

# **TRA-0426** **WOOD CHIPPER**

Using tips:  
Video on Youtube



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*Operator's Manual*

**BILT HARD**

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# INTRODUCTION

## IMPORTANT HEALTH AND SAFETY INFORMATION

Before using your new chipper, please take time to read this manual. Failure to do so could result in:

- personal injury
- equipment damage
- damage to property
- 3rd party injuries

This manual covers the operation and maintenance of the hydraulic wood chipper. All information in this manual is based on the latest product information available at the time of purchase.

All the information you need to operate the machine safely and effectively is contained within pages 2 to 12. Ensure that all operators are **properly trained** for operating this machine, especially in **safe working practices**.

Due to improvements in design and performance during production there may be, in some cases, minor discrepancies between the actual chipper and the text in this manual.

The manual should be considered an important part of the machine and should remain with it if the machine is resold.



### CAUTION or WARNING

BE AWARE OF THIS SYMBOL AND WHERE SHOWN, CAREFULLY FOLLOW THE INSTRUCTIONS.



### CAUTION or WARNING

THIS SYMBOL INDICATES IMPORTANT SAFETY MESSAGES IN THIS MANUAL. WHEN YOU SEE THIS SYMBOL, BE ALERT TO THE POSSIBILITY OF INJURY TO YOURSELF OR OTHERS AND CAREFULLY READ THE MESSAGE THAT FOLLOWS.



### CAUTION or WARNING

ALWAYS FOLLOW SAFE OPERATING AND MAINTENANCE PRACTICES

Designed to chip solid wood material up to 28 inch in diameter and capable of chipping up to 3.5 tonnes of brushwood per hour.

# SPECIFICATIONS

<b>HYDRAULIC WOOD CHIPPER</b>		<b>SKU:TRA-0426</b>
<b>Engine Brand/Type</b>	Loncin Brand/V-twin cylinder;Four Stroke;Forced air cooling	
<b>Start</b>	Electric Start 12V 32Ah Battery	
<b>Fuel Tank</b>	12L	
<b>Hydraulic Oil Tank</b>	18L	
<b>Cutting Method</b>	Disc	
<b>Max Chipping Capacity</b>	8inch	
<b>Discharge Chute</b>	360 Degree Rotating	
<b>Belts Brand/Material</b>	SANLUX/Rubber	
<b>Blade No.</b>	2pcs cutting blades+1pcs fixed blade	
<b>Blades Material</b>	A8	
<b>Blades Type</b>	High-speed tool steel	
<b>Feeding System</b>	Hydraulic motor feeding	
<b>Hydraulic Motor/Rotor</b>	1pcs	
<b>Wheel</b>	145/70R 12tire	
<b>Axle</b>	With Shock-absorbing steel plate	
<b>Towing</b>	Tow Bar With 2 INCH Hitch Hall	
<b>Weight(N.W./G.W.)</b>	1036/1146 lbs	
<b>Packing Size</b>	66*48*42 inch	

# OPERATING INSTRUCTIONS



1x Main body,feeding chute and engine



2x Tire cover and Tires 145/70 R12



1x Discharge chute Half circle board1,2

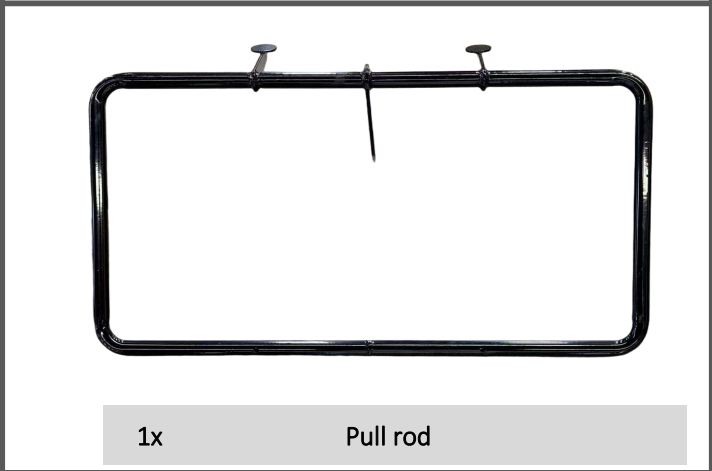
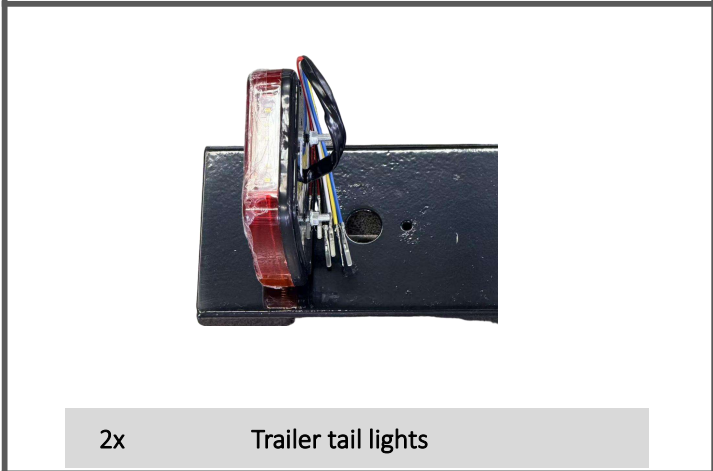


2x Shock absorber spring plate



1x Axle

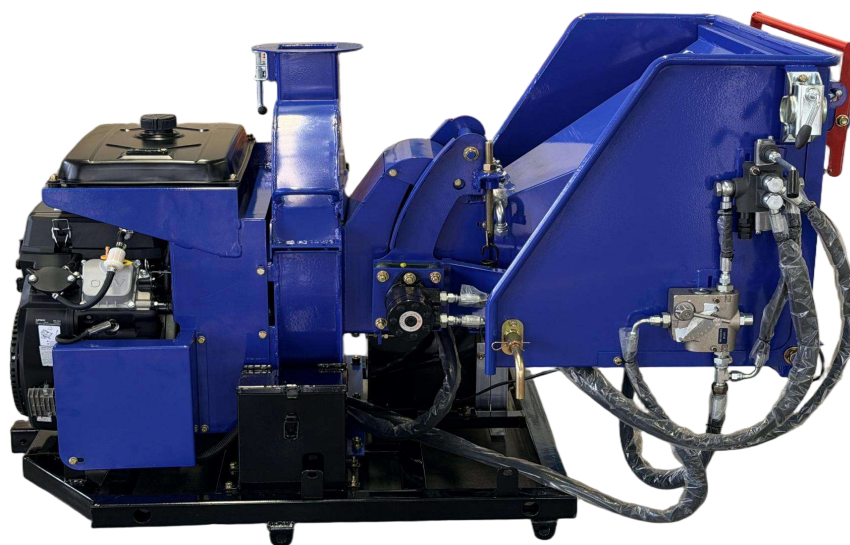
# OPERATING INSTRUCTIONS



# OPERATING INSTRUCTIONS

## Assembly Part

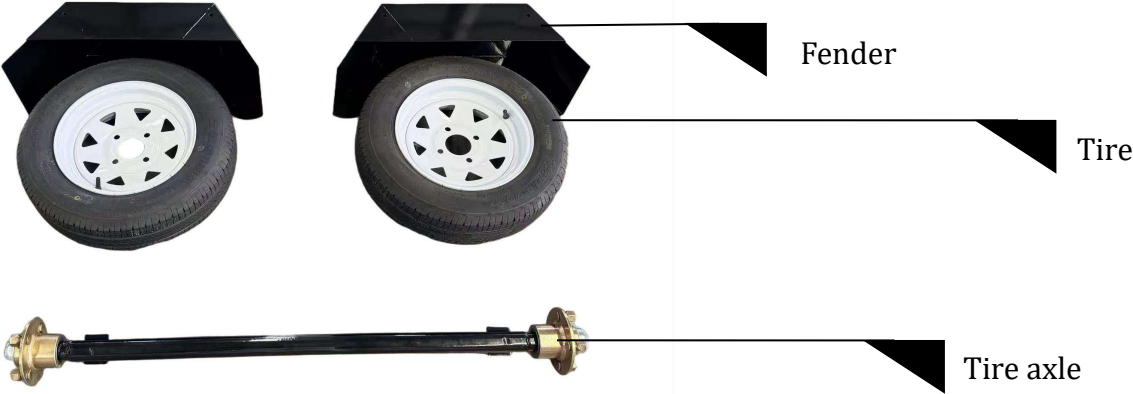
## Main Part



# OPERATING INSTRUCTIONS

Your Wood Chipper comes partially assembled and contains the following:

**Part 1:**



# OPERATING INSTRUCTIONS

## AXLE

Use "U" type bolts to install wheel shaft and damping steel plate.



## WHEELS

Assemble the wheel onto the axle.

## FENDER

Assemble the fender to the base frame through the fender assembly using an M8×20 full-thread hexagon head bolt, M8 hex lock nut, and Ø8 plain washer.



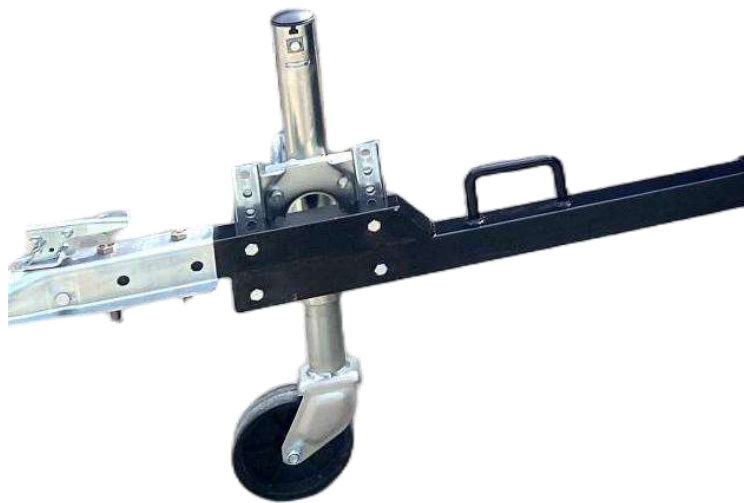
# OPERATING INSTRUCTIONS

## Part 2:

### TOW BAR AND JOCKEY WHEEL

Begin by securing the tow bar and jockey wheel use M12×35 full-thread hex head bolts, along with 12mm flat washers and 12mm spring washers.

Use M12x80 hex bolts, along with 12mm flat washers and 12mm spring washers and M12 nuts install the coupler.



Use M12x80 hex bolts, along with 12mm flat washers and 12mm spring washers and M12 nuts install the tow bar to the main body.



# OPERATING INSTRUCTIONS

## Part 3:



## Muffler

When the tires and jockey wheel are installed, the machine will be supported and the muffler will be installed at the bottom of the machine.

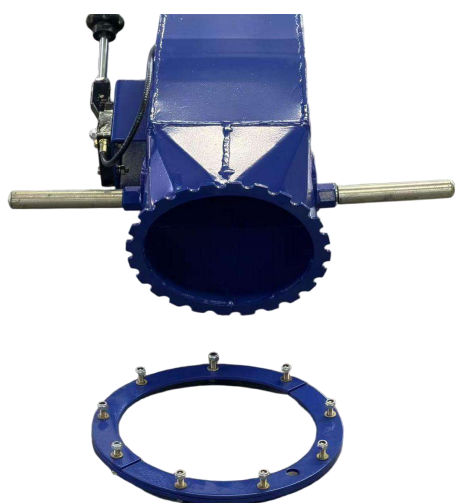
Use M8x25 hex bolts, along with 8mm flat washers and M8 lock nuts install the muffler to the main body.



