

japa 700

User manual

TR – Tractor drive
TRE – Combination drive

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1. Foreword

Laitilan Rautarakenne Oy (JAPA) is a Finnish company with extensive product development. Our goal is to produce simple but reliable and durable machines with a long service life. If you operate your JAPA machine in a due manner and maintain it following the instructions in this manual, your machine will serve you efficiently for a long time. If there is anything that you would like to discuss in greater detail, please contact your dealer or us here directly at the JAPA-factory.

WE CONGRATULATE YOU FOR THE PURCHASE OF YOUR NEW JAPA FIREWOOD PROCESSOR!

This manual is intended for professional users. The operator must have ordinary knowledge and skills. Familiarise yourself thoroughly with these operating instructions before starting the installation work or the operation. Familiarise yourself with the features and safety equipment of the machine after you have read the manual: after that you can start working. Keep this manual with the machine at all times.

At the time of printing, all instructions, descriptions and technical specifications were based on the latest data of the machine's construction. The manufacturer, however, is continuously developing and improving the machine and, therefore reserves the right to alter its design and safety features without prior notice.

We at JAPA are confident that you will be satisfied with your new firewood processor. The machine complies with all the safety requirements of the European Union and as a sign of this, it bears the CE sign.

To ensure rapid and efficient service when ordering spare parts or in the possible event of malfunction, you should give the information on the nameplate of the machine to the sales person or the mechanic. Write down the data in the nameplate on this page in the place reserved for it in order to make it available whenever needed.

If you cannot solve the problem on your own, contact the dealer who will settle the matter together with the manufacturer.



FILL IN THE NAMEPLATE WITH THE MACHINE'S DATA AND WRITE DOWN THE DEALER'S CONTACT INFORMATION:

Serial No.: _____

Year of manufacture: _____

Salesperson: _____

Dealer: _____

Address: _____

Telephone: _____

1.1 Intended use of the machine

The JAPA 700 is an efficient, safe and easy-to-operate firewood processor for cutting and splitting of firewood.

The efficient hard-metal saw-blade of 700 mm in diameter cuts safely logs up to 26 cm in diameter. The cutting length can be adjusted between 25 cm and 60 cm. Use of the machine for any other purpose than processing firewood is prohibited.



The firewood processor is intended for operation by one person only.

1.2 Declaration of Conformity**Manufacturer:**

Laitilan Rautarakenne Oy
Kusnintie 44
FI-23800 Laitila, Finland
Tel. +358 2857 1200
Fax. +358 2857 1201
Web: www.japa.fi

The person in charge of the Technical Construction File:

Ville Kairus

The declaration is valid for the following models:

JAPA 700 TR 4T
JAPA 700 TR 5.6T
JAPA 700 TRE 5.6T

Powered by tractor PTO or electric motor (7.5 kW)

The following directives have been applied in manufacturing the machine:

The Machine Directive 2006/42/EY being put into effect through the Government decree no. 400/200

Notified Body:

nr. 0504
MTT Mittaus ja standardisointi (Vakola)
Vakolantie 55
FI-03400 Vihti

Laitila 1.3.2018

Laitilan Rautarakenne Oy



Jori Lammi

Managing Director

1.3 Warnings and other markings affixed to the machine



Use eye guards and hearing protectors!



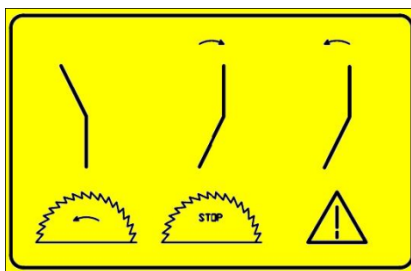
Use clothing, gloves and shoes that are suitable for the work.



Read the instruction manual before starting the operation.



Check the operability of the machine before



Using the emergency stop lever. See point 2. 9



Location of the emergency stop lever



Beware of the rotating crosscut blade!



Risk of getting squashed! Stay away from moving parts of the machine.



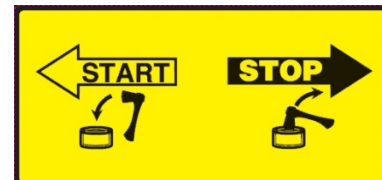
The machine may only be operated by one person!



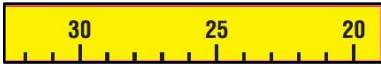
Do not walk under the conveyor! Safe distance 5 m.



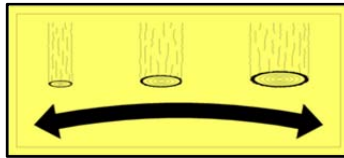
Limitation of the tractor PTO speed, 400 r.p.m.



Starting and reversing the splitting.



Log-length scale.



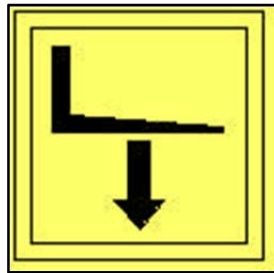
Height adjustment of the splitting wedge.



Direction of rotation of the electric motor.



Lifting point.



Places for the forklift forks

HYDRAULIC
OIL 46

Hydraulic oil



DO NOT LEAVE A RUNNING MACHINE UNSUPERVISED!

1.4 Nameplates of the machine

The nameplate of the machine is located behind the machine, on the right side of the splitting chute.

Nameplate of the machine (1)

- Serial number of the machine
- Designation of the machine type
- Year and date of manufacture
- Machine's weight
- Voltage (machine powered by electric motor)
- Max. rotational speed of the PTO
- Max. pressure of the hydraulics
- Diameter of the crosscut blade/blade hole
- The name and address of the manufacturer

Sarjanro		CE
Manufact. Nr		
Malli, Model		
Pvm, Date		
Paino, Weight		
Jännite, Voltage		
R/Min		
Hydr.max paine		
Moott. sarjanro		
Engine Serial Nr		
JAPA - MACHINE		
LAILAN RAUTARAKENNE OY		
www.japa.fi, (02) 8571 200, FINLAND		

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1.5 Machine models

JAPA 700 TR 4T	Tractor-powered, splitting force 4 t
JAPA 700 TR 5.6T	Tractor-powered, splitting force 5,6 t
JAPA 700 TRE 5.6T	Tractor- and electrically-powered (7.5 kW), splitting force 5,6 t

As standard feature in all models:

All models are as standard equipped with a 3-point hitch of CAT1, and a hydraulically driven discharge conveyor of 3.8 metres, which can be turned mechanically into three different positions. In addition, a hard-metal saw-blade of 700 mm in diameter and a wedge splitting in 2/4 ways.

1.6 Safety instructions

These safety regulations are of a general nature. Also all other relevant health and safety related instructions, traffic regulations concerning transportation and the requirements of the general legislation must be observed while handling the machine. Following the instructions helps prevent accidents in advance.

The machine may only be operated by a person who is familiar with use of the machine and its operating instructions. The operator must never be under the influence of alcohol or drugs. Observe the requirements imposed on the operator, and the required minimum age, 18 years.

Familiarise yourself carefully with the safety and installation instructions as well as with the operation and control functions before you install the machine or put it into operation.

