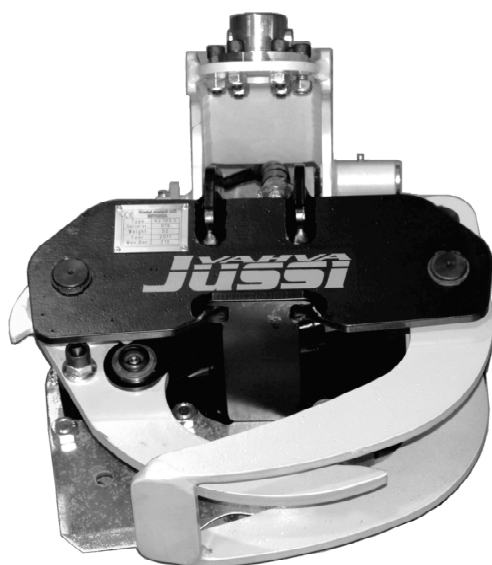


ENERGY WOOD HEAD VJ 105E

User- and service manual
2011



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KREISI metall

Declaration of conformity

Kreisi Metall OÜ
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guarantee that energy wood grapple VJ105E

is in the conformity with the standards and demands of machinery directive (directive 98/37/EY) and include changes made by national implementing legislation provisions.

Ragnar Tiiter
Product development

USER MANUAL FOR ENERGY WOOD HEAD VJ 105E

This user manual includes energy wood head VJ 105E (further on VJ 105E).

READ SAFETY INSTRUCTIONS CAREFULLY BEFORE STARTING TO USE VJ 105E.

Even for an experienced machine operator it is strongly suggested to read the contents of this manual.

Easy maintenance and check ups you can make yourself.

If you are not familiar with the machines construction or activity, ask from manufacturer or distributor before you start to operate the machine.

We keep the right to change control values and equipment also maintenance- and repair instructions without prior notification.

Given measurements, weights, performance values etc. are normative and can vary depending of the equipment.

SAFETY

SAFETY REGULATIONS

- In this section we give directions that you have to follow when working with VJ 105E. In addition to directions given in this manual the operator has to follow other possible precautions and safety measures when working or attaching the VJ 105E .
- Carefully refer to machines construction, equipment, maintenance- and repair instructions before starting to work.
- If instructions given in this manual are in cross dispute with local regulations, the machine operator has to follow regional regulations.
- Only persons experienced may operate and service in the use of VJ 105E. Employers obligation is to take care that operator has appropriate skills and required hardware.
- VJ 105E is meant for cutting, felling and loading trees. All other use of VJ 105E is strictly prohibited.
- Staying on top or between the claws of VJ 105E is **STRICTLY PROHIBITED** while engine is working. When starting the machine VJ 105E can close or open, and tilt up or down causing injury to persons standing close.
- Follow also machines and loader manufacturers given safety instructions.
- If VJ 105E operator notices troubleshooting, damage or other wear of machinery, has to immediately inform to foreman or machines owner, who must without delay do necessary repairs
- Set the seat, control devices, armrests etc. as comfortable as possible. Keep the windows clean for a good visibility.
- The machine is often operated alone. Foreman has to know whereabouts and work hours, if it should be necessary to find you.
- Check every day the condition of hydraulic hoses and machine parts for wear damage.

SAFETY

SAFETY REGULATIONS

Ending work with machine

When ending work with machine set it on level ground, straighten cranes main- and second beam and put the grapple VJ 105E to fixed position on trailer or on the ground. Put the hand brake on, stop the engine and switch off the power.

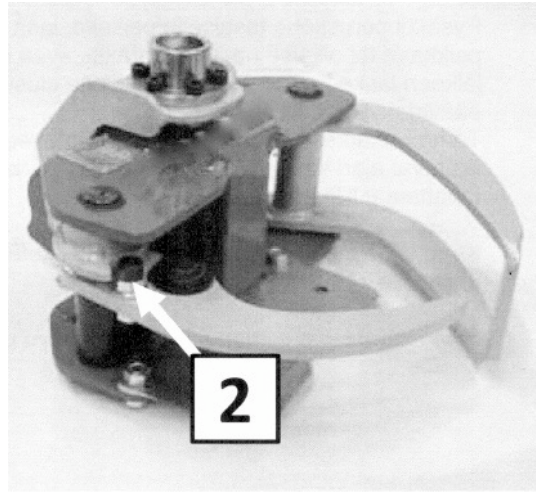
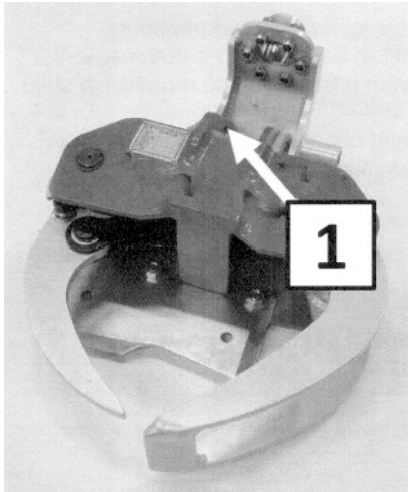
This is important because cranes hydraulic distributor sections are not totally pressure proof but in time let back in oil from cylinders into oil tank that cause the crane to move.

When starting to work with machine be convinced that nobody is near the VJ 105E or the reach of crane.

