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User manual

Firewood processor TITAN 40/20

Safety instruction manual



CE

GENERAL

Dear customer!

We are pleased that you decided to purchase our machine. The firewood processor is designed for an easier production of firewood. The safety in forestry work is only ensured by following the safety and operating instructions. By following all instructions you will guarantee smooth operation of the machine and avoid unnecessary expenses.

We recommend reading the instructions carefully. If you are not sure about something, you can also contact us.

We wish you safe work.

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1. Intended purpose

The machine is intended exclusively for normal work in the forest. Any other use outside of this framework is considered as unintended. The manufacturer is not liable for damages, resulting from unintended use. In this case, the user is the sole bearer of risk. Intended use also includes following operational, service and maintenance conditions, which are prescribed by the manufacturer. The machine must only be operated by qualified personnel who are trained and acquainted about the dangers and consequences which can result from improper use. Relevant safety regulations must also be followed, including all applicable safety-technical, occupational medicine and road traffic regulations. Unauthorized interference and modifications of the machine exclude the manufacturer's liability for damages resulting from this.

2. Technical data:















	Unit	TITAN 40/20
Drive	kW PS	35 (45)
	kW	15
Steering		hydraulic control
Transport		3-point hitch attachment II. cat □ chassis – 200/60/R14,5
Oil cooler		□
Support displacement during cutting		■
Log stabilizer		Hydraulic gripper
Length of firewood	cm	Max. log diameter – Ø40 length 25 - 60
Driven conveyor rollers	piece	6 + 1/ 6
Wood feed from cutting to splitting		hydraulic feeder
Splitting force	kN (t)	200 (20) – AS
Splitting knife		adjustable height of the splitting cross 2-4, 2-6, 2-8, 2-12
Width (A) x Depth (B) x Height (C)	mm	1970 x 2860 x 2360
Weight	kg	1800

□ Optional ■ Standard

SAFETY INSTRUCTIONS

1. Meaning of symbols:

The following symbols and warnings in this manual warn against potential damage to persons or property or provide helpful information about working procedures.

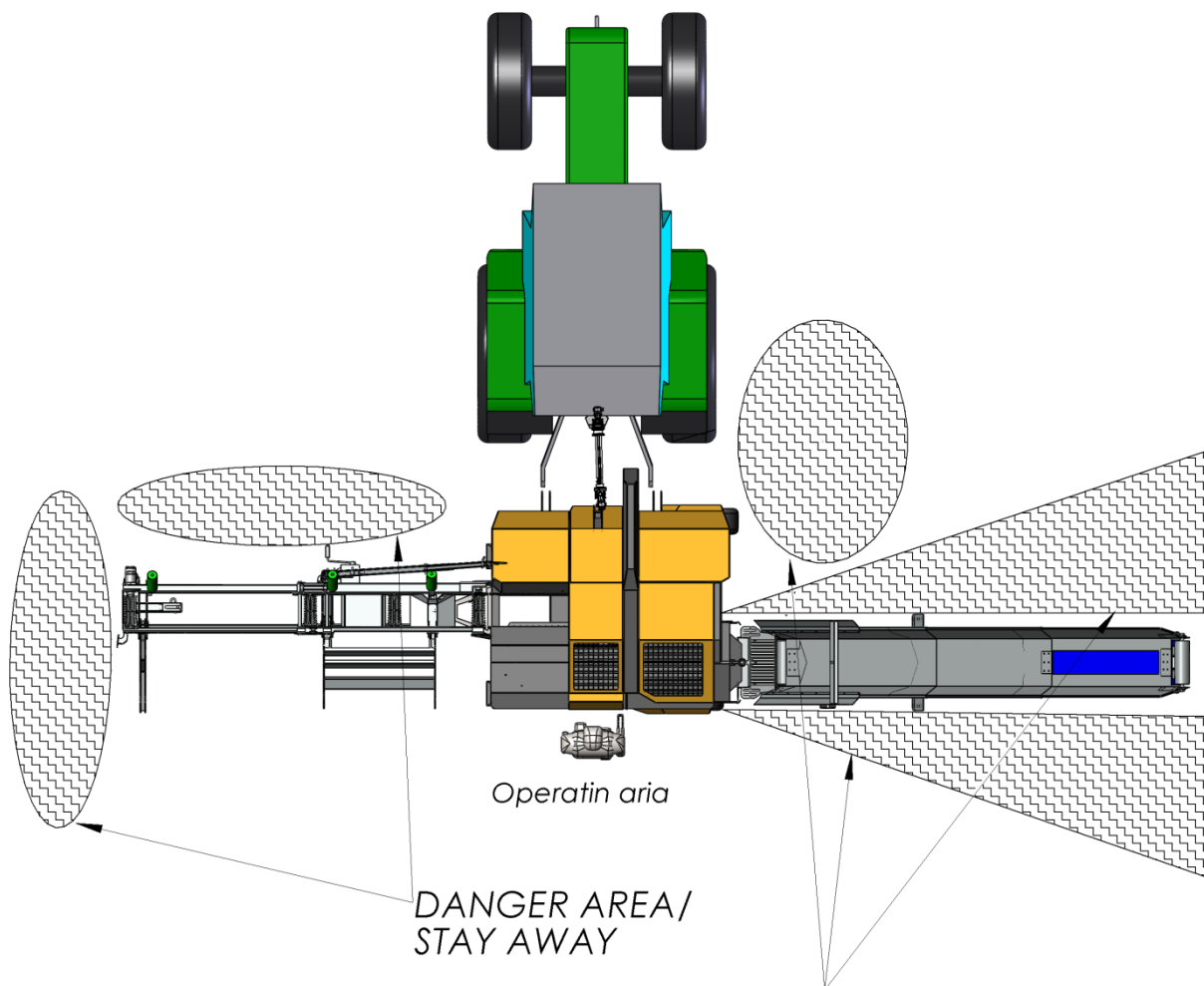
	Warning against dangerous areas Failure to follow warnings for safety at work may jeopardize health or lives of persons. Always observe these warnings and be extremely careful and cautious.
	Warning against contusions Risk of injuries due to pinching of hands.
	Warning against cuts Risk of injuries due to cuts of extremities.
	Eye protection This symbol indicates a working area where fine dust may be generated, which can irritate the eyes. Disregarding this symbol may affect or damage your eyes.
	Ear protection This symbol indicates an area where the noise level exceeds - >85 dB (A). Disregarding this symbol may affect or damage your hearing.
	Feet protection This symbol indicates an area where appropriate occupational safety footwear must be used. Disregarding this symbol may result in feet injuries.
	Body protection This symbol indicates an area where appropriate protective clothing must be used. Disregarding this symbol may result in injuries to extremities..
	Head protection This symbol indicates an area where appropriate head protection equipment must be used. Disregarding this symbol may result in head injuries.
	Face protection This symbol indicates an area where appropriate face protection equipment must be used. Disregarding this symbol may result in facial injuries.
	Lubrication required Adhere to all warnings on lubrication before use or according to hourly intervals.
	Circular saw The machine contains a circular saw with a diameter of 1000mm
	Cardan shaft operation The machine is driven by a cardan shaft between min. 420 rpm and max. 460 rpm. Pay attention to direction of rotation.
	Forklift area Area for lifting the machine with a forklift.
	Direction of engine rotation. Arrow mark indicating engine rotation direction; in case of wrong direction, follow instructions.

RESERVATIONS TO TECHNICAL CORRECTIONS

The technical data, measurements, illustrations of the machines and general safety standards are subject to constant development and as such are not always binding upon delivery. We reserve the right to typographical errors.

STAYING IN THE AREA OF THE MACHINE

- Stay away from danger area around the machine.
- Staying in the danger area may result in serious injuries!
- Do not reach into the conveyor or the conveyor belt when the machine is operating!
- Before removing wedged pieces of wood, always turn off the machine.
- The machine is intended for outdoor use only!
- When operating the machine, always wear protective gloves and tight-fitting clothing.
- Wear protective gloves!



2. General safety instructions



- The machine can only be used by persons who are familiar with its functions, dangers and instructions for use.
- The operator must provide appropriate instructions for personnel.
- Persons under the influence of alcohol, drugs or medicine, which affect the mental fitness must never operate or maintain the machine.
- The machine must never be used by children or by persons with limited physical, cognitive or mental abilities, unless they have been given supervision or instruction by a person responsible for their safety.
- The machine can only be operated in technically flawless condition.
- Before turning on the machine, always make sure it is positioned on a stable ground.
- Minimum age of the operator: 18 years.
- The machine can only be operated by ONE person at a time.
- To maintain your concentration, make several pauses during work.
- Keep the work area well lit, poor lighting may significantly increase the risk of injuries!
- Never work without personal protective equipment.
- Before any repairs, installations, maintenance and cleaning, always make sure the drive is turned off and wait until the machine stops moving.
- Never leave the machine running unattended.
- Always turn off the machine before changing position.
- Only use original spare parts UNIFOREST.
- Never modify or interfere in any way with the machine.
- Only qualified personnel are authorized to work on electrical equipment!
- Never used damaged connections.
- Keep electrically powered machines protected from rain. Otherwise this may result in failure of the switch or electric motor.
- Never use your hands to hold timber when cutting.
- Never try to remove wood chips or other parts of workpieces from the cutting area when the machine is running!
- With gloves on, never reach around the saw blade when it is rotating!
- The machine can only be used outdoors!
- If you decide to use the machine indoors, always provide local suction (intake at the source!
- The machine must be kept in a good working condition and free from residue, e.g. splinters and pieces of wood!
- During work, always wear protective gloves and tight-fitted clothing.
- During work, always use eye or face protection!
- To reduce the risk of inhaling harmful dust, always use a mask for respiratory protection.
- Only use saw blades designed for noise level reduction!
- Never use damaged or deformed saw blades!

