

**USER MANUAL
WARRANTY CARD**

To the chippers: RTW650



FOX Forest Agriculture SP. z o.o.

Original instruction





WARNING!

Read the entire text of the instruction manual before starting the machine.
The operating manual allows for proper use of the machine and for its safety. Keep it so information is always available. Incorrect use can lead to serious injury.

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1. INTRODUCTION



Warning:

This symbol is used in this manual when there is a danger to the user or bystanders.

This symbol is also used when there is a risk to the environment or property.

The RTW650 disc chipper described in this manual has been manufactured according to the highest quality standards, with a high level of reliability and operational safety. Properly used device ensures reliability and trouble-free operation.

This manual provides information and procedures for the safe operation and safe maintenance of this model. For your safety and accident prevention, read the safety instructions, read them, and refer back to the manual as necessary.



Warning:

Read the entire text of the manual before installation and commissioning.

Familiarize yourself with the device, its proper use and safety instructions.

Keep this manual in a safe place so that the information is always available.

If the device has been passed on to others, also hand over the complete manual.

Directions! The manufacturer of this device, in accordance with the applicable product liability law, is not responsible for any damage resulting from the use of this device resulting from:

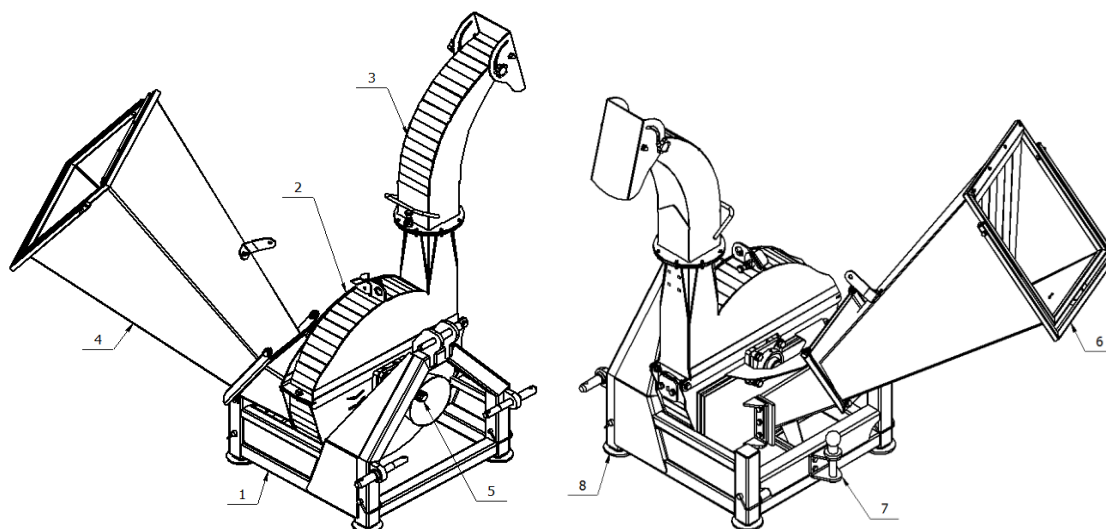
- Failure to comply with these operating instructions,
- Improper operation and maintenance
- Repairs by other, unauthorized persons,
- Installation and replacement with non-original spare parts.
- Unauthorized design changes to the machine, unauthorized modifications to the machine.
- Insufficient inspection of machine parts which are susceptible to wear.
- Improper repairs.
- Misuse.

The risk is borne by the user himself. Unauthorized modifications to the device exclude any liability of the manufacturer from any resulting damages.

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The information contained in this manual regarding technical data, dimensions, safety standard and illustrations are current at the time of printing. We reserve the right to change and improving its products without notice to the buyer.

2. PRPOPOSE AND GENERAL DESCRIPTION OF THE DEVICE



1. Support frame

2. Cover for the cutting blade

3. Discharge hopper

4. Charging hopper

5. PTO shaft

6. Emergency stop switch

7. Ball pin

8. Adjustable support legs

General structure of the chipper

The device is designed for shredding wood and fibrous garden waste, such as tree clippings, boughs and branches.

WARNING: It is forbidden to put stones, glass, metal, bones, plastic, textiles and other materials into the inlet of the chipper mechanism. Any use other than that approved in this manual may damage the device and pose a serious risk to the operator. The operator or user is fully responsible for any injuries and damage to third parties and their property. The manufacturer is not responsible for any damage or mishaps caused by improper use and operation of the device, including any changes and modifications made by users and operators, which also lead to the immediate loss of warranty.