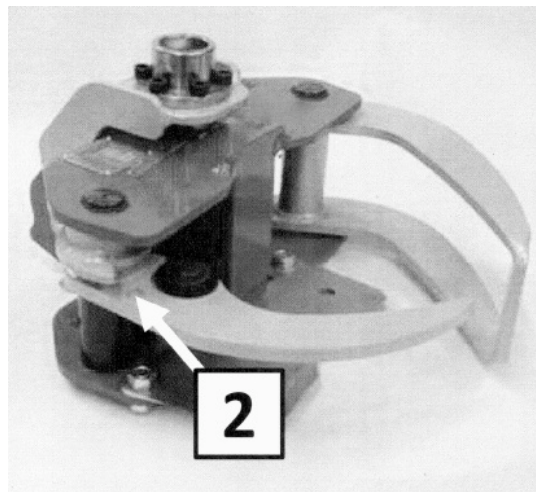
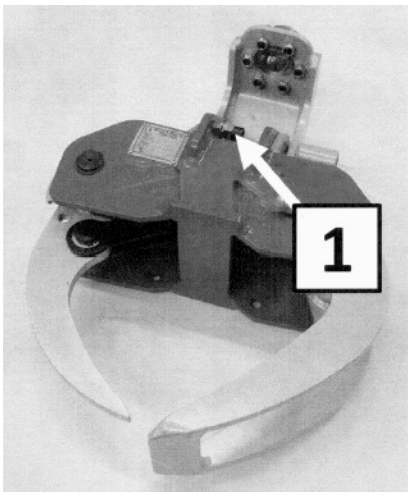
Properly equipped first aid bag has to be reachable at all times.

Energy head VJ 105E tilt functions

The tilt option is chosen when attaching the bolt to position nr.2 shown on the picture below. With VJ 105E is included one spare bolt with nut. While using the grapple only for loading and unloading the bolt is fixed to frame position 1. See instruction below:



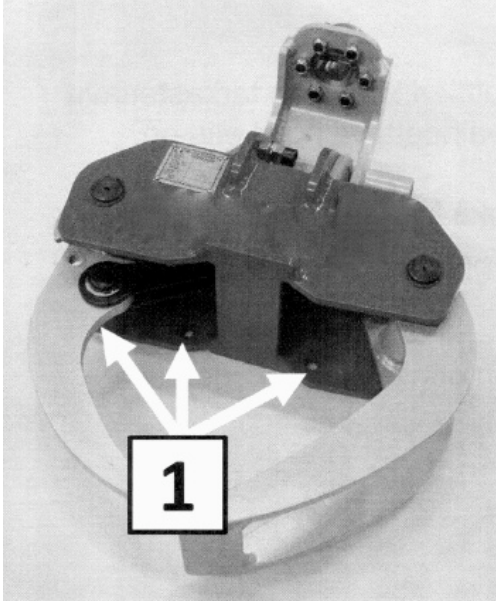
For the tilt option bolt is put from position 1 to position 2. In this position the grapple will tilt up when jaws are opened.



For loading and unloading the blade is removed (see also next page) and bolt is moved from position 2. to position 1. In this way the grapple does not tilt up and is fixed in loading position.

ATTENTION! The bolt can not be simultaneously in position 1 and position 2. -> **RESULT IS BREAKAGE!**

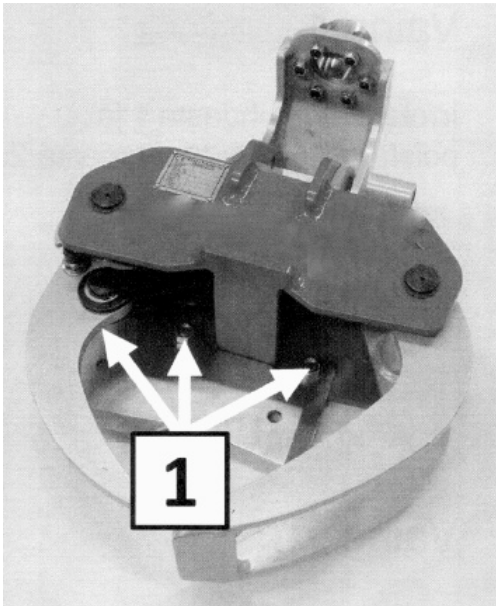
Removing and attaching the cutting blade



Removing the blade

For the use of loading and unloading with grapple the three M16 bolts are opened in position 1.

Remember to put the bolt from jaws to the frame of the grapple (see previous page).



Attaching the blade

For the use of cutting down trees the blade is fixed with three M16 bolts in position 1. Bolts are inserted from below and nuts are fixed on top of the blade. In that way the bolts threads are not damaged when hitting the ground.

The position of blade is ON TOP of the frame.

Remember to put the bolt from frame to jaw of the grapple (see previous page).

**When changing the blade uncarefully the blade can inflict serious incision injuries to hands and body (DANGER TO LIFE!).
WORK CAREFULLY AND PEACEFULLY**

Read the manual carefully before starting to work!

Pay special attention to safety when working with the blade of the grapple!

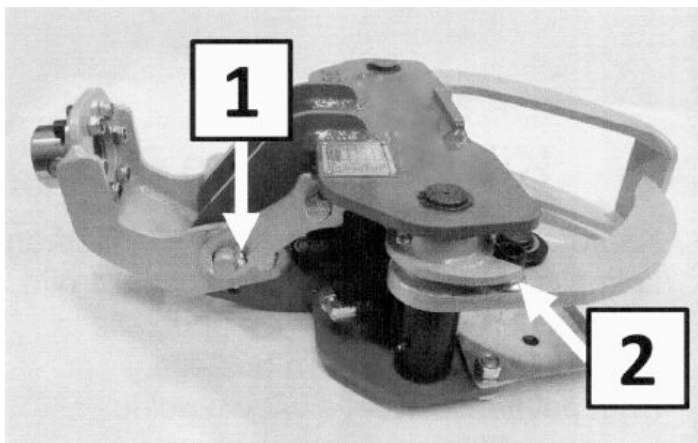
Chain link replacement

Grapples swing linkage condition and tightness of bolts has to be checked every day. Chain link is a wear part, which has to be replaced when it has worn out.

In the VJ 105E set is included one spare chain link, bolts and nuts.