Minimum diameter of saw blade	Maximum diameter of saw blade	Bore
990 mm	1010 mm	40 mm

- Only use saw blades which comply with the standard EN 847-1.
- After the machine is turned off, make sure that all the tools stopped working!
- The operating pressure in the hydraulic device must never exceed 220 bar!

3. Noise level



The A-weighted emission sound pressure level at the workstation is

- 87 dB (A) running idle or
- 94 dB (A) during cutting,

measured at the ear level of the operator.

The noise level of machine driven by a cardan shaft depends on the type of tractor.

It is therefore necessary to wear hearing protection.

The values specified are emission values and as such do not represent safe values for a working environment. Although there is a correlation between emission and immission levels, it cannot be determined whether additional safety measures are required. Factors that may affect the current immission level at the workstation include the work space properties and other noise emitters, e.g. number of machines and other working procedures in the vicinity. Permissible values at work places vary between different countries. Nevertheless, this information should help the user in assessing potential hazards and risks.

4. Residual risks

In spite of following all safety rules and correctly using the machine, there are still some residual risks that cannot be eliminated:

- Contact with rotating parts or tool.
- Injuries resulting due to workpieces or parts of workpieces flying off.
- Risk of fire due to insufficient engine ventilation.
- Impaired hearing because of working without earmuffs.
- Inappropriate human behaviour (e.g. excessive physical exertion, mental exhaustion ...)

The use of any machine involves residual risks, therefore be extremely cautious when operating the machine.

Operating personnel are responsible for work safety!

5. Intended use

The machine – TITAN 40/20 – is designed for cutting and splitting firewood with a maximum diameter of 5–40 cm.

Firewood is split with a splitting force of 20 t into 2, 4, 6, 8 or 12 pieces and the splitting length can be adjusted from 25cm to 60 cm.

The machine can only be used for cutting and splitting logs!

6. Improper use

Any improper use or use for any other purpose, which is different from operations specified in the intended use is expressly prohibited!

MACHINE OVERVIEW

1. Compatibility

This user manual applies to following machines:

Machine type

Model no.	Model	Drive
900.00.00.K	TITAN 40/20-CD	Cardan shaft
900.00.00.E	TITAN 40/20-CD-E	Cardan shaft/ electric motor

Optional equipment:

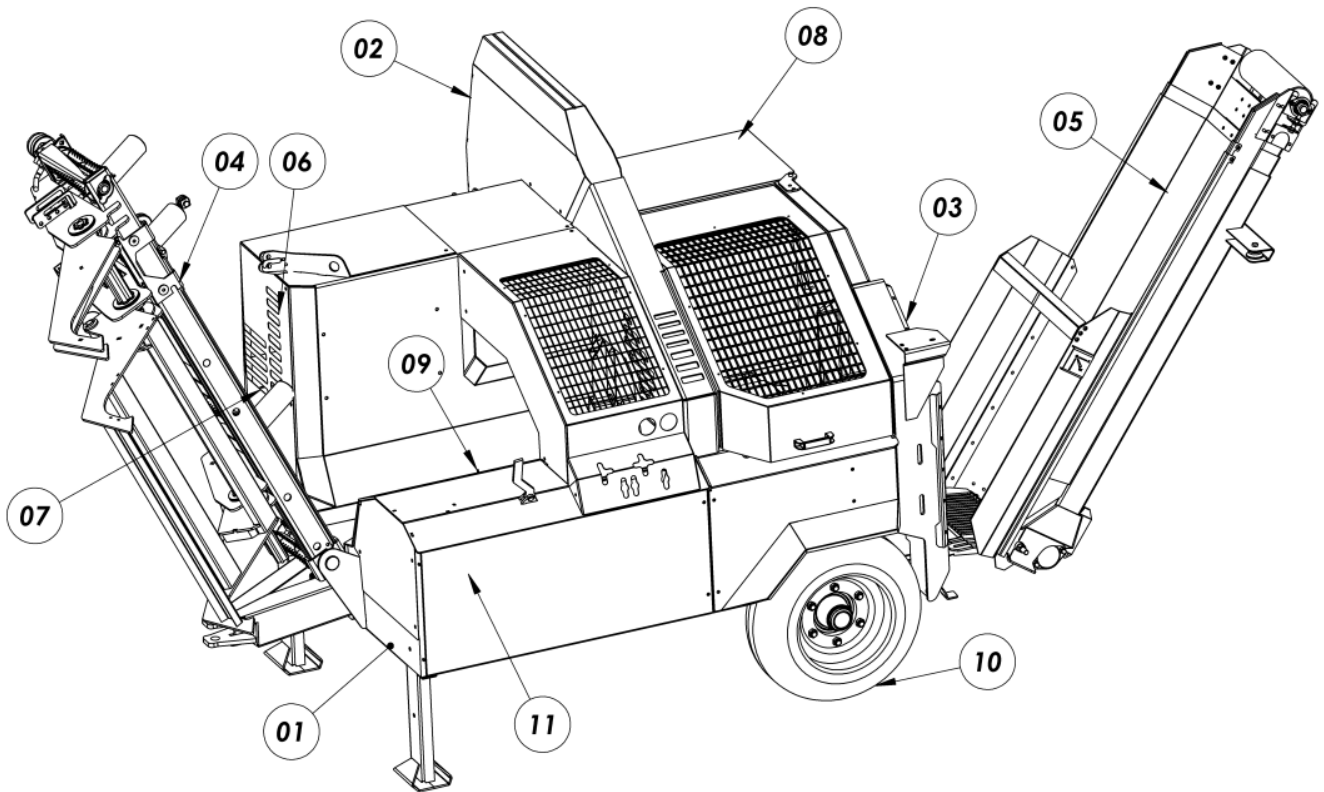
Splitting knife	2-4, 2-6, 2-8, 2-12	
Oil cooler	12V	
Lift table	Telescopic 3m	
Conveyor belt 5m	Telescopic cylinder	
Chassis	200/60/R14,5	

2. Description

Titan 40/20 is a tractor attachment and also comes as an optional mounted or trailed attachment. The machine is driven by the cardan shaft of the tractor or by electric motor with optionally available combination of both and its main advantages are the following structural solutions:

a robust structure with integrated elements of the feeding mechanism, cutting arms and the splitting unit, which represents a central role; rotationally hinged lift table for easier handling of logs, telescopic conveyor belt with a lateral twist for removal of firewood and easier loading on the trailer and the steering workstation, which is positioned in the most convenient area to make the operation of the machine as effortless as possible.

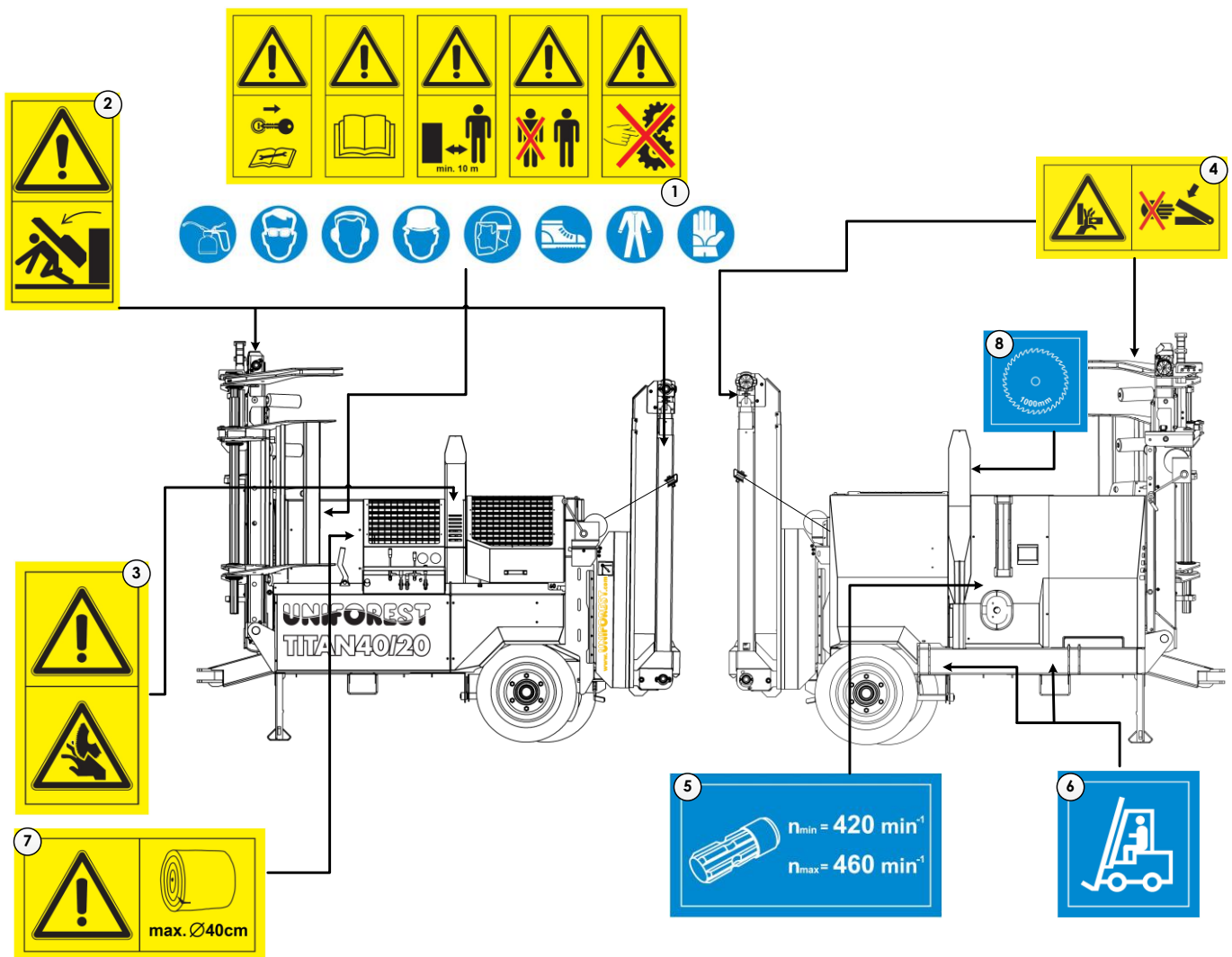
3. Machine overview by segments



1	Structure	7	Electric motor
2	Circular saw with drive unit	8	Protection plates
3	Splitting knife with feed unit	9	Feed rollers
4	Lift table	10	Chassis
5	Conveyor belt	11	Splitting mechanism
6	Hydraulic components		