General regulations:

- Select a sufficiently firm and even workplace.
- The machine is exclusively intended for processing firewood.
- The machine is intended for operation by one person only.
- Make sure that all other people stay outside the operating range.
- Always ensure that the electric conductors, if any, are intact.
- Always wear approved eye guards and hearing protectors!
- Clean and service the machine regularly.
- Always stop the machine before servicing and disconnect the power cord of the machine powered by electricity (TRE).

Workplace:

- Keep the working space clean and clear of foreign objects.
- Ensure, that the surface near the machine is not slippery.
- Do not wear loosely hanging clothes.
- Never use the machine indoors, risk of dust generation!
- Only operate the machine in an adequately lit space.

During working:

- Exercise particular caution when cutting knotty or crooked trees.
- As a result of faulty cutting, the log may roll over and cause an injury or a machine failure.
- Careless cutting or splitting may cause unexpected danger situations.
- Never remove any safety-related devices from the machine.
- You are yourself responsible if any safety-related devices have been removed from the machine.
- Always bring both the machine and the conveyor into the work position before starting up.
- Only use fault-free power take-off drive shafts and attach the chain for the shaft-guard to the machine.

1.7 Sound level and vibration

According to the standard EN ISO 3744:2009 is 100.6 dB, the A-weighted sound power level of the JAPA 700 firewood processor, and the average sound pressure level is 80.6 dB. The vibration emission values do not exceed the limit $2,5\text{m/s}^2$.

Where the machine is powered by a tractor, the sound of the tractor may dominate the work site. Always wear appropriate hearing protection: earmuffs or ear plugs. We recommend using a logger's helmet.

1.8 Responsibility of the operator

- JAPA is a safe machine provided that it is operated according to the instructions in this manual.
- The machine must be serviced and cleaned regularly.
- The machine is intended exclusively for processing firewood, and it may be operated by one person.
- All the safety devices are required to be in place in order to ensure a sufficient level of safety during working.
- The operator of the machine is responsible for the flawless operation of the safety-related devices.
- The operator himself is responsible for any accidents, which may occur if safety-related devices have been removed from the machine.
- The machine's construction must not be modified in any way that affects its safety.
- The operator is also responsible for the safety of all outsiders.

1.9 Working conditions

- Bring the machine to as level position as possible, and make sure that the surface near the machine is not slippery.
- Keep the surroundings of the machine in good order and make sure that there are no outsiders in the work area.
- Keep the access routes to and from the machine clear of unnecessary objects during working.
- Never use the machine indoors, owing to the risk of dust generation or the danger of exhaust gases.
- The manufacturer requires that general lighting in the workplace is sufficient.
- Do not lift logs onto the in-feed conveyor using a grapple lift.
- Avoid unnecessary lifting by using a suitable log-stand. This helps you save time, effort and your back.
- When starting the machine in severe frost, allow it idle for about 5-10 minutes.

1.10 Terms of warranty

Roles

The Guarantor Manufacturer of the JAPA-product:
Laitilan Rautarakenne Oy, Kusnintie 44, FI-23800 LAITILA
Tel.: +358-(0)2-857 1200, Fax: +358-2-857 1201, E-mail: aftersales@japa.fi.

Dealer

The Dealer is an enterprise that is authorised by Laitilan Rautarakenne Oy to sell JAPA products in its area. The Dealer is the customer's contact point in matters related to the warranty for those JAPA products that the Dealer has sold and delivered.

Buyer

The Buyer is any person or entity that has obtained a JAPA product for its use. The Buyer is obliged to notify the Dealer of any defect that is observed during the warranty period, and to keep the receipt as evidence of the place and time of purchase of his JAPA product. As required, the Buyer is obliged to also submit the data given on the nameplate to the Dealer.

The guarantee is valid for the original buyer for 12 months, starting from the date of purchase, but for no more than 1 000 operating hours.

In guarantee matters, always contact the machine's seller before undertaking any procedures.

A guarantee demand has to be issued to the seller **immediately** upon discovery of a defect. If the defect concerns a damaged part or component, please send a photograph of the damaged part or component to the seller, if possible, so the fault can be identified. When submitting a guarantee claim, the buyer must always include the type and serial number of the machine and present a receipt that includes the date of purchase. Guarantee claims must be submitted to an authorised retailer.

The guarantee covers

- Parts damaged in normal use due to faults in material or manufacture.
- Reasonable expenses caused by repairing a fault in accordance with the agreement between the seller or buyer and manufacturer. Faulty parts will be replaced with new ones. A faulty part or parts replaced due to a material fault should be returned to the manufacturer through the retailer.

The guarantee does not cover

- Damages caused by normal wear and tear (for example blades, mats and belts), improper use or use contrary to the instruction manual
- Damages caused by negligence of maintenance or storage procedures detailed in the instruction manual
- Damages caused during transport
- Cutting blades, V-belts and oil, and normal adjustment, care, maintenance or cleaning procedures
- Defects in a machine to which the buyer has carried out or commissioned structural or functional changes to the degree that the machine can no longer be considered equivalent to the original machine
- Other potential costs or financial obligations resulting from the procedures mentioned above
- Indirect costs
- Travel costs resulting from guarantee repairs
- The guarantee for parts replaced during the guarantee period of the machine expires at the same time as the machine's guarantee
- The guarantee is void if the ownership of the machine is transferred to a third party during the guarantee period
- The guarantee is void if any of the machine's seals have been broken

If a fault or defect reported by the customer is found to not be covered by the guarantee, the manufacturer has the right to charge the customer for the pinpointing and possible repair of the fault or defect in accordance with the manufacturer's current price list.

This guarantee certificate indicates our responsibilities and obligations in full and it excludes all other responsibilities.