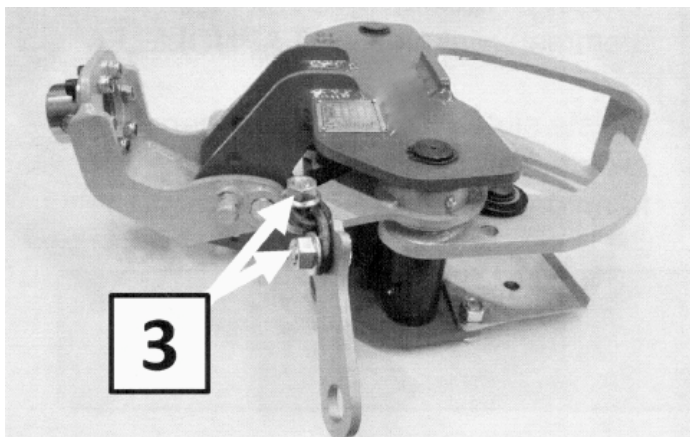
Use only original spare parts to ensure proper functioning and lifetime.

Put the grapple on the ground according to picture, jaws set parallel.



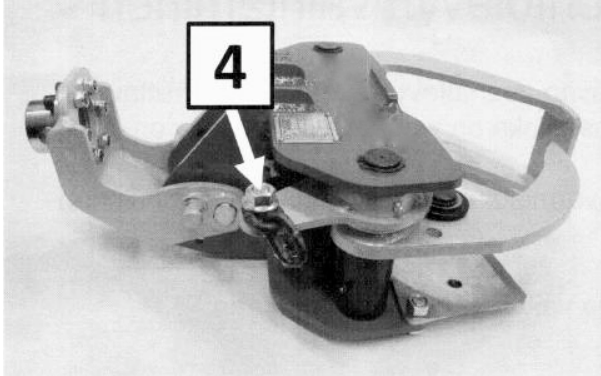
Step 1

Take out the bolt from position 1 and remove bolt from position 2.



Step 2

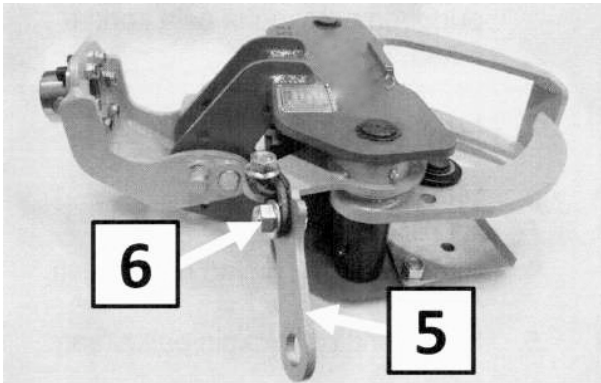
Turn the chain according to picture and remove bolts from position 3.



Step 3

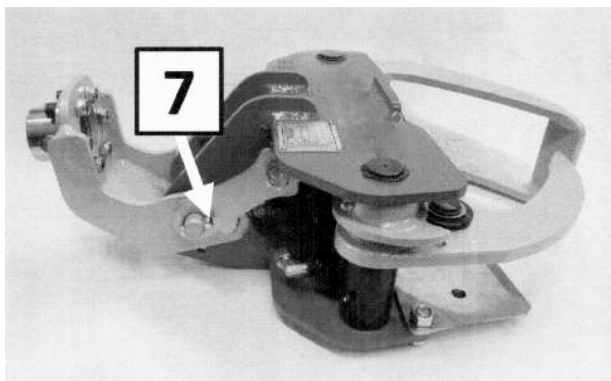
Replace the new chain according to picture. Insert the bolt, tighten the flanged nut nr.4 ON TOP OF THE CHAIN.

Put some grease to the joint point of the chain.



Step 4

Put the link nr5 according to picture to the RIGHT side so that both chain links are like shown on the picture. Put the bolt in place with the flanged nut nr.6 ON TOP OF THE CHAIN.



Step 5

Turn the link into position and fasten the bolt nr7.

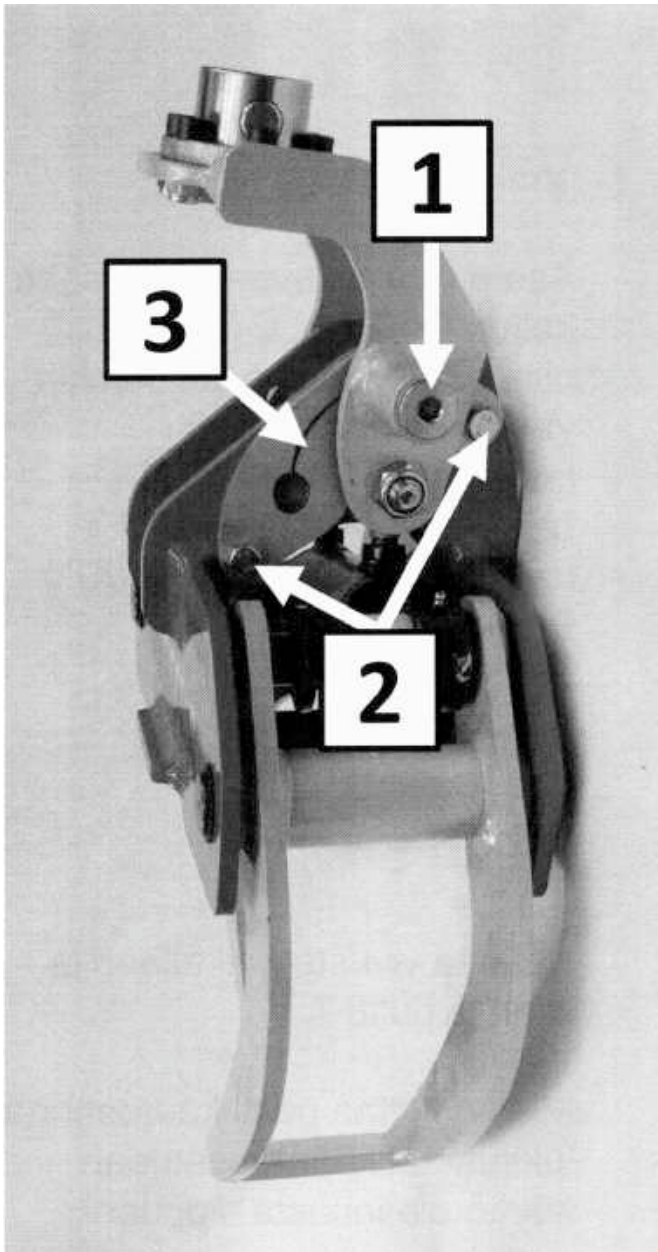
Remember to insert the tilt bolt according to operation (cutting or loading position)!