# OPERATING INSTRUCTIONS

## Part 4:

Use M6x25 hex bolts, along with 6mm flat washers and 6mm spring washers and M6 hex nuts install the discharge chute to the main body.

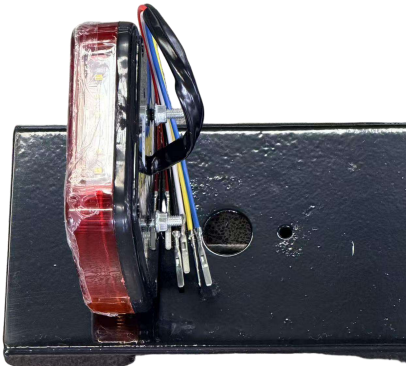


# OPERATING INSTRUCTIONS

## Part 5:

### TAIL LIGHT BRACKET AND TAILER TAIL LIGHTS

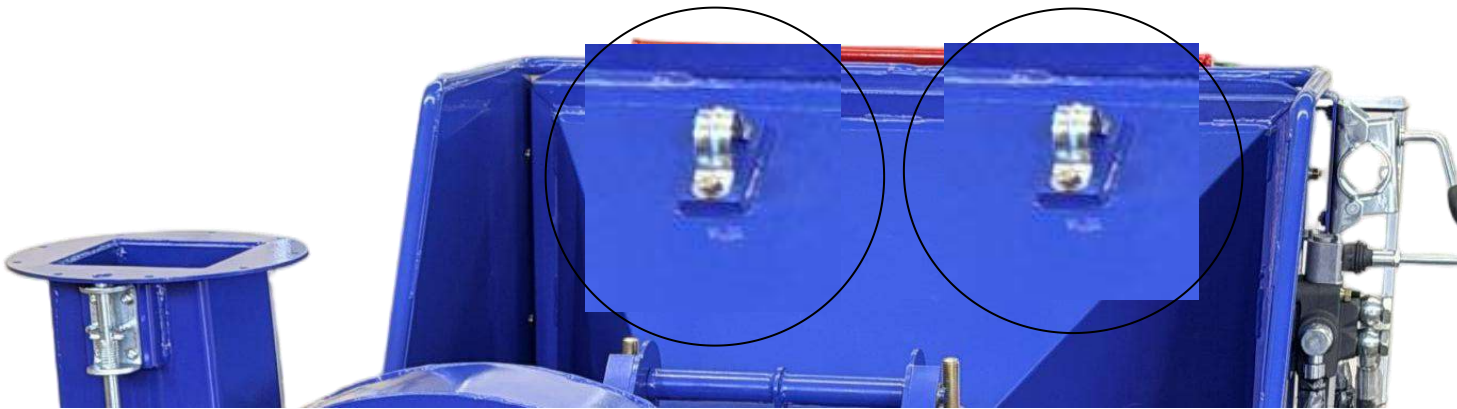
Use M8x70 hex bolts, along with 8mm flat washers and M8 lock nuts install the Tail light bracket to the main body.



# OPERATING INSTRUCTIONS

## Hydraulic feeding roller handle

Use M10x25 hex bolts, along with 10mm flat washers and M10 lock nuts install the hydraulic feed roller handle to the feed hopper top.



# **SECTION I**

## SAFE WORKING

# SAFE WORKING

## OPERATOR'S PERSONAL PROTECTIVE EQUIPMENT (PPE)

- Chainsaw safety helmet (EN 397) fitted with mesh visor (EN 1731) and ear defenders (EN 352).
- Work gloves with elasticated wrist.
- Steel toe cap safety boots (EN 345-1).
- Close fitting heavy-duty non-slag clothing. High-visibility clothing (EN 471) if risk assessment identifies the need.
- Face mask if appropriate.
- DO NOT wear rings, bracelets, watches, jewellery or any other items that could be caught in the material and draw you into the chipper.

### WARNING

THE CHIPPER WILL FEED MATERIAL THROUGH HOLD-TO-RUN. TO DO THIS, IT RELIES ON SHARP BLADES BOTH ON THE FEED ROLLERS AND THE CHIPPER ROTOR. TO KEEP THE BLADES SHARP, ONLY FEED THE MACHINE WITH CLEAN BRUSHWOOD. DO NOT PUT MUDDY/DIRTY WOOD, ROOTS, POTTED PLANTS, BRICKS, STONES OR METAL INTO THE CHIPPER.



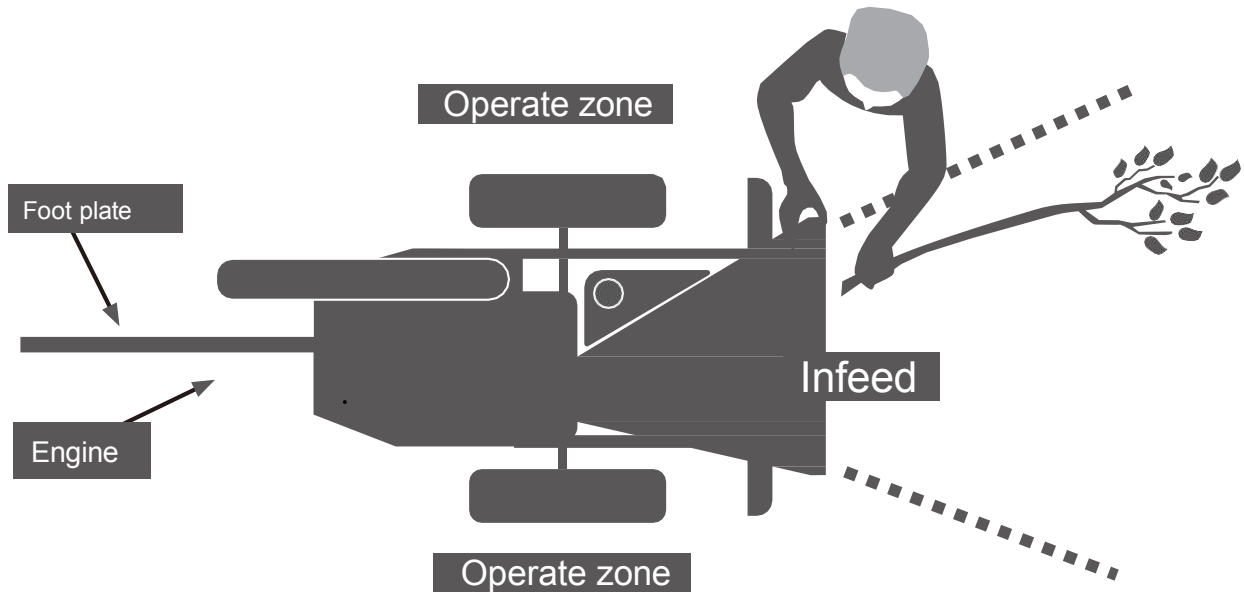
## BASIC WOOD CHIPPING SAFETY

The operator should be aware of the following points:

- Maintain a safety exclusion zone around the chipper of at least 10 meters for the general public or employees without adequate protection. Use hazard tape to identify this working area and keep it clear from debris build up. Chips should be ejected away from any area the general public have access to.
- Hazardous material - Some species of trees and bushes are poisonous. The chipping action can produce vapour, spray and dust that can irritate the skin. This may lead to respiratory problems or even cause serious poisoning. Check the material to be chipped before you start. Avoid confined spaces and use a face mask if necessary.
- Be aware when the chipper is processing material that is an awkward shape. The material can move from side to side in the funnel with great force. If the material extends beyond the funnel, the branch may push you to one side causing danger.  
Badly twisted brush should be trimmed before being chipped to avoid thrashing in the feed funnel.

# SAFE WORKING

- Be aware that the chipper can eject chips out of the feed funnel with considerable force. Always wear full head and face protection.
- Always work on the side of the machine furthest from any local danger, e.g. not road side.



- Never leave the chipper unattended when running. Machines must be supervised at all times when in use.
- In the event of an accident, stop the machine, remove the key and call the emergency services immediately.
- Only use the machine in daylight or illuminance above 500lux. Never operate the wood chipper after dark.
- Always operate the chipper outdoors and in a well ventilated area - exhaust fumes are dangerous. Always keep the operating area clear of people, animals and children. Never operate the chipper in rainy days.
- Keep the warehouse clean and dry for storage, check the battery to be safe, stabilize the chipper on hard level ground and then use the wedges on both side of the wheels.

# SAFE WORKING

## GENERAL SAFETY MATTERS

- Always stop the chipper engine before making any adjustments, refuelling or cleaning.
- Always check the rotor has stopped rotating and remove the chipper ignition key before maintenance of any kind, or whenever the machine is to be left unattended. The way to confirm that the rotating cutting parts have stopped is to see that the two-color rotating axis inside the transparent cover no longer rotates, then maintenance work can be carried out.
- Always check the machine is well supported and cannot move. If working on an incline, position on solid ground, across the slope. Stabilize the chipper on hard level ground and then use the wedges on both side of wheels.
- Always operate the chipper with the engine set to maximum speed when chipping.
- Always check (visually) for fluid leaks. If found, resolve the leak before operating the chipper.
- Always take regular breaks. Wearing personal protective equipment for long periods can be tiring and hot.
- Always keep hands, feet and clothing out of feed opening, discharge and moving parts.
- Always use a push stick to push in short pieces. Under no circumstances should you reach into the funnel.
- Always keep the operating area clear of people, animals and children.
- Always keep the operating area clear from debris build up.
- Always keep clear of the chip discharge tube. Foreign objects may be ejected with great force.
- Always ensure protective guarding is in place before commencing work. Failure to do so may result in personal injury or loss of life.
- Always operate the chipper in a well ventilated area - exhaust fumes are dangerous.
- Ensure a fire extinguisher is available on site.
- Ensure a personal first aid kit and hand cleaning materials are available (e.g. waterless skin cleanser).
- Always cover ignition switch with plug provided when towing or jet wash cleaning.



# SAFE WORKING



DO NOT ALLOW THE FOLLOWING TO ENTER THE MACHINE, AS DAMAGE IS LIKELY



CLOTH



STONES



METAL



GLASS



RUBBER



PLASTIC



BRICKS



STRING



ROOTS



BEDDING  
PLANTS

- Do not operate chipper unless available light is sufficient to see clearly.
- Do not use or attempt to start the chipper without the feed funnel, guards and discharge unit securely in place.
- Do not stand directly in front of the feed funnel when using the chipper. Stand to one side.
- Do not smoke when refuelling.
- Do not let anyone who has not received instruction operate the machine.
- Do not climb on the machine at any time.
- Do not handle material that is partially engaged in the machine.
- Do not touch any exposed wiring while the machine is running.
- Do not use the chipper inside buildings.

