolt M12×35	6
A31	Ventilation plug M16x1.5	1
A32	Combination pads 16	2
A33	Bolt M8×30	16
A34	Square head long cheese end set screw M12×60	1
A35	Nut M12	3
A36	Combination washer 12	1
A37	oil monitor M18×1.5	1
A38	Hexagon socket screw plug M16×1.5	1
A39	Chain case	1
A40	Bolt M12×40	11
A41	Bolt M8×35	2
A42	Plain washer 20	2

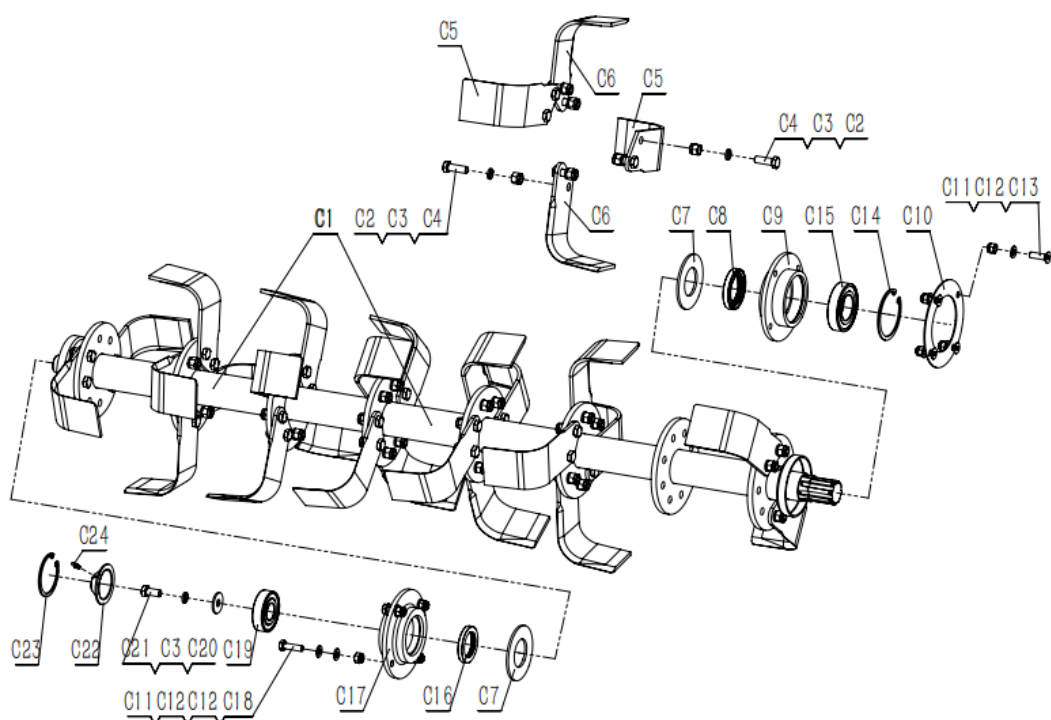
A43	Bolt M12×50	2
A44	U bolt	2
A45	Rear connection plate(right)	1
A46	Tensioning plate	1
A47	Right side plate of cutter shaft	1
A48	Bolt M12×45	1
A49	16A roller chain 21 links	1
A50	small chain pulley	1
A51	large chain pulley	1
A52	Spring washer for shaft A34	1
A53	Spring washer for shaft 42	1
A54	cork pad	1
A55	Chain case protection plate	1
A56	Front connection plate	1
A57	Front baffle	1
A58	Left side plate of cutter shaft	1
A59	Plain washer 14	1
A60	Flat soil tooth bracket	1
A61	Rubber pad (1)	1
A62	Cutter shaft cover	1
A63	Bolt M10×25	2
A64	Flat soil teeth	52
A65	Rear plate shaft	1
A66	Rubber pad (2)	2
A67	Gearbox assembly	1
A68	Rotor shaft assembly	1