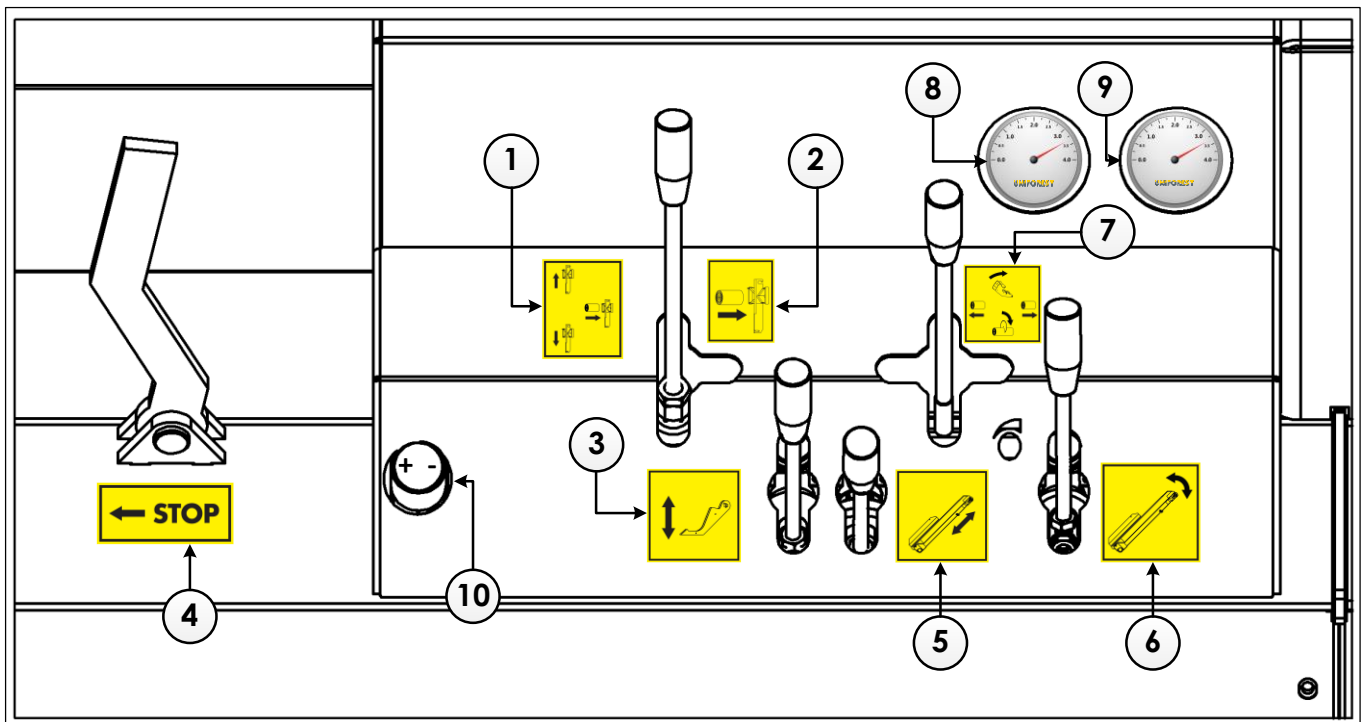
4. Meaning of warning and functional labels

Warning labels



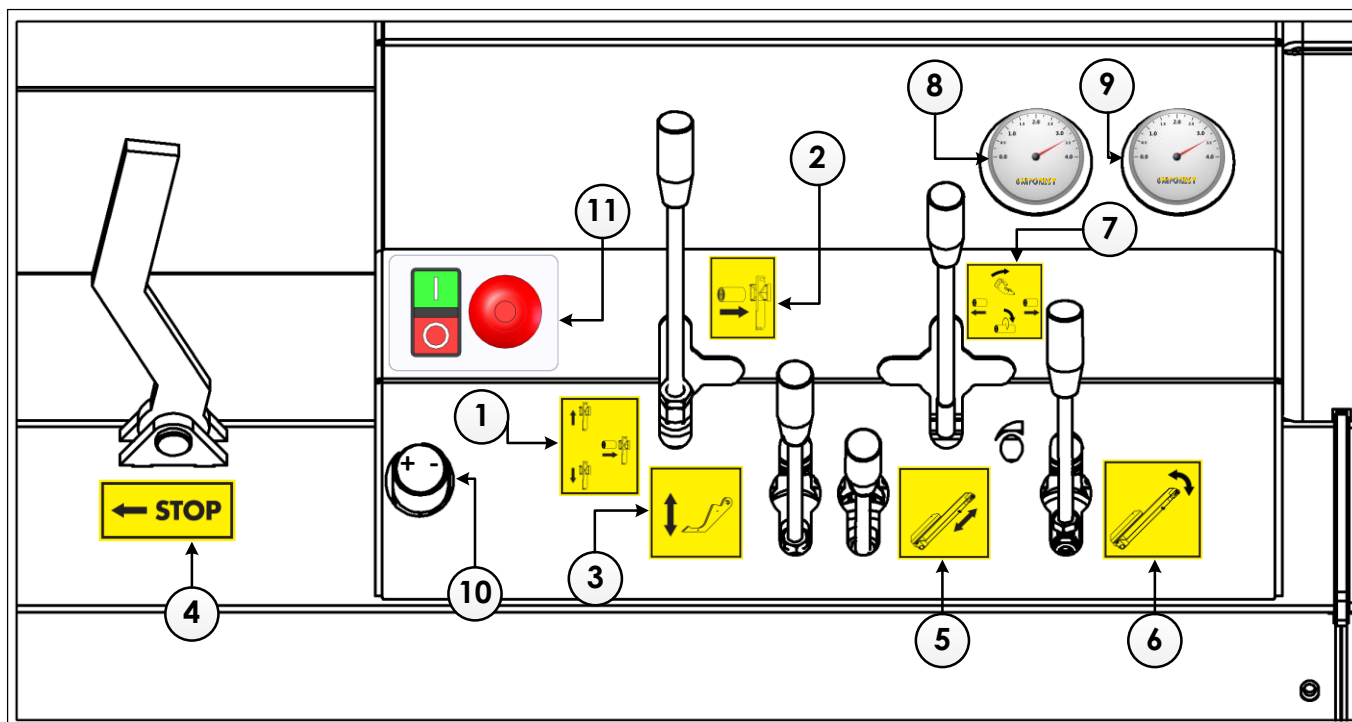
1	Safety warning symbols
2	Warning against falling objects
3	Warning against circular saw operation area
4	Warning against contusions
5	Number of cardan shaft operation revolutions
6	Area for lifting the machine with a forklift
7	Maximum operational diameter of logs
8	Diameter of circular saw integrated into the machine

Functional labels of model TITAN 40/20-CD



1	Control – splitting axe movement (up/down) and activation of splitting piston
2	Control – splitting piston
3	Control – lift table (up/down) / Control – loading table (forwards/backwards)
4	Control – splitting piston stop
5	Control – conveyor belt cylinder (together/apart)
6	Control – conveyor belt drive (forwards/backwards)
7	Main control – loading rollers (forwards/backwards), cutting (circular saw), feeding hatch
8	Pressure gauge – splitting pressure
9	Pressure gauge – system pressure
10	Adjustment valve – conveyor belt speed

Functional labels of model TITAN 40/20-CD-E



1	Control – splitting axe movement (up/down) and activation of splitting piston
2	Control – splitting piston
3	Control – lift table (up/down) / Control – loading table (forwards/backwards)
4	Control – splitting piston stop
5	Control – conveyor belt cylinder (together/apart)
6	Control – conveyor belt drive (forwards/backwards)
7	Main control – loading rollers (forwards/backwards), cutting (circular saw), feeding hatch
8	Pressure gauge – splitting pressure
9	Pressure gauge – system pressure
10	Adjustment valve – conveyor belt speed
11	Main switch of electric motor and emergency stop switch!

5. Workstation and positioning of the machine

Before you turn on the machine, make sure it is placed on stable ground.

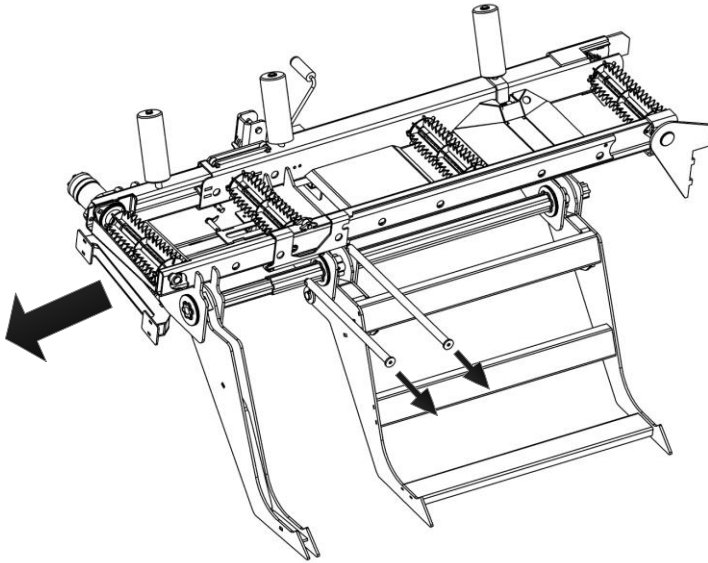
Place the machine on horizontal and solid ground free from obstacles.