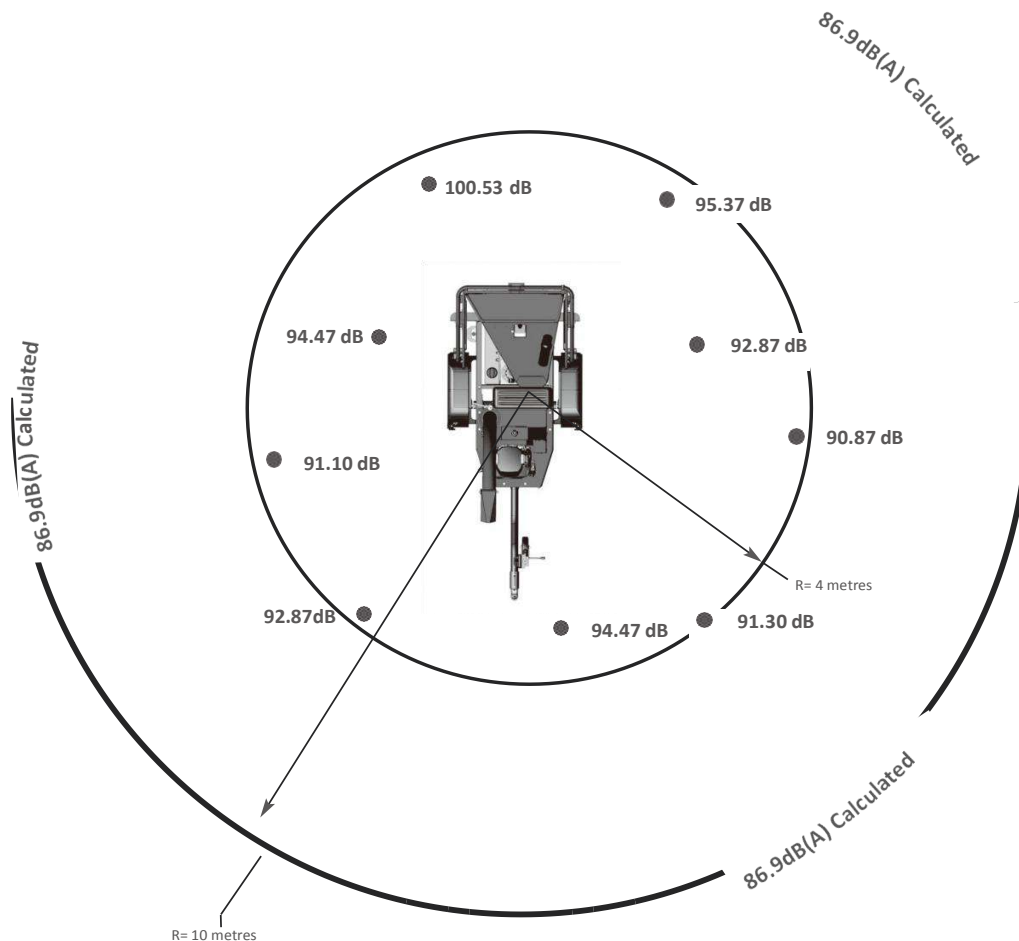


# SAFE WORKING

## NOISE TEST

**MACHINE:** Hydraulic Wood Chipper  
**NOTES:** TESTED CHIPPING 120MM CORSICAN PINE 1.5M IN LENGTH

Noise levels above 80dB (A) will be experienced at the working position. Wear ear protection at all times to prevent possible damage to hearing. All persons within a 4 metre radius must also wear good quality ear protection.



**Guaranteed Sound Power:** 117dB (A)

As required by Annex III of Directive 2000/14/EC "Noise Emission in the environment by equipment for use outdoors".

# **SECTION II**

## OPERATING INSTRUCTIONS

# OPERATING INSTRUCTIONS

## SAFE TRANSPORTATION

- The wood chipper is designed to be transported via a van or small trailer. The machine is equipped with grab bars that are to be used for both lifting the machine, and strapping it down. This machine weighs approximately 1080 lb and should only be lifted using correct apparatus.
- When the wood chipper is packaged in the plywood case, we can carry machine by forklift.

Note: The machine is not designed to travel on the road, it's only permitted to move for short distance by its wheels.

## STABLISHING THE CHIPPER

- Stabilize the chipper on hard level ground
- Use the wedges on both side of wheels.

## DELIVERY

All machines have a full pre-delivery inspection before leaving the factory and are ready to use. Read and understand this instruction manual before attempting to operate the chipper. In particular, read pages which contain important health and safety information and advice.

## OPERATOR'S PERSONAL PROTECTIVE EQUIPMENT REQUIRED

- Chainsaw safety helmet fitted with visor and recommended ear defenders to an appropriate specification.
- Heavy-duty gloves with elasticated wristarea.
- Close - fitting heavy-duty non-snap clothing.
- Safety footwear.
- Face mask (if appropriate).

# OPERATING INSTRUCTIONS

## PREPARATION

All personnel involved with this machine must thoroughly read and fully understand the contents of this manual. Prior to use, training is essential and should be provided by the dealer. The dealer must also possess a comprehensive understanding of the manual, including proper operation, maintenance, and all aspects related to the machine's functions and safety protocols.

### Work Site Preparation:

- Remove all rocks, metal objects, or other materials that could damage the machine from the work area and material storage zones.
- Clear all obstacles that may block walkways or access paths.
- Ensure the work site is not located under high-voltage power cables.
- Verify the work site is well-lit and adequately ventilated.
- Confirm the work site is in an open area with sufficient space for operation and movement.
- Identify where branches/twigs will be processed and designate a collection area for wood chips.
- Maintain enough space for material delivery and unobstructed access.
- Check that first aid kits are fully stocked, in good condition, and readily accessible.
- Ensure at least two adult operators are present during machine operation to monitor functionality and maintain site safety.

### Material Preparation:

Proper material preparation enhances efficiency, improves working conditions, and reduces the risk of unnecessary maintenance costs.



Metals, rocks, glass, or similar substances can severely damage the machine, leading to property loss, injuries, or even fatalities. Vines or entanglement wrapping around twigs may entangle operators or damage the machine, so all vines in the material must be removed beforehand.

- An inclined feeding end facilitates easier material loading.
- Ensure materials are sufficiently long (over 1.2m) to keep hands clear of the rollers. Short materials can be pushed into the rollers using longer pieces as a guide.
- Adjusting material weight and length by cutting them into appropriate pieces can reduce the risk of operator injury.
- This chipper is designed for processing branches free of foreign objects such as rocks, metals, mud, or any substances that could damage the machine.

### Chipper Preparation:

To secure the machine on-site, one of the following methods must be used.

- Proper towing and anchoring to prevent unintended movement; or
- Deployment of support wheels with wheel chocks (blocks) firmly in place to stabilize the unit.

Note: Operating the chipper on uneven, sloped, or unstable ground can result in equipment instability and poses serious safety risks.

# OPERATING INSTRUCTIONS

## While Towing:

When towing the chipper, follow these safety precautions to ensure secure transportation:

- Ensure the towing vehicle is powerful enough to handle the chipper's weight.
- Always park the vehicle on flat, level ground before connecting or disconnecting the chipper.
- The towing vehicle must be fully stopped with the parking brake engaged.
- Never operate the chipper while it is being transported.
- Ensure the tow coupler is securely fixed onto the vehicle's tow ball.
- Attach the safety chain and cable:
  - The chain must be evenly hooked and must not drag on the ground.
  - The cable must be correctly connected.
- Check that all trailer lights (brake, indicator, etc.) are functioning properly.

## When Parking Without Towing:

- Each model is equipped with a jockey wheel for support when parked without being towed. Always retract the jockey wheel during transportation.
- Ensure the chipper's chassis remains parallel to the ground.
- Place wheel blockers in position to secure the wheels.

## ADD OIL TO ENGINE

**\*Shipped with NO fluids. Must add own fluid**

The engine is shipped without oil.  
Do not start  
the engine before adding oil.

1. Make sure the chipper shredder is on a flat, level surface.
2. Remove the oil fill cap/ dipstick to add oil.
3. Remove the dipstick and check the oil filling volume which should be at the upper limit of the scale (F point).

DO NOT OVERFILL.  
Check engine oil level daily  
and add as needed.

4. Completely insert the dipstick into the dipstick hole during inspection.
5. Dispose of used oil at an approved waste management facility.

## Engine oil

SAE 10W-30 is recommended for general, all-temperature use. Other viscosities shown in the chart may be used when the average temperature in your area is within the indicated range. (See engine manual for oil capacity, oil recommendation, and location of fill cap.)

# OPERATING INSTRUCTIONS

## ENGINE FUEL

**\*Shipped with NO fluids. Must add own fluid**

With the engine stopped, check the fuel level gauge. Refill the fuel tank if necessary.



Pressure can build up in the fuel tank. Allow the engine to cool for at least two minutes before removing fuel cap. Loosen the fuel cap slowly to relieve any pressure in the tank.

Use clean, fresh, regular unleaded gasoline. DO NOT mix oil with it gasoline. Be sure not to fill above the upper limit mark.

Always allow room for fuel expansion.



Do not fill the fuel tank above the upper limit. Over fill will results in engine die or damage the carbon canister (if equipped) and void your warranty.

## FIRE OR EXPLOSION

Gasoline is highly flammable and extremely explosive. Fire or explosion can cause severe burns or death. Keep flammable items away while handling gasoline.



Fill fuel tank outdoors and in a well-ventilated area with the engine stopped. Always wipe off spilled fuel and wait until the fuel has dried before starting the engine. DO NOT operate the engine with known leaks in the fuel system. Use proper fuel storage and handling procedures. DO NOT store fuel or other flammable materials nearby. Empty the fuel tank before storing or transporting this engine. Keep fire extinguisher handy and be prepared if a fire starts.



NEVER use engine or carburetor cleaner products in the fuel tank or permanent damage may occur.

# OPERATING INSTRUCTIONS

## HYDRAULIC OIL

**\*Shipped with NO fluids. Must add own fluid**



USE PLASTIC GLOVES TO KEEP OIL OFF SKIN AND DISPOSE OF THE USED OIL AND FILTER IN AN ECOLOGICALLY SOUND WAY. THE OIL AND FILTER SHOULD BE CHANGED ONCE A YEAR OR AT ANY TIME IT BECOMES CONTAMINATED. BEFORE STARTING CHECK THAT THE CHIPPER IS STANDING LEVEL AND BRUSH AWAY LOOSE CHIPS.

1. Remove the black screw cap from the top of the filter housing.
2. Partially remove filter element from inner cup. Leave filter to drain for 15 minutes.
3. Remove filter element from cup when clear of hydraulic oil.
4. Remove drain plug and drain oil into a suitable container.
5. Replace drain plug.
6. Refill with ISO VG 46 hydraulic oil until the level is between the min and max lines on the tank (about 15 litres).
7. Refit the filter cup, install a new filter element and refit the black screw cap, to the filter housing, ensuring o-ring remains in place.

## STARTING ENGINE

1. Open the fuel valve (fuel pipe switch) under the fuel tank.

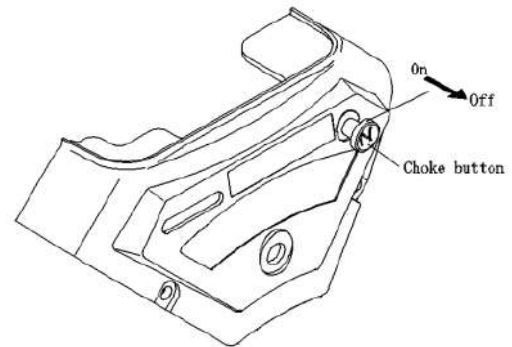


**When starting the machine for the first time, you need to start it several times when starting the key.**

# OPERATING INSTRUCTIONS

## 2. Choke button

The function of the choke button is to open or close the choke valve in the carburetor. When pull out the button, the choke valve is closed, in such case, it is prone to start the cold engine. When the engine works normally, it is required to push the choke button in, that is to say the choke valve is in opening position,



3. Move the engine switch to the ON position.
4. Move the throttle lever slightly to the FAST speed.

## STOP ENGINE

To stop the engine in an emergency, simply turn the engine switch to the OFF position. Under normal conditions, use the following procedure:

1. Move the throttle lever to the SLOW (🐢) position.
2. Let the engine idle for one or two minutes.
3. Turn the engine switch to the OFF position.
4. Turn the fuel valve lever to the OFF (🚫) position.