The chipper is equipped with a disc cutting system containing knives made of wear-resistant steel. The cut material is pulled in by gravity. The shredded material is ejected with the help of centrifugal force through the ejection funnel, which, thanks to its high position and adjustment of the ejection direction, allows the material to be directed to a trailer, wheelbarrow or other container. The chipper has metal hinged covers of the inlet and outlet feeder and the cutting disc ensuring safe operation. A solid structure equipped with a 3-point hitch system ensures durability and stability of the device.

3. DEVICE SPECIFICATION











Technical specifications:








Typ	RT-630
MINIMUM / RECOMMENDED POWER * [HP]	25/50*
RECOMMENDED ROTATION PTO SHAFT (RIGHT SIDE) [rpm]	540-1000
CUTTER DIAMETER [mm]	630
NUMBER OF KNIVES	4 + 1 counter knife
Material of CUTTING KNIVES	Stal HARDOX typ 500
Recommended overload clutch [Nm] **	900-1700
INLET [mm]	520x520
FIXING SYSTEM	three-point system
Max. cutting diameter of fresh soft wood [mm] *	130
Max. cutting diameter of fresh hard wood [mm] *	110
Max. cutting diameter of dry hard wood [mm] *	80
CHIPER DIMENSIONS WITH FOLDED CHARGE FUNCTION L x W x H	85 / 85 / 150
PIVOTING ANGLE OF THE EQUIPMENT PIPE	360°
HEIGHT OF EXTRUSING PIPE [cm]	160
Weight [kg]	230


* The maximum diameter of shredded branches depends on the type of wood and the conditions when cutting the material. For hardwood (e.g. oak / beech), the maximum cutting diameter will be smaller than softwood (e.g. pine, spruce). For dry or knotty wood, the maximum cutting diameter will also be reduced.

** Clutch selection parameter should be corrected with max. the PTO torque on the tractor

4. SYMBOLS

Mark	Description	Mark	Description
	Use hand protection		No unauthorized person! No unauthorized person!
	Wear foot protection		Prohibition of putting hands into the oil feeder, Keep a safe distance from the inlet hole and discharge area
	Wear safety glasses		Warning! Danger of injury from rotating cutting rollers. Keep hands and feet away from the openings during machine operation.
	Wear ear protection		Attention, it is possible to cut your fingers / hands!
	Read the user's manual		Attention, danger of intercepting / drawing in / entangling! Spinning elements!

		Warning, danger!	
	Recommended propeller shaft speed: 540-1000 rpm		Attention rotating blades, danger of cutting your fingers!
		Attention, fine parts falling out at high speed use personal protection equipment (full face mask).	
			Warning! Rotating parts, danger of being caught.

	COMPANY NAME:		The identification plate shows the model name, year of manufacture, and serial number. When ordering spare parts or information about services, please always state this information.
Weight:	Minimum power: Recommended power:		
Production year:	Drive:		
Type:	Serial No.:		
DEVICE NAME			



5. SECURITY

Getting to know the chipper.

Read and understand the operating instructions and be familiar with the labels on the machine. Familiarize yourself with the use of the device and its limitations as well as the potential hazards associated with the use. You also need to know how to control such a machine to use it properly.

Protective clothing

During work it is essential to use:

- protective clothing, fitting tightly to the body, without loose, protruding stripes or sleeves.
- protective goggles or face mask
- hearing protectors
- protective gloves
- protective footwear

Checking the device every time.

Always check the condition of the chipper before starting it.

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All covers and protective covers should be in place and fully functional. It should be a habit to check that all wrenches and tools have been removed from the work area before starting the machine. Damaged or missing parts must be replaced before use. Also, be sure that all nuts, bolts, etc. are securely and fully functionally installed. Do not use the chipper if repair is required or the machine is in poor condition.

Safety signs

Always keep the safety signs clean and legible.

Any missing or illegible safety signs must be replaced immediately.

Replaced parts must also be marked. Safety signs are available from an authorized distributor.

IT IS ABSOLUTELY FORBIDDEN !!!

It is forbidden to work with a chipper after consuming alcohol or narcotic drugs and psychotropic substances (drugs) and drugs that impair the ability to react.

It is forbidden to use the chipper by:

- unauthorized persons, untrained, unfamiliar with the operating manual,
- children (under the operator's minimum age as stipulated by local law)
- pregnant women,
- people with limited mental abilities.