The machine must be placed directly on the ground. Make sure there is no boards, hoop iron etc. on the ground beneath the machine.

Positioning of the machine

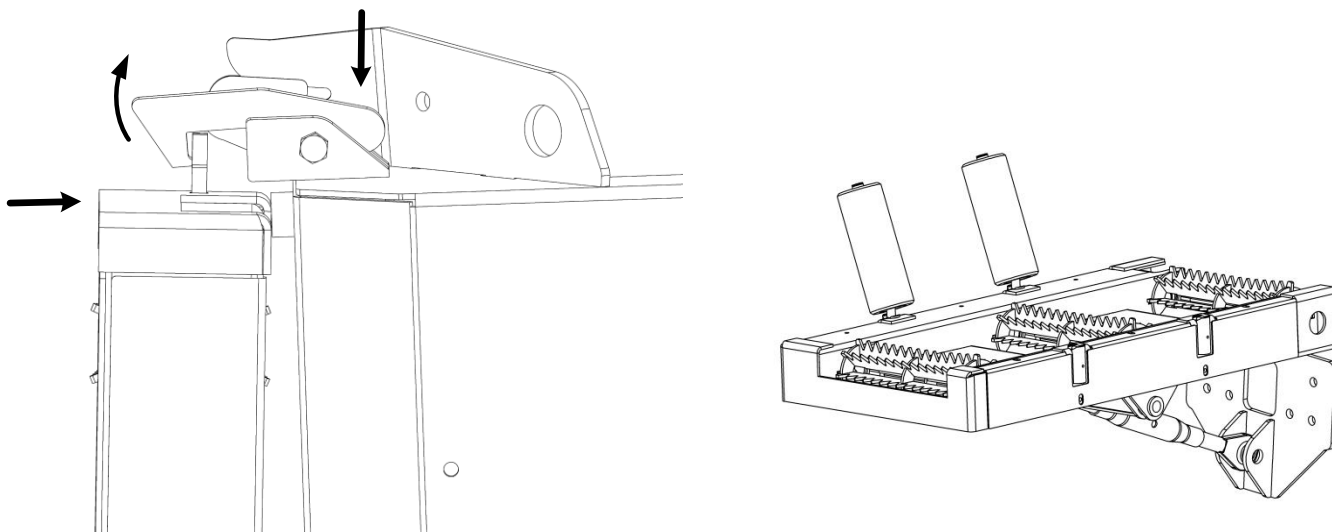


Positioning of the lift table into operating position



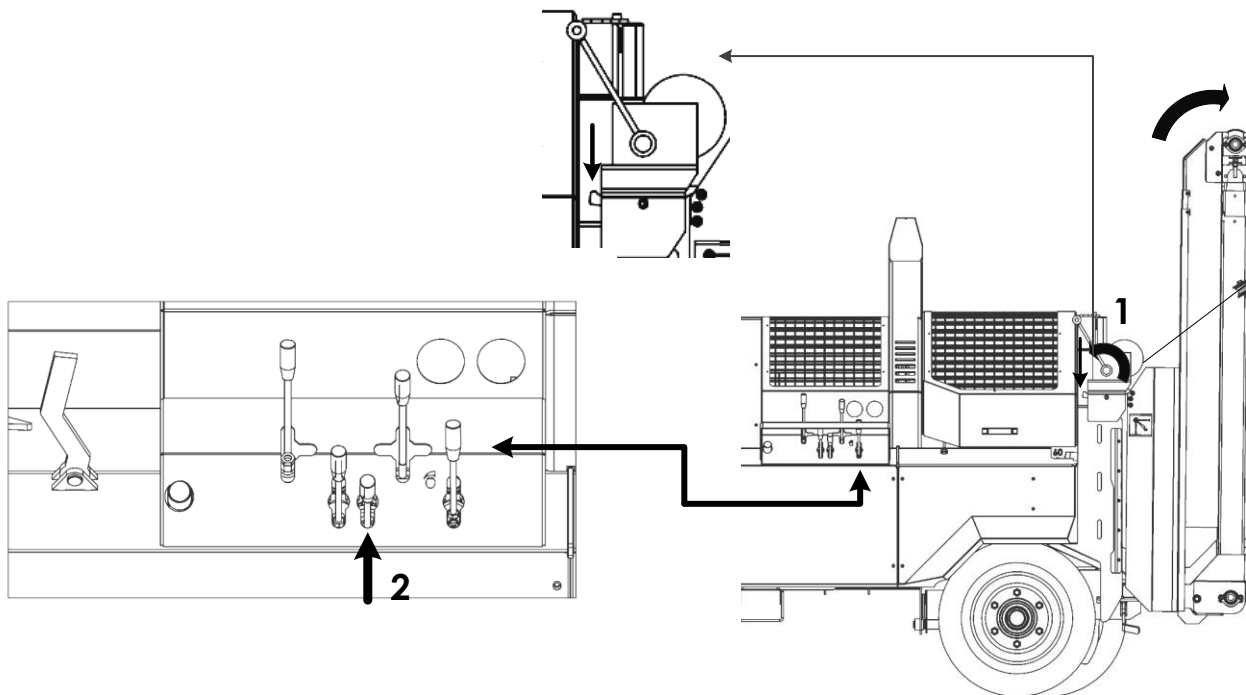
- Lower the lift table using the manual winch until it almost reaches a horizontal position.
- Remove the safety pins on both bolts and remove the bolts (see figure)
- When you remove the bolts, pull out the retractable part of the lift table until you reach the required length (three adjustable table lengths)
- Insert the bolts into their respective holes and secure them with pins
- Remove the pin on the leg and adjust the required height of the leg to position the table into a horizontal position and insert the pin back in its place.
- Lower the table horizontally on the ground with the manual winch
- Secure the connection of the lift table to the machine with a dedicated pin

Positioning of the short feeding table



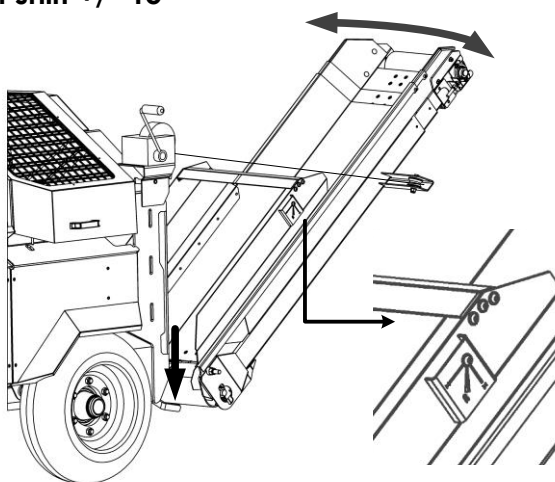
- Push the table towards the generator and lift the safety lock
- Lower the table and attach the top link to its connection point
- Adjust the top link until you reach an ideal working position

Positioning of the conveyor belt into operational position



- Disconnect the conveyor belt (1) under the manual winch and lower it to an angle of 35° using the manual winch
- Extend the conveyor belt with the lever (2) on the control panel into its final position (the hydraulic cylinder is fully extended), the awning must be appropriately taut
- Before operating, check the angle of the conveyor belt with the designated measurement scale on the conveyor belt

Belt shift +/- 15°



Firewood length	Turning angle
25 cm	to 15°
33 cm	to 15°
40 cm	to 7.5°
50 cm	0°
60 cm	0°

- Push the lever on the lower part of the conveyor belt with your foot
- Manually turn the conveyor belt into required direction
- Remove the foot from the lever to release it and turn until the pin is locked in position

STARTING

Before operation, check the correct operation of protective and safety devices, flexible hydraulic hoses and oil level!

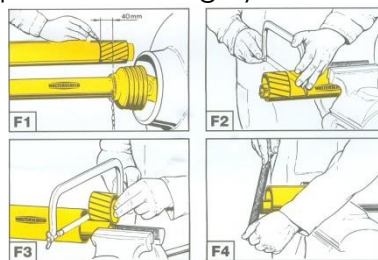
Before each use check if the saw blade is attached properly.

During the first assembly of the machine check the length of the cardan shaft and adjust if necessary!

Determine the exact length as follows:

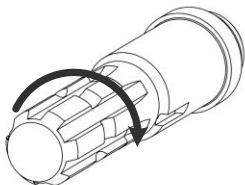
1. Turn off the tractor;
2. Attach the machine to the tractor;
3. Pull the cardan shaft apart, connect the two respective parts to the tractor and the machine, compare them crosswise and mark them (figure F1);
4. Shorten the external and internal plastic protective pipes (figure F2);
5. Shorten the external and internal sliding profiles to the same length as plastic protective pipes (figure F3);

Skim the pipe ends, remove the chips and thoroughly lubricate the sliding parts (figure F4).



1. Cardan shaft drive

- Connect the machine to the three-point hitch attachment of the tractor.
- Put on the cardan coupling and secure it with a safety chain.



- The tractor cardan shaft rotates in the clockwise direction.
- Adjust the throttle lever of the tractor to minimum.
- Slowly engage the cardan shaft of the tractor and wait until the machine starts.
- Adjust the required number of revolutions of the cardan shaft with the throttle lever.

Maximum number of revolutions of the cardan shaft:

- 460 rpm

Never exceed the maximum number of revolutions of the cardan shaft; otherwise the oil temperature will rise. This may cause a premature wear and leaking of the pump, rollers and hydraulic system.