Grapple friction plate replacement instruction

Grapples up – and down positioning friction plate condition have to be checked daily. Friction plate is a wear part that has to be replaced when it has worn out.

Use only original spare parts to ensure proper functioning and lifetime.

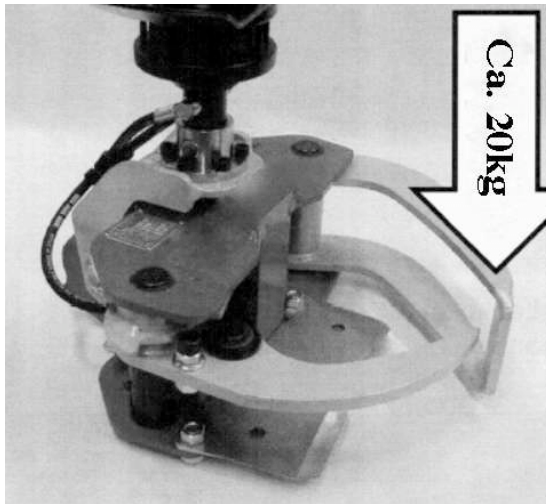
Set the grapple in loading position and change the plate according to instructions:



1. Remove stopper nut nr. 1 to relieve the force coming from sprig.
2. Remove bolts from positions nr 2.
3. Change the friction plate nr 3.
4. Close the bolts in positions nr 2.
5. Put the stopper nut nr.1 back to position.

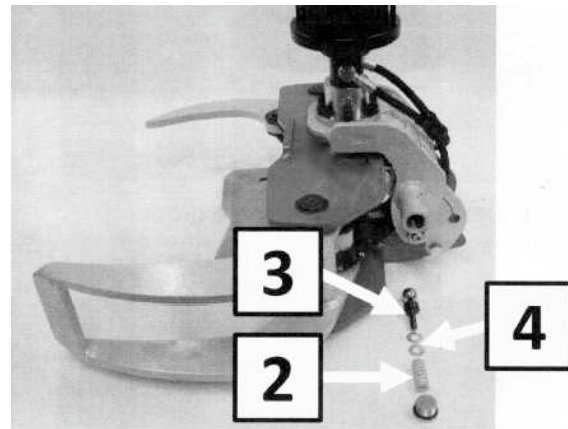
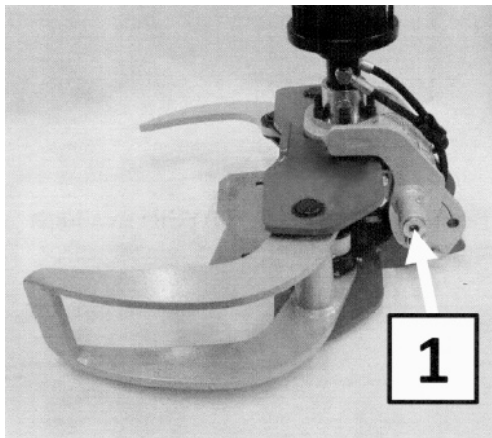
Adjusting the tilt force

Grapples tilt fixing brake force will vary after a while caused from every daily work with VJ 105E. In this way you can adjust the force holding the grapple up. The delivery package contains one adjusting washer.



If the grapple and jaws are positioned as on the picture, the necessary force measured to tilt the grapple down is ca. 20kg from the tip of the jaws.

If the tilt is triggered by force much less than 20kg, set the grapple on firm ground and adjust the spring force according to following instructions:



Open the stopper nut (1), take spring (2) and washer rod (3) off from grapple.

Behind the spring (2) on the ball pusher (3) are two washers. Add one washer and assemble the parts.

When you need to adjust the tilt next time you have to change the friction plate (see on the previous page) and spring (2). Then add two washers (4) as before.

**ATTENTION! Do not add additional washer (more than 3pcs together)
-> RESULT IS BREAKAGE!**

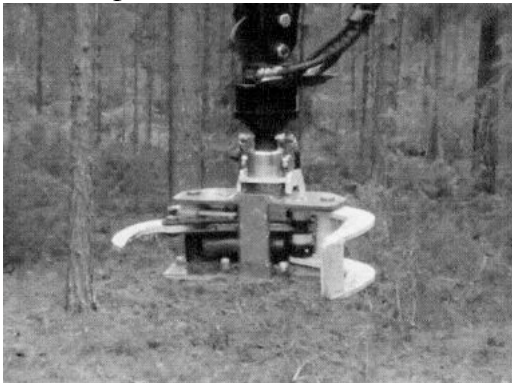
VJ 105E tree felling operations



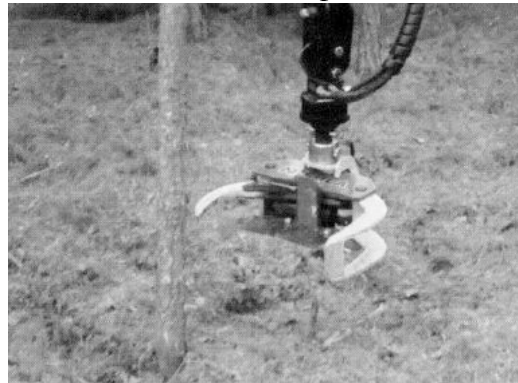
1. Jaws fully closed the grapple is in **DOWN** position.



