



Kellfri®

13-WC15H CHIPPER



CAREFULLY READ THE OPERATING INSTRUCTIONS BEFORE USING THE PRODUCT!

OPERATING INSTRUCTIONS TRANSLATED FROM THE ORIGINAL

Table of content

Product information	3
Technical data	3
Safety	4
In case of emergencies	5
Personal protection	5
Surroundings	5
Warning signs and labels	6
Before using / Use	7
Coupling / Uncoupling	8
Installation: Checklist	9
Installation	10-11
Adjusting the chip length	12
Mounting the knife	13
Adjustment of feed speed	14
After use	15
Transportation and Storage	15
Maintenance and service	15-16
Spare parts	17
Exploded drawing	18-22
Complaint form	23
Warranty & EC-insurance	24

INTRODUCTION

Thank you for choosing a product from Kellfri AB. By following the general safety information and the instruction manual and by using common sense, you will have a great and safety use of your Kellfri product for many years. Kellfri's tools and products aimed at the self operating farmer with high demands on functionality.

PRODUCT INFORMATION

Kellfri's Chipper 150 works with a powerful, heavy duty cutting disc. Efficiently chips wood waste, small trees, twigs and branches as well as larger trunks with a diameter of up to 15 cm. Use chips for composting, bedding, garden beds, running tracks and fuel etc. Hopper and adjustable feed speed supplied as standard. When necessary, the two feed-in rollers can also be rotated backwards. Optimum chipping quality is achieved at a high rpm. The ejector is rotatable through 360°. The chipper is mounted on the tractor's three-point linkage (type 2) and supplied with a drive shaft. The chipper requires one single-acting and one return hydraulic outlet on the tractor. The chipper is supplied with two hydraulic ½ inch, quick coupling male hoses.

TECHNICAL DATA	13-WC15H
Length x width x height	1000 x 1290 x 2000 mm
Wood diameter - max dimension	150 mm
Chipping disc diameter	762 mm (enkel)
Infeed	hydr. 2 vals
Rpm	540/1000 rpm
Power drive	Direkt
Power requirements	50-90 hk
Weight	430 kg
Branch breakers	None
Knife	4 movable and 1 fixed knife (hardened steel)

INTENDED USE

The equipment is intended for chipping wood waste, twigs and branches. Ensure that the material to be cut is free from nails, stones, etc.

NOTE! The machine can be dangerous if misused, therefore, it requires that the user of the machine has sufficient knowledge of how the machine is used and works!

SAFETY INSTRUCTIONS

Before using the product, please read the safety information and instruction manual and understand its contents for your own and others' safety. Always keep the safety information and instruction manual easily accessible to the user of the product.

Remember that it may be good for your own and others' safety to read the safety information every now and then. If the instructions manual is damaged or otherwise unusable, please contact and order a new one from: Your retailer

The general safety instruction is also available from Kellfri's website: www.kellfri.co.uk

Do not use this equipment if you are feeling sick, tired or under the influence of alcohol. Nor if you are under the influence of strong medications or drugs, suffering from strong depression or severe mental illness. Always follow the general traffic rules and regulations and the rules of the Animal Welfare Act. Persons under 15 years old and people with mental illness may not use these products.

PRODUCT SAFETY INSTRUCTIONS

- Read the instruction manual carefully before using this product. The product may only be used in the manner described in this manual.
- Keep the work area free from other people, moving parts, increasing the risk of accidents.
- Respect implement risk zone! Only you who drive should stand near the machine during operation. Children must never be staying within the work area, never let children play with the machine.
- The tool works best and safest when it is used in this capacity it is intended for, do not try by various means to increase machine capacity. Never overload the machine.
- Never leave the machine unattended when it is running. Turn off the tractor engine and tighten
- parking brake when you leave the piece of equipment, even for a short while.
- Never leave the gear retracted. The hydraulics can lose pressure and as a result the implement could fall down.
- Ensure that all guards are always installed and can not come off before use.
- The PTO shaft must be protected over its entire length. Make sure to anchor the safety chain well.
- The machine should always be uncoupled before maintenance or service.
- The machine may not be used without feeder and hopper.
- Do not drive with the chipper if excessive vibration occurs, stop the machine immediately and check the maintenance schedule.
- Do not use the machine unless all safety precautions are taken
- Do not climb on the chipper!
- NEVER try to remove things that stuck in the wood chipper while it is running!
- Ensure that the tool has stopped spinning before any action is taken.
- Never place any body part in the machine while it is running.
- The machine may only be lifted on the designated lifting points. Use only suitable lifting equipment with the enough lifting capacity to lift the machine.



Warning!

The original design of the product must not, under any circumstances, be modified without the approval of the manufacturer. Unauthorised modifications and/or accessories may cause life-threatening injuries or death for users and others.

INCASE OF EMERGENCIES

In case of an emergency please dial 112.