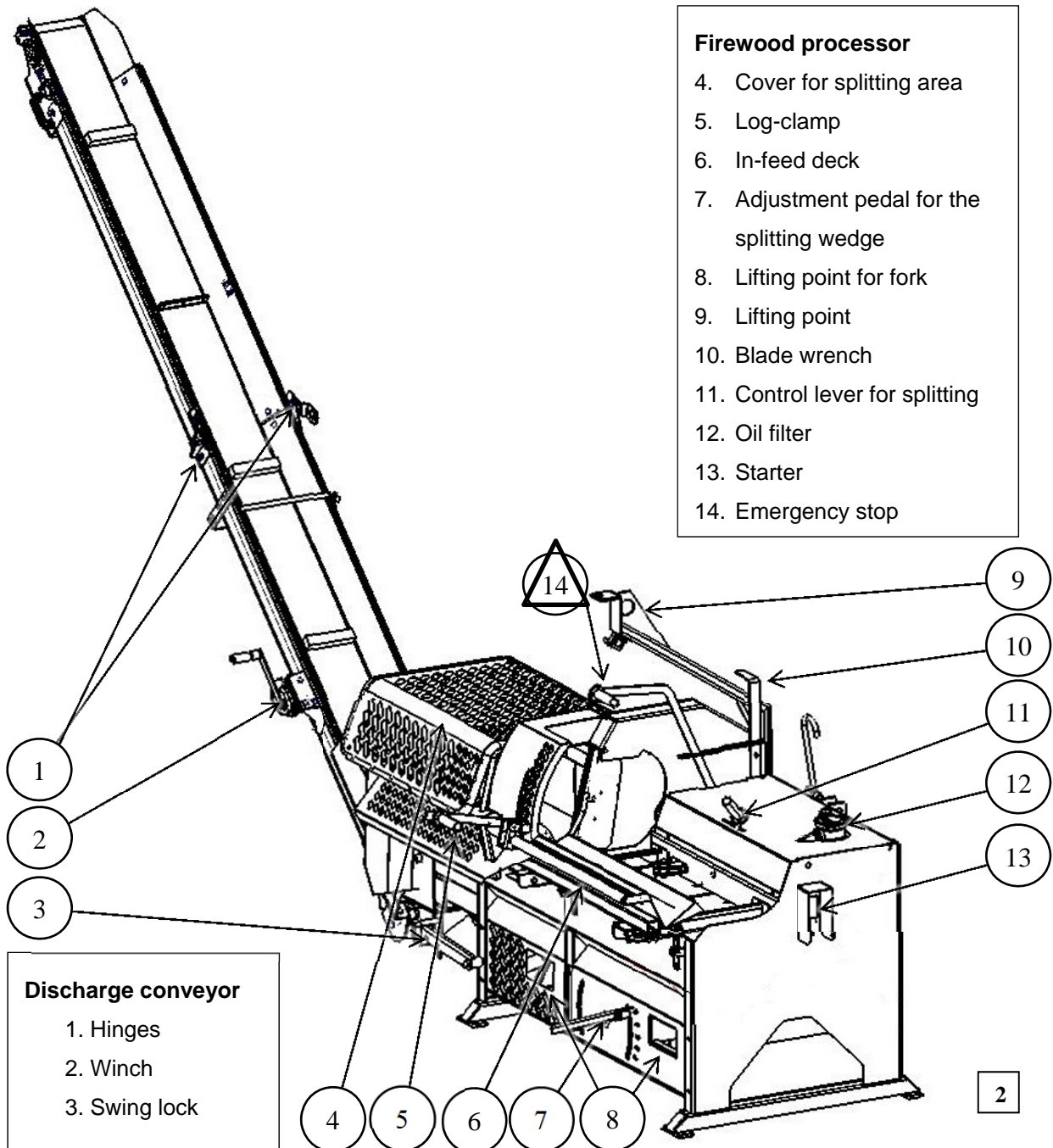
Guarantee terms come into force when you register your customership in the extranet service found on our website.

2. Inspection and installation of the machine

2.1 Delivery inspection of the machine

Inspect the machine immediately after having taken delivery. If the product shows signs of transport damage or any parts are missing, contact the carrier and the dealer immediately.

2.2 Main parts of the machine (2)



2.3 Lifting and transporting the machine (2)

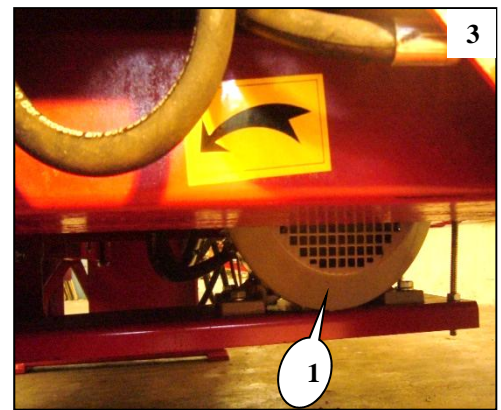
The firewood processor may only be lifted by the marked places (see 1.3) using the forks 8. or the sling (or equivalent) 9. Lifting by any other point may damage the firewood processor.

The firewood processor is also equipped with a three-point hitch for the lift arms of the tractor.

2.4 Electric motor (3)

The electric motor (1) of the firewood processor is located inside the frame. The motor is easiest to locate from the sign expressing its direction of rotation (1.3).

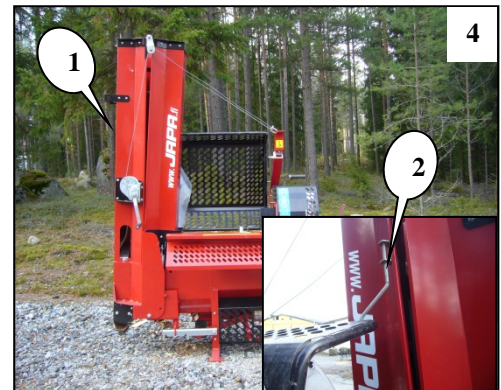
Only the TRE models are equipped with an electric motor.



2.5 The work and transport positions of the discharge conveyor

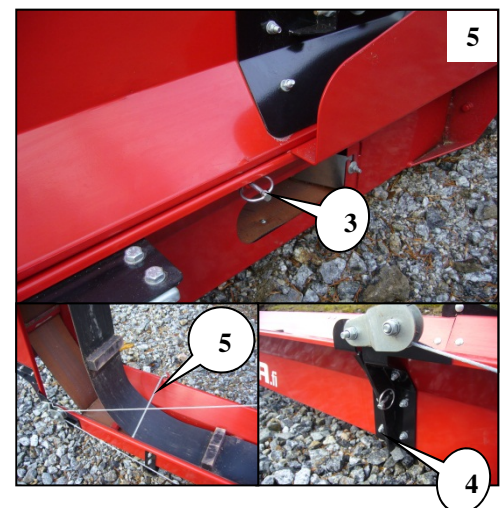
Bringing the conveyor into the work position, (4, 5 and 6)

1. The conveyor in the transport position.
2. Release the locking pin (2) by means of which the conveyor is fixed to the cover of the splitting area. The locking device is located at the rear of the conveyor.
3. Lower the conveyor to the ground using the winch, and slacken the wire.
4. Remove the locking pin of the transport position (3) and carefully turn down the upper part of the conveyor.
5. Insert the locking pin in place. (4)
6. Turn the conveyor belt support (5) and lift up the conveyor by means of the winch (max. 45°). Now the device is ready for operation. (Fig. 6)



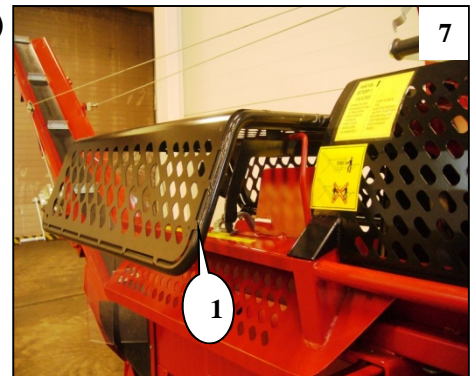
Bringing the conveyor into the transport position, (4, 5 and 6)

7. Put the support for the conveyor belt in place. (5)
8. Remove the locking pin of the conveyor. (4)
9. Lower the conveyor to the ground using the winch.
10. Lift up the upper end of the conveyor and lower it on top of the lower end.
11. Insert the locking pin for the transport position. (3)
12. Lift the conveyor to the transport position using the winch.
13. Lock the conveyor to the protective net for the splitting area by means of the locking pin. (2)
14. Now the machine is ready for transport. (Fig. 4)