**Sudden stopping at a high speed under a heavy load is not recommended. Engine damage may result.**



**Do not move the choke control to CLOSE to stop the engine. Backfire or engine damage may occur.**

Wait until the machine completely stops. Allow the engine to completely cool. Then clean out the interior of the machine and its discharge chute.



**Do not disengage the belt drive with the machine running. This will cause friction and vibration on the belt drive.**



# OPERATING INSTRUCTIONS

- The maximum legal towing speed is 37 mph (60 km/h).  
Reduce speed on rough or uneven surfaces to minimize excessive vibration and protect the machine.
- Avoid obstacles that may contact or damage the underside of the machine.
- Steer clear of steep gradients and heavily potholed terrain.
- Exercise extra caution when reversing—the short wheelbase causes the machine to respond quickly to steering inputs.
- Tire pressure should be maintained at 2.8 Bar (41 psi).  
Ensure all wheel nuts are tightened to between 90 Nm and 100 Nm.
- Before departure:
  - Remove all loose woodchip material from the machine.
  - Ensure the chute is securely fixed in the inboard (transport) position.
  - Confirm that the hopper tray is closed in the upright position and the locking latch is fully engaged.

## ATTACHING TO THE VEHICLE TOW HITCH

Ensure the vehicle's tow ball is clean and well-greased. Turn the jockey wheel handle anticlockwise to raise the machine hitch until the hitch socket is positioned above the vehicle's tow ball.

Reverse the vehicle carefully so that the tow ball aligns directly beneath the machine's hitch socket. Grasp the handle on the tow head and push back the safety catch with your thumb.

Turn the jockey wheel handle clockwise to lower the hitch socket onto the tow ball. Release the tow head handle and continue winding the jockey wheel handle clockwise. The tow head should snap securely into place on the tow ball. If it does not, repeat the previous two steps to ensure proper alignment and connection.

Continue turning the jockey wheel handle until it is fully retracted and the jockey wheel frame is seated in its notch on the stem. The machine's full weight should now rest on the towing vehicle.

Release the jockey wheel clamp, slide the jockey wheel assembly fully upward, then tighten the clamp securely. Connect the vehicle's trailer socket to the machine's socket using the connection lead. Verify that all machine and vehicle lights are functioning correctly.

The machine is now securely attached to the tow vehicle and ready for transport.

## EMERGENCY STOPPING

There are two methods of stopping the chipper in the event of an emergency.

### STOPPING THE ROLLERS

Push the hydraulic feed bar operate handle the middle position will stop the rollers immediately.

### STOPPING THE ROLLERS & ENGINE

Pushing the Emergency stop bar of the funnel kills all power to both the engine and the rollers, bringing the machine to a complete stop.

# OPERATING INSTRUCTIONS

## BLADE WEAR

The most important part of using a wood chipper is keeping the cutter blades sharp. chipper blades are hollow ground to an angle of 40 degrees. When performing daily blade checks ensure blade edge is sharp and free from chips, if there is any evidence of damage, or the edge is "dull" change the blade(s)A new blade should chip for up to 25 hours before it requires sharpening. This figure will be drastically reduced by feeding the machine with stony, sandy or muddy material.

As the blade becomes blunt, performance is reduced. With increased stress and load on the machine the chips will become more irregular and stringy. At this point the blade should be sent to a reputable blade sharpening company. The blade can be sharpened several times in its life. A wear mark indicates the safe limit of blade wear. Replace when this line is exceeded.

The machine is also fitted with a static blade (anvil). It is important that the anvil is in good condition to allow the cutting blades to function efficiently. Performance will be poor even with sharp cutter blades if the anvil is worn.

## HYDRAULIC OIL LEVEL INDICATOR

The oil level will be visible through the tank wall. It should be within the upper and lower level marks.

## PETROL TANK INDICATOR

The fuel level may be inspected by removing the fuel filler cap and looking into the tank.

## DAILY CHECKS BEFORE STARTING

- Locate the machine on firm level ground.
- Check machine is well supported and cannot move.
- Check jack stand is lowered and secure.
- Check all guards are fitted and secure.
- Check the discharge unit is in place and fastened securely.
- Check discharge tube is pointing in a safe direction.
- Check the feed funnel to ensure no objects are inside.
- Check feed tray is in up position - to prevent people reaching rollers.
- Check controls as described below.
- Check (visually) for fluid leaks.
- Check fuel and hydraulic oil levels.

# OPERATING INSTRUCTIONS

## BEFORE USING THE CHIPPER

It is essential to carry out the following tests to check safety equipment - this sequence of tests will only take a few seconds to carry out. We recommend that these tests are carried out daily. Observing the function as described will confirm that the safety circuits are working correctly. This is also a good opportunity to remind all operators of the control and emergency stop systems.

- Start the engine, test if the feed roller and its hydraulic system can operate normally.
- To ensure the safety bar is always operational it must be activated once before each work session. The rollers will not function until the bar is activated. This procedure must be repeated each time the ignition is switched off.
- Check the emergency stop button as well

## STARTING THE ENGINE



### FOR A COLD ENGINE:

- Place the throttle control at 1/3 throttle and pull the choke out.
- Insert ignition key into starter switch.
- Turn the key to start the engine. Release the key as soon as the engine starts.
- Gradually return the choke to the off position as the engine starts and warms up. Allow the engine to warm up for at least one minute before chipping.

### FOR A WARM ENGINE:

Follow the instructions for a 'cold engine' but return the choke to the off position as soon as the engine starts.

If engine fails to start after 10 seconds leave for 1 minute and try again.

## STOPPING THE ENGINE

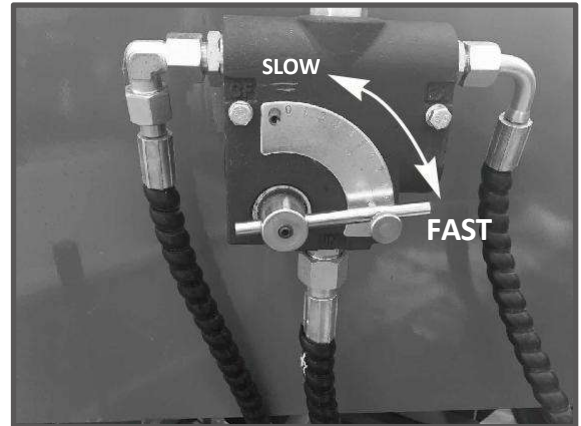
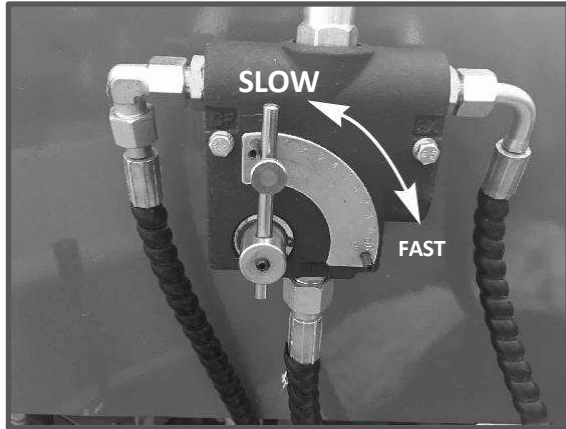
- Set engine to idle position.
- Allow to run for at least one full minute.
- Switch off and remove ignition key.

For more detailed information refer to the Engine Owner's Manual

# OPERATING INSTRUCTIONS

## FEEDING SPEED ADJUSTMENT

Flow control valve controls the motor rotation speed. When breaking branches with large diameter, the flow rate can be appropriately lowered, and the speed can be adjusted up when the branches are small.



## HYDRAULIC MOTOR ROTATION AND STOP

One hydraulic motors are fixed on the feeding roller and rotate in same directions to roll the wood into the chipping house.

# OPERATING INSTRUCTIONS

## STARTING TO CHIP



### WARNING

**DO NOT USE OR ATTEMPT TO START THE CHIPPER WITHOUT THE PROTECTIVE GUARDING AND DISCHARGE UNIT SECURELY INPLACE. FAILURE TO DO SO MAY RESULT IN PERSONAL INJURY OR LOSS OF LIFE.**

- Check that the chipper is running smoothly.
- Release the catches on the feed tray and lower.
- Perform the "before using the chipper" tests.
- Stand to one side of the feed funnel.
- Proceed to feed material into the feed funnel.

## CHIPPING

Wood up to the recommended diameter can be fed into the feed funnel. Put the butt end in first and engage it with the feed rollers. The hydraulic feed rollers will pull the branch into the machine quite quickly. Large diameter material will have its feed rate automatically controlled by the no stress unit.

Sometimes a piece of wood that is a particularly awkward shape is too strong for the feed rollers to break. Pull the material out of the feed funnel and trim it so the chipper can handle it.

## BLOCKAGES

Always be aware that what you are putting into the chipper must come out. If the chips stop coming out of the discharge tube but the chipper is taking material in - STOP IMMEDIATELY. Continuing to feed material into a blocked machine may cause damage and will make it difficult to clear.

If the chipper becomes blocked, proceed as follows:

- Stop the engine and remove the ignition keys.
- Remove the discharge tube. Check that it is clear.
- Wearing gloves, reach into the rotor housing and scoop out the majority of the debris causing the blockage.

# OPERATING INSTRUCTIONS

## WARNING



**DO NOT REACH INTO THE ROTOR HOUSING WITH UNPROTECTED HANDS. THERE ARE SHARP BLADES AND ANY SMALL MOVEMENT OF THE ROTOR MAY CAUSE SERIOUS INJURY.**

- Replace the discharge tube.
- Restart the engine and increase to full speed.
- Allow machine time to clear excess chips still remaining in rotor housing before you continue feeding brushwood. Feed in a small piece of wood while watching to make sure that it comes out of the discharge. If this does not clear it, repeat the process and carefully inspect the discharge tube to find any obstruction.

NOTE: Continuing to feed the chipper with brushwood once it has become blocked will cause the chipper to compact the chips in the rotor housing and it will be difficult and time consuming to clear.