Keep cell phone or emergency phone available specially when working alone. First aid kit and fire extinguishers must be kept easily accesable during all work, maintenance and service

PERSONAL PROTECTION

Always use suitable protection equipment. Do not wear loose clothing or jewellery while working with the equipment. Long hair should be tied up when working equipment that has moving parts. Use protective gloves as there is a risk of burns if any hot surfaces are touched such as exhaust pipes, and avoid getting oil and petrol on skin. Ear defenders must be worn whilst the engine is running.



SURROUNDINGS

Make sure your working area is clear from people, children and objects before installing and using the machine. Risk of serious injuries can occur during operation. Take an extra caution when children are in the area where the equipment/ product is being use or stored. Check the area for low hanging electrical wires. Be careful when working on slopes and near ditches.

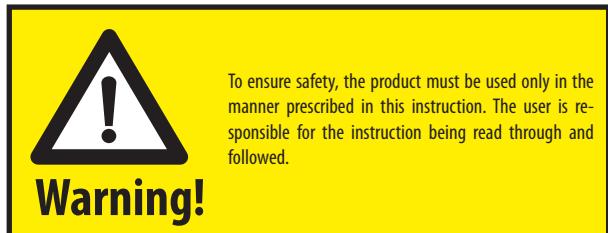
Always work alone with single - purpose tools/products. Never have junk lying in your area. Keep working areas clean. Always respect the risk zone.



WARNING DECALS

Ensure that warning labels are always visible and clean. Clean the warning labels as required. Do not rinse using pressure washer directly on the warning labels. Any damage/ broken stickers should be replaced. Order new stickers from your supplier.

SYMBOL	EXPLANATION	PLACERING
 	Warning for flying debris! Danger zone 20 m.	Maskinens sida
 	WARNING! Rotating PTO shaft.	
	Rotating knives	
	Warning! Keep off the machine!	
	Warning! Accident risk for children!	
	The product is CE marked.	



STEPS BEFORE USE

Carefully read the safety instructions and the operating instructions. Make sure that you understand the safety instructions, operating instructions and warning decals. Use common sense when using the product and suitable personal protective equipment. Always check the performance of the machine combination to be used. It is important that these are in harmony and work satisfactorily. This is done to ensure the equipment or product work as expected, and to guarantee the safety of yourself and others. Carry out a visual inspection of the equipment or product before use. Repair or replace damaged or worn parts to reduce the risk of injury. Grease moving parts and check that all nuts and bolts are tightened. Correct if necessary. Learn and remember the correct working method. Beginners must work slowly until they have learned how the machine or product works. Users/customers are responsible for ensuring users can handle the situation. If users feel that the machine is dangerous to use, it should not be used.

- Perform a safety check of the machine before each use. If you notice any errors or omissions, the machine should immediately be repaired.
- Make sure there are no foreign objects in the machine before using it.
- During operation, the machine must be on a hard, flat surface. Avoid working on slippery surfaces, especially in winter
- Check the drive shaft of the power take off and the three point brackets before connecting and using the chipper.
- Check the work area before operation. Make sure there are no people or animals nearby.

CHECK THE OIL LEVEL OF THE HYDRAULIC SYSTEM BEFORE STARTING THE MACHINE !!!



Never use a tool or product
with defective safety equipment.

Warning!

USE

Only those who understand the safety instructions and the operating instructions may use the equipment or product. Exercise caution and care when working with the equipment and only use it in the way described in the operating instructions. There is a risk of crushing when working with equipment that has moving parts. Exercise caution when working with equipment with hydraulic hoses as oil under pressure can penetrate the skin. Immediately seek medical attention if this should occur. Always work alone with equipment that are defined as single purpose equipment. Never overload the equipment and respect the risk zone.



NEVER allow anyone inexperienced to operate
the tractor and / or machine!

Warning!

COUPLING

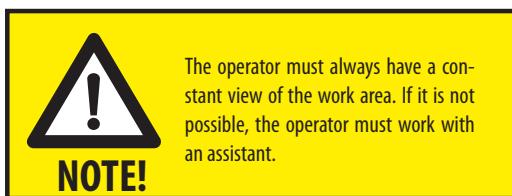
- Connect the machine to the tractors rear three point hitch.
- Connect the PTO shaft. Adjust the length, if necessary. (See the PTO shaft manual).
- Anchor the chain well.
- Connect the hydraulic hoses to the tractor's hydraulic system. Be careful when connecting the hydraulic hoses, there is always a risk for injuries.
- Check the hydraulic system for leakage.
- Ready for use.

UNCOUPLING

- Reduce the engine speed of the tractor to idle, turn off the engine.
- Make sure the rotor has stopped spinning before disconnecting the PTO shaft.
- Before disconnecting the chipper from the tractor, park it on a flat, hard surface. Make sure it can not tip over.
- Before disconnecting the hydraulic hoses, make sure there is no pressure left in the system.

CHIPPING

DANGER! Make sure fire extinguishers are accessible when the chipper is in use. Always check the surface temperature of the chipper. If it gets hot, turn it off, check and rectify the faults.