2. When jaws are opening the grapple starts to move into **UP** position.



3. Jaws fully opened the grapple is in cutting position.



4. Grapple is brought close to the tree in **FULLY** opened position.



5. The jaws are kept open until the tree is positioned as seen in the picture.



6. The cut is made by closing the jaws.



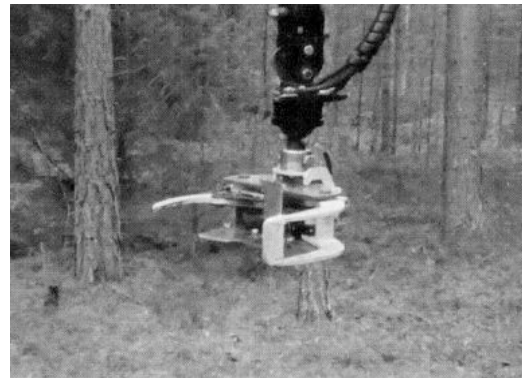
7. After the cut is made the grapple starts tilt down.



8. The cut tree is put to a suitable place or straight on to the trailer.



9. The tree is freed by opening the jaws.



10. When the jaws are fully opened the grapple is in cutting position again.

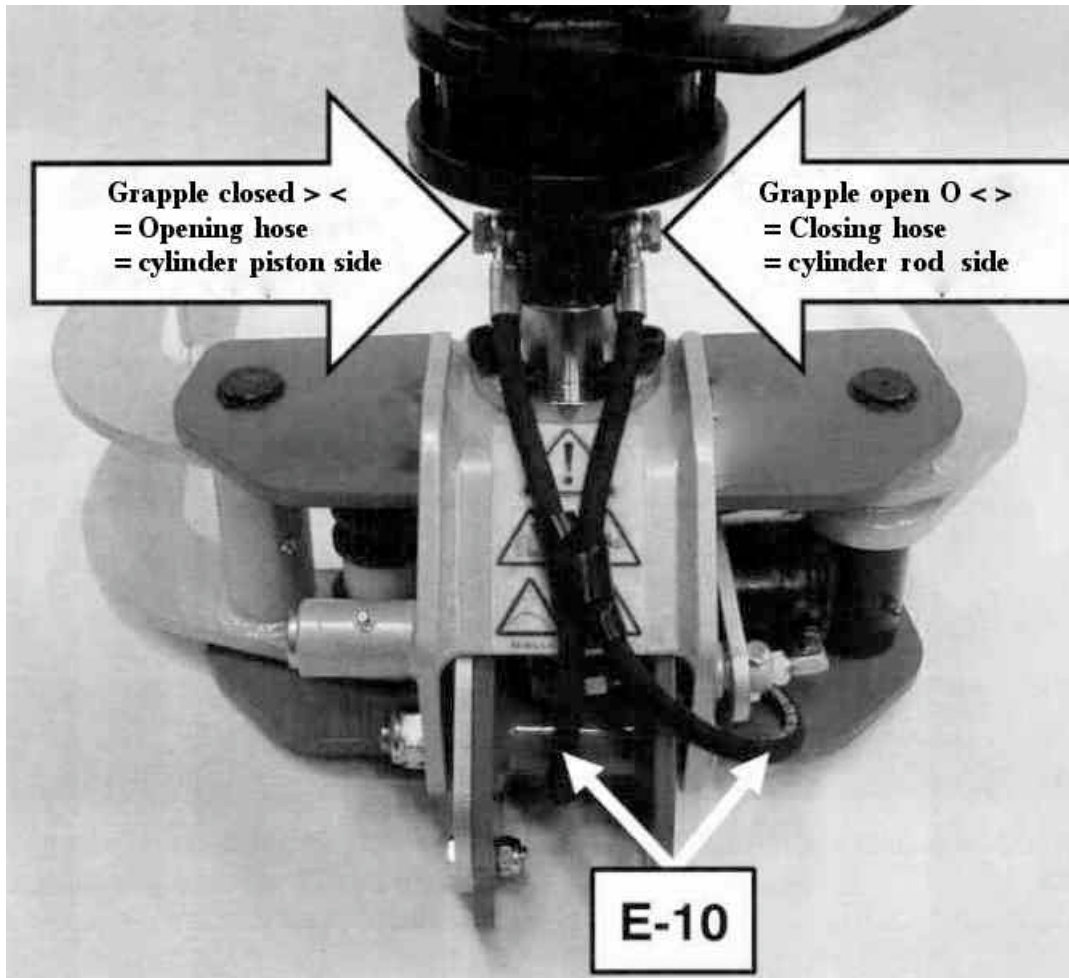
Be convinced of trees falling trajectory before cutting operation!

Check the state of cutting blade every day and sharpen it if necessary. Keeping the cutting blade in good condition and sharp influences essentially the cutting performance. The blade has to be renewed or changed after a while to ensure smooth working operations.

Maksimum tree cutting diameter is 80-120mm. Avoid cutting oversized trees, the result can be damaged cutting blade.

VJ 105E grapples hoses

Hoses coming from rotator to grapple are connected according to picture and wrapped from the middle with protective plastic spiral.



With adapter sets AD395 (Ø39,5mm) and AD495 (Ø49,5mm) are delivered also hoses for connecting E-10 parts.

Code	Name	Size	Weave.	Length mm	Heads and direction	Nut	Pcs.
E-10	Hose	1/4"	2	500	JIC 9/16 straight – 1/4" banjo	06	2

Length - from center of hose head to end of hose head

MAINTENANCE

Make every daily check ups and greasing.

When special tools or experience is required during set up and repairs please contact the dealer or manufacturer.

Operator or owner of the grapple has to nonetheless do maintenance. Necessary maintenances are tightening of mm. bolts and nuts.

If for grapple VJ 105E is used NO ORIGINAL spare parts the warranty is void.

Oil or other dangerous liquids are not prohibited to throw away into nature but have to be sent to hazardous materials collection point.

Take care of your environment in all activities.

MAINTENANCE AND INSPECTIONS

	Object	Every 10h
1	Grapples greasing	G
2	Cutting blades sharpness	I
3	Cutting blades attachments bolts tightness	I
4	Chain link wear and connection bolts tension	I
5	Friction plate wear	I

G = Greasing

I = Inspection

MAINTENANCE

SAFETY DURING MAINTAINANCE- AND REPAIR WORK

During maintenance and repair work with caution and moderation. Avoid working alone.