## WARNING



**ALWAYS IMMOBILISE THE MACHINE BY STOPPING THE ENGINE, REMOVING THE IGNITION KEY AND DISCONNECTING THE BATTERY BEFORE UNDERTAKING ANY MAINTENANCE WORK.**

# OPERATING INSTRUCTIONS

SERVICE SCHEDULE	Daily Check	50 Hours	100 Hours	500 Hours	1 Year
Check engine oil - top up if necessary (10W-30).	✓				
Check for engine oil / hydraulic oil leaks.	✓				
Check fuel level.	✓				
Check feed funnel, feed roller cover, access covers, engine covers and discharge unit are securely fitted.	✓				
Check blades	✓				
Ensure engine air intake is free from leaf build up.	✓				
Check tyre pressure is 2.2 Bar (32 psi).	✓				
Check safety bar mechanism.	✓				
Grease the roller box slides.	✓	OR AS REQUIRED - SEE PAGE 20			
Grease the roller spline and bearing.	✓	OR AS REQUIRED - SEE PAGE 20			
Clean air filter element.	DEPENDING ON WORKING ENVIRONMENT				
Check for tightness all nuts, bolts and fastenings making sure nothing has worked loose.		✓			
Grease discharge flange.		✓			
Check tension of main drive belts (and tension if necessary).		✓			
Check anvils for wear.		✓			
Check fuel pipes and clamp bands.			✓		
Check battery electrolyte level.			✓		
Check for loose electrical wiring.			✓		

# OPERATING INSTRUCTIONS

SERVICE SCHEDULE	Daily Check	50 Hours	100 Hours	500 Hours	1 Year
Replace hydraulic oil filter - every year or 100 hours after service or repair work to the hydraulic system.			✓	OR	✓
Replace hydraulic oil.			✓	OR	✓
Replace fuel pipes and clamp bands.	REFER TO YOUR ENGINE SUPPLIERS MANUAL				
Check spark plugs.					
Change engine oil.					
Replace engine oil filter cartridge.					
Check valve clearance.					
Replace anvils when worn.	RETURN TO DEALER FOR ANVIL CHANGE				
Axle maintenance.	REFER TO SUPPLIERS INSTRUCTION SHEET				
Tow head maintenance.					

NOTE: Your woodchipper is covered by a full 12 months parts and labour warranty. Subject to correct maintenance and proper machine usage, the bearings are guaranteed for 12 months regardless of hours worked by the machine. In conditions of 'heavy usage' - i.e. in excess of 500 hours per year - it is recommended that the bearings are changed annually to ensure that the machine retains optimum working performance.

## SAFE MAINTENANCE

ALWAYS IMMOBILISE THE ENGINE BEFORE UNDERTAKING ANY MAINTENANCE WORK ON THE CHIPPER BY REMOVING THE KEY AND DISCONNECTING THE BATTERY.

- Handle blades with extreme caution to avoid injury. Gloves should always be worn when handling the cutter blades.
- THE drive belts should be connected while changing blades, as this will restrict sudden movement of the rotor.
- The major components of this machine are heavy. Lifting equipment must be used for disassembly.
- CLEAN machines are safer and easier to service.
- Avoid contact with hydraulic oil.

# OPERATING INSTRUCTIONS

## SAFE LIFTING OF THE CHIPPER

The lifting eye is designed to lift the machine's weight only. Do not use hoist hook directly on the lifting eye, use a correctly rated safety shackle. Inspect the lifting eye prior to each use - DO NOT USE LIFTING EYE IF DAMAGED.



## SPARES

Only fit genuine replacement blades, screws and chipper spares. Failure to do so will result in the invalidation of the warranty and may result in damage to the chipper, personal injury or even loss of life.

## BATTERY REMOVAL AND MAINTENANCE

- Remove the negative lead first and then the positive lead.
- Clean, charge and/or top up the battery as required.
- Refitting is the reverse of removal. Apply a smear of petroleum jelly to the terminals to prevent corrosion.



### WARNING

REFER TO THE BATTERY SAFETY SECTION ON PAGE 17.

## CHECK FITTINGS

The HYDRAULIC WOOD CHIPPER is subject to large vibrations during the normal course of operation. Consequently there is always a possibility that nuts and bolts will work themselves loose. It is important that periodic checks are made to ensure the security of all fasteners. Fasteners should be tightened using a torque wrench to the required torque (see below). Uncalibrated torque wrenches can be inaccurate by as much as 25%. It is therefore essential that a calibrated torque wrench is used to achieve the tightening torques listed below.

	Size	Pitch	Head	Torque lb ft	Torque Nm
<b>Blade Bolts</b>	M16	Standard	24mm Hex	125	170
<b>Anvil Bolts</b>	M10	Standard	8 mm Allen Key	65	88
<b>General</b>	M8	Standard	13 mm Hex	20	27
<b>General</b>	M10	Standard	17 mm Hex	45	61
<b>General</b>	M12	Standard	19 mm Hex	65	88

# OPERATING INSTRUCTIONS

## BATTERY SAFETY INFORMATION

### WARNING NOTES AND SAFETY REGULATIONS FOR FILLED LEAD-ACID BATTERIES



- For safety reasons, wear eye protection when handling a battery.



- Keep out of reach of children.



- Fires, sparks, naked flames and smoking are prohibited.
- Avoid causing sparks when dealing with cables and electrical equipment, and beware of electrostatic discharges.
- Avoid short circuits.



#### EXPLOSION HAZARD:

- A highly explosive oxyhydrogen gas mixture is produced when batteries are charged.



#### CORROSIVE HAZARD:

Battery acid is highly corrosive, therefore:

- Wear protective gloves and eye protection.
- Do not tilt the battery, acid may escape from the vent openings.

#### FIRST AID:



- Rinse off acid splashed in the eyes immediately for several minutes with clear water! Remove contact lenses if worn and continue rinsing. Then consult a doctor immediately.
- Neutralise acid splashes on the skin or clothes immediately with acid neutraliser (soda) or soap suds, and rinse with plenty of water.
- If acid is swallowed, consult a doctor immediately.



#### WARNING NOTES: THE BATTERY CASE CAN BECOME BRITTLE, TO AVOID THIS:

- Do not store batteries in direct sunlight.
- Discharged batteries may freeze up, therefore store in an area free from frost.



#### DISPOSAL:



- Dispose of old batteries at an authorised collection point.
- The notes listed under item 1 are to be followed for transport.
- Never dispose of old batteries in household waste.

# OPERATING INSTRUCTIONS

## STORAGE AND TRANSPORT

- Batteries are filled with acid.
- Always store and transport batteries upright and prevent from tilting so that no acid can escape.
- Store in a cool and dry place.
- Do not remove the protective cap from the positive terminal.
- Run a FIFO (first in-first out) warehouse management system.

## 1. INITIAL OPERATION

- The batteries are filled with acid at a density of 1.28g/ml during the manufacturing process and are ready for use.

## 2. INSTALLATION IN THE VEHICLE AND REMOVAL FROM THE VEHICLE

- Switch off the engine and all electrical equipment.
- When removing, disconnect the negative terminal first.
- Avoid short circuits caused by tools, for example.
- Remove any foreign body from the battery tray, and clamp battery tightly after installation.
- Clean the terminals and clamps, and lubricate slightly with battery grease.
- When installing, first connect the positive terminal, and check the terminal clamps for tight fit.
- After having fitted the battery in the vehicle, remove the protective cap from the positive terminal, and place it on the terminal of the replaced battery in order to prevent short circuits and possible sparks.
- Use parts from the replaced battery, such as the terminal covers, elbows, vent pipe connection and terminal holders (where applicable); use available or supplied filler caps.
- Leave at least one vent open, otherwise there is a danger of explosion. This also applies when old batteries are returned.

## 3. CHARGING

- Remove the battery from the vehicle; disconnect the lead of the negative terminal first.
- Ensure good ventilation.
- Use suitable direct current chargers only.
- Connect the positive terminal of the battery to the positive output of the charger. Connect the negative terminal accordingly.
- Switch on the charger only after the battery has been connected, and switch off the charger first after charging has been completed.

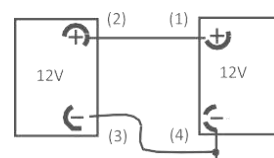
# OPERATING INSTRUCTIONS

## 4. MAINTENANCE

- Keep the battery clean and dry.
- Use a moist anti-static cloth only to wipe the battery, otherwise there is a danger of explosion.
- Do not open the battery.
- Recharge in case of insufficient starting power (see no. 4).

## 5. JUMP STARTING

- Use the standardised jumper cable in compliance with DIN 72553 only, and follow the operating instructions.
- Use batteries of the same nominal voltage only.
- Switch off the engines of both vehicles.
- First connect the two positive terminals (1) and (2), then connect the negative terminal of the charged battery (3) to a metal part (4) of the vehicle requiring assistance away from the battery.
- Start the engine of the vehicle providing assistance, then start the engine of the vehicle requiring assistance for a maximum of 15 seconds.
- Disconnect the cables in reverse sequence (4-3-2-1).



## 6. TAKING THE BATTERY OUT OF SERVICE

- Charge the battery; store in a cool place or in the vehicle with the negative terminal disconnected.

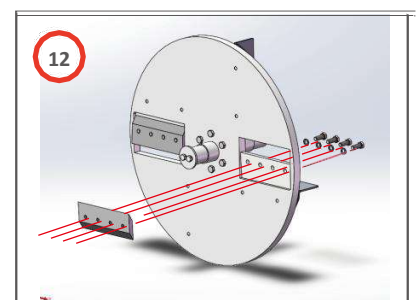
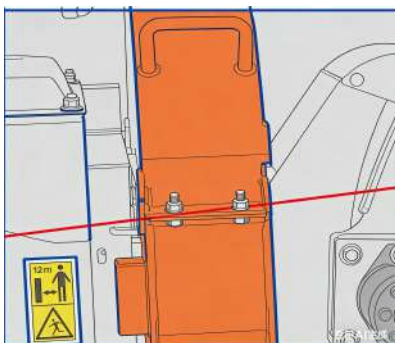
# OPERATING INSTRUCTIONS

## CHANGE BLADES



**WARNING**  
**WEAR RIGGERS GLOVES FOR THE BLADE CHANGING OPERATION.**

1. Turn the chipper off and remove the ignition keys.
2. Remove battery leads.
3. Remove the M12 bolt retaining the guard, allowing the guard to be opened.
4. Turn rotor to blade change position.
5. Insert locking bar into rotor housing and rotor. Must ensure that the opening time must be longer than the time when the moving parts stop.
6. Brush away all dirt and debris from the rotor and blades.
7. With spanner/socket undo the bolts and washers that are holding the blade in place. Remove both blade bolts from the blade.
8. Grasp the blade by the flat edges while wearing heavy duty gloves.
9. Withdraw the blade from the rotor.
10. Clean the back surface of the blade, blade bolts and blade area of the rotor before reseating blades. The blades must not have any material underneath them when tightened. If they are not flat and tight they will become loose very quickly.
11. Reassemble the blades, bolts and washers in the order shown in the diagram above.
12. Apply a smear of anti seize compound compound (copper ease) to the bolt threads. Do not apply copper grease onto the counter bore faces of the blades or bolts.
13. A calibrated torque wrench must be used to tighten the bolts to a torque setting of 125 lbs ft (170 Nm).
14. Remove lock pin, rotate rotor to next blade then replace lock pin and repeat steps 7-12
15. Refit the M12 bolt and nuts retaining the guard and tighten to 45 lb/ft.
16. Refit battery leads.



# OPERATING INSTRUCTIONS

## WARNING



ALWAYS SHARPEN BLADES ON A REGULAR BASIS. FAILURE TO DO SO WILL CAUSE THE MACHINE TO UNDER PERFORM AND WILL OVERLOAD ENGINE AND BEARINGS CAUSING MACHINE BREAKDOWN. BLADES MUST NOT BE SHARPENED BEYOND THE WEAR MARK (SEE DIAGRAM). FAILURE TO COMPLY WITH THIS COULD RESULT IN MACHINE DAMAGE, INJURY OR LOSS OF LIFE.