- Get familiar with the chipper without starting it.
- It is important that the chipper stands stable during work. The chipper must not be lowered too much in relation to the tractor. The PTO drive shaft may become loose during operation.
- It is important to always keep a safe distance from the place where the chips are thrown out. Aim the chute so that the ejected chips do not pose a risk to the operator or anyone else.
- Start the chipper carefully with the tractor at low rpm. Then increase the speed slowly to the right chipping speed (540/1000 rpm)
- Never put any part of the body into the hopper or into any other part of the chipper while the machine is running.
- Before putting material to be chipped, ensure that the wood is free of metal, earth, nails, stones, etc. which is fed into the chipper.
- When feeding in manually, NEVER stand in front of the hopper.
- Make sure that no one has hands or arms next to the roller.
- Put the branches / trees against the wood chipper and when chipping begins release branches / trees immediately.
- NOTE! The oil becomes hot when it flows through the hydraulic system. Check the oil temperature at regular intervals eg every 30 minutes to avoid overheating the oil. If the oil gets overheated, stop the machine and allow the oil to cool. Overheating of the oil may occur if the tractor has a small hydraulic tank.
- If a tree / branch needs to be removed from the hopper while chipping, change the input rotation so that the tree is fed out of the machine.

CAUTION! The Tree / branch must not be removed from the hopper with the crane!

WARNING! Tree / branch must not be removed from the feed hopper with the crane!

13-WC15H



CHIPPING



FEED HOPPER



HANDLE - FEEDING



CHUTE



GAS SPRINGS 2X

MONTERINGSANVISNING

Things to consider when installing the chipper:

It is recommended that installation is carried out by two people because of the chipper weight.



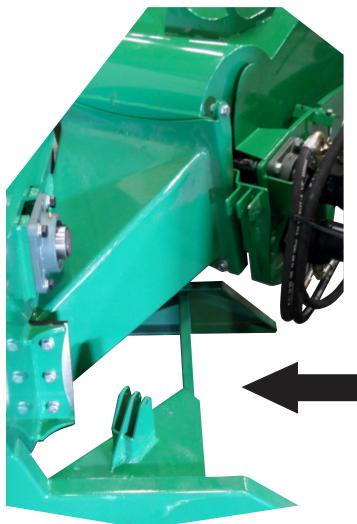
The machine may only be lifted at the designated lifting points.

Use only suitable lifting equipment with the sufficient lifting capacity to lift.

CAUTION! RISK OF CRUSHING! No one is allowed to stand underneath suspended load!



1. The chipper is delivered in a steel frame. Prepare all the parts for assembly, remove all packaging materials such as plastic, steel strips, etc.
2. Set feeder assembly as close as possible to the chipping assembly. Remove the bolts, nuts and washers mounted on the chipper. Lift the hopper, tilt upwards and fit the top bolts. Do not tighten the bolts yet.

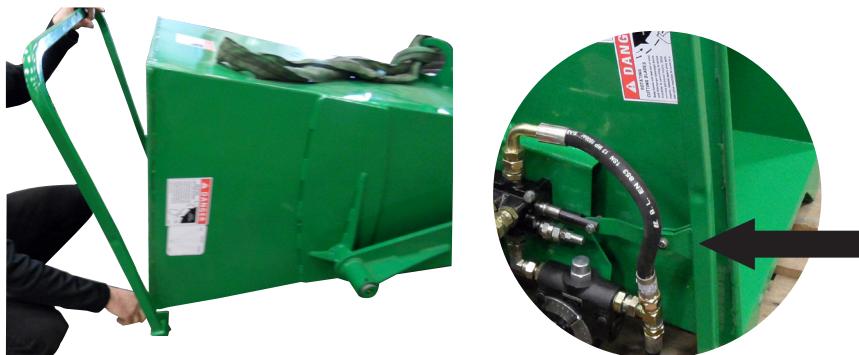


3. For the installation of gas springs, tilt the feeder upwards as far as it goes. Install gas springs, tighten the bolts, and then lower the hopper carefully.





4. Remove the spacers (mounted on the discharge chute) and place the discharge chute on top of the chipper. It should be 2 spacers between the discharge chute and lower portion of the ejector. Spacers are divided into two parts (half-moon). The narrow plate must be above the other, mount and tighten the bolts. **NOTE!** Do not tighten the bolts to hard. Tighten them so you can easily turn the chute.



5. Mount the safety handle. Attach the flow control valve
6. After mounting all parts. Check and make sure that all bolts are tightened.