Only personnel who are familiar with user manual and have enough experience to operate VJ 105E can be maintenance operator.

Read safety instructions before starting to work.

Stop the engine, close power switch and remove ejection key from its socket for the time of service if not mentioned otherwise.

Use necessary safety equipment like gloves, glasses, ear plugs, helmet and hard top boots.

DO NOT EVER SHARPEN THE CUTTING BLADE WHILE ENGINE IS WORKING!

Always use gloves when working with the cutting blade.

If you are not familiar with the grapples operations or construction please ask the dealer or manufacturer for directions before starting to work.

Do not ever do any service near the blade or jaws of the grapple before you have turned of the machine -> LIFE THREATENING

If you are doing mainteanance to the grapple be sure that nobody starts the machine. (If machine is started, the jaws of the grapple can start moving depending of the position of distributor) -> LIFE THREATENING

MAINTENANCE

SAFETY DURING MAINTAINANCE- AND REPAIR WORK

Remove the oil pressure from system before starting to repair or maintenance the grapple.

Cleaning and lubricating is prohibited when engine is working.

Open all the connections very carefully.

To prevent damaging the grapple during maintenance be sure that you have the right service instructions, tools, etc.

Do not wear jewelry, chains, loose belts or other items that can get stuck while working.

Lock the grapple in loading position if maintenance is made in loading position.

DO NOT EVER WELD THE GRAPPLE IF YOU DO NOT HAVE AN APPROVED FIRE EXTINGUISHER CLOSE BY.

DANGER ZONE

Grapples danger zone is 30m. In this way the danger of falling trees is minimized.

It is not allowed to be near grapple if the engine is working. In this way it is avoided damages from unintentional motor ignition.

The operator is responsible for not inflicting any damages to bystanders.

Before starting to work be always sure that nobody is in the area. Stop working immediately if someone appears in danger zone.

When cutting down trees be aware of wind direction and trees growing angle.

Working near power lines is always dangerous. Remember all the safety instructions and regulations.

SERVICE- AND USE INSTRUCTIONS

SERVICE AND PRESSURE MEASURES

Machines hydraulic services must be made according to instructions given. Usual malfunctions are caused by impurity in hydraulic system. Failures occur as machine malfunctions or parts have worn out. Failures can be prevented when you keep purity during service- and repair work, change filters and oil in time and keep the oil tank clean. New hoses must be cleaned before installment.

If hydraulic problems occur first of all you should check the oil level in oil tank and machines pressure given by manufacturer. Pressure drop in system can occur when oil leakage is detected (worn out gaskets in system, broken hoses, main pressure valve malfunction etc.). The main oil pump pressure should be measured at first.

Recommended operating pressure 170-190, max. pressure 210bar!

WHEN WORKING WITH MACHINE

Never put your hands on the cutting blade or grapples jaws when machine is working.

When you leave the machine set the grapple on firm ground or on the suitable transport position on the trailer.

Never open hoses or other hydraulic parts that can be pressurized.

Grapple can influence the machines stability. It is influenced also by the angle of landscape, type of ground, position of load, cranes position etc.

If the operation of tree cutting is in progress and the tree does not fall over, the machine has to be brought to a safe position. The tree can fall on the machine and cause serious damage. Never leave an almost felled down tree into the forest. If the grapple VJ 105E is in working order cut down the tree.

Be sure that your clothes do not get attached to the distributors levers when you lift or connect/disconnect the distributor.

Keep the floor in the cabin clean and free of items.

In the case of fire use fire extinguisher approved by your district.

WARRANTY

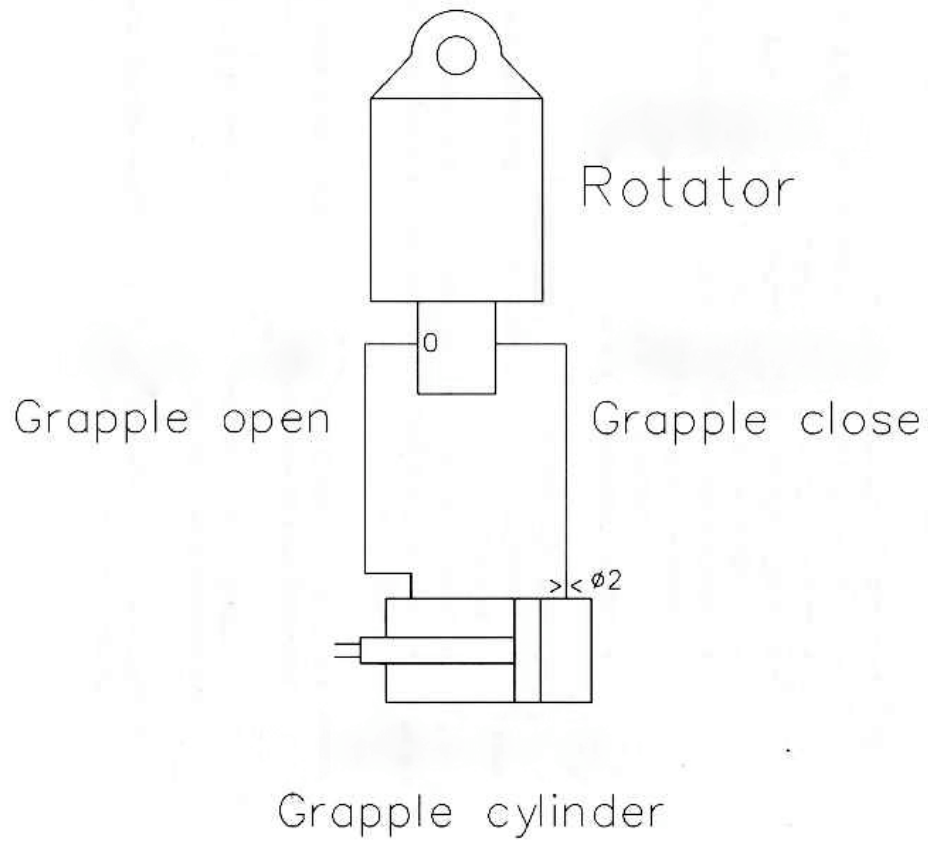
..... grants to the grapple VJ 105E
the following warranty.