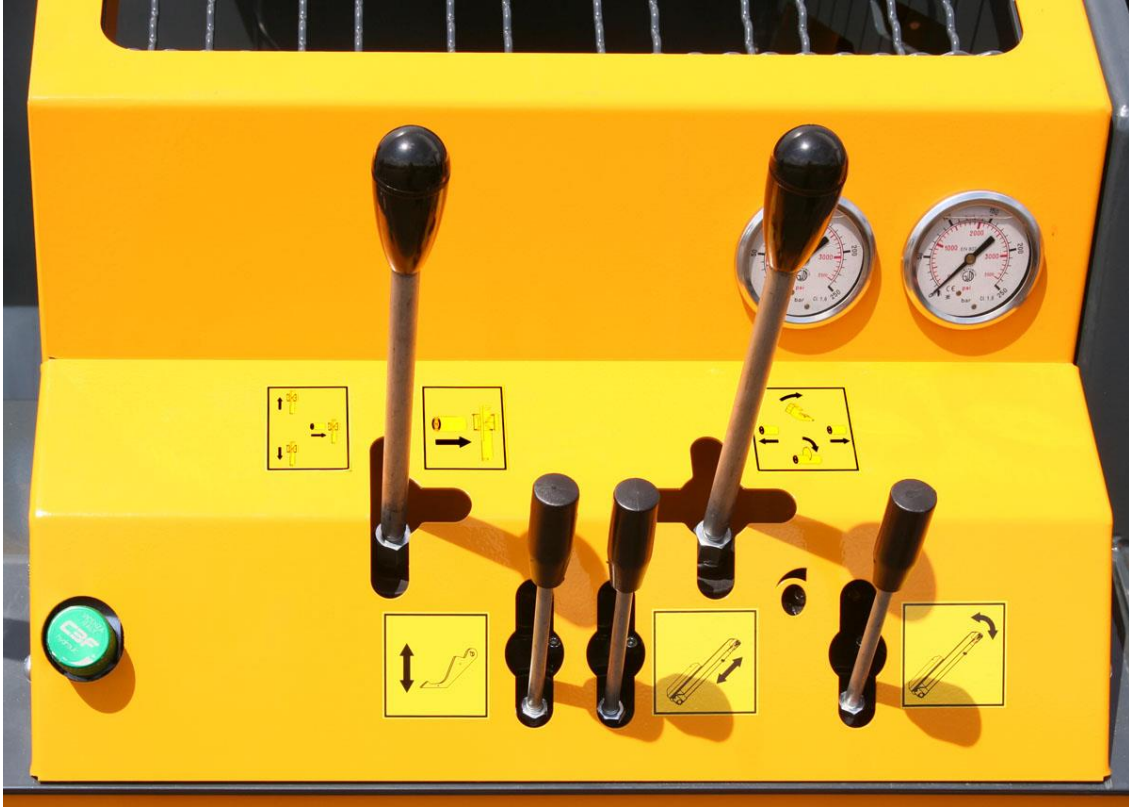
Before disconnecting the cardan coupling, adjust the throttle lever of the tractor to a minimum. Place the disconnected cardan coupling to a dedicated storage area.

MACHINE CONTROL

1. Operating procedure

The machine can only be operated by strictly one person.
Be careful and make sure there are no other persons present around the machine.

2. Control of operational functions of the machine



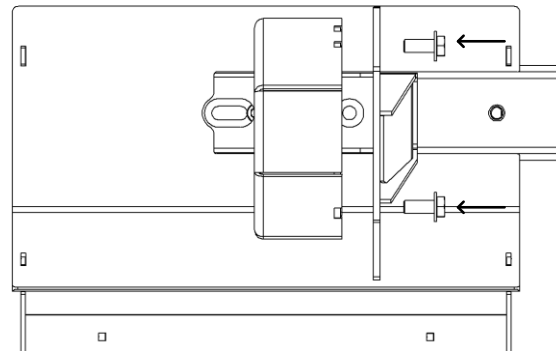
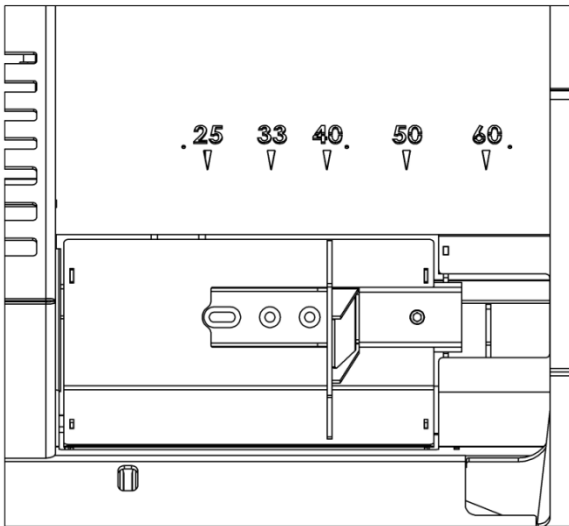
3. Instructions for splitting

Only use firewood with a diameter of 5–40 cm.
Separate the wedged wood from the axe with a hammer or a hydraulic jack.

4. Stop function

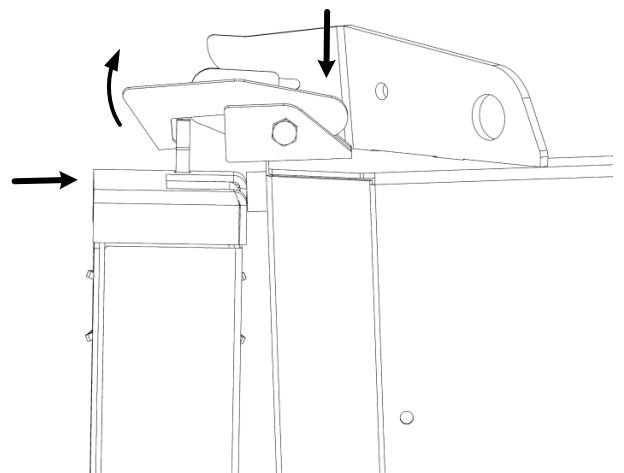
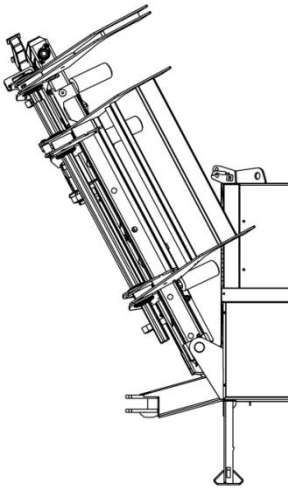
- If protective door is opened during work, the log splitter is stopped and the saw returns into its initial position.
- When you close the protective door, the splitting procedure is resumed from the stopping point!
- If the option of quick belt release is included on the machine, it can be used for an emergency stop.
- For an electric motor version, press the emergency stop button in case of emergency.

5. Adjusting the firewood length



- To adjust the firewood length, the leaning hatch must be in the “left-hand” position.
- Unscrew the two head bolts.
- Adjust the hatch to reach the required firewood length (you can use the measurement scale on the machine).
- Fasten the hatch by tightening the two head bolts.
- To adjust the cutting and splitting length of 25 cm, the machine must be fitted with an additional connector.

6. Lift table

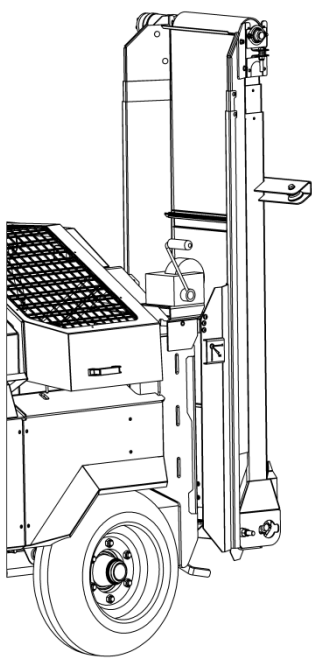


- The lift table is placed into operating position and is subsequently controlled by the control console with the log lifting lever
- The rollers are connected in a sequence which corresponds the rollers of the machine for a simultaneous operation

When adjusting the lift table into the operating and feeding position, make sure there are no people in the area of the machine during lifting/lowering of the table!

7. Conveyor belt

- Conveying position

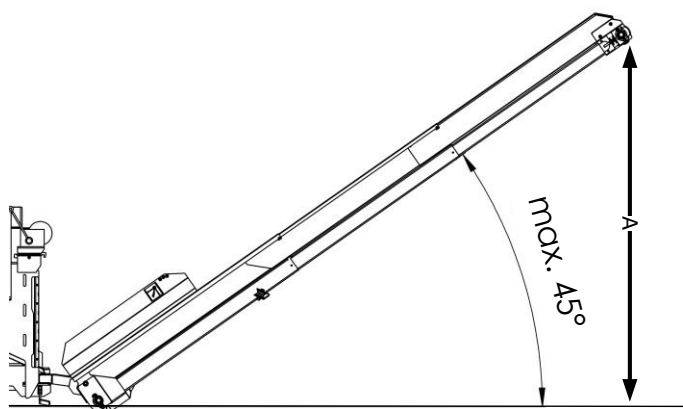


- When the conveyor belt is in operating position, you only need to activate the conveyor drive lever, which remains in position when activated.
- If the conveyor belt is jammed, it can be rolled backwards with the same lever, which must be pushed downwards; in this case the lever will not remain in its position.

Operating position:

Adjustment of the angle of the conveyor mechanism:

The maximum angle of the conveyor mechanism is 45°, if exceeded; the conveyor mechanism may be irreparably damaged during firewood splitting!