SETTING THE CHIP LENGTHS

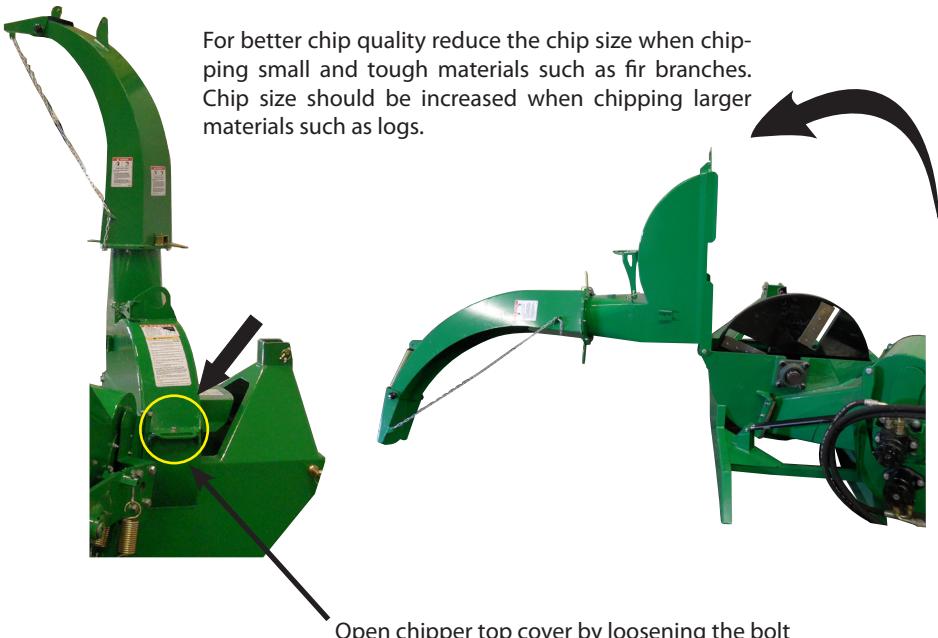
It is the distance between the cutting knife and the fixed knife which determines the chip size. Wood chips size is set by moving the fixed knife inward or outward. The greater the distance is between the blades, the larger chips becomes.



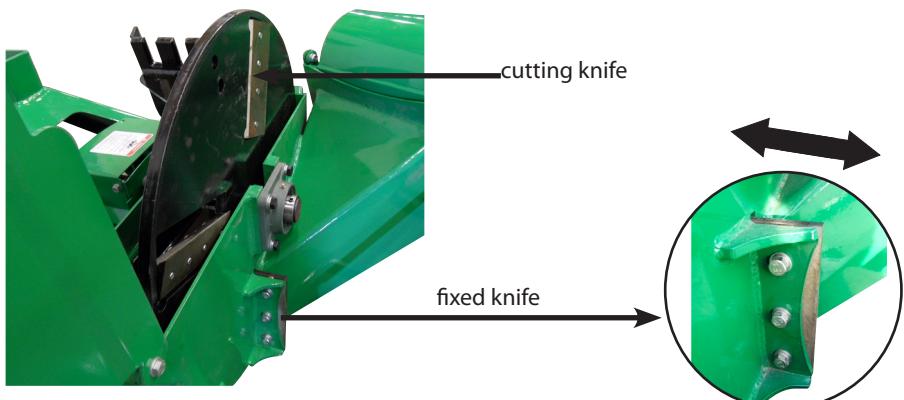
IMPORTANT!

When adjusting the knives, it is important that the cutting knives do not touch the fixed knife and that the cutting distance is the same on all knives. Always check that the fixing bolts are tightened.

For better chip quality reduce the chip size when chipping small and tough materials such as fir branches. Chip size should be increased when chipping larger materials such as logs.



Open chipper top cover by loosening the bolt



KNIVES

- Always check the condition of the knives, the knives' attachment screws and nuts.
- It is important to always have sharp knives, sharp knives gives better chip quality.

CHANGING CUTTING KNIVES:

- Loosen the knife's bolts
- Replace the blades and reassemble all fastening bolts.
- Adjust the knives cutting distance when necessary and then tighten.
- Spin the chopping disc by hand and check that all knives have the same cutting distance and that the cutting knives don't touch anywhere.
- When switching to new cutting knives, the fixed knife might need to be adjusted. Check the clearance between the cutting knives and the fixed knife, adjust if necessary.



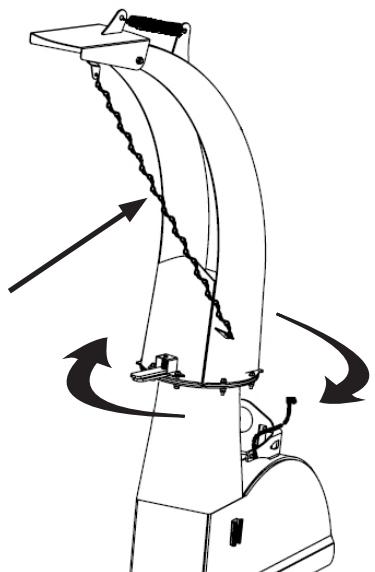
**LOOSEN THE BOLTS
THE KNIVES ARE REVERSIBLE**

BRANCH BREAKER

CHUTE

Adjust the chute by pulling the lever and then turning the chute at the desired angle.