1. Warranty is valid for 6 months or 1000 work hours. Warranty is void after time or both restrictions have fulfilled. If the owner of warranty item changes the warranty is not valid unless agreed otherwise.
2. Warranty includes: raw materials and production failures, replacement of defective parts, properly repaired or new part is sent to you.
3. Warranty does not cover:
 - change of usual ware parts like gaskets , hoses, gliders, cutting blade etc.
 - damages caused by wrongful use of machinery
 - damages caused by wrongful maintenance of machinery
 - damages caused by accidents during work
 - indirect loss of earnings caused by standing work hours
 - work- and travel expenses
 - transportation and postal expenses
4. Warranty is valid if:
 - Client immediately contacts the dealer or manufacturer
 - Client explains the reason of damage
 - Client send immediately the broken part to dealer or manufacturer for inspection

The return of the faulty part has to be done within 2 weeks from receiving a new spare part. When acted otherwise the part is invoiced to the client.

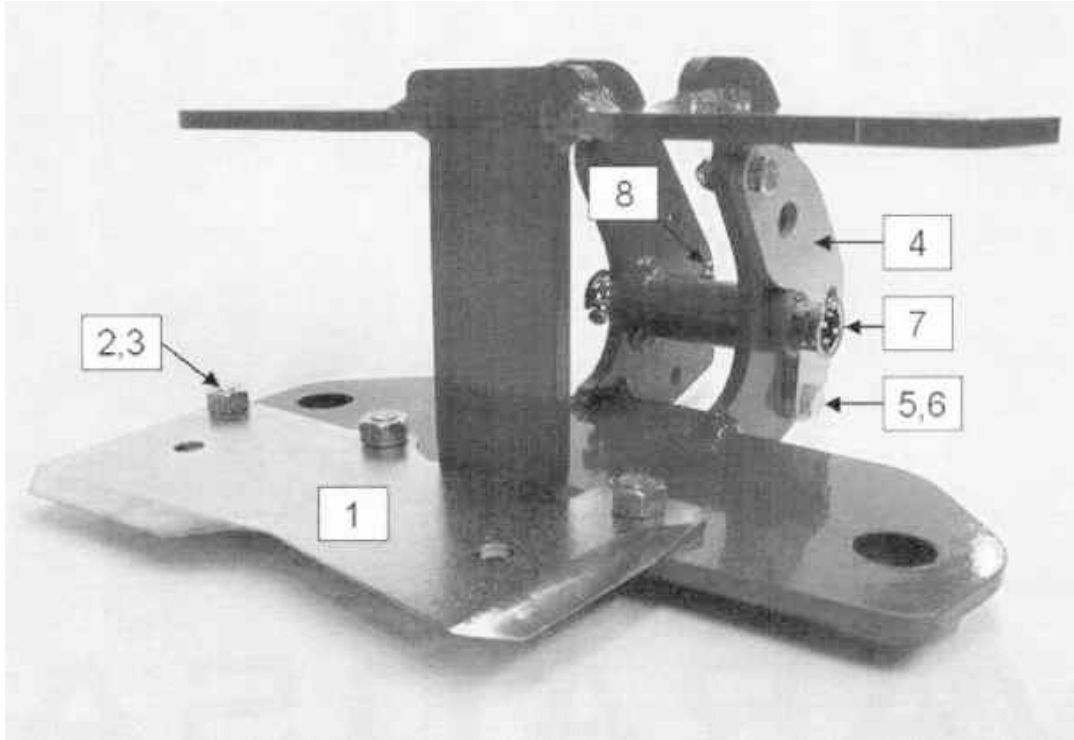
5. Parts replaced or repaired during the time of warranty are not given a new warranty. The warranty is valid until the original time ends.
6. From other repairs or change of replacement parts not included in warrant you are being invoiced according to our price list.