It is forbidden to start work with the chipper without checking the technical condition of the device.

The operators **are forbidden** to move away from the chipper without first switching off the tractor engine and removing the key from the ignition switch or disconnecting the power supply.

It is forbidden to make any adjustments to the chipper or make repairs while the chipper is hitched to the tractor.

It is forbidden to use the machine with removed or damaged safety devices, such as covers and guards, chutes and ejectors, and with missing warning decals.

It is forbidden to use the device for purposes other than its intended purpose.

It is forbidden to use the device while the driving tractor is in motion.

It is forbidden to make any changes or modifications to the device, introducing changes or modifications will result in the immediate loss of warranty. In addition, the manufacturer is not responsible for the resulting property damage and accidents, personal injury, death of the operator.

6. RULES OF USE

When using the device, remember that improper use may result in serious injury.

Before each start-up of the device, check the drive and protection system. If it does not function properly, it should be repaired before commissioning.

In addition, check that all covers are correctly fitted and that the discharge and inlet funnels are not obstructed.

Before starting the engine in the tractor, check the chipper mounting.

When starting the chipper for the first time, after working for 1 hour, it is recommended to do the following:

- check the tightness of all the screws,
- check the condition of the rotor bearings,
- check the condition of the cutting disc and cutting blades. If necessary, adjust or replace.
- lubricate all the calamites.

The activities should be repeated after every 10 hours worked.

Before starting the device for the first time, the operator should read the operating instructions issued by the manufacturer of the device and make sure that he knows the operation of all control devices.

In addition, the employees operating the chipper must have appropriate qualifications and undergo appropriate health and safety training in order to learn the rules of safe and proper operation.

To perform work with a chipper, two trained persons are required, the chipper operator and the operator of the driving tractor.

Operators must provide sufficient space and a solid and stable surface to work with the machine. Do not lean forward or stand above the machine when throwing material in.

Operators performing work with a chipper should constantly observe the work area and should never allow the presence of bystanders or animals in the working area of the machine.

The chipper operators are responsible for the safety of bystanders or animals that may be in the vicinity of the machine.

It must be assumed helmet or other headgear covering the hair, glasses, ear protection and protective clothing. The person operating the machine should not wear a scarf, tie, loose clothing (tight-fitting clothing is recommended) and gloves intended for other work (e.g. leather welding). While working, keep your head, hair and body away from the intake opening.

When working with a tractor without an emergency switch, two people are required to operate the device, the tractor operator and the chipper operator.

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Works with the use of a chipper may only be performed by adults trained by the employer.

An employee performing work with a chipper must be rested, healthy and in good physical condition.

It is forbidden to work in rain and bad weather.

Work with the chipper only in daylight or good artificial lighting.

Before inserting the material to be cut into the inlet funnel, make sure that the material does not contain any foreign elements harder than wood, such as: stones, wires, ropes, nails, rivets, chains, etc. that may damage the knives, the cutting mechanism or the entire machine. Consequently, it may lead to a dangerous accident threatening the life and health of the operator and other bystanders.

To avoid jams, insert slender and thin material alternating with larger branches.

The device can be turned off only when all the material passes through the shredder. Otherwise, the device may jam.

If the cutting mechanism of the chipper is blocked, immediately stop the engine of the tractor driving the chipper.

If the operator's clothes are caught by branches and pulled towards the chipper feeder inlet, the tractor operator must immediately stop the tractor's work.

If the operator's clothes are caught by branches and pulled towards the chipper feeder inlet, the tractor operator must immediately stop the tractor's work.

To protect against accidental activation of the engine driving the tractor wood chipper, remove the key from the ignition and disconnect the battery from the clip removing clamp.

Do not overload the device.

Take regular breaks, remembering that the chipper drive must be turned off during each break in work.

Always keep the chipper blades sharp.

Keep a safe distance from the machine while working, as long branches may be thrown out during hoisting.

After work.

During operation and immediately after turning off the device, remember not to touch the inlet channel, be careful and do not put your hands inside it, because even after the drive is turned off, the rotating elements continue to work for some time. Make sure that the machine is completely stopped and then perform the activities related to cleaning and maintenance of the machine.

Park the machine and secure it in the parking place.

Inspection of the technical condition, adjustment and execution of ad hoc repairs and maintenance as well as cleaning of parts and working units may be performed only when the chipper has the drive turned off.