Adjust the screen angle by changing the length of the chain.

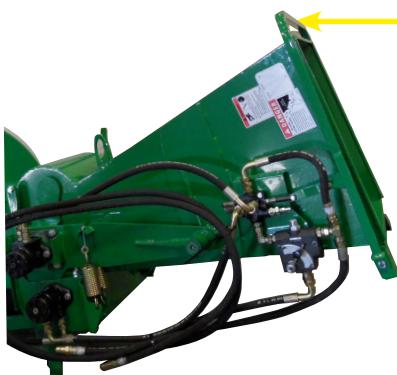


ADJUSTMENT OF FEEDING SPEED

It is important to have the right feeding speed to avoid the trees / branches getting stuck in the feeder. Feeding speed should be synchronized with the cutting speed of the wood chipper. Adjust the feeding speed by turning the flow control valve (clockwise / counter-clockwise) so that the trees / branches are not pushed towards the chipping disc without the feeding teeth slowing down. Always test drive the machine before use!



ADJUSTMENT OF FEEDING SPEED



Change the feeder rotation by pressing on the handle.

The handle goes back to the starting position as soon as you release it. Begin the infeed by pulling the handle forward.



When you turn off the chipper, chipper disc continues to rotate, wait until the disc has stopped spinning before any action is taken on the machine.

IMPORTANT!

AFTER USE

Lower the engine rpm of the tractor to idle then ensure that the shaft has stopped spinning before disconnecting the PTO shaft.

TRANSPORT AND STORING

Make sure that the area is clear of people, children and objects before transportation. Always be extra careful during transport and movement. Ensure that the product is well secured and that existing transport safety devices are mounted. Always place the load as low as possible. Respect the danger zones even during transport and movement. When lifting, don't go under the suspended load. Trailer used for transport should have functioning brakes.

Always store the tool or product in a dry place, preferably underneath a roof when not in use. Make sure that the equipment or product stands stable and not likely to tip over. Never let children play at the storage site. Bear in mind the risk of tipping over!

If the chipper is to be stored for a long time, lubricate the knives e.g. with Vaseline.

MAINTENANCE AND SERVICE

Make sure the tool stands stable and not likely to tip over during maintenance and service. Replace damaged and worn parts immediately to reduce the risk of injury. Perform maintenance, servicing and inspections as recommended. Use only parts with equivalent performance to reduce the risk of damage and failure.

- Disconnect the machine from the tractor when fixing a problem.
- The machine may only be lifted in special lifting points, only use lifting equipment with sufficient lifting capacity.
- Regularly check the condition of the machine to prevent breakdowns. If cracks, twists, bends, gaps or fatigue is discovered, stop the operation and rectify the faults
- Replace worn parts. Tighten all screws and nuts after a few hours of operation, and after that every day when using with the machine.
- Always check all bolts and nuts are tightened after maintenance and service. Always test the machine before work is started.
- Lubricate all lubrication points regularly. Lubrication points are to be lubricated every 20 hours.
- Make sure there is no pressure in the system before the repair is carried out on the hydraulic circuits.



WARNING: Leaking oil under pressure can penetrate the skin and can cause serious injuries. Do not use your hands when searching for leaks. Use a piece of paper or cardboard to search for leaks.

IMPORTANT!

TROUBLESHOOTING	REASON	MEASURE
Bad chip quality, uneven chip size.	<ul style="list-style-type: none"> Blunt knives Distance between cutting blades are different or too large. 	<ul style="list-style-type: none"> Check knives. Adjust and sharpen if needed.
The chipper wont drag in branches / trees.	<ul style="list-style-type: none"> Knives in wrong direction. Blunt knives or knives sharpened in wrong angle. The feeder do not push in the trees / branches. 	<ul style="list-style-type: none"> Check knives. Flip, adjust and grind if necessary. Make sure that the feeder is properly connected and working properly.
Stop in the chute.	<ul style="list-style-type: none"> Too low rpm. 	<ul style="list-style-type: none"> Increase rpm to 540/1000 rpm.
Large vibrations occurs.	<ul style="list-style-type: none"> Cutting speed and feeding speed is unsynchronized 	<ul style="list-style-type: none"> Adjust the feeder speed.
Infeed rollers do not rotate or rotates too slowly.	<ul style="list-style-type: none"> No pressure in the hydraulic system. Low oil level in the hydraulic system. 	<ul style="list-style-type: none"> Check oil level and check for possible leakage in the hydraulic system. Fill with hydraulic oil.