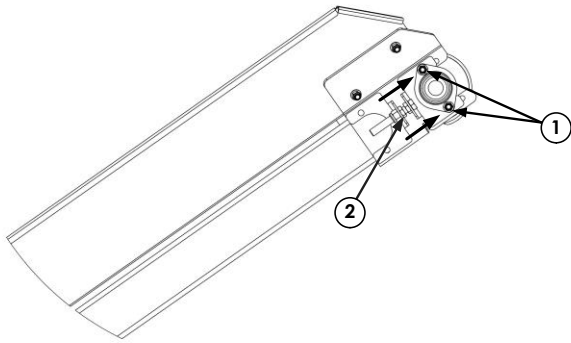


Firewood length	Inclination angle
25 cm	to 45°
33 cm	to 42°
40 cm	to 40°
50 cm	to 35°
60 cm	to 30°
Inclination angle	Belt height A
4m belt	
to 45°	3000 mm
to 30°	2150 mm
Inclination angle	Belt height A
5m belt	
to 45°	3600 mm
to 30°	2600 mm

Conveying position:

- Follow the procedure above in reverse order.

Adjusting the conveyor belt tension




Eventually the conveyor belt may become loose due to operating load. In this case the tension of the conveyor belt must be readjusted.

- Put the conveyor belt into the operating position.
- Slightly loosen the fastening screws (1) on both sides of the conveyor mechanism.
- Loosen the counter nuts on both tension adjusting screws (2).
- Tighten the upper part of the conveyor mechanism by evenly turning both tension adjusting screws.
- When you adjust the correct tension of the conveyor belt, tighten the tension adjusting screws (2) with counter nuts.
- Tighten the fastening screws (1) on both sides of the mechanism.

It is important to make sure that the belt is running along the middle of the roller and not on one side only. If the belt is running on one side only, the position of the upper roller must be correctly readjusted so that the rollers are parallel to each other!

8. Stopping the machine

 Before the machine is stopped, disengage all pressurized hydraulic functions. To achieve this, move all operating levers into neutral position.

Tractor drive with a cardan coupling

Disconnect the cardan coupling of the tractor.

- Before disconnecting the cardan coupling, position the throttle lever of the tractor to a minimum and disengage the cardan function.

TRANSPORT

Lift table

The lift table must be moved into the transport position.
See lift table (reverse direction of extension for operating position).

Conveyor belt

The conveyor belt must be moved into the transport position.
See conveyor belt (reverse direction of extension for operating position).

Before the machine is transported, disengage and disconnect the cardan shaft from the generator.

1. Transport with the three-point hitch attachment of the tractor

- Attach the machine with the three-point hitch and lift it with the hydraulic system of the tractor.
- If the rear tractor lights are covered, a warning light must be installed at the back side of the machine (e.g. magnet support, portable lamp).
- When transporting the machine on public roads, follow road traffic regulations.
- Maximum transport speed: 40 km/h
- If the machine is lowered on the ground, make sure it is placed on a level and solid surface.
- Obligatory use of slow moving vehicle signalization – check the local laws on road traffic regulation (Rules on devices and equipment of vehicles).

2. Transport with the machine chassis

- When the machine is transported, it is necessary to use the lower link.
- Before transportation, the support legs must be moved into the uppermost position.
- If the rear tractor lights are covered, a warning light must be installed at the back side of the machine (e.g. magnet support, portable lamp ...).
- Obligatory use of slow moving vehicle signalization (Rules on devices and equipment of vehicles).
- Test the operation of the lamp.

When the machine is transported on public roads, the road traffic regulations must be observed.

Maximum transport speed: (10 or 25 km/h) – comply with local regulations!

If the machine is lowered on the ground, make sure it is placed on a level and solid surface.

CONTROL INTERVENTIONS

Before starting any control interventions, always turn off the machine.

Disconnect the machine from the power source or disconnect the cardan shaft!

1. Protective devices

The machine must be fitted with all protective devices (covers, protective grids etc.).

2. Threaded fittings

After the first hour of operation, tighten all screws and nuts.

After every 100 operating hours, retighten all screws and nuts.

- Replace any missing screws and nuts.

3. Hydraulic hoses

After the first hour of operation check the sealing and fastening of all hydraulic hoses.

The sealing and fastening of hydraulic hoses must be checked after every 100 operating hours.

- Immediately replace any damaged hydraulic hoses!

4. Saw blade

Before each use, check if the saw blade is fastened correctly.

Before each use, check if the saw blade is worn or damaged and sharpen or replace it, if necessary.

Before each use, check if the saw blade for traces of grease or resin, if the saw blade is dirty it must be cleaned with appropriate cleaning detergent.

5. Adjusting the tension of the V-belt

V-belts must be prestressed so that they can be moved by approximately 8 mm by pressing when pushed in the middle.

- See ... Replacement of V-belt

6. Oil level

To check the oil level, place the machine on a level ground.

The oil level is checked through the control glass.

See p. 23

Hydraulic oil level

The maximum oil level is achieved when the oil level on the control glass reaches over the bottom half.

The minimum oil level is achieved if the oil level only reaches the bottom area of the control glass.

In this case, hydraulic oil must be filled immediately.

- See ... Changing hydraulic oil

The oil filter can only be checked when the oil is changed.

Oil level in the drive unit

As standard, the oil in the drive units is ready for operation and must be checked every time when the hydraulic oil is changed.

See p. 24

MAINTENANCE

Always turn off the machine before any maintenance operations!

Disconnect the machine from the power source or disconnect the cardan shaft!

Only qualified personnel are authorized to work on electrical equipment!

Never operate the machine without protective devices.

Always use original spare parts UNIFOREST.

LUBRICATION

Oily and greasy parts and used oil must be disposed of according to local regulations.

1. Lubricating plan

The machine is made from high-quality materials, therefore all vital parts are produced from high alloy materials with the state-of-the-art protection against penetration of moisture and dust and the machine is also equipped with closed bearings which do not require additional lubrication.

The chains of the drive rollers must be regularly lubricated with appropriate grease or silicone spray.

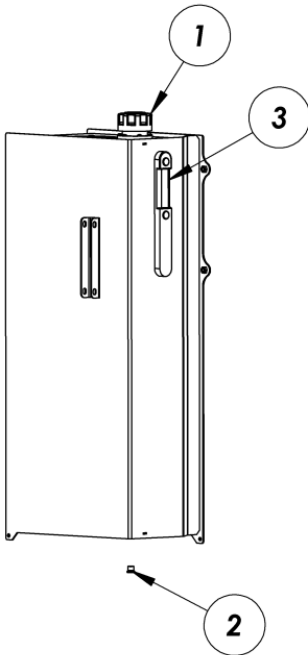
2. Oil change

a) Hydraulic oil changing

The hydraulic oil must be changed after first 5000 operating hours or every two years. It is not necessary to change the oil sooner, because the final factory check includes the parallel flow filtration which removes all dirt particles.

- Determination of oil purity according to ISO 4406: Purity class 14/11 fineness 1,2 µm/oil contamination – low.

How to change the oil:



- Before you change the oil, all elements must be in neutral position.
- Loosen the breather screw. (1)
- Loosen the drain plug. (2)
- ☞ Drain plug is located at the bottom of the water tank. (2)
- Drain old hydraulic oil into a suitable collection container.
- Tighten the drain plug back on the tank and fill with new hydraulic oil. (2)
- Turn on the machine and leave it running for a few moments.
- Check the oil level and add more oil, if necessary. (3)

Volume of hydraulic system: 100 litres

Our hydraulic system contains high-quality oil Olma VSG 46.

- This oil has an extremely high viscosity index, excellent ageing and foaming prevention properties, excellent viscosity in low temperatures and guarantees a reliable protection against wear and corrosion.
- Viscosity class 46.

When changing the oil, it is recommended to use quality oil.

There should be no problems if different oils of the same quality are mixed.

b) Recommended hydraulic oils

Drives:	SAE 90 or similar oil
System oil:	Oil viscosity: 46

c) Oil filter

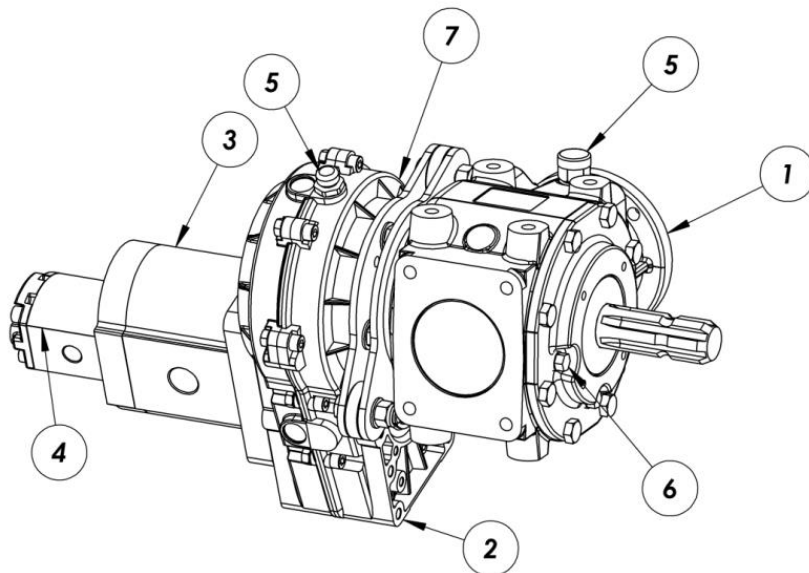
The filtration insert must be replaced with every oil change.

There is no reason for concern if you encounter some aluminium chips, they normally occur when the pump is started.

The filtration insert should not be washed with gasoline or petroleum, which can damage the filter.

3. Gear oil changing

- Oil must be periodically changed after every 5000 operating hours or every 2 years of operation.



Loosen the filling plug and the oil drain plug. (6/2)

- Wait until the old oil is drained and tighten the oil drain plug.
- Add new oil into the drive (6/5).
- Check the oil level (6/7).