Periodically check that all bolts and nuts are tightened. Replace damaged ones.

When replacing a damaged chipper knife, tighten or unscrew the knife always in protective gloves according to the instructions.

7. EMERGENCY SITUATIONS

After discovering defects, damage or improper operation of the machine or its components, the chipper should be immediately shut down and immobilized and the supervisor should be notified. Resumption of work without removing the damage or the cause of the failure is unacceptable.

If it is necessary to leave the chipper while working unattended, be sure to turn off the tractor and immobilize the machine.

In case of doubts as to the observance of the safety conditions, the employee has the right to stop work and ask the supervisor to clarify the situation and make a decision.

If in doubt as to how work is performed, stop working and ask your supervisor for guidance.

In the event of a fire in the tractor driving the chipper. Follow the instructions in the event of a fire. A faulty, damaged or under repair chipper should be withdrawn from use, clearly marked with information boards and secured in such a way that it cannot be started.

8. FIRST AID

In the event of an accident at work, immediately turn off the tractor driving the machine, report the accident to your supervisor, call the ambulance service if necessary. Leave the workplace in the condition in which the accident occurred.

Always be prepared for the eventuality of an accident. It is connected with having:

- a fully equipped first-aid kit, easily accessible for the operator and people in the vicinity. The first aid kit should contain an adequate amount of dressing materials for cuts.
- Clean towels and cloths to stop bleeding.
- A mobile phone or other device allowing for a quick call for help.

You should work in a team of at least two! A person familiar with the principles of first aid should be nearby. The helper must be at a safe distance from the working area, but should always pay attention to the operator. Only use the device in places where you can quickly call an ambulance! If an injury occurs, provide first aid and obtain further medical attention if necessary.

9. CONNECTING TO THE TRACTOR

Power transmission shafts equipped with a coupling with a shear pin should be used, in the event of overloading the machine, the pin is sheared and the drive is disengaged.

Observe the recommended minimum front load of the tractor in order to maintain stability.

Be especially careful when hitching the shredder to the tractor and when disconnecting it.

Each time before starting work, check the correct operation of all safety switches.

It is strictly forbidden to stay between the chipper and the tractor or in close proximity to them while performing activities with the lever for operating the hydraulic system.

It is forbidden to stay between the tractor and the chipper during work.

Use only the PTO shaft with a guard. Working with the shaft without the cover or with a damaged cover is strictly prohibited.

The shaft cover must be secured against rotation, e.g. with a chain.

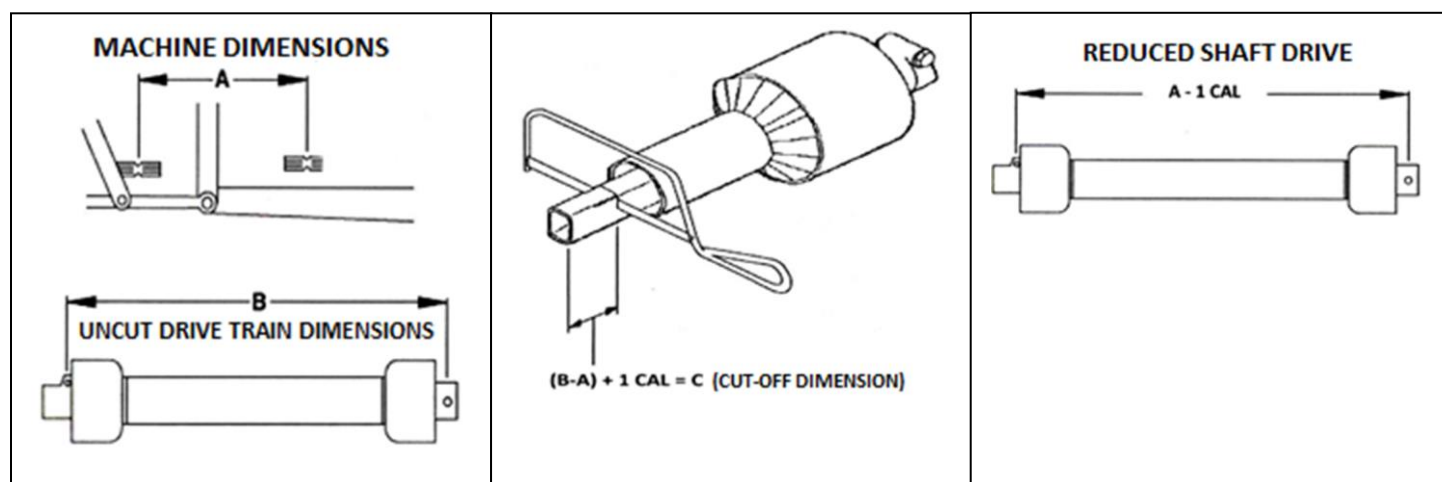
It is forbidden to work without the WPM (machine power take-off) and PTO (tractor power take-off) guards.