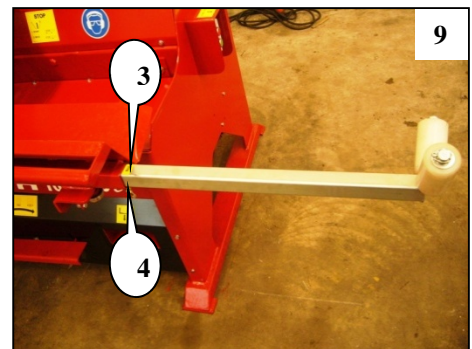
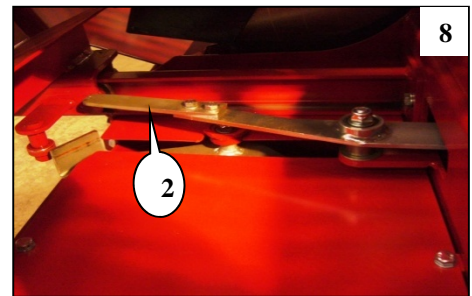
2.6 Bringing the in-feed deck into the work position, (7, 8 and 9)

1. Close the protective net for the splitting area (1). The locking for the in-feed deck(2) will be released simultaneously.
2. Pull out the extension until the Max decal (3) comes into view. Lock the table extension in this position.
3. The in-feed deck is now ready for use.



2.7 Bringing the in-feed deck into the transport position, (7, 8 and 9)

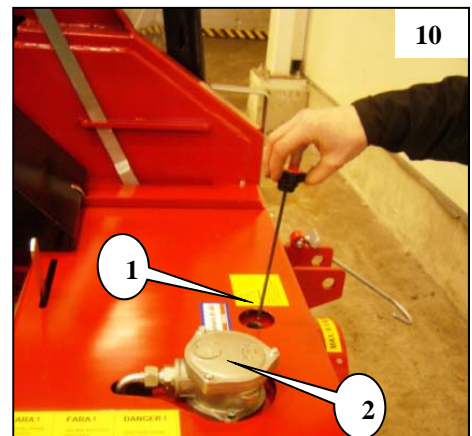
1. Release the locking of the support extension (4), push the support in and lock it.
2. Pull out the in-feed deck and lift the cover for the splitting area (1) into the transport position.
3. The locking lever for the in-feed deck (2) locks up the deck in its rear position and after that the machine is ready for transport.



2.8 Checking the hydraulic oil level and topping up the oil (10)

1. Check the level of the hydraulic oil daily using the dipstick.
2. The oil level must be visible on the stick 5-7 cm (1).
3. At oil change the volume is 20 litres.
4. The oil and the filter shall be changed once a year.
5. The oil filter is located under the cover (2).
6. The oil type can be e.g. Teboil 46 S.

SPARE PARTS CODE OF THE FILTER ELEMENT 94134



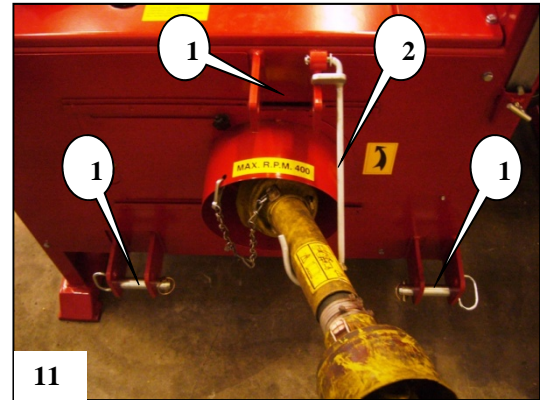
2.9 Connecting to the tractor or to the electric motor

Connecting the machine to the tractor (11)

1. For tractor-powered operation, hitch the machine to the tractor's three-point linkage (1), centre it and lock it to the lifting arms.

Installing the PTO shaft:

1. Verify the shaft's length and cut the shaft to the correct length, as required. The maximum allowed rotational speed of the shaft is 400 r.p.m. For safety reasons, this speed must not be exceeded.
2. If the drive shaft is not connected to the tractor, you can put it in the holder on the firewood processor (2).
3. The PTO shaft is not a standard piece of equipment.

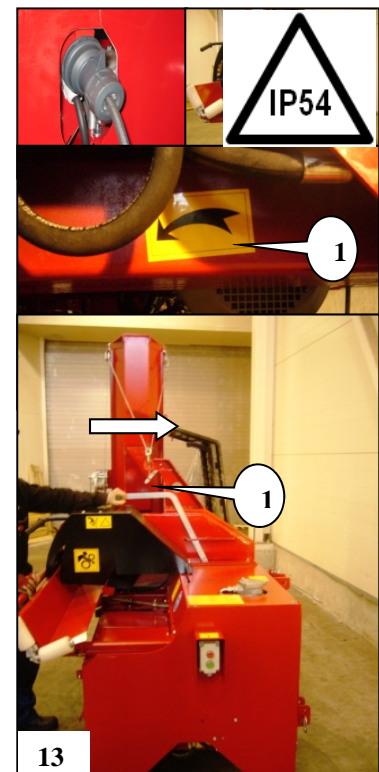


General regulations for use of the PTO shaft

- The power take-off must be switched off, when connecting the PTO shaft to the tractor.
- Never connect the shaft using only the clutch.
- The power take-off must be switched off when the motor is started.
- The power take-off must be switched off unless it is not in use.
- Only use protected and approved drive shafts in good condition.
- Always shorten the PTO shaft following the manufacturer's instructions.
- Check that after connection the lock bolt of the drive shaft is in the locked position.
- Fix the locking chain of the shaft guard so as to prevent the guard from rotating.
- Never hang the drive shaft in the chain of the guard.
- Before connecting or using the drive shaft, check that there are no people inside the danger zone.

Operation powered by electricity, TRE (12)

- Depending on the country of delivery, the machine may be equipped with a 7.5 kW / 380 V three-phase motor.
- The electric motor must be fitted with fuses of at minimum 3x20A.
- For your own safety, only connect the firewood processor to a power supply equipped with a fault current protective switch.
- The electric motor bears a sticker indicating its rotational direction (1). Check that the motor rotates in the correct direction. Stop the electric motor immediately if it is rotating in the wrong direction.
- To change the direction of rotation turn pins of the plug.



2.10 Emergency stopping of the machine (13)

The machine is equipped with a hydraulic brake, which stops the crosscut saw-blade in less than 10 seconds. Push the lever (1) forward to engage the hydraulic brake (as indicated by the arrow).

Pull the lever (1) to the rear to deactivate the emergency stop. Always ensure that the emergency stop feature is operational before starting to work with the firewood processor.



Always switch off the electric motor or stop the rotation of the tractor PTO shaft before deactivating the emergency stop device.

If the blade does not stop within the time mentioned above, the emergency stop must be readjusted (point 5.5).