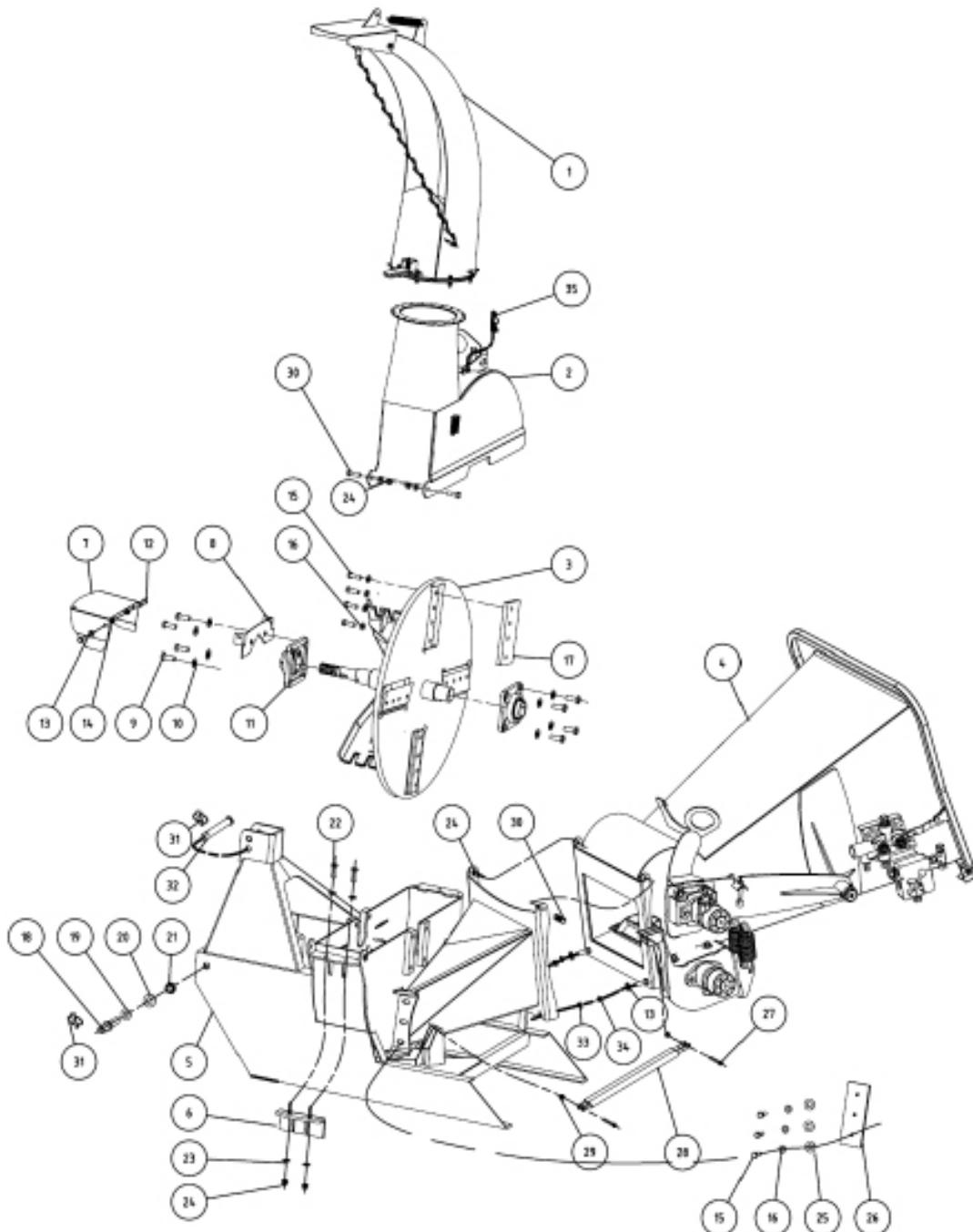
SERVICE	INTERVAL	
Knives	Before operation	Replace any defective blades. Sharp blades provide better results. When replacing knives, the bolts are to be tightened properly.
	During work.	Listen for noises.
Infeed rollers	Every 20th operating hour	Lubricate.
Hydraulic	Before operation	Search for leaks, check all connections and hoses.
Safety devices.	Before operation	Inspection of safety devices such as safety valves, covers etc.
Bearings	Regularly 50H	Lubricate the bearings with grease regularly, depending on how much the machine is used. Frequently used machine, all bearings should be lubricated every week. Otherwise, every 50 hours or once a year.