The power take-off shaft must be of the correct length.

Use a PTO shaft.

CHOOSING POWER SHAFT

To ensure compatibility with a diverse group of 3-point mounting systems, the power transmission shaft may be too long or too short. It is particularly important that the transmission through the telescopic shaft is carried out freely, but without tapping to limit the operating range. **Too long a shaft can cause bearing damage (including bearing housing cracks) in both the shredder and the tractor.**



- Connect the chopper to the tractor, without the power transmission shaft.
- Raise the chopper to level the PTO shafts.
- Measure the dimension between the retaining grooves between the PTO shaft on the tractor and PTO shaft in the shredder.
- Measure the same dimensions on the compressed drive system (power shaft)
- In case the power transmission shaft exceeds the measured dimension from step 4, shorten the shaft.

B. Cutting the telescopic power shaft:

- Cut off the machine dimension (A) to the size of the notched drive system (B) or (B-A). This dimension determines if the drive system is too long.
- Add an additional inch (25mm) to this dimension so that the system does not touch the working dimension, set the cut-off dimension (C).
- Cut the dimension (C) at both ends with a metal saw. Plastic sleeves should also be cut.
- Blind the resulting sharp edges.
- Assemble the shaft.
- Check whether the PTO shaft connection is hassle-free.

10. STORAGE AND TRANSPORT

The device should be transported coupled with a tractor or secured on a suitable platform. Please note that during transport a batch hopper was filed. Remember that the inlet must be folded during transport.

Never allow anyone to sit or stand on the machine.

The device should be stored out of the reach of children in a dry place at 0°C to + 40°C.

Prepare chipper for storage as follows:

1. Remove any material from the machine.
2. Thoroughly wash the unit with pressurized water to remove any dirt, sludge or sand.
3. Inspect any rotating parts, remove any entangled material if necessary.
4. Run the machine for a few minutes to dry the inside of the machine.
5. Raise and lock the feeding funnel.
6. Protect against corrosion by painting repairs.

11. MAINTENANCE

Before commencing maintenance, make sure that the machine is disconnected from the power source and is on stable and level ground.

Check/maintenance plan	Before each use	After each use	Every season	After the first hour	Every 10 hours	As needed
Machine control ¹⁾	x			x	x	
Machine cleaning ²⁾		x				
Fasteners and locks ³⁾	x			x	x	
Safety signs			x			
Drive system	x					
Device security	x					
Rotor bearings	x			x	x	

Cutting disc	x			x	x	
Blades adjustment						x
Blades replacement						x
Lubrication				x	x	

1) Check if all covers and protective elements are in the right place, if they are not damaged or loose, check if the inlet and discharge hoppers are not obstructed,

2) Use only a brush or cloth for cleaning, do not use solvents or cleaning agents,

3) Check the condition and tightness of screws, nuts, locks, knobs, etc.

12. SOLVING PROBLEMS

Problems	Possible cause	Solution
Metallic or other disturbing noises can be heard during operation	<ol style="list-style-type: none"> 1. Loose or damaged parts. 2. The rotor or blades are clogged with wood or blocked with pieces of material. 3. The bearings can be damaged. 	<ol style="list-style-type: none"> 1. After disconnecting the drive, check connections, blades and tighten / adjust if necessary. 2. Check the device for patency and unblock it, if necessary. 3. If the bearings are damaged, replace them by qualified personnel. Damage to the bearings may be favored by an incorrectly selected length of the power transmission shaft (too long).
The machine is not producing chips and the branches are not cut properly.	<ol style="list-style-type: none"> 1. The blades are not sharp or are damaged. 2. The knives are positioned incorrectly 	<ol style="list-style-type: none"> 1. Sharpen or replace the knives 2. Adjust the position of the knives
The device does not pull branches.	<ol style="list-style-type: none"> 1. Cutting disc locked 2. The cutting disc rotates "backwards" 	<ol style="list-style-type: none"> 1. After disconnecting the drive, remove the blocking material 2. The drive shaft should turn to the right (clockwise)