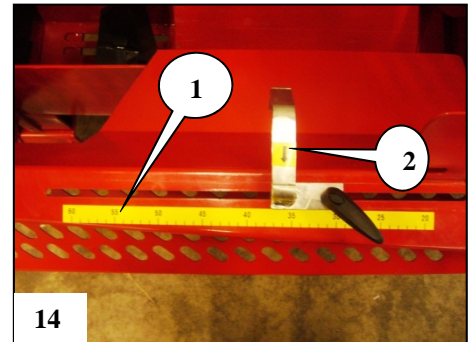
3. Functions of the firewood processor

3.1 Preparations before starting the work:

Place the firewood processor on an even and firm surface so that working with the machine and the access route to and from it are unobstructed. Before starting up, check that all the attachment bolts are tightened and the protective covers are in place. Also check the hydraulic hoses and connectors, as well as operation of the control and safety devices. Repair possible faults before starting the work. With electric drive, always check before the operation that neither the cord, the appliance inlet nor the protection switch for the engine is damaged. During the work, always use protective gloves, eye guards, safety shoes and hearing protectors.

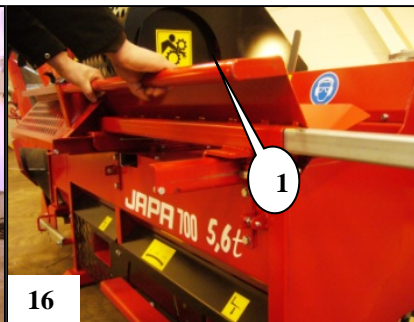
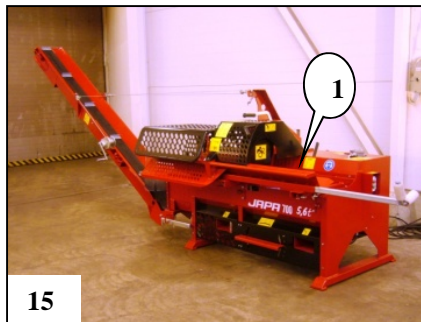
3.2 Adjusting the log length (14)

The length of the cut-off log is adjusted by shifting the mechanical log length limiter located in front of the splitting chute. Choose the desired maximum length for the log on the scale and lock the limiter (2) in this position.



3.3 Feeding the log to the blade (15, 16, 17) for cutting

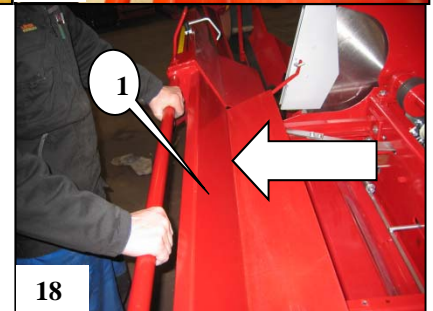
1. The log is fed to the blade by means of the in-feed deck (1). The bearing-supported in-feed deck moves in the horizontal position, which makes working with it so effortless. Pull the in-feed deck to the rear and place the log that you intend to cut onto the deck and push it to the side against the log length limiter. After this, execute the cutting by pushing the in-feed deck forward. Always complete the crosscut operation to ensure that the splitting operation starts without a problem.
2. You can keep the log in position during cutting by means of the log clamp (2).



3.4 Starting up the hydraulic splitting (18)

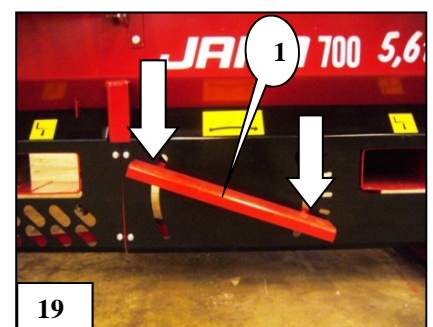
When the log is cut off, and the in-feed deck (1) is pulled to the rear, the cut-off billet falls into the splitting chute. The splitting ram is launched as soon as the in-feed deck reaches its extreme position in the rear.

The splitting ram pushes the billet against the splitting wedge and makes it split. After that the discharge conveyor takes the ready piece of firewood onto the trailer or in the heap.



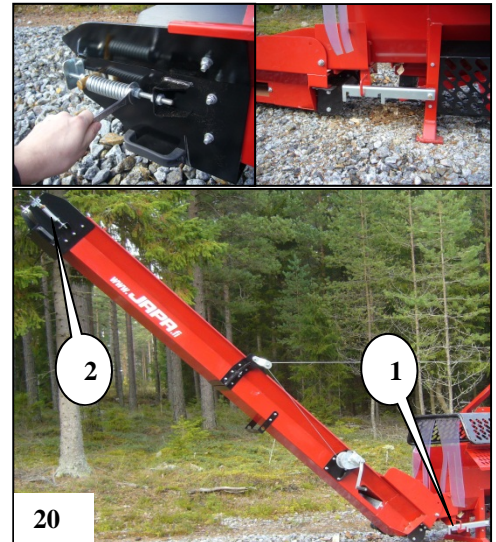
3.5 Adjusting the height of the splitting wedge (19)

The height of the splitting wedge is adjusted using the pedal (1) under the in-feed deck.



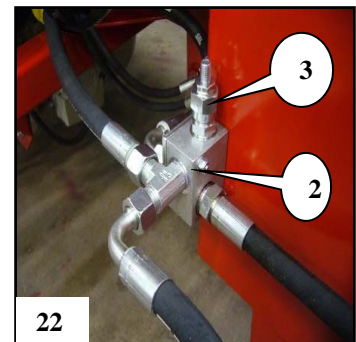
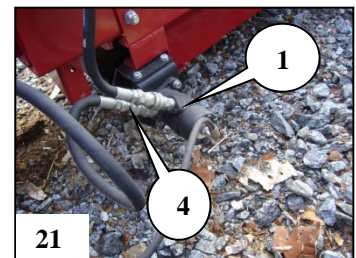
3.6 Swinging the discharge conveyor and tightening its belt (20)

1. The machine is equipped with hydraulic swing of the discharge conveyor. This feature allow the discharge conveyor to be swung into three different positions. Lift up the catch (1) and turn the conveyor either to the left or to the right. The conveyor locks into position as soon as the hook is pressed down.
2. The tightness of the discharge conveyor belt can be adjusted by means of the mechanism (2) at the top end of the conveyor. Remember to check after the adjustment, that the belt is still running at the centre of the roller.