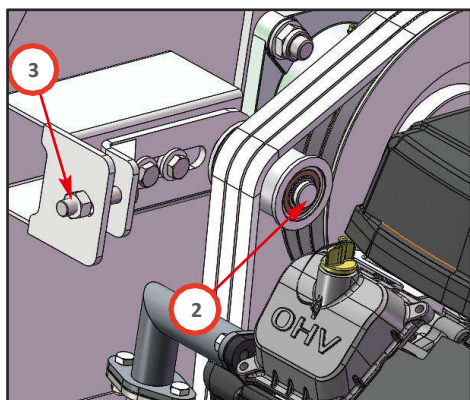


## TENSION BELTS

NOTE: There will normally be a rapid drop in tension during run-in period for new belts. When new belts are fitted, check the tension every 2-3 hours and adjust until the tension remains constant.

Belt failures due to lack of correct tensioning will not be covered under your warranty.

## TENSION DRIVE BELTS



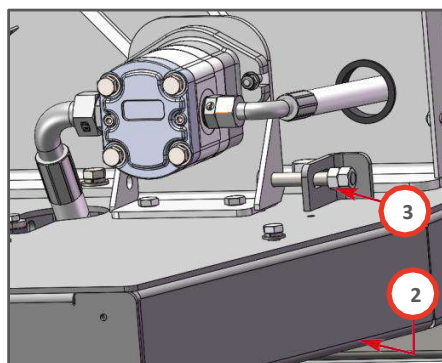
1. Remove belt guard.
2. Loosen bolt in centre of tensioner pulley with a 19mm spanner so that pulley is able to slide with minimal wobble.
3. Turn nut in end of tensioner pulley slider until correct belt tension is achieved. For instructions on checking belt tension & correct belt tension values, please refer to the V-Belt Tensioning Data Table.
4. Retighten bolt in centre of tensioner pulley.
5. Refit belt guard.
6. Run machine and test, recheck belt tension.

NOTE: Slack drive belts will cause poor performance and excess belt and pulley wear.

# OPERATING INSTRUCTIONS

## TENSION HYDRAULIC PUMP BELT

1. Remove belt guard.
2. Access the two nuts on the under side of the chassis and slacken using a 19 mm socket spanner.
3. Adjust the M8 bolt on the outside plate until the desired tension is achieved. For instructions on checking belt tension & correct belt tension values, please refer to the V-Belt Tensioning Data Table (pg. 30).
4. Retighten the two nuts to (88 Nm) 65 lbs/ft.
5. Refit belt guard.



## CHANGE HYDRAULIC OIL AND FILTER

### WARNING



**USE PLASTIC GLOVES TO KEEP OIL OFF SKIN AND DISPOSE OF THE USED OIL AND FILTER IN AN ECOLOGICALLY SOUND WAY. THE OIL AND FILTER SHOULD BE CHANGED ONCE A YEAR OR AT ANY TIME IT BECOMES CONTAMINATED. BEFORE STARTING CHECK THAT THE CHIPPER IS STANDING LEVEL AND BRUSH AWAY LOOSE CHIPS.**



1. Remove the black screw cap from the top of the filter housing.
2. Partially remove filter element from inner cup. Leave filter to drain for 15 minutes.
3. Remove filter element from cup when clear of hydraulic oil.
4. Remove drain plug and drain oil into a suitable container.
5. Replace drain plug.
6. Refill with VG 32 hydraulic oil until the level is between the min and max lines on the tank (about 15 litres).

NOTE: This is a non-adjustable air breather filter.

7. Refit the filter cup, install a new filter element and refit the black screw cap, to the filter housing, ensuring o-ring remains in place.

# OPERATING INSTRUCTIONS

## GREASE THE DISCHARGE FLANGE

1. Remove the discharge tube.
2. Apply multipurpose grease to surface shown.
3. Refit discharge tube.



## ENGINE SERVICING

All engine servicing must be performed in accordance with the Engine Manufacturer's handbook provided with the machine. FAILURE TO ADHERE TO THIS MAY INVALIDATE WARRANTY AND/OR SHORTEN THE LIFE OF THE ENGINE.

## CHECK HOSES






All the hydraulic hoses should be regularly inspected for chafing and leaks. The hydraulic system is pressurized to 150 Bar and thus the equipment containing it must be kept in good condition.

Identify the hoses that run to the top motor. These have the highest chance of damage as they are constantly moving. If any hydraulic components are changed new seals should be installed during reassembly. Fittings should then be retightened.

# **SECTION IV**

## DECALS

# DECALS

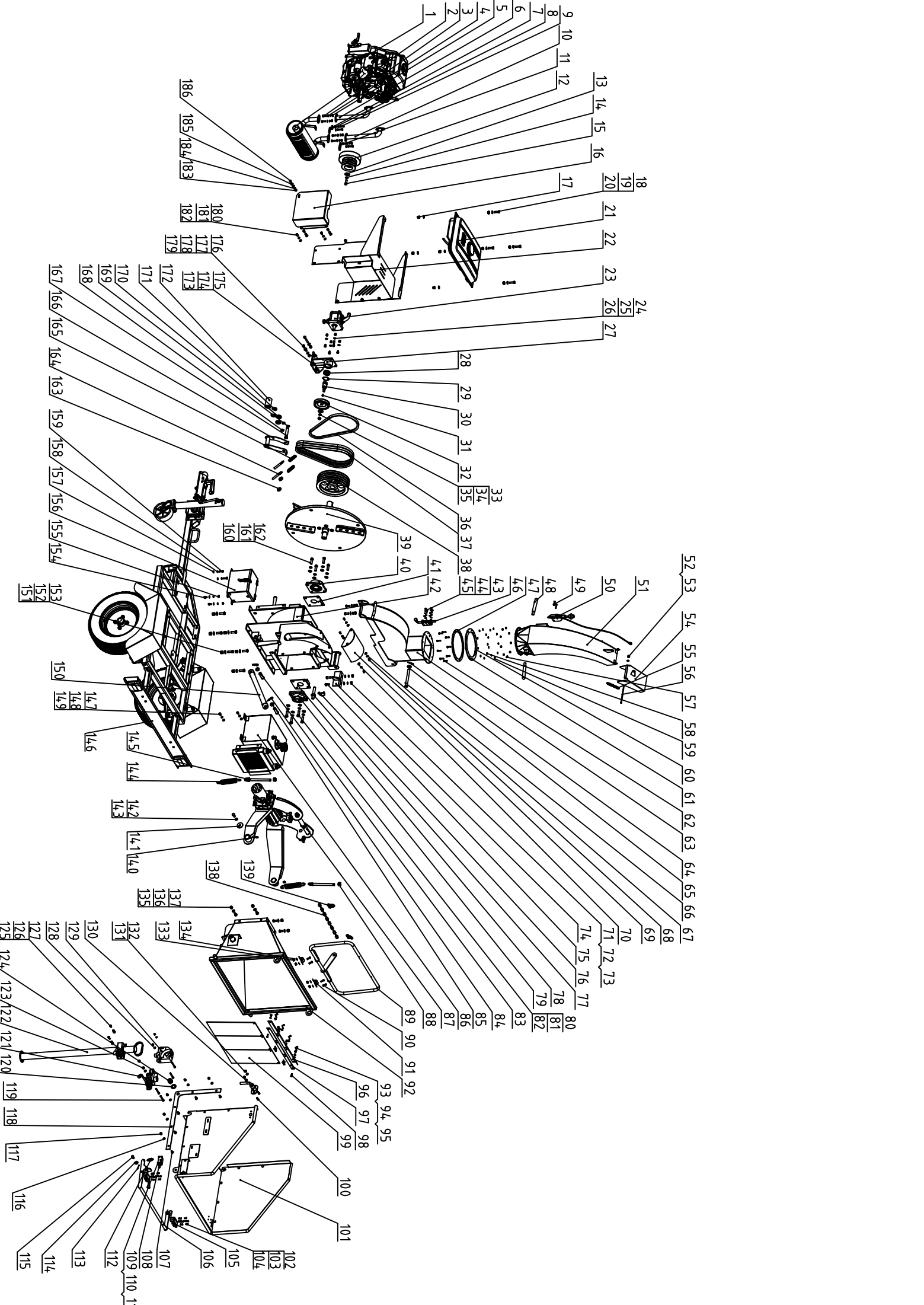
Decal	Description	Decal	Description
	<p>Wear protective gloves. Wear eye protection. Wear hearing protection. Read these instructions carefully. No smoking, sparks, or flames No connect with rotating parts. No entry rotate parts Always stay away from the discharge area when the machine is operating.</p>		<p>Danger Keep distance from wood chips</p>
	<p>Danger. Rotating blades. Keep hands and feet out.</p>		<p>Keep hands or any part of the body away from the hopper, hopper and discharge chute when the machine is in use.  Always stay away from the discharge area when the machine is operating.</p>
		<p>Recommend engine oil 10W-30 Engine oil capacity 1800ml</p>	

## PARTS LIST(GWC-25)

NO.	DESCRIPTION	QTY.	NO.	DESCRIPTION	QTY.
1	Gasoline engine	1	94	Flat washer M6	10
2	Muffler	1	95	Lock nut M6	10
3	Hex bolt M8x25	4	96	Angle iron L=600	1
4	Flat washer M8	8	97	Fixed plate	1
5	Lock nut M8	8	98	Hex bolt M6x20	6
6	Muffler pipe 2	1	99	Safety rubber	1
7	Fixed plate 2	1	100	Hex socket head bolt M8x25	2
8	Hex bolt M8x20	4	101	Feed hopper 1	1
9	Spring washer M8	8	102	Hex socket head bolt M5x16	8
10	Muffler pipe 1	1	103	Flat washer M5	8
11	Fixed plate 1	1	104	Lock nut M5	8
12	Clutch 28.575	1	105	Lock catch	2
13	Flat washer M12	1	106	Stop bar	1
14	Spring washer M12	1	107	Hex bolt M8x20	10
15	Engine shaft bolt	1	108	Limited switch	1
16	Cover 2	1	109	Hex socket head bolt M5x16	4
17	Lock nut M10	4	110	Spring washer M5	4
18	Hex bolt M10x35	4	111	Flat washer M5	4
19	Flat washer M10	8	112	Spring	1
20	Rubber ring	4	113	Cotter pin	2
21	Fuel tank	1	114	Flat washer M12	2
22	Cover combination	1	115	Pin shaft 12x25	2
23	Hydraulic pump	1	116	Flat washer M8	10
24	Hex socket head bolt M8x40	4	117	Lock nut M8	10
25	Flat washer M8	4	118	Stiffener	2
26	Lock nut M8	4	119	Hex socket head bolt M8x65	4
27	Hydraulic pump support	1	120	Flat washer M20	2
28	Bearing 61906	2	121	Directional control valve	1
29	Hole circlip 47	1	122	Support bar	1
30	Connect shaft	1	123	Lock nut M8	4
31	Flat key A16x18	1	124	Lock nut M20	2
32	Pump pulley	1	125	Hex socket head bolt M8x25	2
33	Flat washer M12x30	1	126	Spring washer M8	2
34	Flat washer M12	1	127	Flat washer M8	2
35	Hex nut	1	128	Flat washer M8	4
36	Belt B17x1100	1	129	Hydraulic speed control valve	1
37	Belt B17x1070	3	130	Safe pin	1
38	Disc shaft pulley	1	131	Lock nut M8	2
39	Dics	1	132	Flat washer M8	2
40	Bearing seat UCFU208	1	133	Lock nut M8	4
41	Bearing seat guard plate	1	134	Flat washer M8	4
42	Shell (bottom)	1	135	Hex bolt M10x25	6
43	Hex bolt M6x20	4	136	Flat washer M10	6
44	Spring washer M6	4	137	Lock nut M10	6
45	Flat washer M6	4	138	Chain	1
46	Lock catch	1	139	Shackle	1
47	Rotating plate	1	140	Grease nipple	2
48	Handle	2	141	Flat washer 45	2
49	Hex socket head bolt M6x30	2	142	Hex bolt M12x25	2