2. Gearbox assembly (STB145-005)



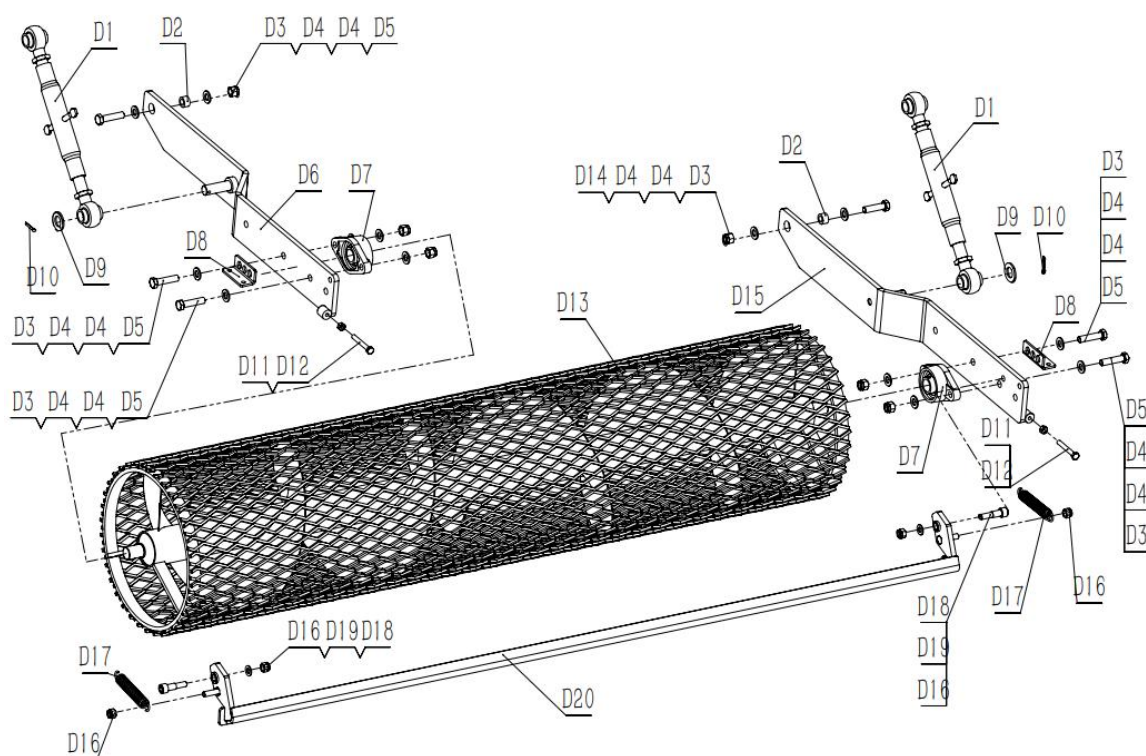
No.	Name & Specification	QTY
B1	Bolt M12×30	8
B2	Spring washer 12	8
B3	Plain washer 12	16
B4	Shaft protective cover(2)	1
B5	Shaft protective cover(1)	1
B6	Bolt M8×25	2
B7	Spring washer 8	2
B8	Plain washer 8	2
B9	Drive shaft	1
B10	Circlip for hole 80	1
B11	Deep groove ball bearing 6307-2RZ	1
B12	Bolt M12×40	4
B13	Copper washer Ø12	4
B14	Lock nut M12	6
B15	Paper pad	1
B16	Drive shaft bearing seat	1
B17	Oil seal spacer	1
B18	O-ring rubber seal 35.5 (inner diameter) x 3.55	1
B19	Oil seal 45×72×8	1
B20	Plywood	1
B21	Bolt M12×45	2
B22	Gearbox bracket	1
B23	Gearbox	1
B24	Shaft protective cover(3)	1

3. Rotor assembly (STB145-004)



No.	Name & Specification	QTY
C1	Rotor shaft	1
C2	Lock nut M12	64
C3	Spring washer 12	65
C4	Bolt M12×35	64
C5	Blade (right)	16
C6	Blade (left)	16
C7	Felt sealing ring	2
C8	Oil seal FB 50×72×10	1
C9	Right bearing seat	1
C10	Cork pad	1
C11	Lock nut M10	8
C12	Plain washer 10	12
C13	Hexagon socket countersunk head screws M10×35	4
C14	Circlip for hole 85	1
C15	Deep groove ball bearing 6209-2RZ	1
C16	Oil seal FB 45×65×8	1
C17	Left bearing seat	1
C18	Bolt M10×35	4
C19	Deep groove ball bearing 6306-RZ	1
C20	Big plain washer 12	1
C21	Bolt M12×25	1
C22	End cap	1
C23	Circlip for hole 72	1
C24	Oil cup M6	1

4. Mesh wheel assembly (STB145-003)



No.	Name & Specification	QTY
D1	Adjustment lever assembly	2
D2	spool sleeve	2
D3	Lock Nut M12	6
D4	Plain washer 12	12
D5	Bolt M12×50	5
D6	Welded joint for left arm of mesh wheel	1
D7	Bearing UCFLU205	2
D8	Spring Tension Plate	2
D9	Plain washer 20	2
D10	Cotter pin 4×25	2
D11	Nut M8	2
D12	bolt M8×60	2
D13	Mesh wheel	1
D14	Bolt M12×45	1
D15	Welded joint for right arm of mesh wheel	1
D16	Lock Nut M10	4
D17	tension spring	2
D18	Set screws	2
D19	Plain washer 10	2
D20	Mud scraper	1