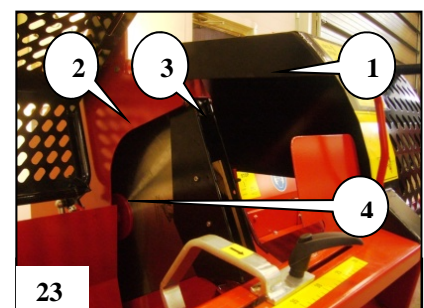
3.7 Discharge conveyor hydraulics (21,22)


1. The hydraulic motor of the conveyor (1) is equipped with a pressure relief valve (2). The valve protects the hydraulic motor in case the discharge conveyor belt stops as a result of overloading or some mechanical obstruction.
2. The valve is ready adjusted at the factory, and the operator needs not readjust it. The valve is not used for adjusting the conveyor belt speed!
3. If you adjust the pressure of the valve to the lower setting, the conveyor may stop. If you increase the pressure, the hydraulic motor may become damaged. It is best to adjust the valve using a pressure gauge as an aid. Undo the lock nut for the valve (3) and adjust the operating pressure to 80 bars by turning the hexagon socket screw and lock the nut.
4. The hoses of the hydraulic motor are fitted with quick-connectors (4). Check, that the connectors do not leak oil.
5. **Do not operate the machine, if the hoses of the hydraulic motor are not in place.**



3.8 Replacing the crosscut blade (23,24)

1. First remove the cover from the in-feed side (1) as well as the overhead cover of the crosscut blade (2), then open the lock nut for the moving blade cover (3).
2. Undo the blade nut (4) using a wrench and the locking tool behind the blade cover.
3. Remove the used blade and put the new one in place. Make sure that the position of the blade with respect to the blade shaft is correct.
4. Lock the blade nut (4) and put the overhead cover (2) for the crosscut blade and the cover (1) on the in-feed side back in place.



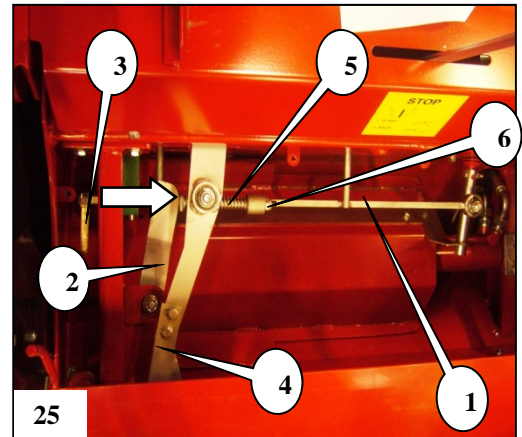
 **NOTE ! The blade nut has a left-handed thread!**

4. The splitting mechanism and how to adjust it

The splitting mechanism has been adjusted at the factory but, depending on the wearing of certain parts, readjustment may be necessary after the machine has been in use for some time.

4.1 Splitting mechanism (25,26)

1. Intermediate rod for the splitting mechanism
2. Launch bar
3. Log stop
4. Locking lever of the in-feed deck
5. Spring-loaded limiter
6. Adjustment nut

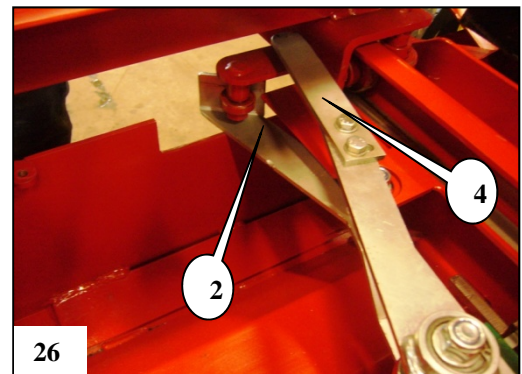


4.2 Adjusting the splitting mechanism (25,26)



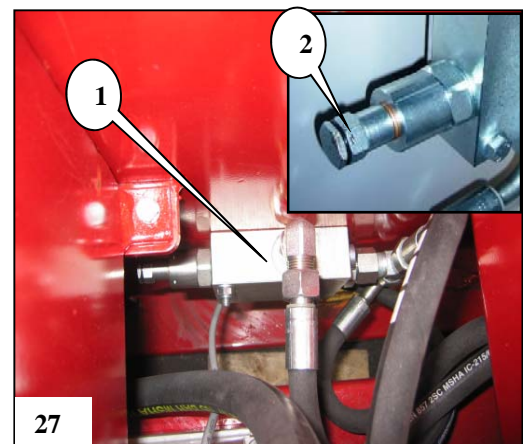
This operation requires special caution!

1. Remove the cover plates from under the in-feed deck (2 pcs.).
2. Check that there are no people inside the danger zone and start the firewood processor (tractor or electricity).
3. Check whether the launch lever (2) transmits a command to the intermediate rod (1) once the in-feed deck is pulled to the rear.
4. If this is not the case, set the adjustment nut (6) for the spring-loaded limiter so that the launch lever (2) will start transmitting a command to the intermediate rod (1)(see arrow).
5. Check that the spring-loaded limiter (5) can move freely.
6. Fix the cover plates back to under the in-feed deck (2 pcs.).



4.3 Automatic high-speed valve (27)

1. The automatic high-speed valve (1) is a standard piece of equipment in the 5.6-ton models, and is ready-adjusted at the factory.
2. Thanks to the acceleration valve, the splitting movement always starts and proceeds at maximum speed. If greater force is required for splitting a knotty or large log, the splitting movement will slow down temporarily.
3. As soon as the log starts to split, full speed will be resumed. The log splits and the cylinder will return at its maximum speed.
4. If the cylinder does not automatically switch to the high-force or high-speed mode, it must be adjusted. Open the protective cover (2) for the valve cartridge. Under the cover there is a hexagon socket screw. To adjust, turn the screw either clockwise (high-speed mode) or counter-clockwise (high-force mode) one round at a time.
5. If the cylinder, even after it has been adjusted, does not change speed at the splitting moment, contact the factory for additional information.

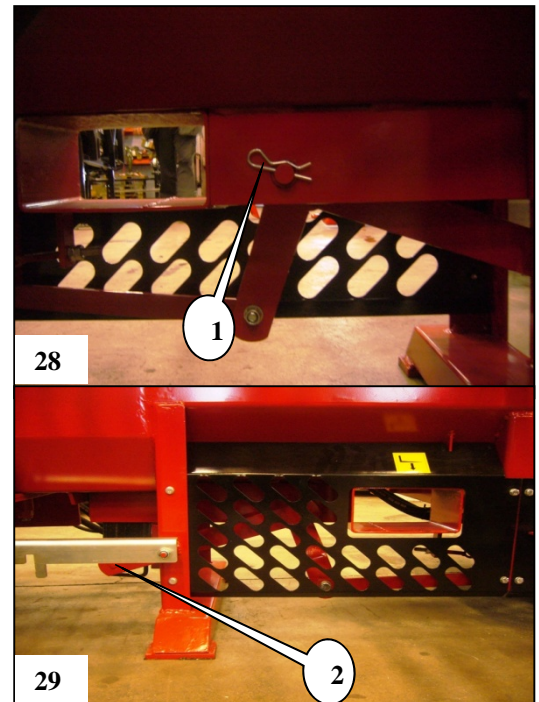


4.4 replacing the splitting wedge (28.29)

Remove the locking cotter (1) and pull the locking pin (2) at the lower part of the splitting wedge out of its loop. Now you can lift the splitting wedge out from the splitting chute side and put a new wedge in place.

The Japa 700 can also be equipped with a wedge splitting in 5 or 6 ways (option).