Hydraulic schema



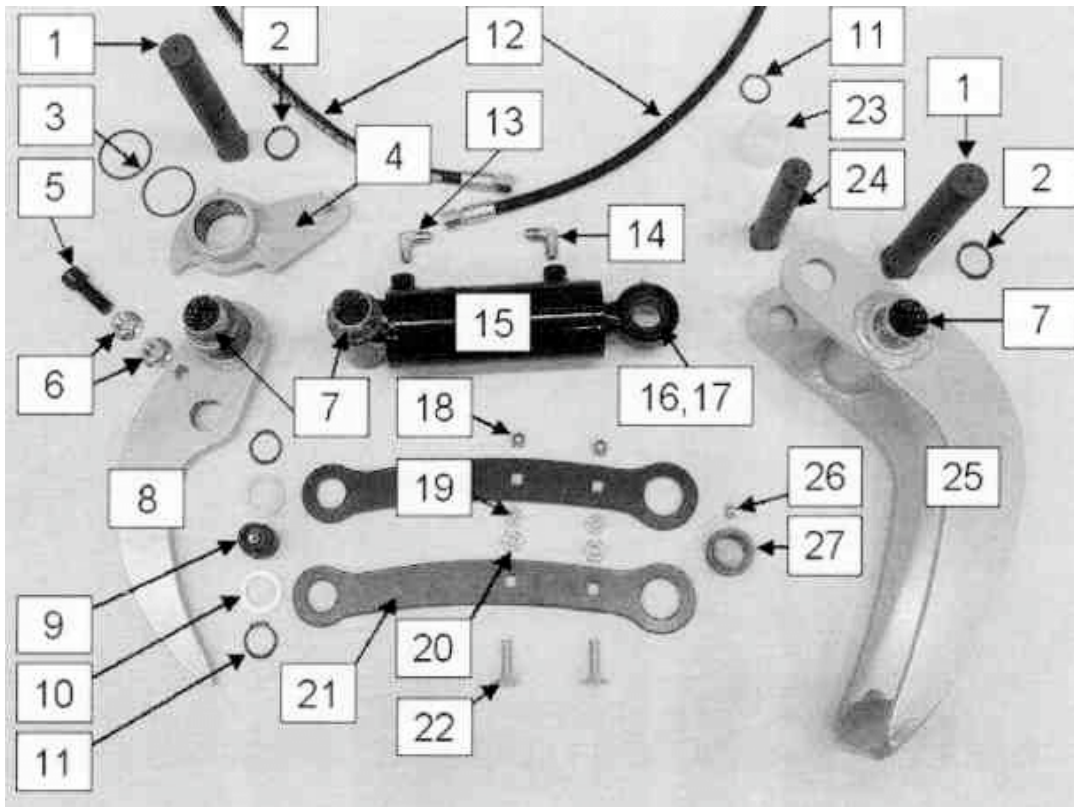
SPARE PARTS LIST

1.1 CHASSIS AND BLADE



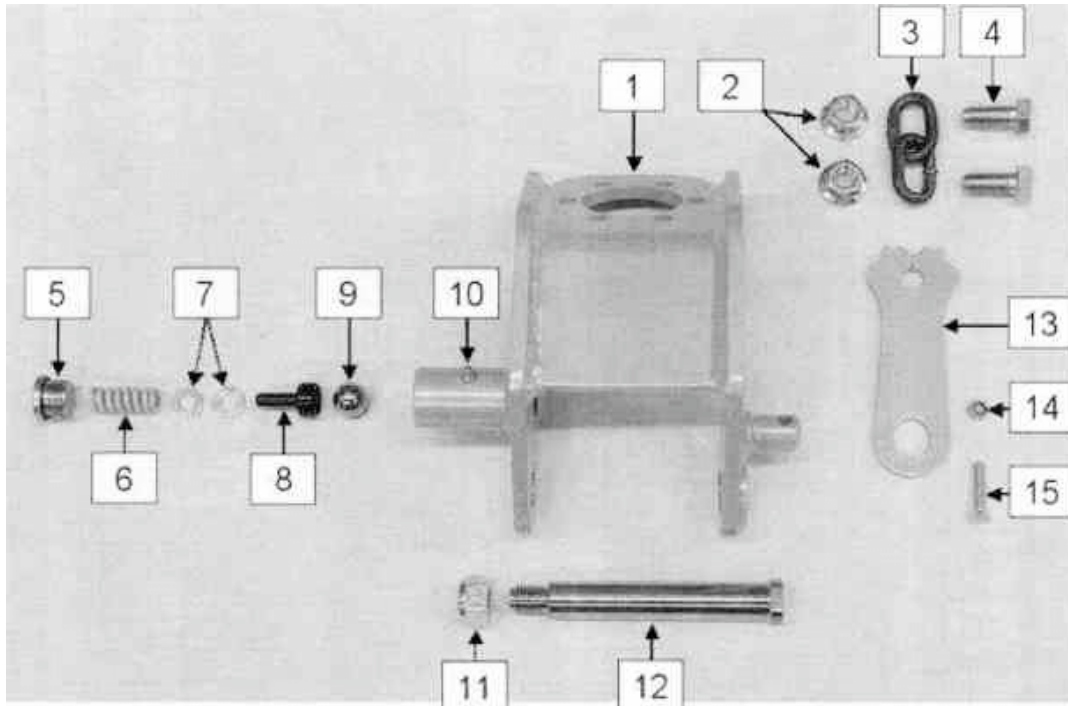
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2.1 GRAPPLE AND CYLINDER



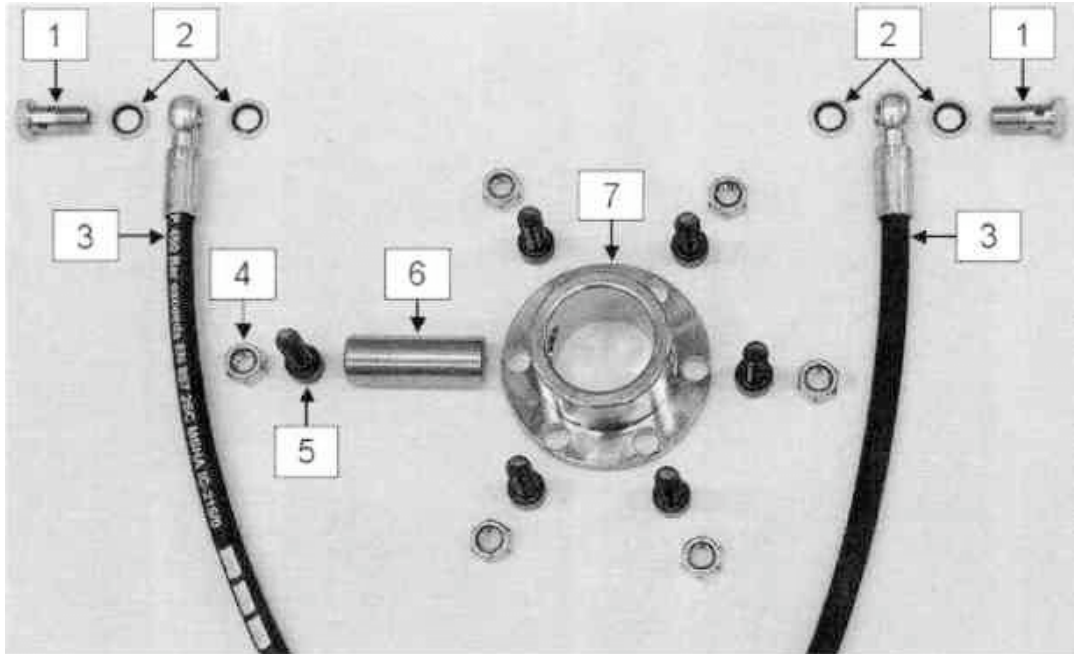
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