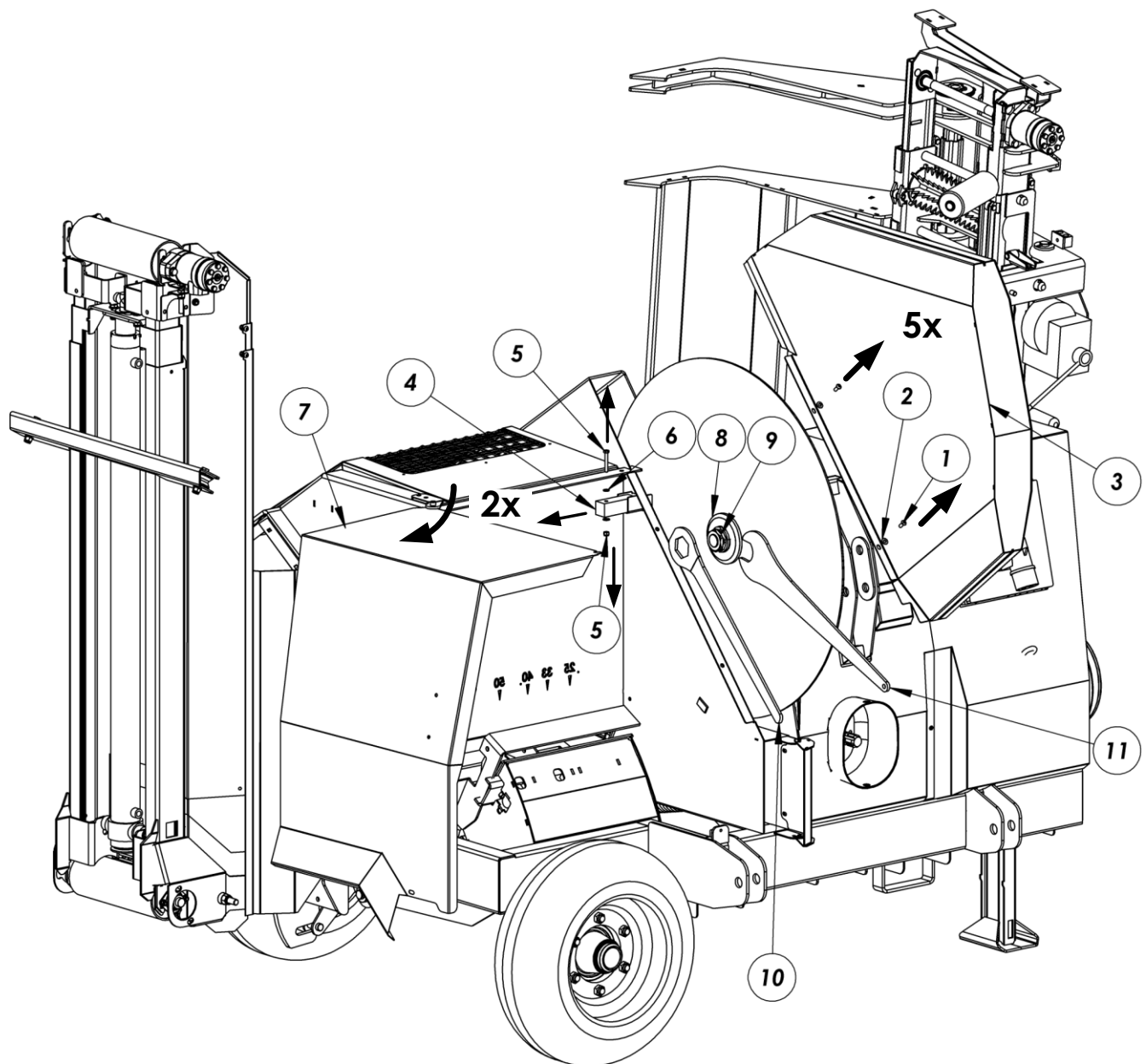
Volume of main drive : 1,2 l

Volume of pump drive : 0,7 l

Use any gear oil with a viscosity class SAE 90.

SAW BLADE CHANGING

Always wear protective gloves when handling saw blades!
Do not exceed maximum number of revolutions of the saw blade recommended by the manufacturer!



- Loosen the head screws (1) on safety door (7) and remove the protective plate (3).
- Loosen the hexagon screws (5) and remove the wooden insert (4).
- Hold the shaft of the circular saw with the clamping flange screwdriver and loosen the tension nuts with the circular saw screwdriver.
- Remove the clamping flange (8) and saw blade (9) which is loosened with the supplied screwdriver (10 and 11).
- Insert a new saw blade and secure it in place.

The tension nut must be fastened in the same position as before.

☞ Insert the saw blade with the teeth facing in the direction of rotation (see arrow).

- Fasten the wooden insert at a distance from the saw blade of approximately 2 mm.

Recommended saw blade

Manufacturer:	Dimensions:
Uniforest	1000 x 6,0 x 40 Z 80 W

Other saw blades with the same properties can be used!

Only use saw blade which comply with the standard EN 847-1.

Saw blade protection

In accordance with the standard, the saw blade is protected with wooden inserts. These inserts are subject to gradual wear and must be replaced as soon as they are excessively worn.

SAW BLADE SHARPENING

To achieve an optimal sharpness, the saw blades can only be sharpened by experts.

Hard carbide saw blade

Instructions for use of hard carbide saw blades

Circular hard carbide saw blades are characterized by a long blade life. The circular saw blades are quality machine tools and must always be handled with caution.

- Hard carbide points must be protected from breaks due to their special hardness.
 - + Improper storage can damage the blade points. Put the circular saw blade on a foam rubber or similar material.
 - + Never use to saw nails, metal parts or similar materials potentially present in the wood.
 - + Do not expose the circular saw blade to impacts or shocks.
- Before you start the engine, check if the circular saw blade rotates in the right direction and its idle run is flawless.
- Never try to stop the circular saw blade by hand or in any other way, when the blade is running.
- Always saw with caution and at an even pace, avoid quick cutting.
- The circular saw blades must be cleaned in regular intervals with a resin removal detergent.
- In idle run, the noise level of hard carbide saw blades is lower. During sawing, the noise level depends on the type of wood which is used.

☞ Warranty claims cannot be made in case of improper handling of the machine. The warranty does not cover saw blades smeared with resin.

REPLACEMENT OF V-BELT

1. Instructions for replacing the V-belt

When one V-belt is replaced, you must replace all V-belts.

The V-belts must not be taut during their adjustment. Pushing them by force to the V-belt pulley may damage and tear the V-belts.

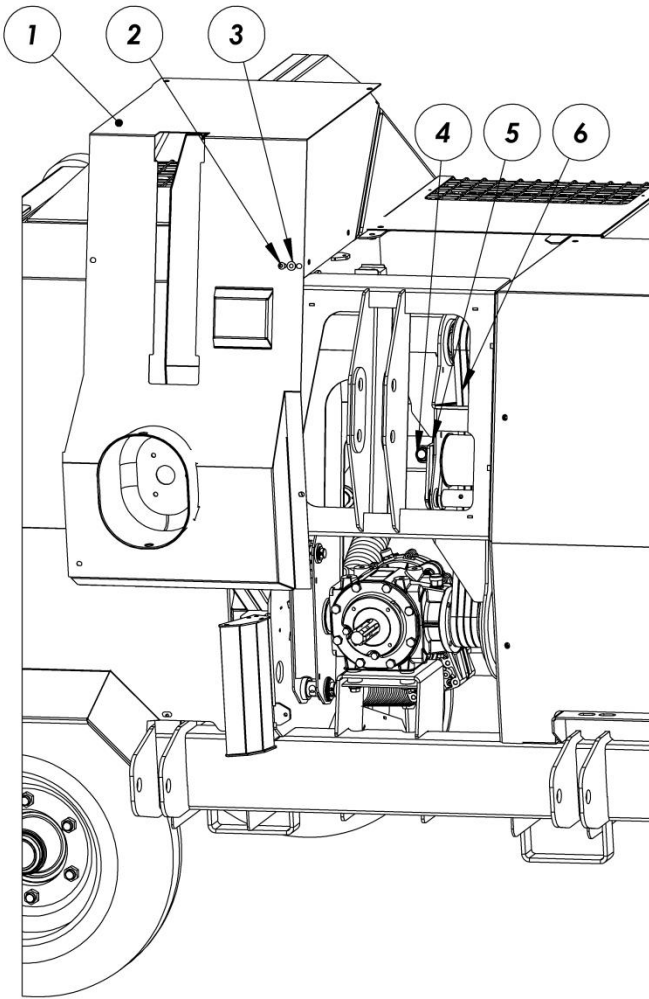
☞ V-belts must be prestressed so that they can be pushed by approximately 8 mm by pressing in the middle.

Types of V-belts

- XPA 1482 QUAD POWER III

Similar models of belts with the same properties can also be used!

2. Replacing the V-belt of a cardan-shaft drive and electric motor



Remove the cover and the cardan shaft protection.

- Loosen six head screws (2) on the protective plate (1) and remove it.
- Loosen the safety hexagon nut (5) on the tensioning screw.
- Loosen the tensioning screw (4).
- Remove old V-belts (6).
- Insert new V-belts.
- Adjust the tension of V-belts with the tensioning screw (4).
- Fasten the safety nut on the tensioning screw (5).
- Mount the protective plate and fasten it with six screws.

When replacing V-belts, the protective plate of the electric motor and the electric motor must also be removed.

All protective devices must be in place before the machine is operated.