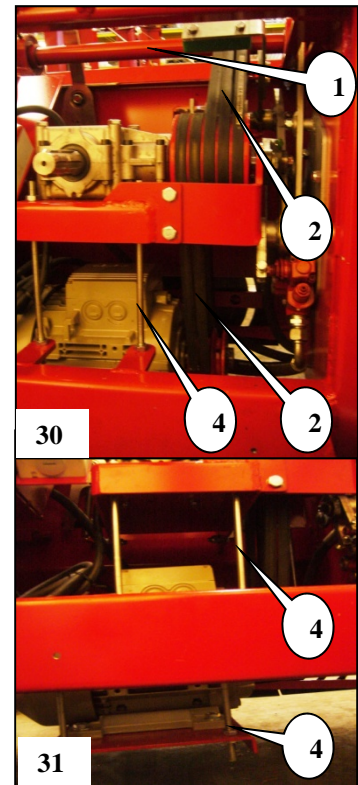
SPARE PART NUMBER OF A 5-WAY WEDGE 94202
SPARE PART NUMBER OF A 6-WAY WEDGE 94197



5. Changing and tightening the V-belts

5.1 Overview (30)

1. In tractor-powered models the blade shaft (1) is rotated through three [3] V-belts (2).
2. In tractor- and electrically-powered models, the power is transmitted from the electric motor to the angular gear through two [2] V-belts.
3. The operation of the emergency stop must always be checked in connection with replacement of the firewood processor's V-belts.



5.2 Tightening (31)

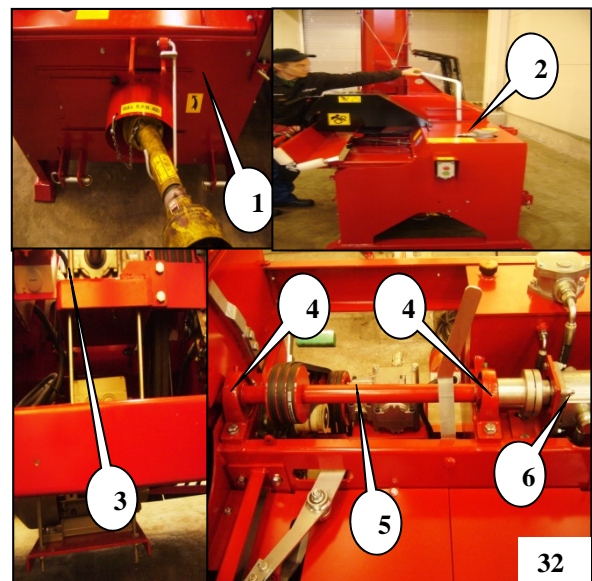


The V-belts must be tightened after the first use, and after that, the tightness shall be checked every 50 hours.

1. The V-belts are tightened by means of the threaded bars (4). The belts tighten up when the nuts are wrenched inward.

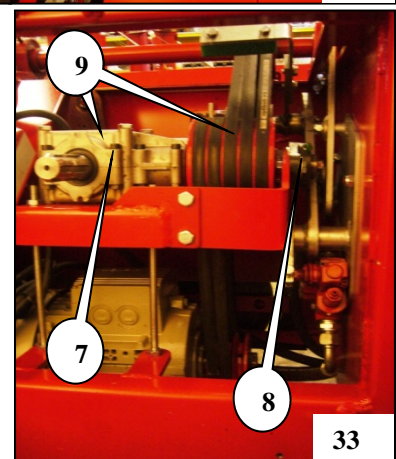
5.3 Replacing the V-belts (32)

1. Remove the rear cover plate (1) and the upper cover (2) of the machine.
2. Slacken the V-belts by undoing the tightening nuts (3).
3. Remove the blade shaft's bearings (4) from the machine frame so that you can remove the blade-shaft (5) and the pump (6).
4. Replace the V-belts (3 pieces) and tighten them (3).
5. Visually inspect that the pump is parallel to the blade shaft and reassemble in reverse order (3-1).



5.4 Replacing the V-belts (32)

6. Remove the rear cover plate (1) and the upper cover (2) of the machine.
7. Slacken the V-belts by undoing the tightening nuts.
8. Remove the blade shaft's bearings (4) from the machine frame so that you can remove the blade-shaft (5) and the pump (6).
9. Remove the angular gear (7).
10. Remove the locking screw (8) for the journal bearing of the V-belt pulley.
11. Remove by pulling the angular gear with its V-belt pulley (9).
12. Replace the V-belts (3 pieces) and tighten them (3).
13. Visually inspect that the pump is parallel to the blade shaft and reassemble in the reverse order (3-1).



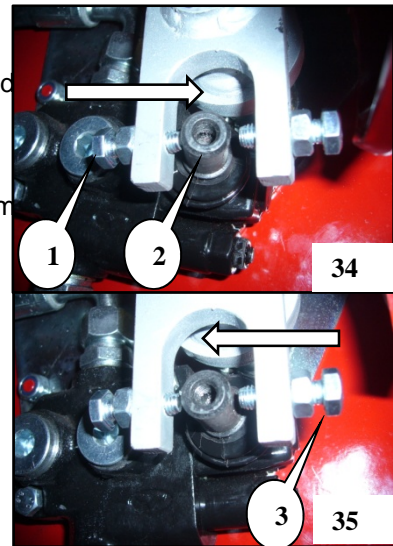
5.5 Adjusting the emergency stop (34,35)

If the blade does not stop in 10 seconds, the emergency stop must be adjusted.



This operation requires special caution!

1. Remove the rear cover plate (1) and the upper cover (2) of the motor.
2. Start the firewood processor and switch on the emergency stop as soon as the blade reaches the operating speed.
3. If the blade continues to rotate slowly, try to stop the shaft by pressing the mechanical friction brake (using, for example, a hammer shaft of rubber etc.) Do not touch the shaft with your hands.
4. If the blade stops, switch off the firewood processor and slacken the V-belts (point 5.2). If the blade does not stop at all, continue to point 5.
5. Start the firewood processor and switch on the emergency stop anew, as instructed in point 2.
6. If the blade still continues to rotate, check the adjustment of the brake valve. Switch on the emergency stop and tighten the screw (1) so that it will push the valve (2) to its extreme position. Loosen a half round and lock. After this, switch the stop off and on, and after that, check the adjustment manually.
7. Switch off the emergency stop, and check that the screw (3) pushes the valve (2) back to its centre-position. If the screw (3) does not centre the valve, the hydraulic oil may heat up greatly during the operation.
8. Start the firewood processor and switch on the emergency stop anew. If the blade still does not stop, contact your dealer/service workshop. The unit must not be used, if the emergency stop is not operational!



5.6 Spare parts

Code	Item	Pc.
97461	V-belt of the blade-shaft	3
97462	V-belt of the electric motor (TRE)	2
96047	Hard-metal blade Ø700	1
96089	Claw-clutch	1

6. Maintenance schedule

Various maintenance plans have been drawn up for the Japa firewood processors to ensure the long service life of the machines. The owner of the machine is responsible for the maintenance. Carelessness or negligence of maintenance may void the guarantee. The services are scheduled as follows:

- 10 h Daily service, must be performed always before using the machine.
- 50 h Weekly service, at least once a year.
- 200 h Monthly service, at least every other year.