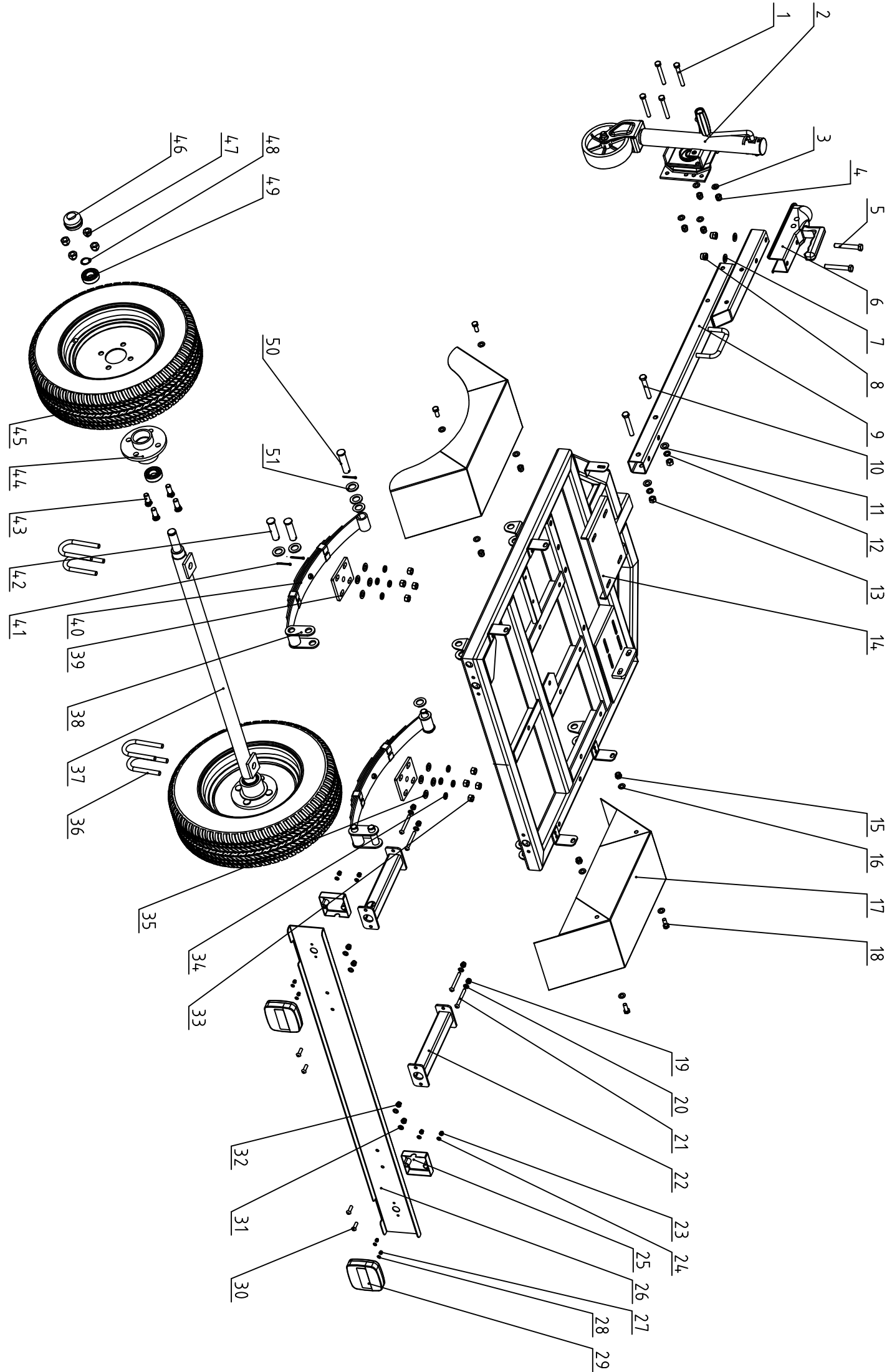
## PARTS LIST(GWC-25)

NO.	DESCRIPTION	QTY.	NO.	DESCRIPTION	QTY.
50	Cable assembly	1	143	Spring washer M12	2
51	Discharge chute 1	1	144	Spring 4x43-170	2
52	Lock nut M8	1	145	Adjusting bolt	2
53	Flat washer M8	1	146	Frame assembly	1
54	Deflector	1	147	Hex bolt M8x20	4
55	Spring	1	148	Spring washer M8	4
56	Hex bolt M8x150	1	149	Flat washer M8	4
57	Hex nut M6	9	150	Support rod	1
58	Flat washer M6	9	151	Hex bolt M12x35	6
59	Spring washer M6	9	152	Flat washer M12	6
60	Half circle board 1	1	153	Lock nut M12	6
61	Half circle board 2	1	154	Hex bolt M8x16	2
62	Hex bolt M6x25	9	155	Hex nut M8	4
63	Shell (top)	1	156	Battery box	1
64	B type pin 16	1	157	Flat washer M8	4
65	Flat washer M16	1	158	Spring washer M8	4
66	Pin shaft 16x155	1	159	Hex bolt M8x25	2
67	Spring washer M8	4	160	Hex bolt M12x40	4
68	Hex socket head bolt M8x16	4	161	Spring washer M12	4
69	Cover plate	1	162	Flat washer M12	4
70	Flat washer M8	4	163	Hex nut M12	4
71	Hex nut M10	2	164	Lock screw M12	2
72	Spring washer M10	2	165	Lock spring 3	2
73	Spring washer M10	2	166	Lock support	1
74	Support	1	167	Shaft 17mm	1
75	Hex bolt M10x25	2	168	Lock spacer	2
76	D type pin 6x40	1	169	Shaft circlip 17	1
77	Pin	1	170	Bearing 6003	2
78	Bearing seat guard plate	1	171	Hole circlip 35	2
79	Bearing seat UCFU207	1	172	Tensioner pulley	1
80	Hex bolt M12x40	4	173	Hex bolt M8x30	4
81	Spring washer M12	4	174	Flat washer M8	4
82	Flat washer M12	4	175	Lock nut M8	4
83	Pin shaft 18x65	2	176	Hex bolt M10x70	2
84	B type pin 18	2	177	Spring washer M10	2
85	Flat washer M18	2	178	Flat washer M10	4
86	Hydraulic tank	1	179	Hex nut M10	2
87	Feed system	1	180	Hex bolt M8x16	8
88	Hex nut M16	2	181	Spring washer M8	8
89	Pull rod	1	182	Flat washer M8	8
90	Hex socket head bolt M8x25	4	183	Hex nut M8	1
91	Pipe clamp	2	184	Spring washer M8	1
92	Feed hopper 2	1	185	Flat washer M8	1
93	Hex socket head bolt M6x16	4	186	Hex bolt M8x20	1



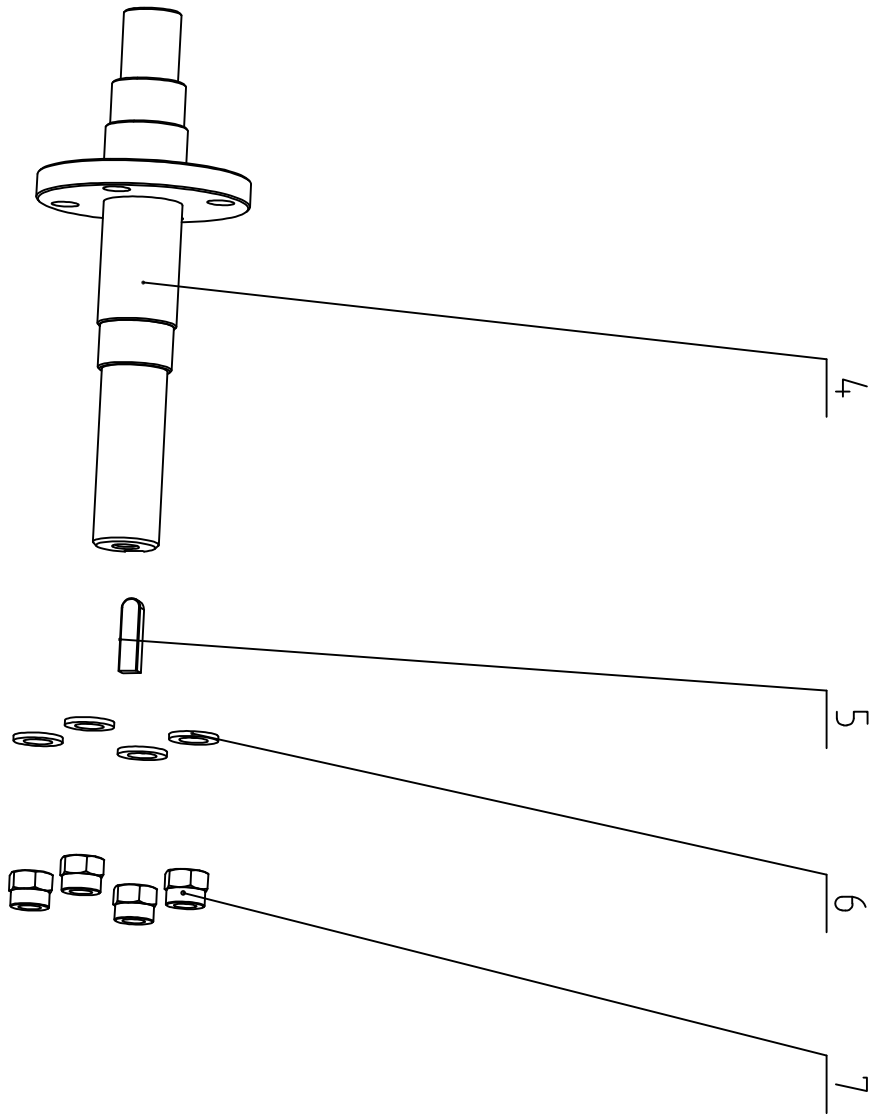
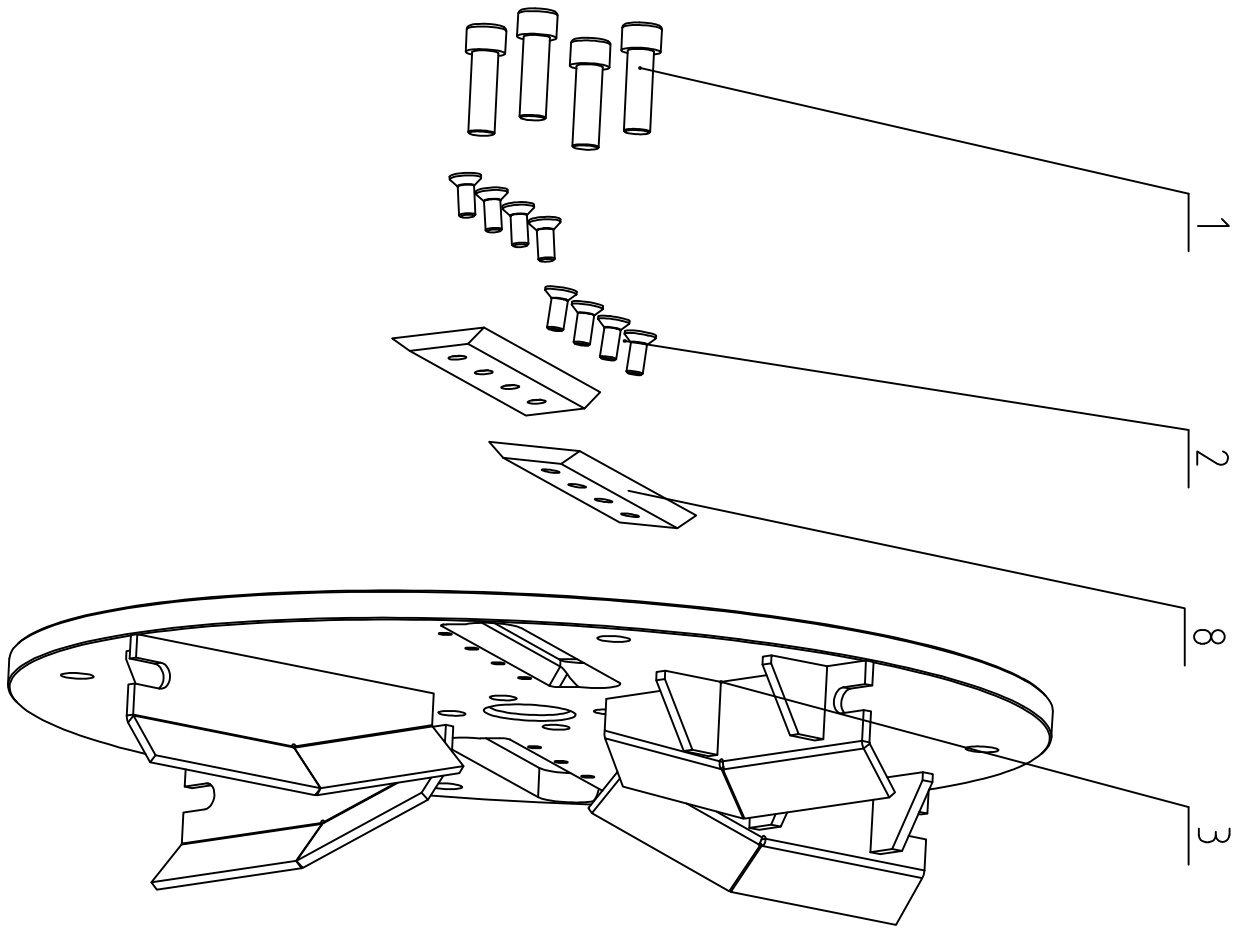
Parts list (GWC-25)