RECYCLING

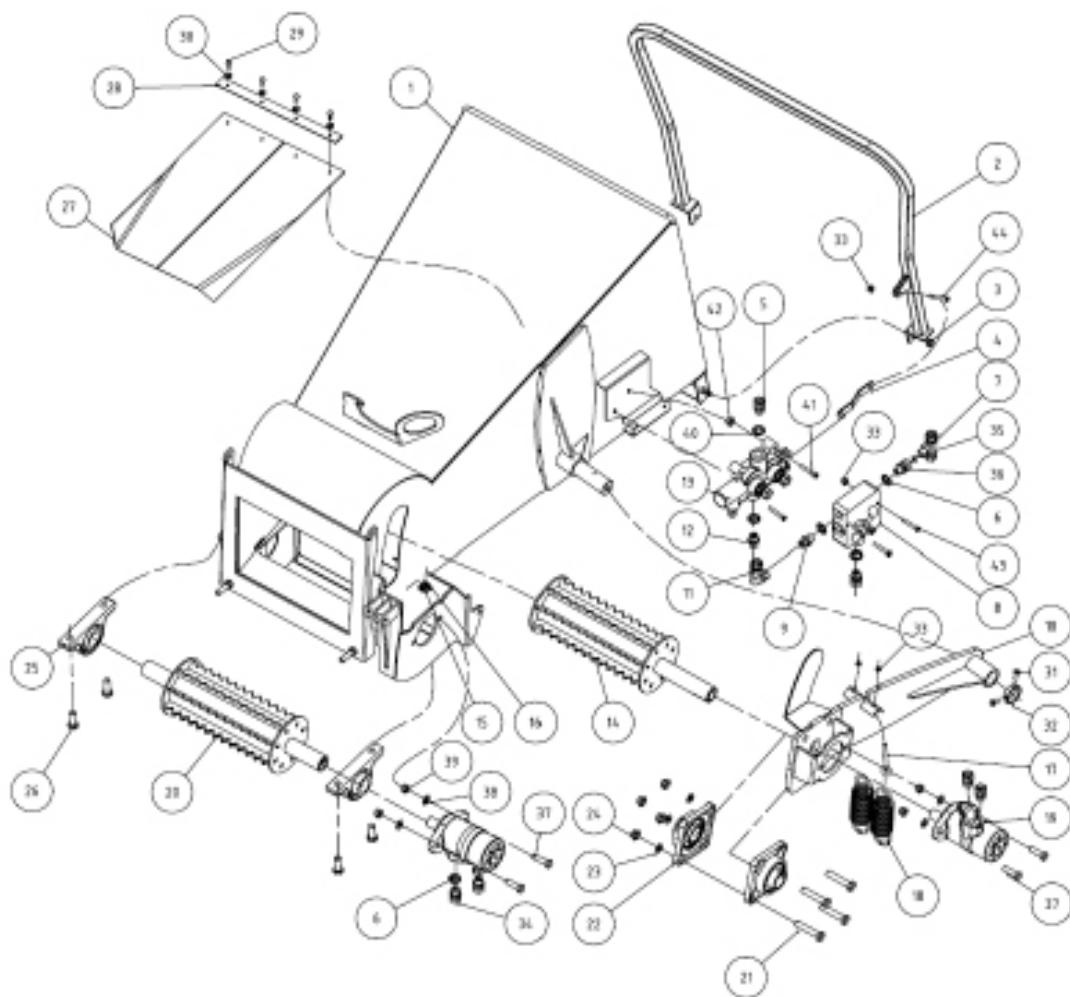
Disposal of the product, the machine should be disassembled and transported to the municipality recycling station. Contact your municipality for further information.

ART. NO.	DESCRIPTION
R13-WC15H.001	hydraulic motor
R13-WC15H.002	Brake input
R13-WC15H.003	valve
R13-WC15H.004	Control valve
R13-WC15H.005	Beam input
R13-WC15H.006	Handle input
R13-WC15H.007	Input Roll top
R13-WC15H.008	Input roller lower
R13-WC15H.009	spring chute
R13-WC15H.010	Chain Chute
R13-WC15H.011	Knife
R13-WC15H.012	Anvil
R13-WC15H.013	Bearing chipper disc UCF210
R13WC15H.014	Bearing feed roller UCP208