ELECTRIC MOTOR DRIVE

1. Starting the machine with an electric motor

Connect the machine to the power network:

- Network voltage 400 V (50Hz)
- Circuit breaker in front of the motor 32 A (tripping characteristic C)
- Use a power supply cable with a minimum diameter of 6 mm²

Main switch:



Pay attention to the rotation direction of the electric motor (arrow on the motor)

If the motor rotates in the wrong direction, follow the instructions below:

The plug contains a phase corrector which can be used to change the direction of rotation of the motor (push the plate in the plug inwards with a screw and turn it 180°)



The plug is tightly secured in the socket; consequently the switch may be damaged when the CEE plug is pulled out of the socket.

You can use special plugs or a silicone spray.

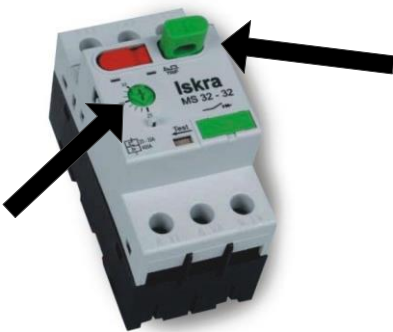
The warranty does not cover this type of damage.

2. Overview of the electric box content

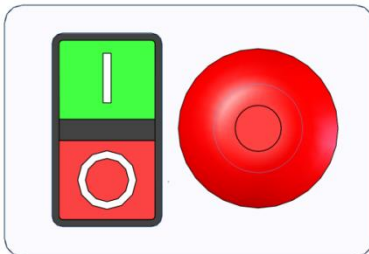
When you check the operation, you must also check the circuit breaker (F1), which is installed in the electric box.



Then check the bimetal, which should be set to the maximum value of 32A. The bimetal switch must be on.



3. Control console



There are two emergency stop buttons on the control box.

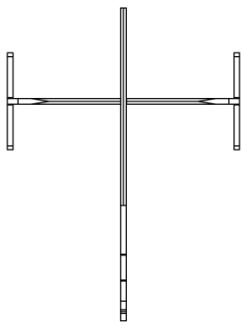
- ❖ Start the machine with the green button (O)
- ❖ You can stop the machine with the red button (I)
- ❖ By pushing the emergency stop button, the electric motor is stopped.
 - To restart, release the emergency stop button (turn the button to the right).

Every time the machine is started and the green button is pressed, leave the motor running idle for at least 30 seconds, until the machine reaches the required number of revolutions.

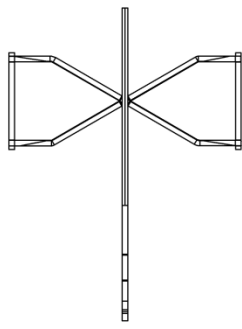
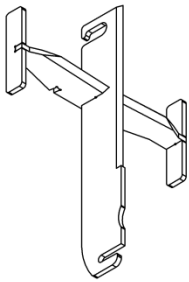
Always remove the plug from the socket before performing any interventions!

OPTIONAL EQUIPMENT

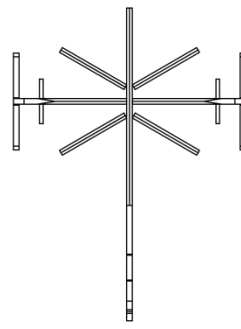
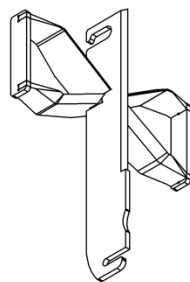
1. Splitting axe versions



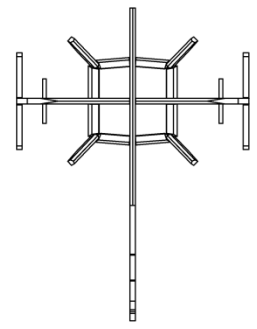
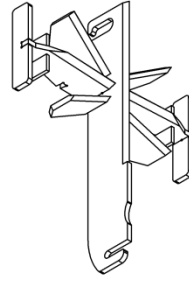
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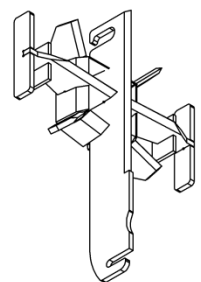
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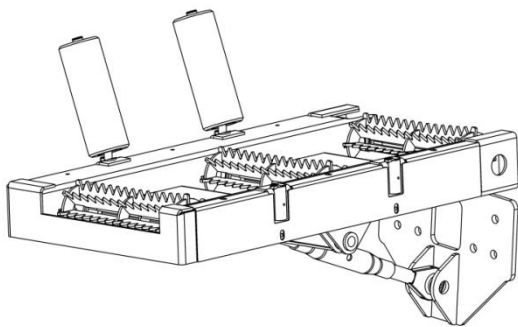
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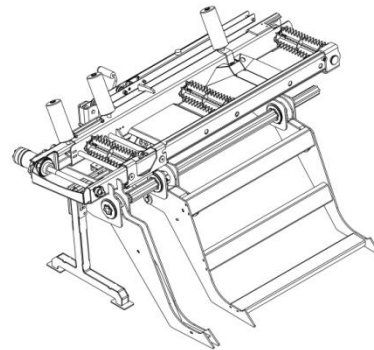
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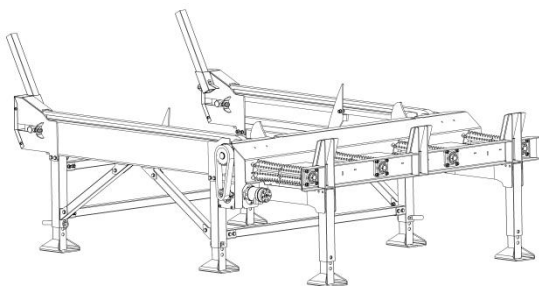
2. Log feeder



Fixed feeding table



Telescopic lifting and feeding table



Loading table

TROUBLESHOOTING

Before troubleshooting, always turn off the machine and wait until all the moving parts have stopped.

If the machine is connected to power supply, it must be disconnected!

Only qualified personnel are authorized to work on electrical equipment!

Detected error (failure)	Cause	Error (failure) troubleshooting procedure
The pressure gauge fails to indicate pressure	The pressure gauge is not working	Replace the pressure gauge
	The drive does not supply power to the pump, the drive clutch is damaged.	Replace the damaged part
	Impurities in the pressure valve	Loosen the valve, clean and tighten it back
	Hose is bent	Replace the hose
	Low oil level in the tank	Add oil in the tank
	Pump failure	Replace the pump
The circular saw is sawing too quickly	Check the sawing pressure	Adjust the pressure in the sawing cylinder
The sawing function is not working	Check the machine cover	Close the machine cover
	Check the unit and the valve	The valve is not working
The lift table is not working	Check the hydraulic cylinder	Replace the hydraulic cylinder
The first drive roller rotates in the opposite direction	Check hydraulic hoses	Replace the connections as shown in the diagram
Hydraulic oil is too hot	Not enough oil in the system	Check the oil level
	Low oil quality	Check the oil quality, replace the oil
	High environment temperature	Install the cooler
	The valve is blocked	Check the valve
Excessive power consumption when sawing	The saw blade is blunt	Sharpen the saw blade
	The saw blade is loose	Check the safety nut on the drive shaft
	The saw blade is smeared with resin	Clean the resin with the resin remover
The machine is noisy	High engine revolutions	Reduce to optimum number of revolutions
	Not enough gear oil	Check the gear oil and add, if necessary
	The valve is blocked	Check the position of the valve
	Wrong position or inadequate lubrication of the cardan shaft	Check the position of the cardan shaft or lubricate
The conveyor belt is not running smoothly or is not moving	Not enough oil in the system	Check the oil, add if necessary
	Inadequate tension of the conveyor belt	Adjust the tension of the conveyor belt
	The conveyor belt is not moving	Check the operation of hydraulic engine
	Jammed firewood	Stop the belt and remove the obstacle
Leaking of hydraulic cylinder	The sealing cuff is worn	Replace the sealing cuff
	The piston is damaged	Replace the cylinder

Any demanding interventions and repairs can only be carried out by qualified service personnel.

SERVICE

Only service providers authorized by UNIFOREST are allowed to service the machine.

DECLARATION OF CONFORMITY

In accordance with article 7 and point A of Annex II of Rules of machine safety
(Official gazette of the Republic of Slovenia, no. 75/2008, 66/2010, 74/2011)

Manufacturer:

UNIFOREST d.o.o.

Dobriša vas 14 a, 3301 Petrovče, Slovenia

(Company name and full address of the manufacturer and, if relevant, of its authorized representative,)

Person responsible for compiling technical documentation:

Marko Polak, UNIFOREST d.o.o., Dobriša vas 14 a, 3301 PETROVČE

(Full name and address of the person authorized for compiling technical documentation with registered office inside the European Union)

Machine description:

FIREWOOD PROCESSOR

(Description, general name, function and brand name)

900.00.00.0

(Documentation no.)

TITAN 40/20

(Type)

(Valid for construction number from – to)

(manufacture year)

We hereby declare under our sole responsibility that the machine FIREWOOD PROCESSOR complies with the following essential requirements of machine safety regulations:

Rules on machine safety

Official gazette of the Republic of Slovenia no. 75/08 (Machinery Directive 2006/42/EC)

Rules on electromagnetic compatibility EMC

Official gazette of the Republic of Slovenia no.132/06 (EMC directive 89/336/EEC)

Applied harmonized and other standards:	SIST EN ISO 12100:2011, SIST EN ISO 4254-1:2013/AC:2011, SIST EN ISO 13857:2008, SIST EN ISO 4413:2011, SIST EN ISO 14982:2009, EN 349:1993+A1:2008, EN 60204-1, EN 1870-6, EN 847-1, EN 609-1, EN 620
Company: UNIFOREST d.o.o. Address: Dobriša vas 14, 3301 Petrovče Stamp	Date: 25.10.2016 Person responsible: Marko Polak Signature:  