NO.	DESCRIPTION	QTY.	NO.	DESCRIPTION	QTY.
1	Hex bolt M10x80	4	27	Lock nut M5	4
2	Jocky wheel	1	28	Flat washer M5	4
3	Flat washer M10	4	29	Trailer tail lights	2
4	Lock nut M10	4	30	Hex bolt M8x25	4
5	Hex bolt M12X80	2	31	Flat washer M8	4
6	Coupler	1	32	Lock nut M8	4
7	Flat washer M12	2	33	Hex nut M12	8
8	Lock nut M12	2	34	Spring washer M12	8
9	Tow bar	1	35	Flat washer M12	8
10	Hex bolt M12x80	2	36	U-shaped bolt M12	4
11	Flat washer M12	2	37	Axle	1
12	Spring washer M12	2	38	Leaf spring connecting plate	4
13	Hex nut M12	2	39	Spring pressure plate	2
14	Chasis	1	40	Shock absorber spring plate	2
15	Lock nut M10	4	41	Cotter pin 4X40	4
16	Flat washer M10	8	42	Pin shaft B20X72	4
17	Tire cover	2	43	Wheel hub bolt M14x1.5	8
18	Hex bolt M10x25	4	44	Wheel hub	2
19	Lock nut M8	4	45	Tires 145/70 R12	2
20	Flat washer M8	4	46	Wheel shaft cover	2
21	Hex bolt M8x70	4	47	Hex nut M14x1.5	8
22	Connect tube	2	48	Shaft circlip 25	8
23	Lock nut M6	4	49	Bearing 6205	4
24	Flat washer M6	4	50	Pin shaft B20x80	2
25	Buckle plate	2	51	Flat washer M20	10
26	Tail light bracket	1	52		



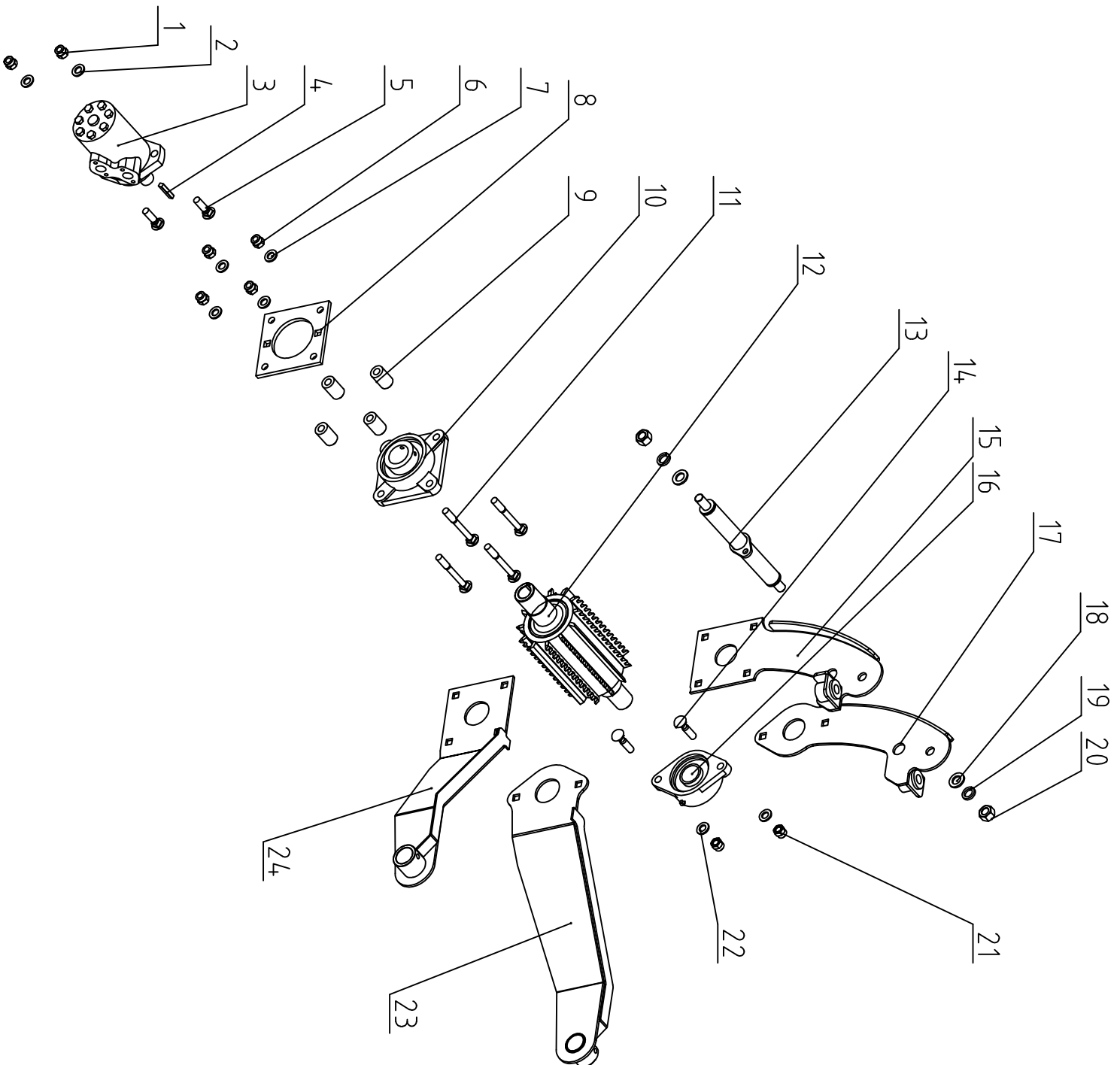
PARTS LIST(GWC-25)

NO.	DESCRIPTION	QTY.	NO.	DESCRIPTION	QTY.
1	Hex socket head bolt M16x50	4	5	Flat key C12x45	1
2	Countersunk hexagonal bolt M10x25	8	6	Flat washer M16	4
3	Disc	1	7	Spring washer M16	4
4	Disc shaft	1	8	Cutting blades	2



PARTS LIST(GWC-25)

NO.	DESCRIPTION	QTY.	NO.	DESCRIPTION	QTY.
1	Lock nut M12	2	13	Fixed welded pipe	1
2	Flat washer 12	2	14	Bolt M12x50	2
3	Hydraulic motor	1	15	Rotating side bracket 2	1
4	Flat key B8x40	1	16	Bearing seat UCFU207	1
5	Bolt M12x45	2	17	Rotating side bracket 1	1
6	Lock nut M12	4	18	Flat washer M16	2
7	Flat washer M12	4	19	Spring washer M16	2
8	Baseplate	1	20	Hex nut M16	2
9	Spacer	4	21	Lock nut M12	2
10	Bearing seat UCFU208	1	22	Flat washer M12	2
11	Bolt M12x100	4	23	Feed roller support	1
12	Feed roller	1	24	Feed roller support	1



**PARTS LIST(GWC-25)**

<b>NO.</b>	<b>DESCRIPTION</b>	<b>QTY.</b>	<b>NO.</b>	<b>DESCRIPTION</b>	<b>QTY.</b>
1	Hinged Bolt M18x1.5	4	21	Hydraulic pump	1
2	Combination sealing gasket M18	16	22	Flange connection M18x1.5	1
3	Directional control valve	1	23	Combination sealing gasket M18	2
4	Motor oil pipe	2	24	Hinged Bolt M18x1.5	1
5	Oil return pipe 2	1	25	Oil return pipe 4	1
6	Directional valve inlet pipe	1	26	Hex socket head screw M4x10	4
7	9/16-18 UNF bolt	2	27	EF-1-25 hydraulic oil filter	1
8	Combination sealing gasket M20	3	28	Gasket 60x38x2	1
9	Hydraulic speed control valve	1	29	Hydraulic tank	1
10	13/16-18 UNF bolt	1	30	Level gauge YWZ-150T	1
11	13/16 three-way	1	31	Radiator	1
12	Hydraulic speed control valve inlet pip	1	32	Combination sealing gasket M27	1
13	Oil return pipe 1	1	33	13/16 M27x1.5 bolt	2
14	9/16-18 UNF bolt M22x1.5	2	34	Gasket 76x40x2	1
15	Combination sealing gasket M22	2	35	Oil filter	1
16	Hydraulic motor	1	36	Oil outlet assembly	1
17	Hex socket head screw M8x25	8	37	Flat washer M5	3
18	Spring washer M8	8	38	Spring washer M5	3
19	Flat washer M8	8	39	Hex socket head screw M5x16	3
20	Flange connection 13/16-16	1	40	Oil return pipe 3	1