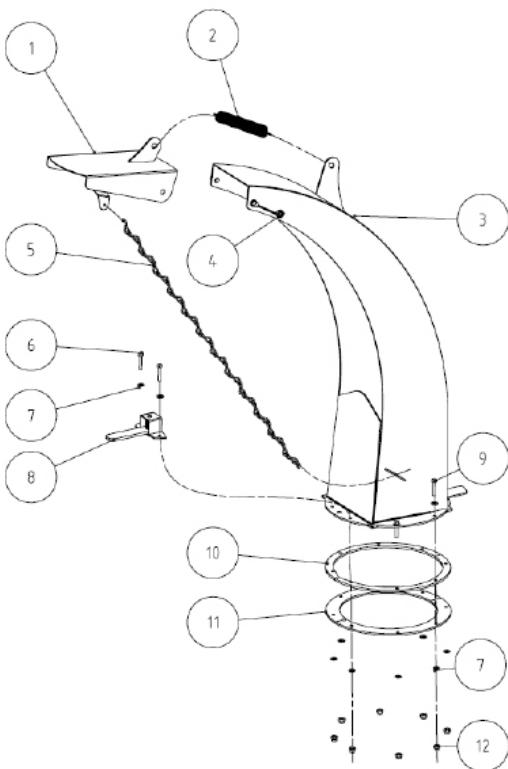


NO.	DESCRIPTION	AMMOUNT
1	Chute	1
2	Top cover	1
3	Chipper disc	1
4	Hopper	1
5	Lower cover	1
6	Bracket	1
7	PTO-shaftl protection	1
8	Bracket	1
9	Bolt M14x1,25x45	8
10	Washer Ø14	4
11	Bearing	2
12	Bolt M10x25	2
13	Washer Ø10	2
14	Lock nut M10	2
15	Bolt M12x1,25x30	16
16	Spring washer Ø12	16
17	Cut Knife - adjustable	4
18	Bolt	2
19	Spring washer Ø22	2
20	Washers Ø22	2
21	Nut M22	2
22	Bolt M12x1,25x35	2
23	Washers	2
24	Lock nut M12	4
25	Washer Ø12x3	3
26	Fixed knife	1
27	Bolt M8x65	2
28	Gas absorbers	2
29	Locking nut M8	2
30	Bolt M12x35	4
31	Locking pin	3
32	Pin	1
33	Nut M10	2
34	Spring washer Ø10	2
35	R pin	1



NO.	DESCRIPTION	AMOUNT
1	feeding hopper	1
2	security handles	1
3	lock nut m10	2
4	connection plate	1
5	valve coupling - straight	3
6	sealing washers	7
7	t-connection	1
8	control valve	1
9	clutch	1
10	connection piece	1
11	valve coupling	1
12	coupling m18 - straight	1
13	safety switches	1
14	input roll - top	1
15	lock nut m16	4
16	washer ø16	4
17	eyebolt	2
18	tension spring	2
19	hydraulic motor	2
20	input roll-bottom	1
21	bolt m14x70	4
22	bearings	2

NO.	DESCRIPTION	AMOUNT
23	washer ø14	4
24	lock nut m14	4
25	stock	2
26	bolt m16x50	4
27	rubber flapper	2
28	sheet list	1
29	bolt m6x15	4
30	washer ø6	4
31	bolt m6x10	2
32	locking ring	1
33	lock nut m6	5
34	quick coupling	5
35	o-ring ø 10x2,5	1
36	the coupling - straight	1
37	bolt m12x45	4
38	washer ø12	4
39	lock nut m12	4
40	sealing washers	4
41	bolt m8x65	2
42	locking nut m8	2
43	bolt m6x65	2
44	bolt m6x25	1



NO.	DESCRIPTION	AMMOUNT
1	Screen	1
2	Tension spring	1
3	Chute	1
4	Cap nut M10	2
5	chain	1
6	Bolt M6x35	2
7	Washer Ø6	16
8	Turn the lever	1
9	Bolt M6x30	6
10	Distance - center	2
11	Distance - Lower	2
12	Lock nut M6	8



Complaint form

We are grateful for your help pointing out any inaccuracies in the Kellfri product delivered to you. Before making a complaint read Kellfri's general warranty and sales conditions in our catalog as well as the enclosed User's manual that comes with the machine.

Please fill in the details below and attach photo and other information in order to process your request.

Buyer:	Customer number:	
Address:	Invoice number:	
E-mail:	Phone nr:	
When was the product delivered?	When was the product taken into operation?	Did the product functioned as it should upon the first operation?

Defect product / part:
.....

Problem description:
.....
.....

Describe the sequence of events:
.....
.....
.....
.....

Other:
.....
.....

*Submit Complaint form and photo to:
Kellfri AB
Division of Services : Contact Kellfri retailer
Or e-mail service.
info@kellfri.se*

Signature:	Date:
------------	-------

WARRANTY TERMS AND CONDITIONS

Validity of the warranty - Kellfri's Warranty is valid 12 months from the date of purchase.

This warranty replaces - Compensation for spare parts after acknowledgment that the fault lies on the material or manufaturing deffects.

- This guarantee do not cover
- Labour costs
 - Travel expenses
 - Any modification that the buyer himself has/had made.
 - Any consequential damages that occurred out of damage to the machine.
 - Damage due to normal deterioration of the machine, inadequate: service, user inexperience or use of spare parts which are not original.
 - Wear parts such as hoses, seals, oils, and mechanical belts

EG-FÖRSÄKRAN OM MASKINENS ÖVERENSTÄMMELSE, ORIGINAL



EC-DECLARATION OF CONFORMITY

According to 2006/42/EC, Annex 2A

Kellfri AB

Munkatorpsgatan 6
532 37 Skara, Sweden

Declares that the machine

Name: 13-WC 15

Type: Chipper

Complies with all applicable provisions of the Machinery Directive 2006/42/EC.

Other equipment must meet the hardware requirements of the Directive.

Tina Baudtler, VD 2015-07-13

Kellfri AB is constantly working on further developing their products and therefore reserves the right to modify, among other things the design and appearance without notice.

CUSTOMER SERVICE

You are always welcome to give your feedbacks, reviews or ask us about our tools and products.

Kellfri AB

Telefon: 0046 0511 - 242 50

Fax: 0511 - 168 33

E-mail: info@kellfri.se