13. DISPOSAL AND ENVIRONMENT PROTECTION

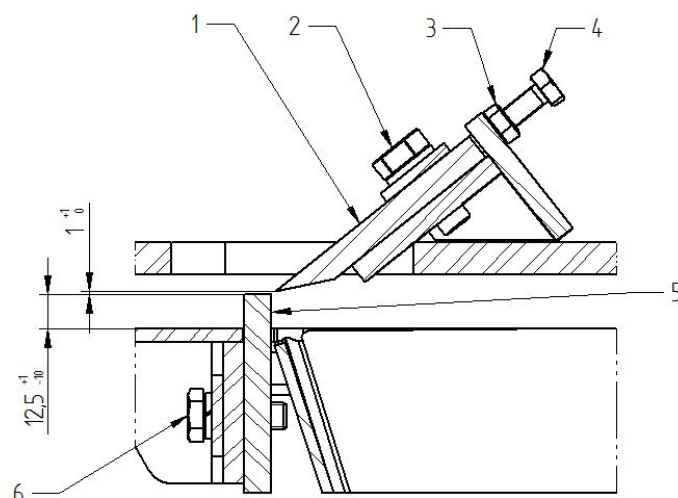
All waste should be returned for recycling or to specialized disposal points where it will be disposed of in accordance with environmental protection requirements.

In order to protect the environment, the device should be taken to a local waste disposal point. The device must not be disposed of with household waste.

Improper disposal may be penalized according to local regulations.

Please check with your local authorities for possible and appropriate methods of disposal of waste from the environment.

14. CHANGING AND ADJUSTING THE BLADES



Adjusting the position of the blades relative to the counterblade

Correctly installed sharp knives are a key condition for the effective operation of the device.

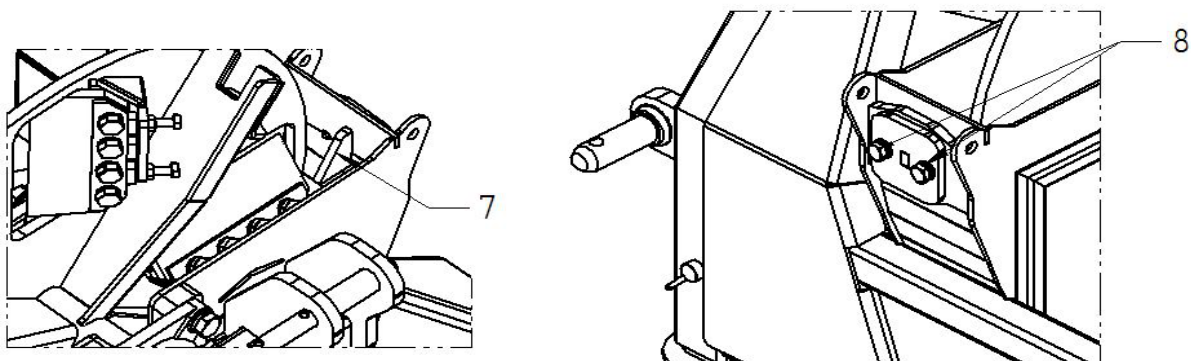
When adjusting their position, remember that the device is disconnected from the drive source and that it is on a flat and stable surface.

The position of the knives is adjusted as follows:

1. Loosen the screws (6)
2. Determine the position of the counter-blade (5) in the range of 13.5-2.5 mm in relation to the internal wall of the body, remembering that the more the counter-blade (5) is inserted into the body (max 13.5 mm), the finer the chips are
3. Tighten the screws (6)
4. Loosen the screws (2), lock nuts (3) and screws (4)
5. Determine the position of the knife (1) taking into account the clearance between the blade (1) and the counter-blade (5) in the range of 1-2mm
6. Tighten the screws (4), then locknuts (3) and screws (2)
7. Repeat steps 4-6 for the other three blades.

The counter-blade used in this model is double-sided, which means that if the edge on which the knife rubs wears out, you can screw the counter-blade in reverse and thus extend the operating time of the device without the need to replace the counter-blade.

The device is equipped with an additional breaker blade (7).