If the machine is used less than 50 hours per year, the yearly service shall substitute the 50 hour service, and the service every other year shall substitute the 200 hour service.

Service object	Task	Service interval 10 h	Service interval 50 h	Service interval 200 h	Material /Item
Angular gear/oil	check change		x	x	SAE 80W-90
Hydraulic oil normal conditions	check change		x	x	ISO 46 S / 20 I
Oil filter	change			x	94134 / 1 pc.
Bearings to be greased (6.2)	lubrication		x		Ball-bearing lubricant
Splitting valve	lubrication		x		Lubrication oil
splitting wedge	Sharpening		x		As required
Splitting mechanism (6.3)	Cleaning		x		As required
Crosscut saw-blade	Check Sharpening	x		x	As required 96047 / 1 pc.
V-belts	Check tightening	x		x	As required 97461 / 3 pc. 97462 / 2 pcs. (TRE)
Electric equipment	Check	x			
Operation of the machine:	Check	x			
Safety devices	Check	x			

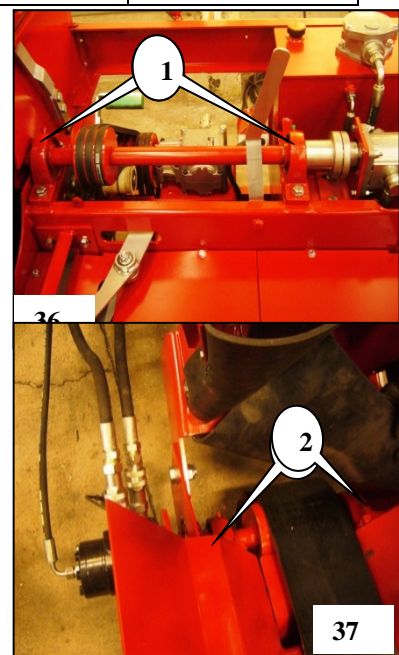
6.1 First service

To ensure long service life of the machine, we recommend that the hydraulic oil and filter be changed in connection with the service every 50 hours. This ensures that all the impurities will be removed from the system.

6.2 Lubrication points (36.37)

The machine has four bearings, which require lubrication at regular intervals.

The bearings on the blade shaft (1) and the bearings (2) at the lower end of the discharge conveyor.



6.3 Cleaning the splitting mechanism

To ensure the functionality of the moving parts, the unit must be cleaned also on the inside. Remove the protective plates from under the in-feed deck's rails, and clean the chute and guides of the ram. Always perform this work with the machine switched off, and the power source disengaged.

6.4 Storing

Execute the daily service on the machine before putting it into storage. Apply a thin film of oil on the crosscut blade (e.g. oil spray) to prevent corrosion. Change the oil before you start using the machine anew, as water may condense into the oil when in storage.

Keep the firewood processor covered against rain.

6.5 Service manual

Fill the service manual in connection with every 200 h service.

DATE	HYDR. OIL	HYDR. FILTER	GEAR OIL	V- BELTS	OTHER

7. Fault finding

Disturbance	Cause	Remedy
Splitting is not operational.	<ol style="list-style-type: none"> 1. Protective net for splitting chute is open. 2. No oil or too little oil. 4. Debris inside the launch system. 5. The oil is too cold. 6. A hydraulic hose has burst or is leaking. 7. The launch system does not lock up/move. 	<ol style="list-style-type: none"> 1. Close the protective net. 2. Stop the machine immediately and top up the oil. 4. Clean up the launch system. 5. Allow the oil to circulate at free-flow for a few minutes. 6. Replace the hose. 7. Always clean the machine when you stop working.
Protective cover for the splitting chute cannot be opened.	<ol style="list-style-type: none"> 1. The in-feed deck is not pulled to its rear position. 	<ol style="list-style-type: none"> 1. Pull the in-feed deck to its rear position.
The splitting movement does not stop, when the protective net is opened.	<ol style="list-style-type: none"> 1. The setting of the locking device has moved out of position or the locking device is broken. 	<ol style="list-style-type: none"> 1. Adjust the locking device or replace the faulty part.
Slow or powerless splitting movement.	<ol style="list-style-type: none"> 1. The oil is too cold. 2. No oil or too little oil. 3. V-belts are slack. 	<ol style="list-style-type: none"> 1. Allow the oil to circulate at free-flow for a few minutes. 2. Top up oil. 3. Tighten the V-belts.
The log does not split.	<ol style="list-style-type: none"> 1. Incorrect position of the wedge. 2. A large branch at the splitting point. 3. Too large log. 4. The splitting force is not sufficient. 	<ol style="list-style-type: none"> 1. Adjust the height of the wedge. 2. Reverse the ram, open the splitting cover, turn the log, and close the splitting cover. 3. Maximum splitting diameter 30 cm. 4. Adjusting the high-speed valve (5.6 ton machines)
The crosscut saw cuts poorly.	<ol style="list-style-type: none"> 1. The blade is dull. 2. Pieces have broken off the blade. 	<ol style="list-style-type: none"> 1. Sharpen or replace the chain. 2. Replace the blade
The in-feed deck does not move.	<ol style="list-style-type: none"> 1. The splitting cover open. 	<ol style="list-style-type: none"> 1. Close the splitting cover.
The conveyor belt is running at the side.	<ol style="list-style-type: none"> 1. The setting has moved out of position. 	<ol style="list-style-type: none"> 1. Adjust the return roller at the end of the conveyor. Test run after the adjustment.
The log gets stuck in the splitting wedge.	<ol style="list-style-type: none"> 1. Incorrect length of splitting stroke. 2. Blunt splitting wedge. 	<ol style="list-style-type: none"> 1. Check the stroke length of the pusher. 2. Sharpen the saw-blade.
The log clashes with the conveyor belt.	<ol style="list-style-type: none"> 1. The conveyor stands too upright. 	<ol style="list-style-type: none"> 1. Lower the conveyor a little.
The electric motor does not start.	<ol style="list-style-type: none"> 1. The temperature switch has tripped. 2. Makes loud noise, but does not start. 	<ol style="list-style-type: none"> 1. Wait for 1–2 minutes; then the temperature switch resets automatically. 2. A phase is missing.
The electric motor stops easily and the thermo-relay trips.	<ol style="list-style-type: none"> 1. Extension cord too long. 2. Too small fuses. 	<ol style="list-style-type: none"> 1. Do not use longer extension cord than necessary. 2. Call an electrician.
The electric motor rotates in the wrong direction.	<ol style="list-style-type: none"> 1. Wrong direction of rotation caused by socket outlet. 	<ol style="list-style-type: none"> 1. Call an electrician.
The oil gets too warm (over 80°C).	<ol style="list-style-type: none"> 1. Too high speed. 2. Too little oil. 3. The cylinder hits the bottom but the pressure is not relieved, so the oil circulates via the relief valve. 4. Incorrectly adjusted brake valve. 5. flow-through in the pump. 	<ol style="list-style-type: none"> 1. The highest permitted rotational speed is 400 r.p.m 2. Top up oil. 3. Adjust the cylinder stroke and swing. 4. Adjust the brake valve. 5. Check the oil pump.