Replacing the additional breaker blade

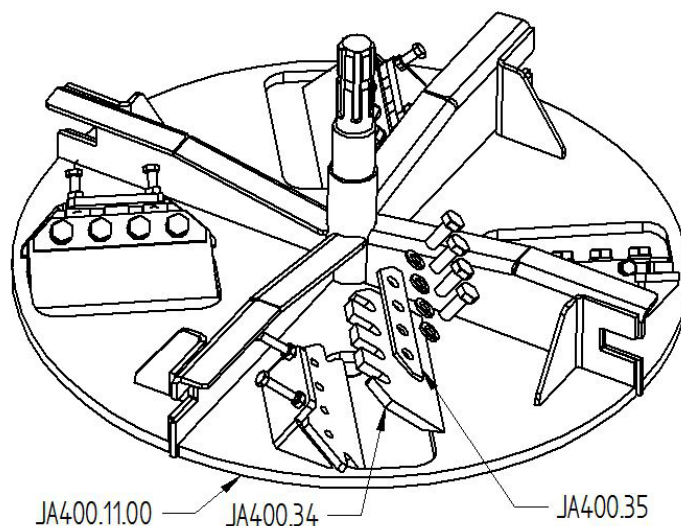
In case of wear / damage, replace them according to the following instructions:

1. Remove the screws (8)
2. Remove the blade (7) and replace it with a new one
3. Fasten the new blade (7) with the screws (8)

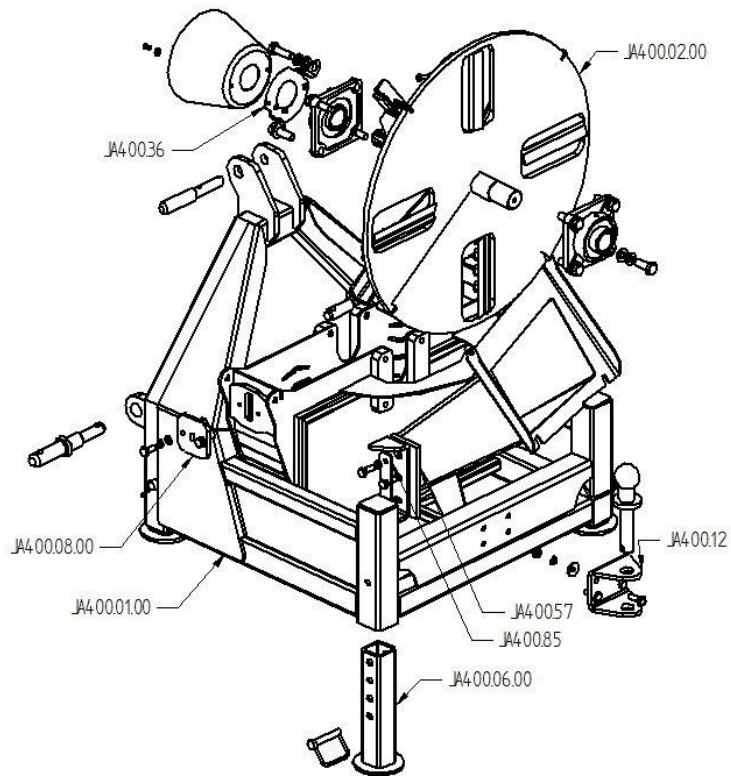
15. SPARE PARTS

Spare parts must be ordered from your distributor. For clear identification, please provide the device type and serial number found on the rating plate of the device.

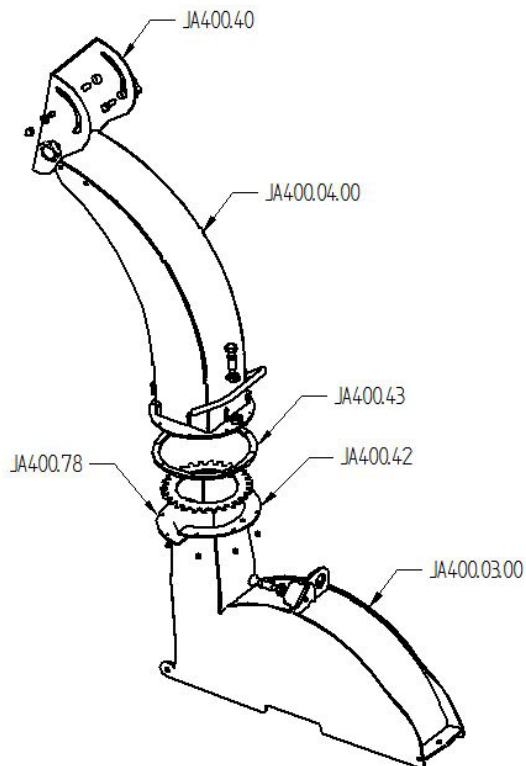
Below are the symbols of the basic elements of the chipper:



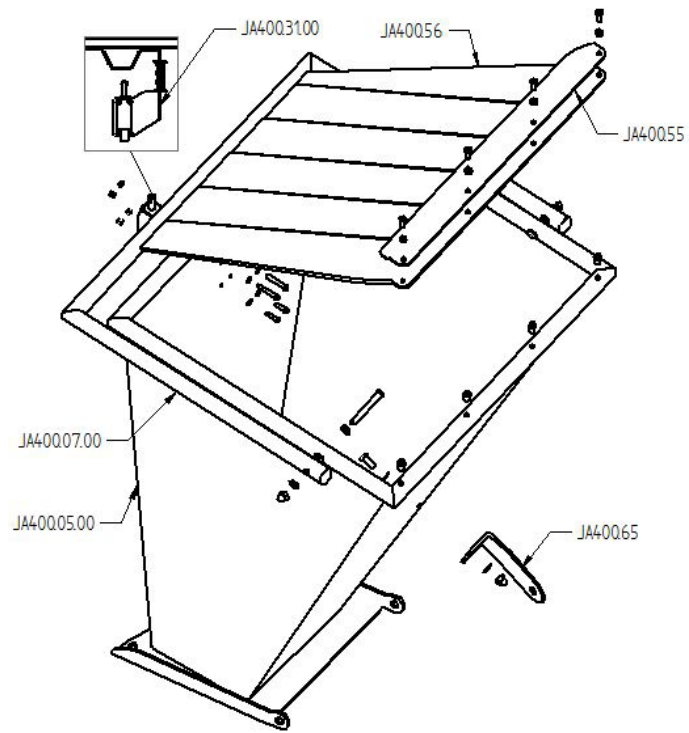
Cutting disc with knives



Support frame assembly



Cutting disc cover and outlet



Inlet funnel

16. WARRANTY CARD

Device symbol:	
Serial number:	
Production date: 202	
Sales date:	
Signature :	_____
	Stamp

GUARANTEE PROCEDURES:

1. This device has a 24-month warranty.
The reduced warranty period (12 months) applies to business, commercial and any other private use.
2. Damage caused by natural wear, overload or incorrect handling is excluded from the warranty. Parts subject to natural wear are not covered by the warranty.
3. The condition for exercising the warranty entitlements is compliance with the instructions regarding work, aggregation with the tractor, inspection, cleaning, maintenance of storage and transport of the device.
4. Damage caused by material or manufacturing defects will be removed free of charge by delivery of a new device or by repair. A condition of using the warranty service is that the complete device together with the purchase document is transferred to the service center at the company's headquarters.
5. Repairs caused by:
 - use of the wood chipper not in accordance with the operating instructions and intended use,
 - fortuitous or other events for which the guarantor is not liable
 - when connecting the harness to the tractor with a PTO shaft not equipped overload clutch
6. The guarantor may not recognize the guarantee if it is found that:
 - introducing modifications,
 - introducing design changes,
 - in case of not using an overload clutch on the PTO shaft
 - damage caused by random events,
 - lack of required information and records or their modification in the warranty card,
 - use of the wood chipper not in accordance with the operating instructions and intended use.
7. Repairs not covered by the warranty may be ordered for payment from our service center. Only devices that have been delivered in appropriate packaging and have been paid for transport costs will be accepted for repair.
8. In the event of a warranty repair, please contact us with a service office. There you can get further information about the complaint.
9. Disposal of the device is carried out free of charge.

CE DECLARATION OF CONFORMITY

Company:

FOX Forest Agriculture Sp. Z o.o.
Wierzawice 874
37-300 Leżajsk
NIP 8161710998

declares that the device marked below according to the type placed on the market by our company meets the relevant safety and health protection requirements in the relevant EU Directives and harmonized standards. In the event of changes to the device, not agreed with our company, this declaration is invalid.

Device description	Product: Disc chipper for wood Model: RTW650 - JA400 (625z4)
Compliance with EU directives	2006/42/WE
Compliance with harmonized standards	PN-EN ISO 12100: 2012 PN-EN 13525+A1: 2007 PN-EN 953: 1999

Date:

10.09.2020

City:

Wierzawice

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Andrzej Mierzwa (Board member)

Signature:



Signature:

