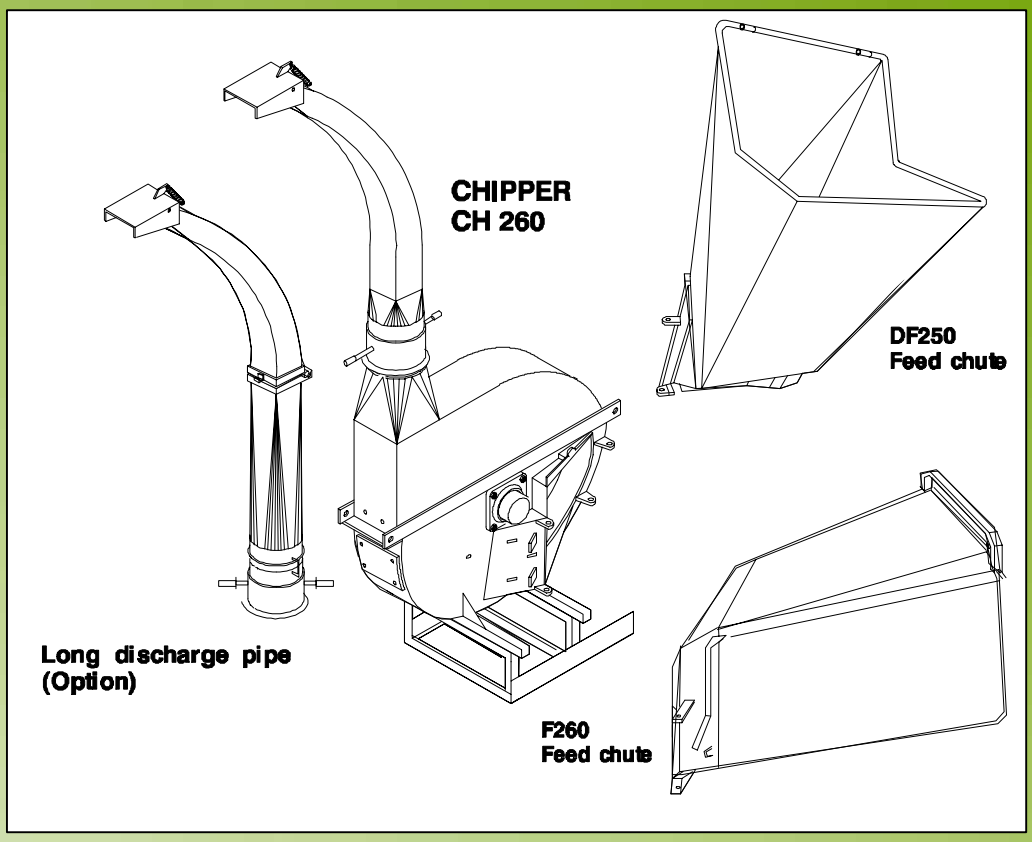
CH 260 CHIPPER
OPERATION, MAINTENANCE AND SPARE PARTS MANUAL

03485700

VALBY

CHIPPER CH 260



From machine: 329 2525

It is very important to read this instruction handbook thoroughly before using the machine!

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1. TO THE OWNER–OPERATOR

Thank you for purchasing a Normet Corporation product.

Before we begin this manual, the people at Normet Corporation want you, the owner–operator , to know this piece of equipment can be very dangerous if safety procedures and warnings are ignored. Read this manual carefully page by page until you understand it completely. Failure to do so will reslult in personal injury and / or equipment damage.

All personnel including operators, maintenance crew, etc. should read this manual before start up.

This manual should be considered a permanent part of your machine and should remain with the machine when you sell it.

IMPORTER:

NORTHEAST IMPLEMENT CO. RP.
P.O. Box 402
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2. SAFETY INSTRUCTIONS

2.1.TERMS AND SYMBOLS USED IN INSTRUCTIONS

THINK SAFETY!

Safety is a combination of operator common sense and alertness at all times when the machine is being operated or serviced.

CAUTION!

This message is used for general reminders of good safety practices or to direct attention to unsafe practices. The message will appear in your operator's manual and/or the sign will appear on the machine with the color combination of yellow and black.

WARNING!

This message denotes a specific potential hazard. The sign will be displayed on the machine in areas of potential hazard. The sign will have the color combination of yellow and black.

DANGER!

This message denotes the most serious specific potential hazard. The sign will be displayed on the machine in areas of potential hazard.

IMPORTANT!

Messages labeled "Important" will appear in your operator's manual to provide specific instructions for performing adjustments, services, etc. If these instruc–tions are not followed it could result in damage to the machine.

3.GENERAL SAFETY

Do not operate this machine until you have read and understood the manual page by page.

The owner of this machine is responsible for instructing all operators and support personnel in the operation and safety precautions of this chipper.

Proper training prior to operating the chipper is obligatory.

- **Inform everyone who works with the chipper about the risks and how they can avoid accidents.**
- **Before the chipper is running, ensure that the working place is clear of any bystander within a minimum risk zone of 50 ft. (15 meter).**
- **Do not let children or untrained persons operate the chipper.**
- **Always have the chipper mounted on the 3-point hitch of the tractor. Otherwise the chipper will tip over.**
- **There is a serious crushing hazard between tractor and chipper. Do not go between the tractor and the chipper in any case, for example when you are mounting the chipper to the tractor.**
- **Check that the covers of the universal shaft are in their place and the ransmission chains are fastened.**
- **Safety goggles, earmuffs and a hard hat are obligatory when chipping. Use respirator mask, if necessary.**
- **Do not wear loose clothing, loose sleeves, scarves or long uncovered hair around moving parts of machinery. Also avoid gloves of poor condition or with loose fitting, because they might get caught in the branches.**
- **Stay alert! Do not operate the chipper when fatigued, or under the influence of alcohol or drugs.**
- **IMPORTANT! Never leave the chipper running and unattended.**
- **IMPORTANT! Failure to obey the warnings on the chipper or in the operator's manual will result in personal injury and / or death and / or equipment damage.**
- **Check the material before you feed it. The material must be free from nails, stones and all other materials that are not wood, paper or plastic. IMPORTANT! Feeding wire and barbed wire into the chipper is very dangerous as it might pull in the operator.**
- **Make sure that no one is in the path of flying chips. Point the discharge pipe away from windows, doorways and other areas where people or animals may be.**
- **Keep the work area clean so there is nothing to trip over.**

SAFETY INSTRUCTIONS

- Disengage the PTO, cut the engine and remove the keys before any maintenance.
- Use only original parts replacements. IMPORTANT! Do not make any modifications.
- Check all moving parts. They should be fastened in place, in good working condition and all shields and guards must be in place.
- Point the discharge downwind to prevent dust or chips from blowing onto the operator.
- If a wood jams inside the chipper, cut the engine and wait for all movements to stop before reaching inside the feed chute.
- Do not use the chipper indoors when you use it with a the tractor or with the separate hydraulic motor. It's possible to use the chipper indoors with the electric motor use.
- You must be very careful when working indoors. Protect yourself against possible hazards like exhaust gas by sufficient ventilation, for dust that can catch fire by cleaning your environment regularly.
- Always use the lock bolt before and during maintenance on the machine.
- Place the PTO shaft in the holding device when disconnected from tractor.

3.1.ROTATING KNIVES

Risk of cutting injury or hits by flying debris.
Do not reach into the feed chute for any reason.
Failure to follow these instructions could result in serious injury or death.

3.2.SAFETY INSTRUCTIONS FOR THE HYDRAULIC FEEDER AND FEED CHUTE

- IMPORTANT! Always also read the general safety instructions.
- IMPORTANT! Do not ever put any part of your body inside the feed chute!
- Prior to operating get familiar with the function and controls of the machine. All functions must be in blameless condition.
- Test the stop function.
- Before starting up, check that there is no debris or foreign objects in the feed chute.
- Do not work in front of the feed chute opening! Stand on the left side of the chute when feeding, as the feed roller might jerk the wood up or to the right.
- When checking malfunction, all controls must be in "off" or in "stop" position.
- Let go of the wood when the feed roller or the knives get hold of it. To feed short pieces, push them in with longer ones.

3.3.SAFETY INSTRUCTIONS FOR THE HYDRAULIC UNIT

- Before performing lubrication work on any equipment, consult the manufacturer's instruction manual and follow the recommended procedures.
- Before lubricating the machine, shut down the engine and stop the machine.
- Pressurized oil can be hazardous. Pressurized oil jet can penetrate skin and cause serious injuries or death.
- Occasional skin exposure with oil is not dangerous. If though you can not prevent long–time exposure use protective gloves and other protective clothing.
- Keep flammable material away from heat, sparks and open fire.
- Hot oil and oil spray can be hazardous. Small amounts swallowed or inhaled do not usually cause toxication. Old oil is more dangerous than new.
- If oil has got into eyes flush them with cool water after which go to doctor. Use safety goggles.
- Avoid mixing lubricants of different grade and quality. Use only recommended oils or oils with corresponding characters.

3.4.SAFETY INSTRUCTIONS FOR THE SEPARATE HYDRAULIC MOTOR USE

- Check the moving parts. They should be fastened in place, in good working condition and all shields and guards must be in place.
- Inform everyone who works with the chipper about the risks and how they can avoid accidents.
- Do not let children or incapable persons operate the chipper.Do not wear loose clothing, loose sleeves, neckties or long uncovered hair around moving parts of machinery.
- Disengage the PTO and turn the tractor off before you service the chipper.
- Use only original parts replacements. Do not make any modifications.
- Failure to obey the warnings printed on the chipper or in the operator's manual might result in a serious injury or death.
- When checking the malfunction, all devices must be in "off" position.
- Place the PTO shaft in the holding device when disconnected from tractor.

CH 260 CHIPPER

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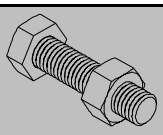
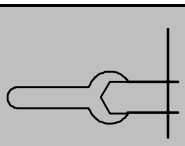
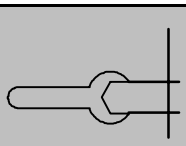
 Thread	 Millimeter	 Inch
M6	10	7/16
M8	13	1/2
M10	17	11/16
M12	19	3/4
M16	24	15/16
M20	30	1 3/16

WHEN ORDERING SPARE PARTS, PLEASE INDICATE MACHINES TYPE FROM THE MACHINE PLATE, SPARE–PARTS ORDER NUMBER, DESCRIPTION AND QUANTITY REQUIRED.

EXAMPLE: CH260, 43298410, Knife, 2 pcs.

CH 260 CHIPPER

CHIPPER PRESENTATION

4.PRESENTATION

The Farmi CH 260 is a double- or triple-knife disk cutter for chipping wood up to ∅260 mm, and plastic. The adjustable chip size enables creation of chips for, e.g., combustion, industrial applications, soil improvement, and drying litter.

CH 260 options/accessories:

- Double–motor hydraulic feeder, mechanical or gravity hopper;
- Independent hydraulic unit HD11;
- Twig or high-power breaker;
- Screen;
- Short discharge pipe;
- Long discharge pipe.

5.MAIN COMPONENTS

1.UPPER CHAMBER
2.LOWER CHAMBER
3.DISK
4.KNIFE
5.VERTICAL ANVIL
6.HORIZONTAL ANVIL
7.BREAKER/SCREEN
8.DISCHARGE PIPE
9.WATER DRAINAGE HOLES
10.LIFTING POINT
11.HOLDING DEVICE FOR THE PTO SHAFT

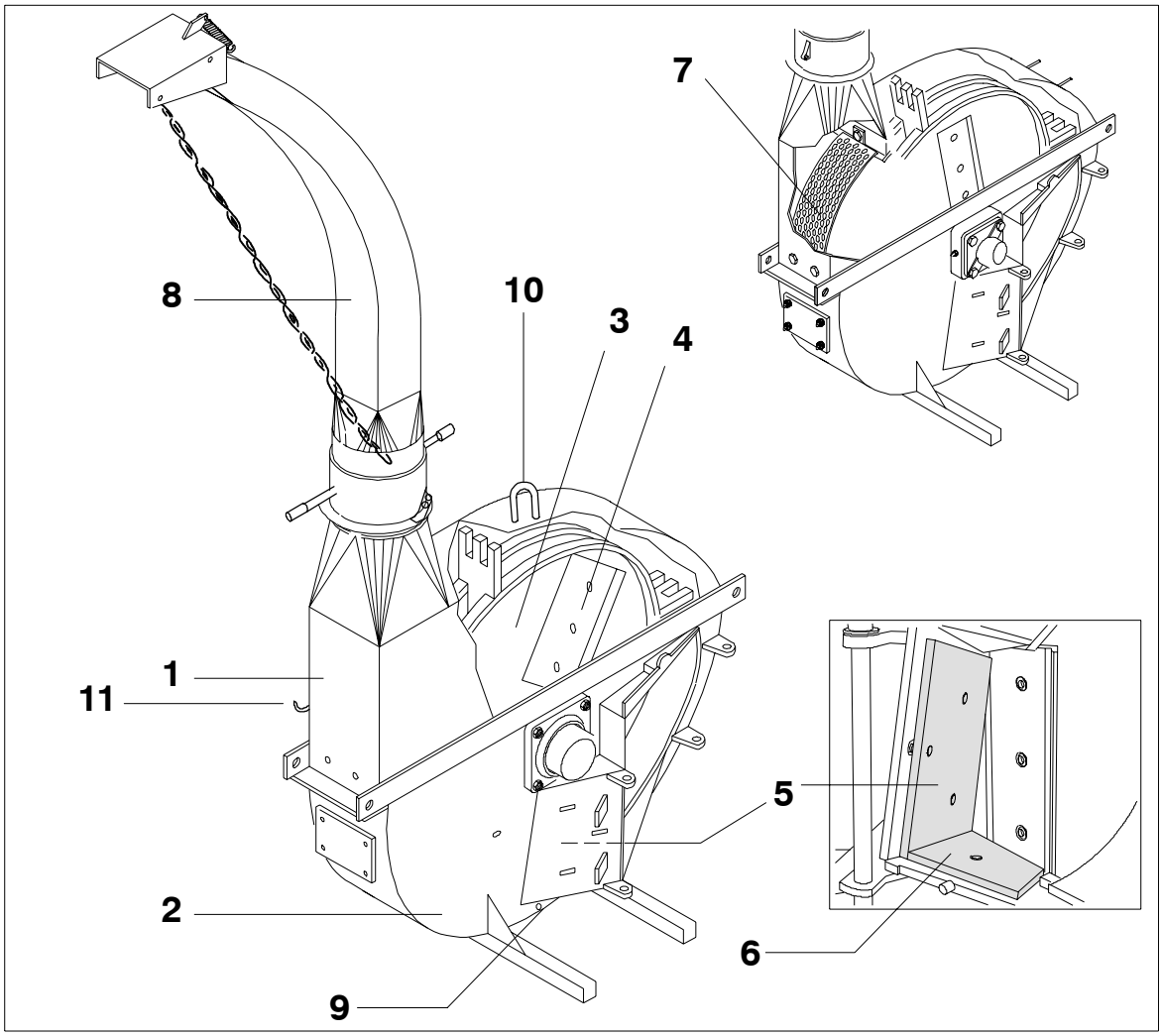


Fig 1.Main parts.

6.DIMENSIONS

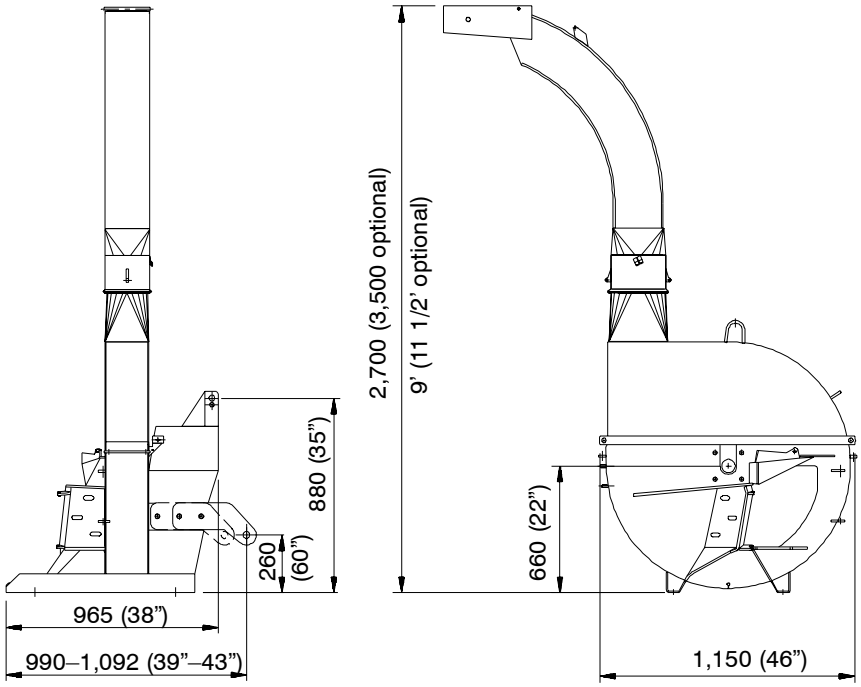


Fig 2.CH 260 dimensionss.

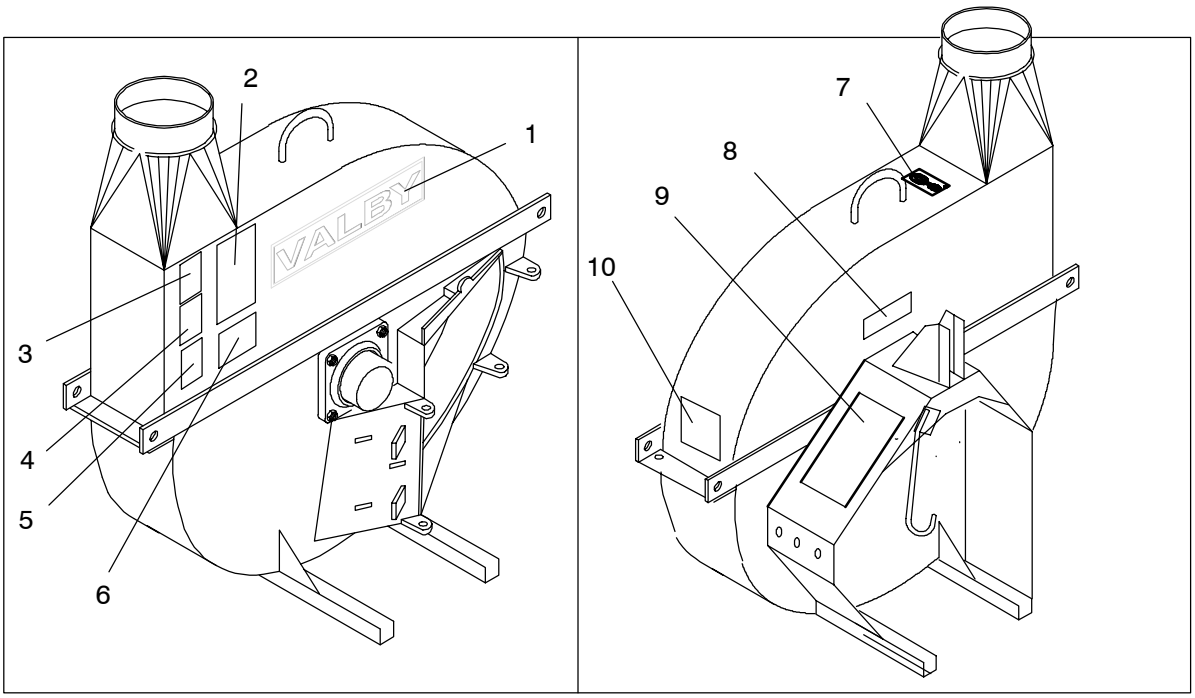
7.TECHNICAL DATA

CH 260	
Type	Disk chipper
Output	10–40 m^3/h wood, 2–3 ton/h paper
Chip lenght	7–12 mm wood, 13–15 mm paper $^1/_4$"–1" on wood, $^1/_2$"–$^9/_{16}$" on paper
Max. wood diameter	250 mm, 10 "
Power demand	30 –70 kW, 40–100 HP
PTO speed	540 or 1000 rpm
Number of knives	2 or 3
Power source	tractor or electric motor
Mounting	3–point or attached to base
Chipper weight	510 kg
Disk diameter	1050 mm, 41 $^5/_{16}$"
Rotor weight	240 kg, 530 lbs
Discharge pipe	360° turning
Opening of upper chamber	to two side
Feeder	mechanical/ gravity hopper or hydraulic feeder
Sound pressure level Sound power level CEN/TC144 WG8N16	102 dB (A) 120 dB (A)

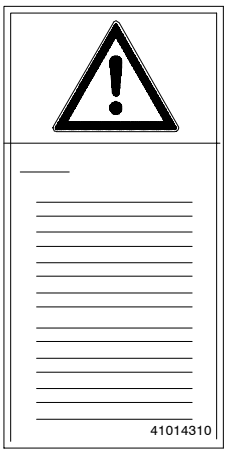
Table 1.CH260 Technical data.

8.PLATES AND STICKERS

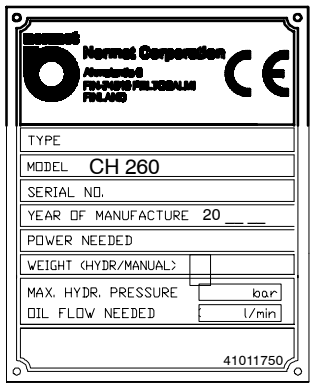
These decals and stickers must be found from chipper. Missing ones must be renewed immediately.



1. 30140602



2. 41014310

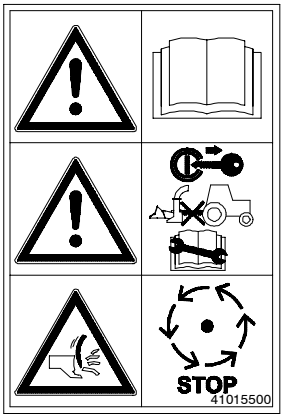


3. 4101750

4. 40142080

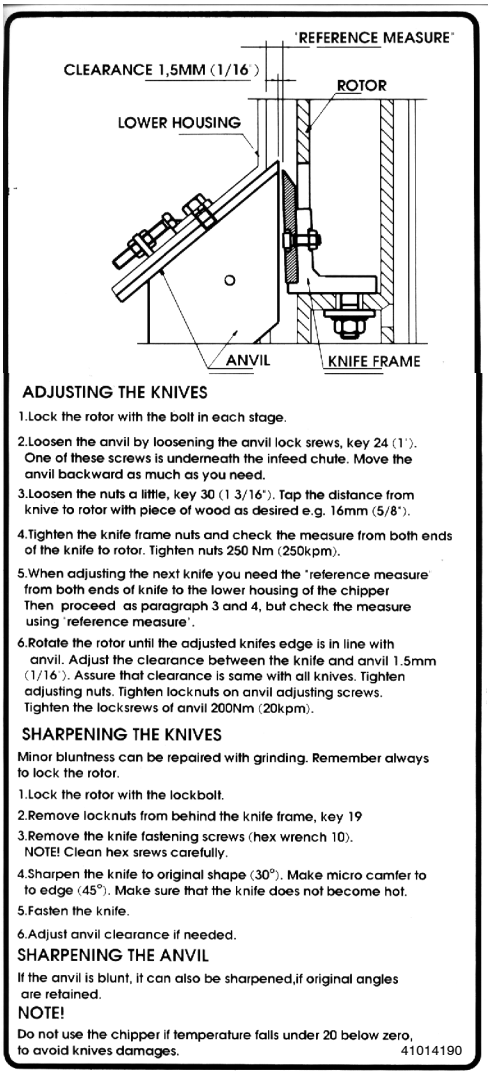
CH 260 CHIPPER

PLATES AND STICKERS

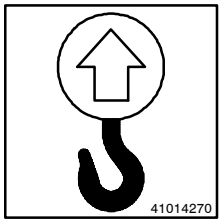


5. 41015500

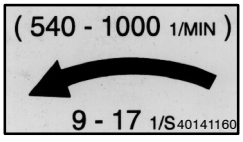
6. 41014170



9. 41014190



7. 41014270



8. 40141160

10. 41014110

CH 260 CHIPPER

PLATES AND STICKERS

Plates and stickers for chipper CH 222

Part	Order no.	Description	Remarks	Qty.
1.	30140602	VALBY–sticker		1
2.	41014310	Safety precautions		1
3.	41011750	Machine plate		1
4.	40142080	Safety goggles, earmuff and a hard hat are oblicatory when chipping		3
5.	41015500	Do not operate this machine until the owner's manual has been completely read and understood, disconnect the PTO before service, be ware of cutting tools		1
6.	41014170	Turn PTO off and stop the engine before maintaining the chipper		1
7.	41014270	Lifting point		1
8.	40141160	Rotation speed and rotation direction of the PTO shaft		1
9.	41014190	Sharpening the knives		1
10.	41014110	Beware of cutting tools		2

9.LIFTING

CAUTION!

Lifting points for each machine are marked with hook symbols.

Lift only using the proper type of lifting device and ensure that it has an appropriate lifting capacity.

Check the lifting slings, cables, and chains regularly.

Ensure that you know the weight of the load to be lifted and never exceed the lifting capacity stated by the manufacturer of the lifting device.

Select the transport routes for lifting so that the load is not transported over people or a location where people might be.

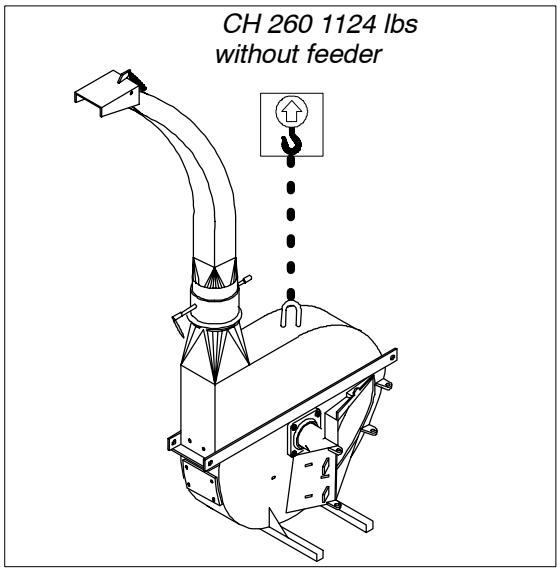


Fig 3.Lifting point.

10.MOUNTING

10.1.MOUNTING ON A TRACTOR

- Attach the drawbar to the outermost holes of the chipper in order to use as long a PTO shaft as possible; this increases the shaft's service life.
- Mount the chipper on the tractor's 3–point hitch. If the tractor cannot lift the chipper up, or if the front of the tractor becomes too light, move the drawbar to the inner holes.
- Tighten the nuts (M20) to 340 Nm.
- The hydraulic feeder and mechanical feeders include fitting blocks that are installed between the chipper and feeder. The fitting blocks are installed so that the two guide pins located at the bottom section of the feed opening go through the holes in the fitting block and secure the block. See Fig. 4.

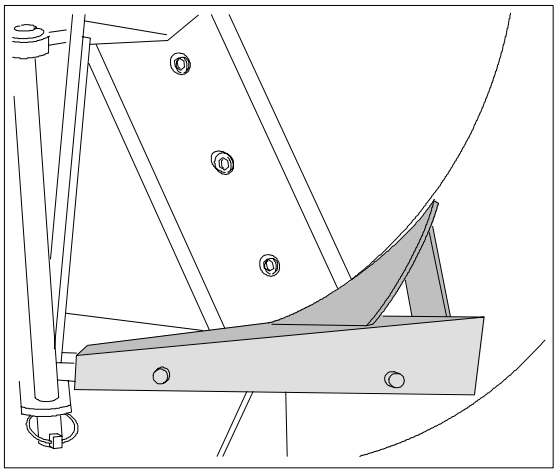


Fig 4.Installing the fitting block..

- Attach the feed chute, using the pin and lockscrews, see Fig 5.

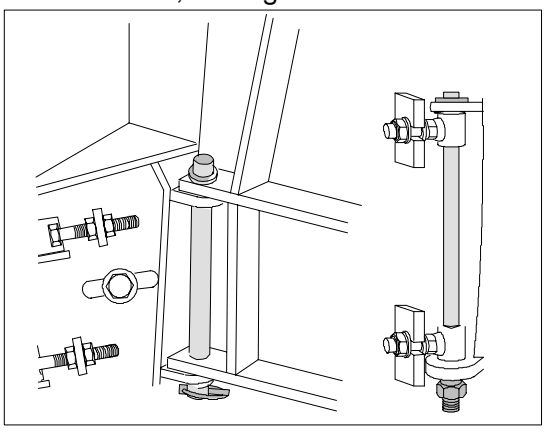


Fig 5.Installing the feed shute.

- When you work with the chipper, it must be mounted on a 3–point hitch. The chipper can tip over if not mounted.
- Check that the PTO shaft length is correct. If the PTO shaft supplied with the chipper cannot be used, contact your local dealer. For instructions on shortening the PTO shaft, see Section 10.1.
- Check that the PTO shaft covers are in place and that the retaining chain for the shield is attached.

10.2.CUTTING THE PTO SHAFT TO THE CORRECT LENGTH

CAUTION!

If the PTO shaft is too long, Damage might be caused to the bearings of the chipper or to the PTO of the tractor. If the PTO shaft is too long it must be cut. Both PTO halves must be shortened by equal amounts.

Cardan shaft recommendation:
Bondioli & Pavesi A6 + (RA1 overrunning clutch). Walterscheid W2400 + (F3 overrunning clutch). An overriding clutch must be used if the tractor has a PTO-brake (for example Ford).

- Turn the tractor off. Lower the chipper on a flat surface.
- Mount the chipper on the three point hitch of the tractor.
- With the chipper resting on the ground, see that the splined shafts of the tractor and chipper are horizontal.
- Connect one shaft half to the chipper's PTO and the other half at the tractor's PTO. Lay the other PTO half on its side so that the end of the shaft is one inch from the PTO-end of the chipper. Mark lengths required. The tubes must be shortened so that they cannot reach the bottom when the chipper is lifted or lowered. Cut the plastic shield. See fig.6.-7.

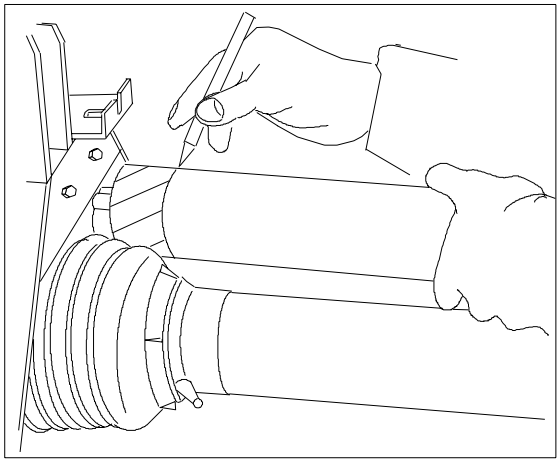


Fig 6.

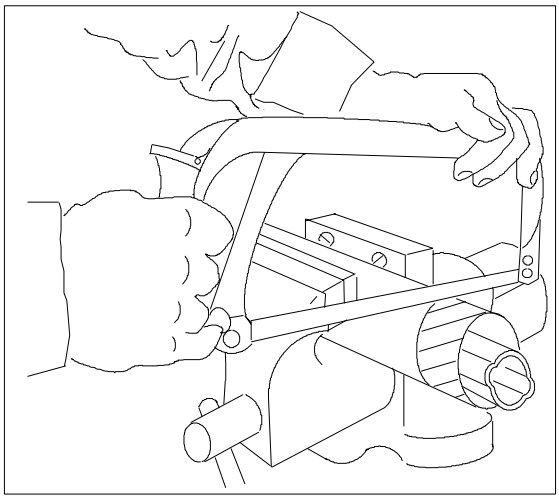


Fig 7.

- Cut a piece from profile tube which is as long as the piece you cut off from the shield. Shorten the other PTO shaft by the same length. After cutting file sharp edges. See fig.8.- 9.

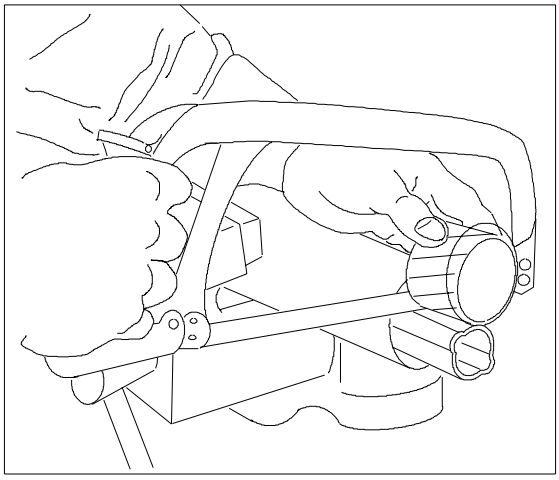


Fig 8.

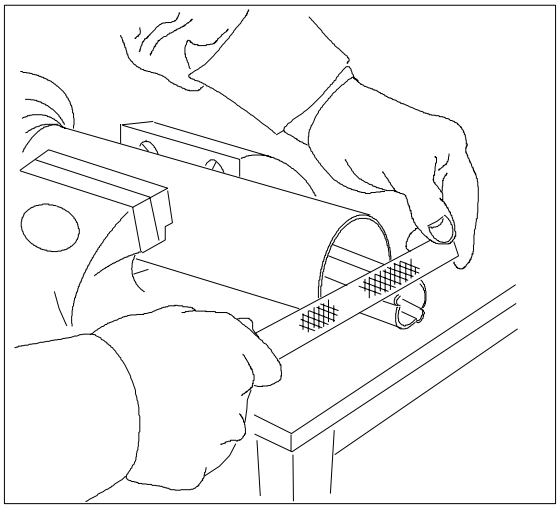


Fig 9.

10.3.INSTALLING THE SCREEN AND BREAKER

The chipper can be equipped with a twig or high-power breaker, or alternatively a screen. The screen cannot be installed in conjunction with a breaker.
The purpose of breakers is to break chips into smaller pieces before the chips enter the discharge pipe.
The screen is used for chipping plastics. The screen prevents production of excessively large plastic chips by keeping them from entering the discharge pipe.

- The breakers or screen is attached inside the cover with three M14 bolts (1) and M14 NordLock lock washers (2). Since the bolts loosen in vibration, they must be tightened after the first hour of operation and again after the first day of operation.
  The two lowermost fastening bolts are secured by inserting an iron wire (3) through the holes in the bolt heads. The ends of the iron wire are twisted with pliers.

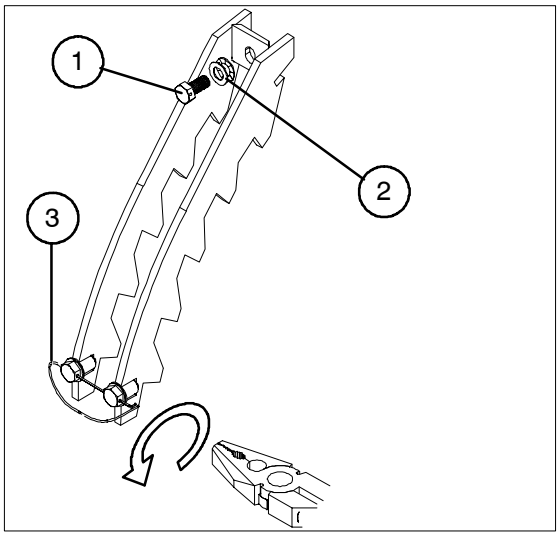


Fig. 10.Securing the fastening bolts with iron wire.

CAUTION!

The screen may only be used for screening thin plastic pieces.
The screen must be removed before chipping other material!

CAUTION! The screen and breakers increase the power demand and may decrease chipper output.

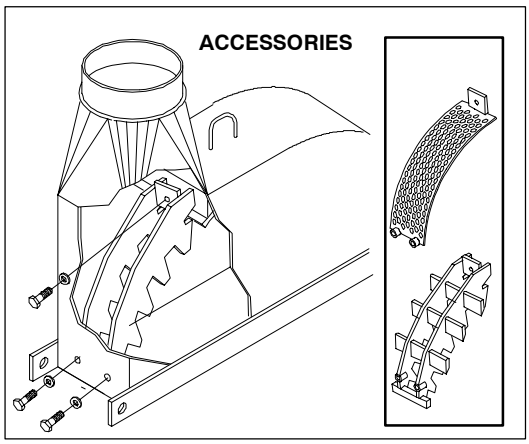


Fig. 11.Installing the screen, twig breaker, and high-power breaker

11.OPERATING THE CHIPPER

11.1.INSPECTIONS PRIOR TO OPERATION

- Park the chipper on level, hard ground.
- Stop the tractor's engine and ensure that the chipper is fully stopped before carrying out the inspections.
- Check that the disk rotates freely by turning the shaft, and ensure that there are no foreign objects inside the chipper.
- Ensure that all protective devices are intact and in place. Removal of the covers is prohibited.
- Direct the discharge pipe so that flying chips do not pose a risk to the operator or anyone else.

11.2.STARTING THE CHIPPER

- Start the chipper at low tractor engine speed and increase the speed slowly to the required chipping speed (540/1,000 rpm).
- The chipper is now ready for chipping.

11.3.STOPPING A TRACTOR – DRIVEN CHIPPER

- Slow the tractor engine speed to idle before disengaging the PTO. This is especially important with tractors featuring a PTO brake (e.g., Ford). Turn the PTO control lever slowly to the OFF position.

11.4.STOPPING A HYDRAULIC MO TOR DRIVEN CHIPPER

- IMPORTANT! When the chipper is driven by the HD100, it is extremely important to slow the driving engine speed to idle before disconnecting the hydraulics, **to prevent cavitation**.

Never disconnect the hydraulics from high rpm. This will cause a risk of cavitation and may damage the hydraulic motor.
Check that no sounds indicating cavitation can be heard from the hydraulic motor.

After stopping the chipper, wait for all movement to stop. The disk continues rotating like a flywheel after the PTO is disengaged.

11.5.CHIPPING

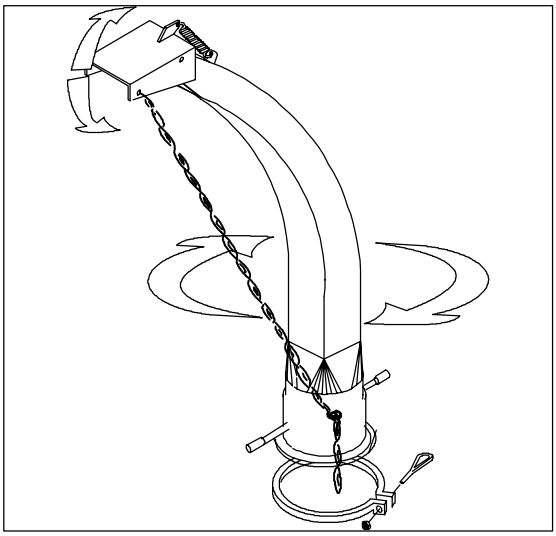
- Before feeding in the material to be chipped, ensure that the wood is free from nails, stones, etc.
- Feed the wood from a standing position on the left side of the feeder.
- Push the wood inside the feed chute until chipping starts. Let go of the wood as soon as the self–feeding starts.
- If you are using a hydraulic feeder, refer to the separate chipping instructions in the feeder manual.

Do not use the chipper in temperatures below –20°C. This is to avoid damage due to brittleness – especially in the knives – caused by the cold. Avoid chipping wood that is frozen solid, as self–feeding is reduced in this case.

ROTATING KNIVES!
Knives can cause cutting injury.
Do reach inside the feed chute with hands or feet.

FIRE HAZARD!
Always keep adequate fire–fighting equipment on hand when using the chipper. Check the outside temperature of the chipper regularly. If the chipper heats up abnormally, stop the chipper and determine the cause of the overheating.
Check the temperature of bearings regularly.
Pay special attention to careful maintenance, and keep the chipper free from dust.
If the chipper starts smoking, pour water down the feed chute.

11.6.ADJUSTING THE DISCHARGE PIPE AND LID



Kuva 12. Dicharge pipe and lid movements.

- Open the band tightening bolt. Turn the pipe in the desired direction. Tighten the bolt.
- Adjust the lid by changing the chain length.

Never direct the discharge pipe or lid towards the feeding area or drive machine.

12.STORAGE

- Ensure that the chipper is on solid ground and that it cannot tip over.
- If the chipper is to be stored for a long period, lubricate the knives with, for example, petroleum jelly.
- Ensure that the water drainage holes in the lower chamber are unobstructed.

13.PERIODIC MAINTENANCE

WARNING!

Always disengage the PTO and stop the tractor and chipper fully before maintenance or repair work.

Ensure that the disk is fully stopped before inserting anything inside the feed chute.

Lock the disk before maintenance or repairs.

Park the chipper on hard, level ground to avoid it falling over.

Wear protective gloves when handling knives or anvils.

13.1. LUBRICATING THE BEARINGS

- The bearings are lubricated at the factory, and a similar lubricant should be used for subsequent lubrication (Shell Alvania Grease R 3. or Kendall L427). An excessive amount of grease causes overheating and impairs lubrication.
- Lubricate the bearings every 200 working hours or at least once a year.
- Lubricate the bearings with ball bearing grease weekly when the chipper is in use. Otherwise, lubricate at least once a year. See Fig. 13.

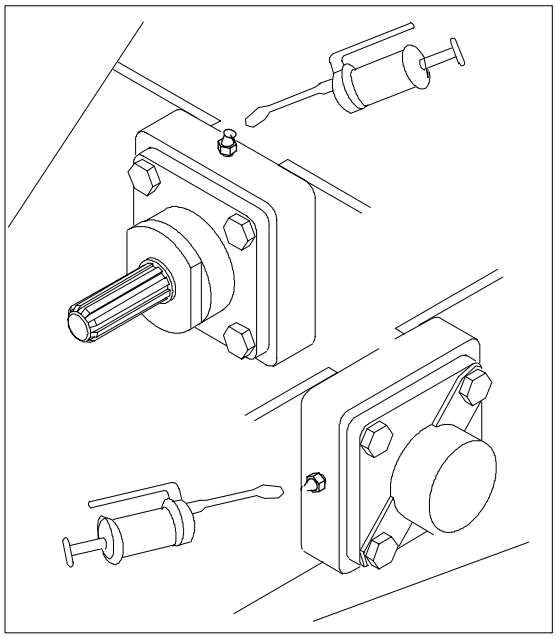


Fig. 13.Lubricating the bearings.

13.2. LUBRICATING THE PTO SHAFT

- Lubricate the PTO shaft prior to operation and regularly, as shown in Fig. 14..
- Lubricate the inner surface of the PTO shaft, accessed via the outer profile tube.
- Lubricate the shield tubes in wintertime to prevent them from freezing and sticking.

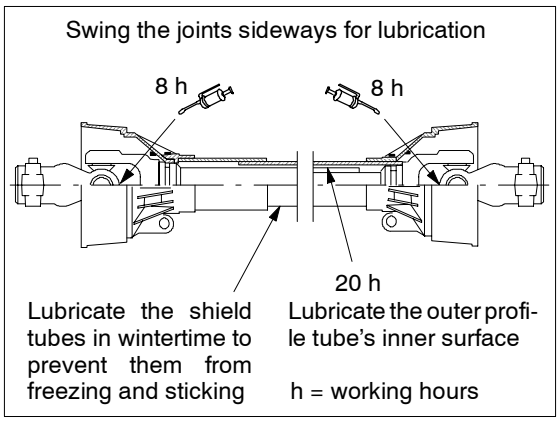


Fig. 14.Lubrication points and intervals for the PTO shaft

13.3. PERIODIC INSPECTIONS

- With new machines, check the mounting bolts for tightness after the first operating hour, tightening them if necessary. Tightening torques are shown in Table 2.
- Check the mounting bolts for tightness once a week.
- The knife–to–anvil clearance is adjusted to the specified values. For instructions on adjusting the clearance, see Section 14.8.

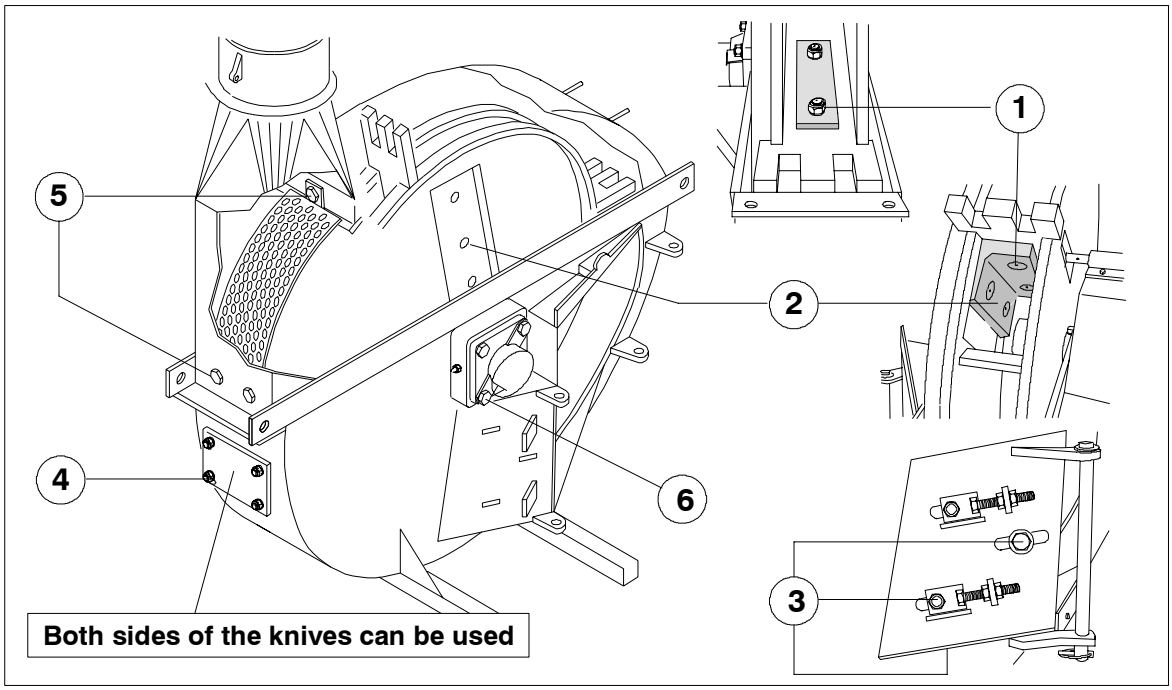


Fig. 15.Checklist for tightening

Item	Width across flats	Tightening torque, Foot pounds
1 Knife bracket fastening bolts	30 mm, 1 3/16"	190
2 Knife fastening bolts	19 mm, 3/4"	50
3 Anvil fastening bolts	24 mm, 1 5/16"	144
4 Breaker blade fastening bolts	19 mm, 3/4"	58
5 Mounting of the breakers and screen	22 mm, 7/8"	92
6 Bearing fastening bolts	24 mm, 1 5/16"	144

Table 2.Tightening torques.

14.KNIFE AND ANVIL MAINTENANCE

Read the safety instructions. The disk continues rotating like a flywheel after the PTO is disengaged.

Wear protective gloves when handling knives or anvils.

14.1. OPENING AND REMOVING THE UPPER CHAMBER

- Remove the lock bolt (M6) (1).
- Loosen the hinge bushing nuts (M20) (2) slightly.
- Pull the hinge pin (3) out.
- Turn the upper chamber to the side.
- Lock the disk with the lock bolt See Fig. 17.
- Remove the feeder or turn it to the side.

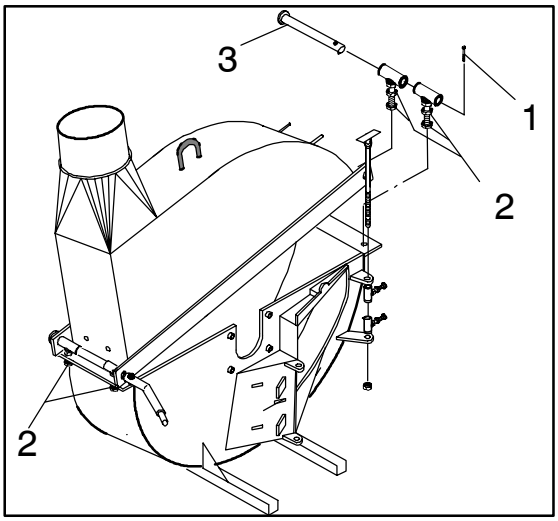


Fig. 16.Turning the upper chamber

14.2. REMOVING THE KNIVES FROM THE KNIFE BRACKETS

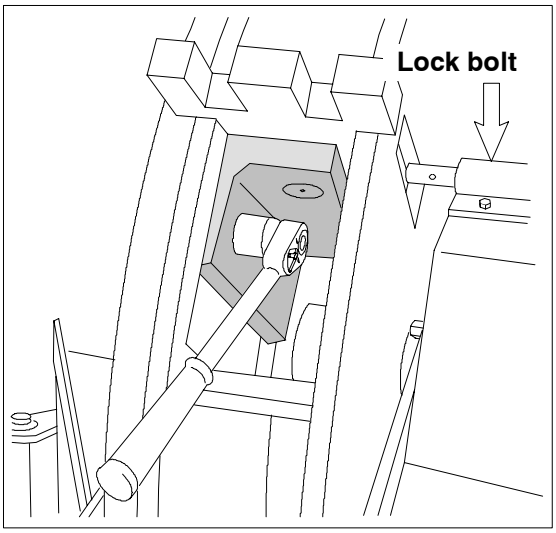


Fig. 17.Locking the disk and removing the lock nuts.

1. Remove the knife lock nuts (M12). Fig. 17.
2. Remove the knife fastening bolts (M12) with a 10 mm Allen wrench. Turn the wrench in such a way that your hands would not hit the knife if the wrench should slip. Fig. 18.

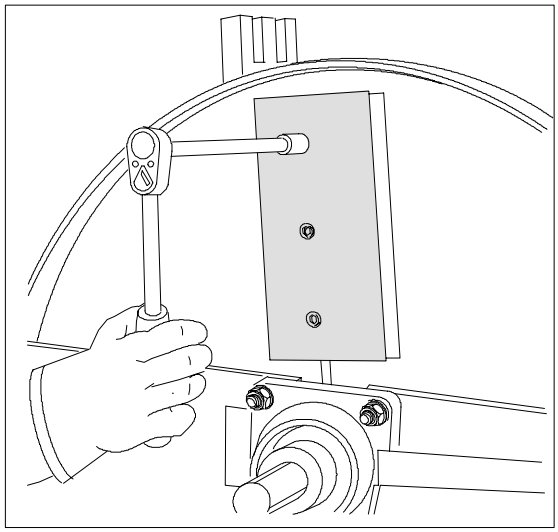


Fig. 18.Removing the knife fastening bolts

14.3. SHARPENING THE KNIVES

CAUTION!

Sharpen all knives equally. This ensures disk balance.

Wear protective gloves when handling knives or anvils.

Avoid heating the knife during sharpening.

The knives need sharpening when:

- The self–feeding of wood has decreased;
- The power demand has increased;
- The chip surface is rough.

Normally, the knives can be sharpened several times without actually being removed (with, e.g., a sharpening stone or belt grinder).

More thorough conditioning is carried out with a surface grinder, with the knives removed.

The new knives are sharpened to a concave shape, R=200. The sharpening angle is 30° and hone angle is 45° . The hone angle prevents the edge from breaking. Fig. 19.

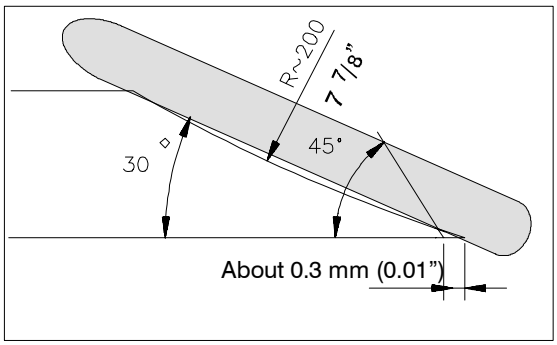


Fig. 19.The profile of a concave knife

It is recommended that the knives be sharpened to a concave shape. If this is not possible, the knife is sharpened to a flat profile. Fig. 20.

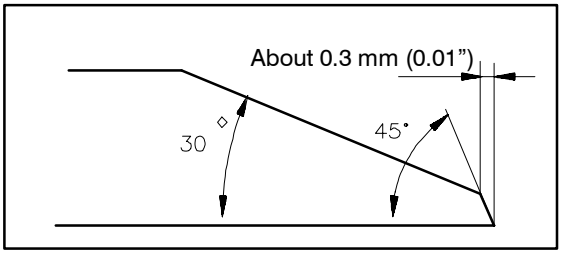


Fig. 20.A knife with a flat profile

The hone angle is ground to a 45° angle with two to three longitudinal strokes, using a level sharpening stone.
Burrs are removed from the knife fastening bolt side, grinding with the surface.
Fig. 21.

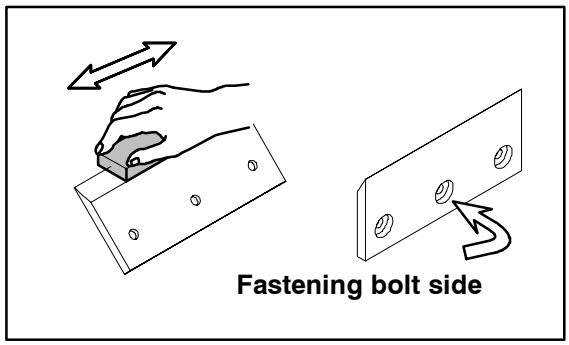


Fig. 21.Final grinding of the knife.

14.4. REMOVING THE ANVILS

The chipper features both a vertical and horizontal anvil. To remove the anvils, open the fastening bolts (A) and (B) (M16). The horizontal anvil fastening bolt (B) is located below the feed opening. Fig. 22.

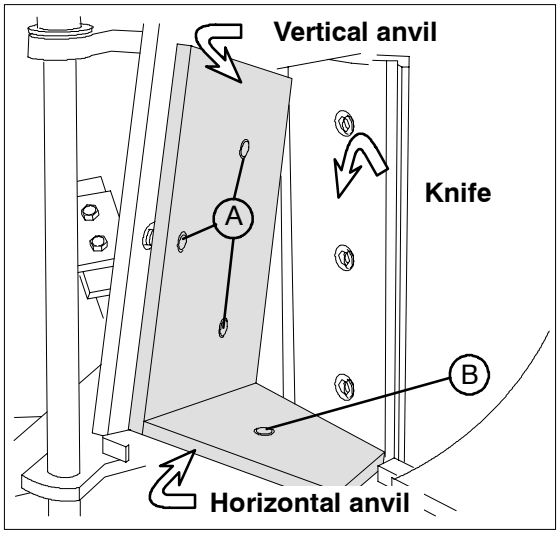


Fig. 22.Anvil fastening bolts.

14.5. SHARPENING THE ANVILS

If you notice wear or rounding of the inner edge of the vertical anvil, sharpen the anvil so that the original angle is retained. Fig. 23.

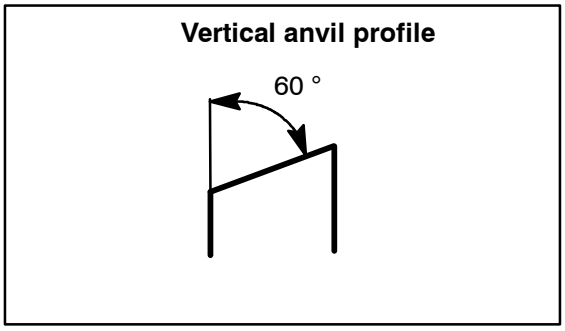


Fig. 23.Vertical anvil profile.

14.6. INSTALLING THE KNIVES AND ANVILS

- Check the condition of the fastening bolts and nuts.
- Install the knives and anvils and tighten the fastening bolts to the torques specified in Table 2..
- Adjust the knife–to–anvil clearance. For more information on adjusting the knife–to–anvil clearance, see Section 14.8.

14.7. ADJUSTING AND CHECKING THE KNIFE–TO–ANVIL CLEARANCE

The need for adjusting the anvils is determined by the amount the knives are sharpened. Always check and, if necessary, adjust the clearance between knives and anvils:

- After a heavy sharpening;
- If the knives were removed – for example, due to sharpening;
- If new knives are replaced;
- If chip length is adjusted.

Check the clearance with a feeler gauge.

- Turn the disk until the knife edge is aligned with the vertical anvil.
- Measure the knife–to–anvil clearance; adjust if necessary.

1. Loosen the vertical anvil fastening bolts (M16) (A).
2. Adjust the clearance between the knife and vertical anvil to 1.5 mm with the adjusting nuts (M12) (C).

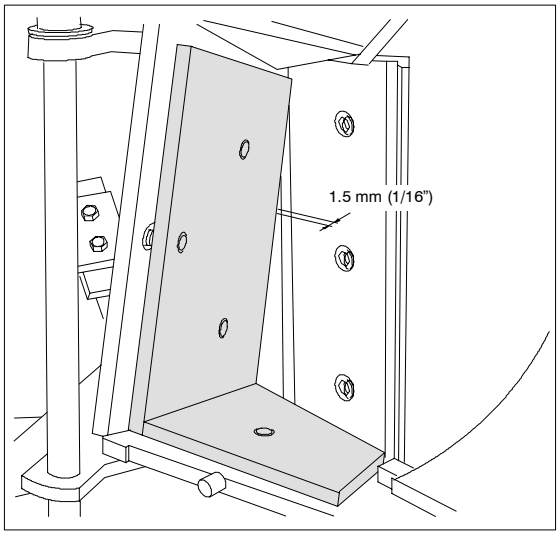


Fig. 24.Clearance

3. Tighten the adjusting bolt nuts (M12). Tighten the anvil fastening bolts to 200 Nm (20 kpm).
4. Check that the knife-to-anvil clearance is the same for all knives.

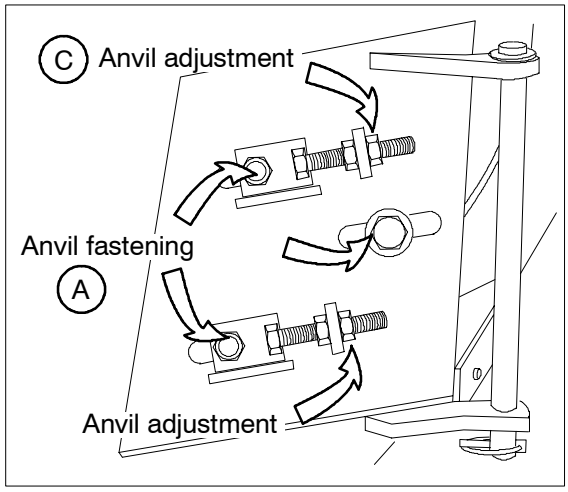


Fig. 25.Anvil fastening and adjustment.

14.8. ADJUSTING THE CHIP LENGTH

The chip length is determined by the distance between the knife and disk (Fig. 26.).The chip length is adjusted by moving the knife brackets. The chip length can be adjusted to between 7 and 25 mm. Fig. 27.

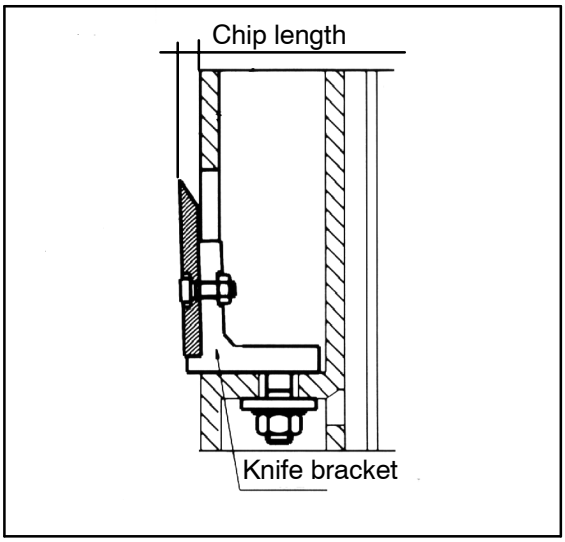


Fig. 26.Chip length.

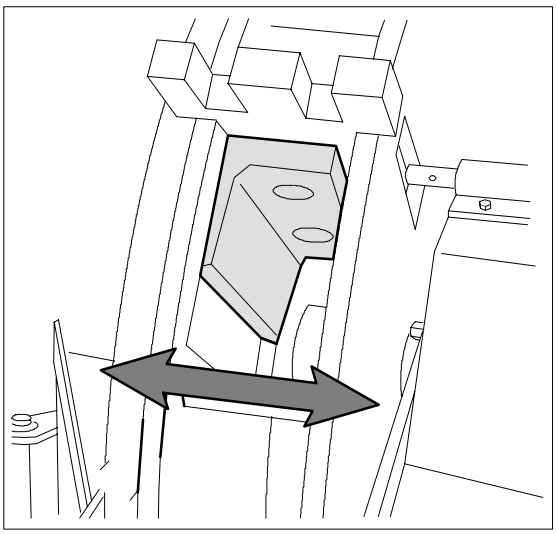


Fig. 27.Knife bracket adjustment direction.

1. See Section 14.1. for further instructions.
2. To increase the chip length, loosen the anvil fastening bolts (A) and (B) (M16) first.
3. Move the anvils further from the disk.
4. Loosen the knife bracket fastening nuts (M20). See Fig. 28. Adjust so that the distance from both ends of the knife to the edge of the disk is equal. If necessary, tap the knife bracket with wood or a rubber hammer. See Fig. 29.

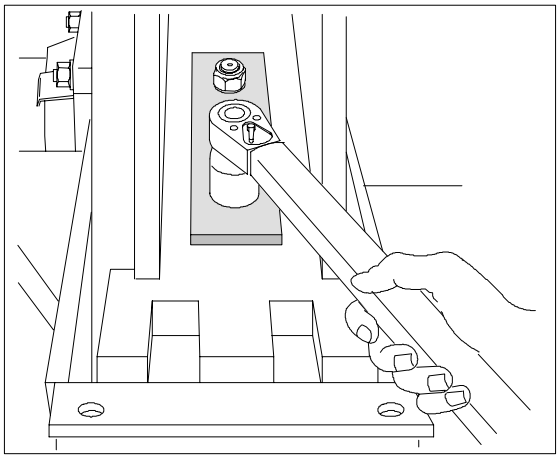


Fig. 28.Loosening the knife bracket nuts.

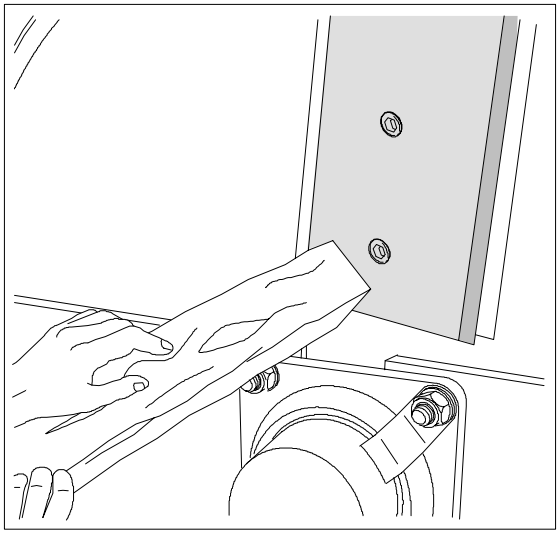


Fig. 29.Moving the knife bracket.

5. Tighten one knife bracket nut and check the other end of the knife by measuring.

The remaining knives are adjusted as follows:

1. Measure the knife-to-chamber distances for both ends of the adjusted knife. The knife-to-chamber distance is the distance between the edge of the knife and the frame chamber - see Fig. 30.

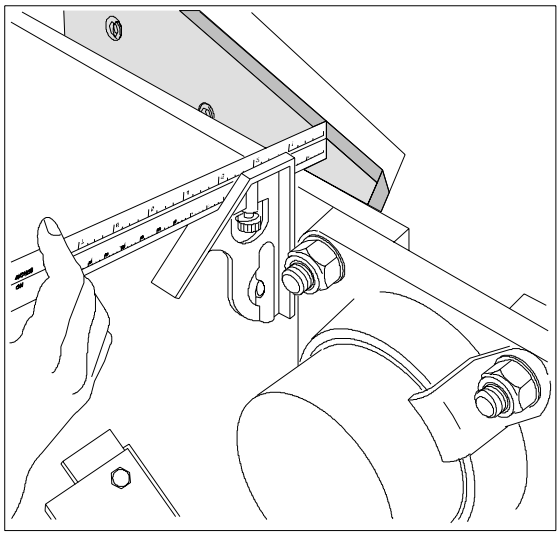


Fig. 30.Knife-to-chamber distance.

2. The remaining knives are adjusted so that the knife-to-chamber distances of all knives are equal.
3. Tighten the knife bracket fastening bolts to 250 Nm (25 kpm).
4. Check all knives by measuring.
5. Check the knife-to-anvil clearances according to Section 14.7.

15.REPLACING THE SPLINED SHAFT

1. Remove the upper chamber.
2. Remove the bearings (see Chapter 13). Welding damages the bearings.
3. Lift the disk up using a hoist.
4. Grind an 15 mm-deep groove about 2 mm from the edge of the shaft. See Fig. 31.
5. Heat the joint area, if necessary.
6. Move the splined shaft so that it comes loose and can be removed.
7. Clean the shaft hole and install the new shaft as shown in Fig. 31..
8. Make a fillet weld up to the surface level with three runs. Use ESAB 68.81, OK 48, OK Femax 38.65, or equivalent filler.

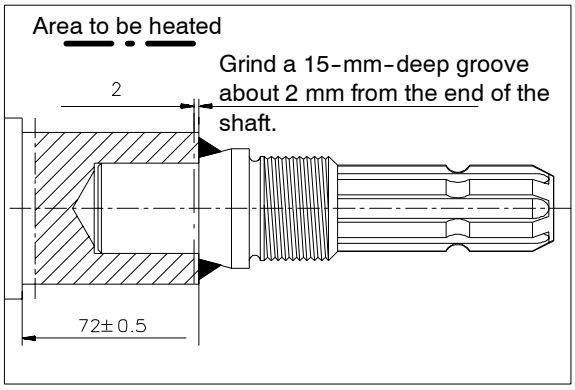


Fig. 31.Replacing the splined shaft.

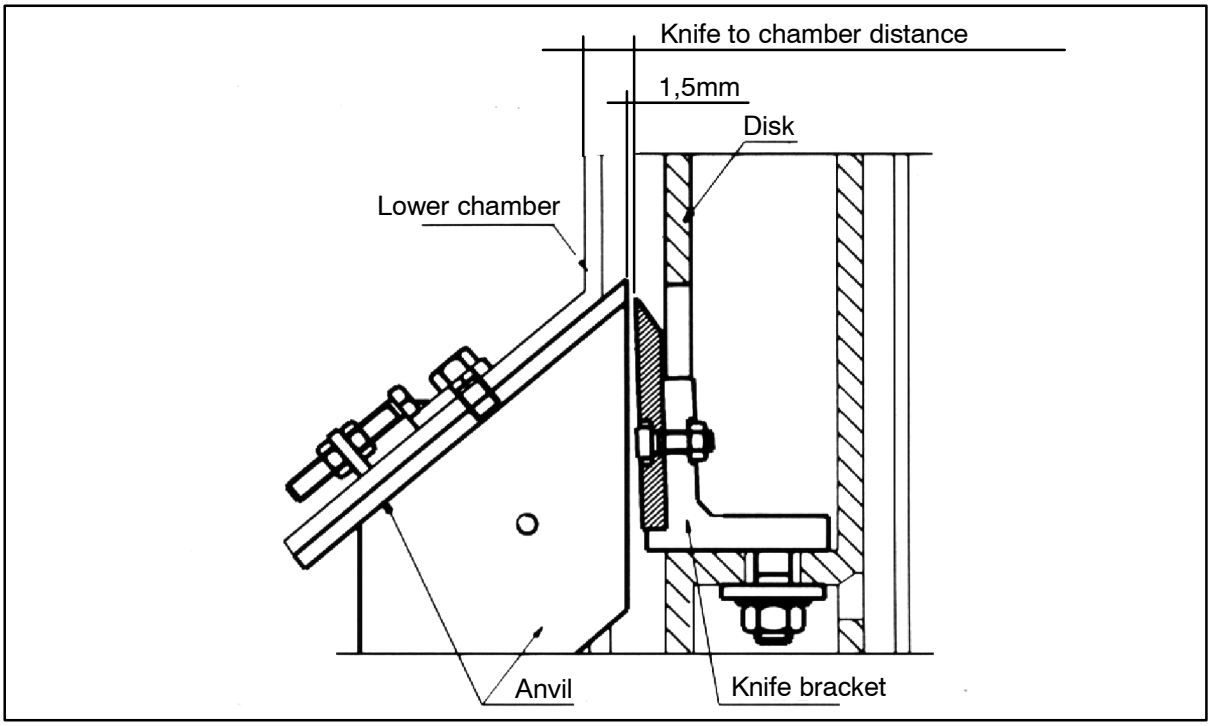


Fig. 32.The knife-to- anvil clearances.

16.INSTALLING THE BEARINGS

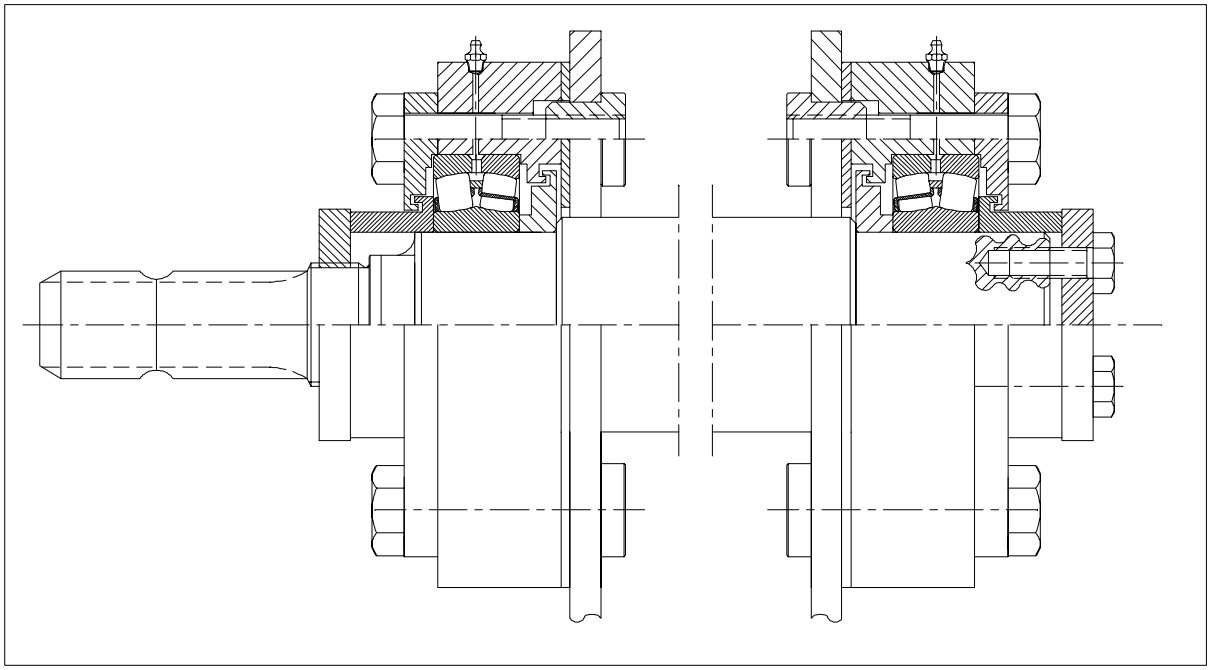
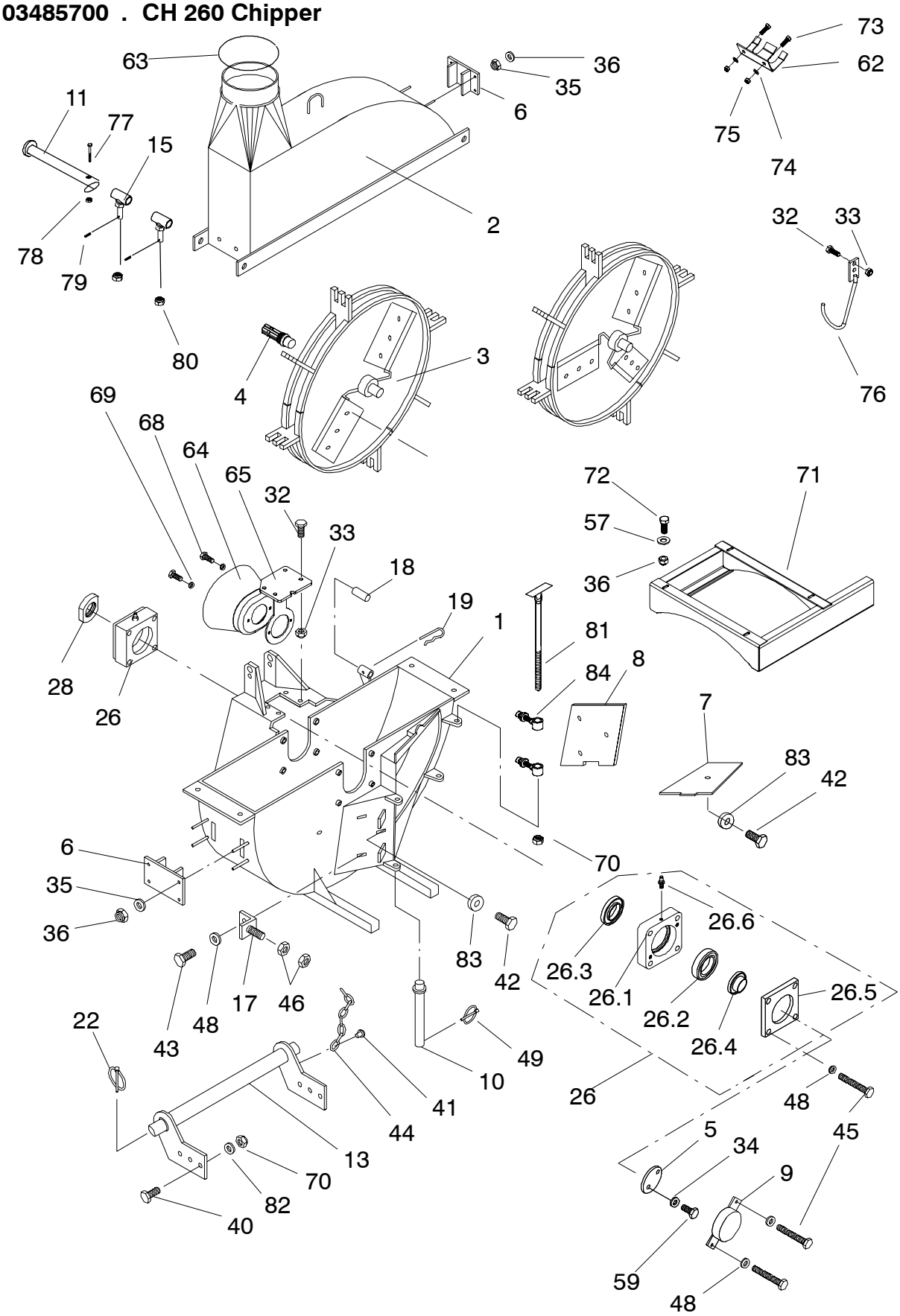


Fig. 33.Installing the bearings.

CH 260 CHIPPER

SPARE PARTS 03485700

03485700 . CH 260 Chipper



CH 260 CHIPPER

SPARE PARTS 03485700

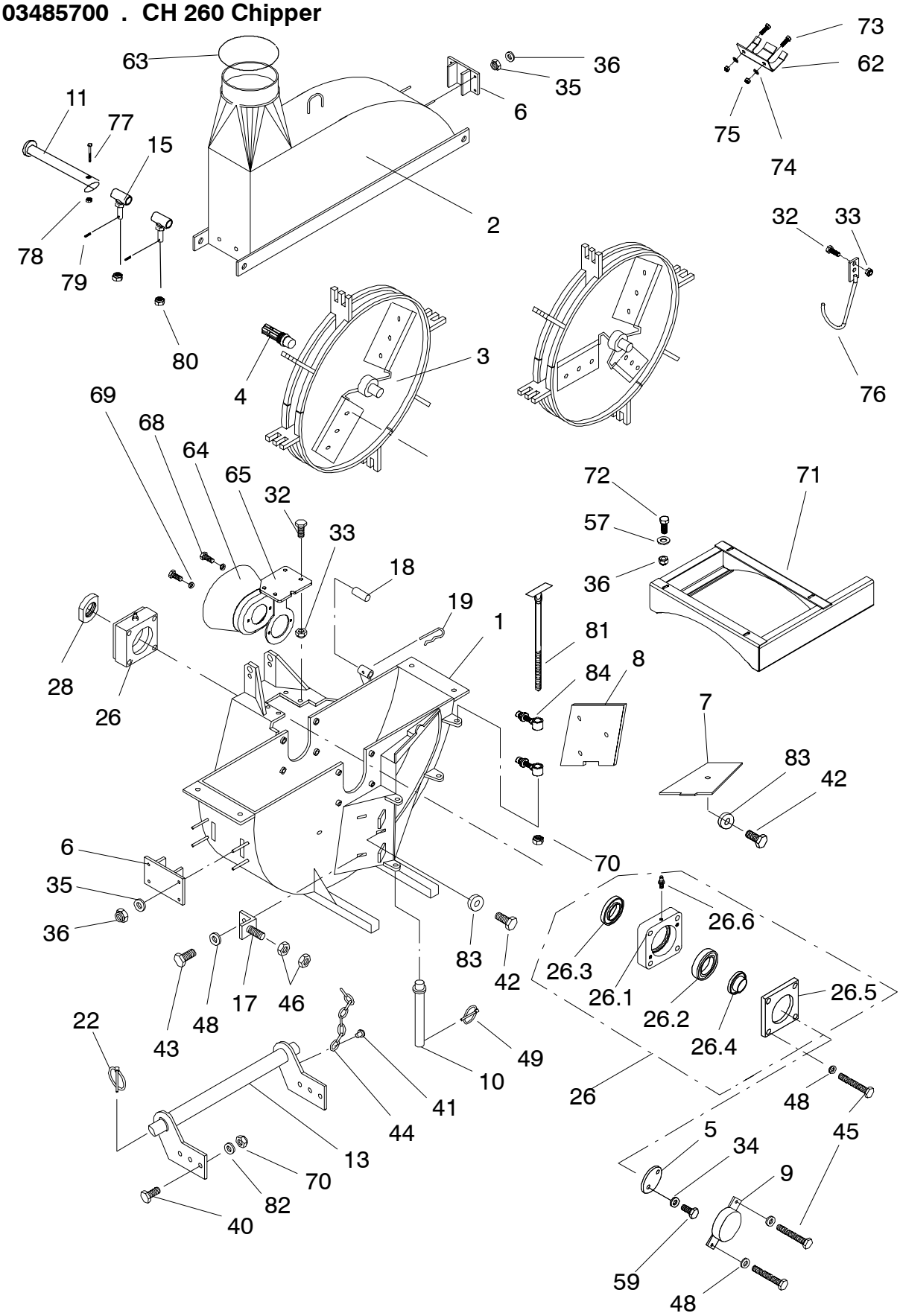
03485700 . CH 260 Chipper

Part	Order no.	Description	Remarks	Qty.
1.	13297010	Lower chamber		1
2.	43297620	Upper chamber		1
3.	33297760	Disk complete, 2–knife	See separate spare parts page	1
	43298410	Disk complete, 3- knife	See separate spare parts page	1
4.	43296730	Splined shaft		
5.	43290758	Flange		1
6.	33296470	Twig blade		2
7.	43297090	Horizontal anvil		1
8.	43297080	Vertical anvil		1
9.	33296290	Shield		1
10.	43290915	Hinge pin		1
11.	43296910	Hinge pin		2
12.	–			
13.	43298050	Draw bar		1
14.	–			
15.	43482430	Hinge screw		4
16.	–			
17.	43291103	Anvil adjuster		2
18.	43291129	Lock tenon		1
19.	52842143	Split pin	5x105	1
20.	–			
21.	–			
22.	52842150	Ring pin	10x45	2
23.	–			
24.	–			
25.	–			
26.	03296370	Bearing, complete		1
26.1.	33296020	Bearing housing		1
26.2.	54523212	Bearing		1
26.3.	43296060	Labyrinth ring		1
26.4.	43296120	Labyrinth sleeve		1
26.5.	43296070	Cover		1
26.6.	52401015	Grease nipple	1/8”	1
27.	–			
28.	43296360	Axle nut		1
29.	–			
30.	–			

CH 260 CHIPPER

SPARE PARTS 03485700

03485700 . CH 260 Chipper



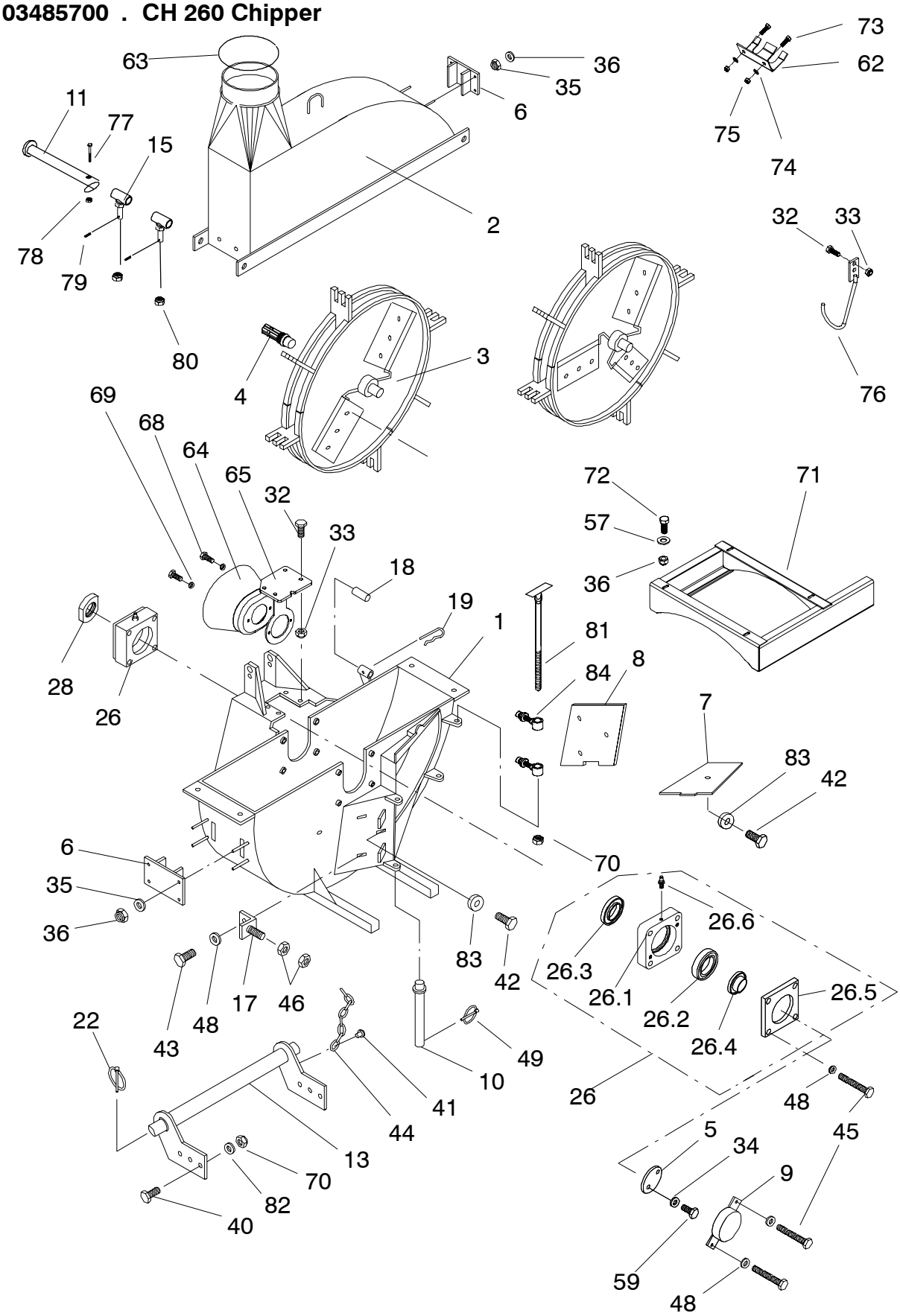
03485700 . CH 260 Chipper

Part	Order no.	Description	Remarks	Qty.
31.	–			
32.	52060233	Screw	M10x30 DIN933	5
33.	52117108	Lock nut	M10 DIN985	5
34.	52211042	Washer	M10 DIN127	4
35.	52211059	Washer	M12 DIN127	8
36.	52117124	Lock nut	M12 DIN985	12
37.	–			
38.	–			
39.	–			
40.	52062221	Screw	M20x50 DIN933	4
41.	52832045	Rivet	4,8x19	2
42.	52062098	Screw	M16x25 DIN933	2
43.	52062106	Screw	M16x30 DIN933	2
44.	03291143	Chain	250	2
45.	52062148	Screw	M16x70 DIN931	8
46.	52110053	Nut	M12 DIN934	4
47.				
48.	52200078	Washer	M16 DIN126	10
49.	52842168	Ring pin	6.5x40	1
50.	–			
51.	–			
52.	–			
53.	–			
54.	–			
55.	–			
56.	–			
57.	41215682	Washer	10	4
58.	–			
59.	52060258	Screw	M10x40 DIN933	2
60.	–			
61.				
62.	43482290	Hose holder		1
63.	43298060	O–ring		1
64.	43511780	Cover		1
65.	43299400	Bracket		1

CH 260 CHIPPER

SPARE PARTS 03485700

03485700 . CH 260 Chipper



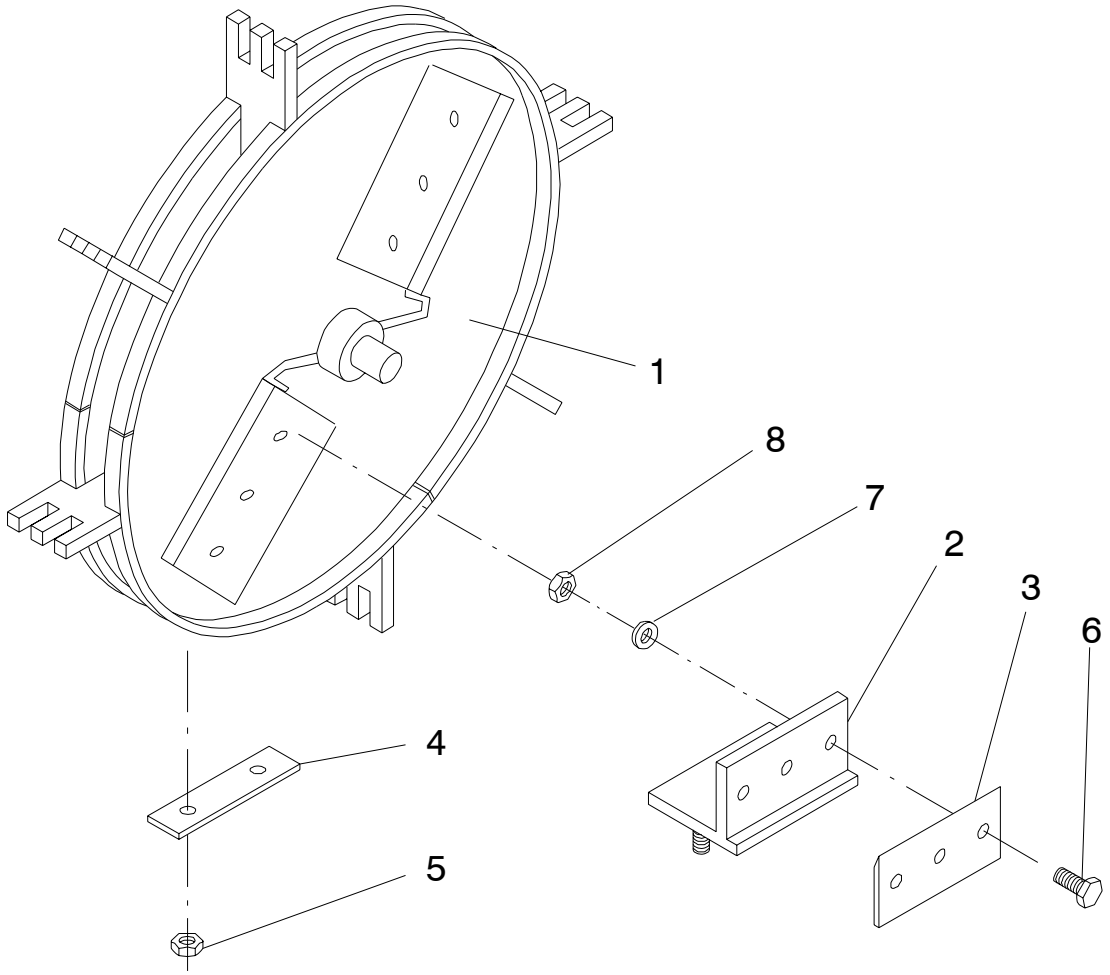
CH 260 CHIPPER

SPARE PARTS 03485700

03485700 . CH 260 Chipper

Part	Order no.	Description	Remarks	Qty.
66.	–			
67.	–			
68.	52060126	Screw	M8x20 DIN933	2
69.	52200334	Washer	M8 DIN440	2
70.	52117207	Lock nut	M20 DIN985	5
71.	33485040	Frame		1
72.	52062023	Screw	M12x30 DIN933	4
73.	52060175	Screw	M8x25 DIN933	2
74.	52200037	Washer	M8 DIN126	2
75.	52117082	Lock nut	M8 DIN985	2
76.	43130376	Hook		1
77.	52060050	Screw	M6x40 DIN933	2
78.	52117066	Lock nut	M6 DIN985	2
79.	52840279	Cotter	4x24 DIN1481	4
80.	52117165	Lock nut	M16 DIN985	4
81.	43482400	Tenon		1
82.	52200086	Washer	M20 DIN126	4
83.	52211075	Washer	M16 DIN127	2
84.	43482440	Lock screw		2

03298110 . Disk, 2–knife, complete

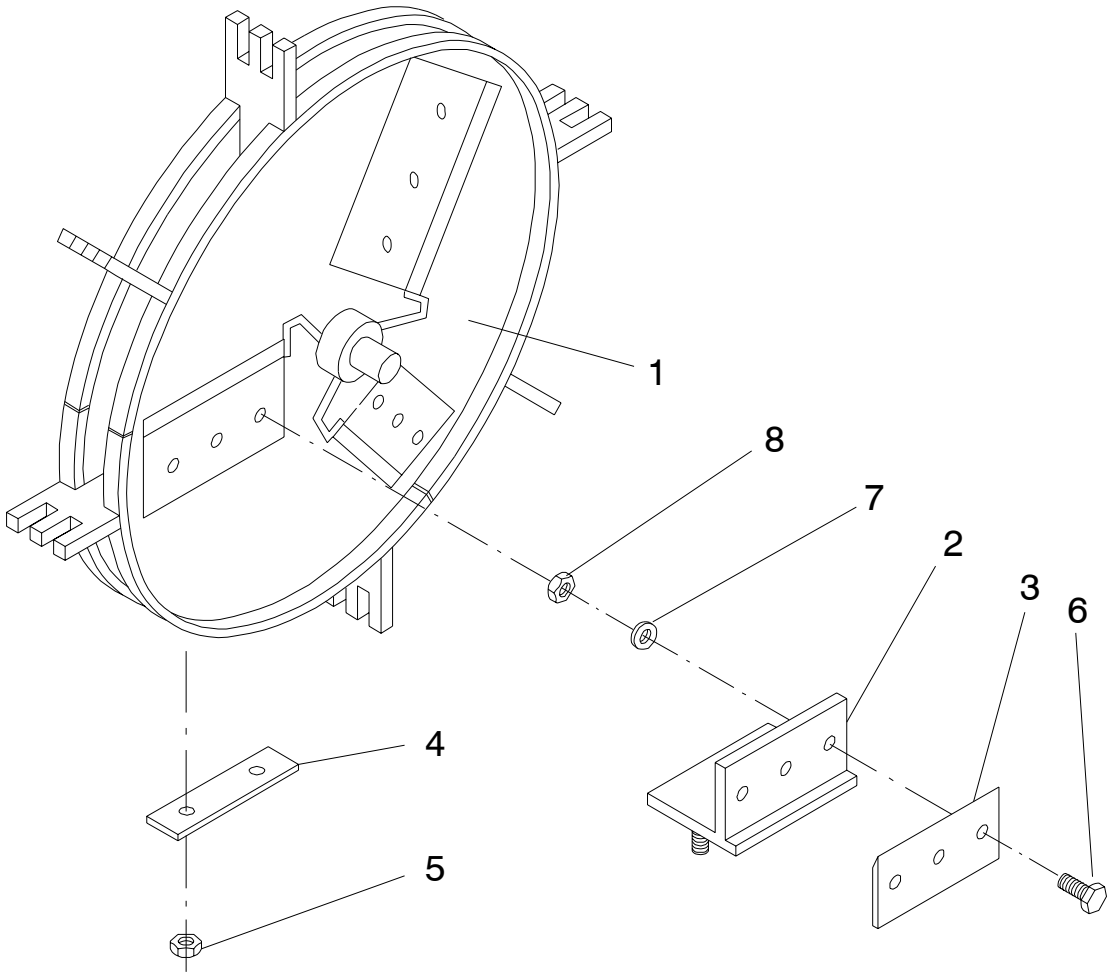


Part	Order no.	Description	Remarks	Qty.
1.	33297760	Disk		1
2.	23293905	Knife bracket		2
3.	43298410	Knife		2
4.	43290741	Support plate		2
5.	52117215	Lock nut	M20x1,5 DIN985 10.9	4
6.	52001526	Screw	M12x30 DIN7984 10.9	6
7.	52211059	Washer	M12 DIN127	6
8.	52111051	Nut	M12 DIN936	6

CH 260 CHIPPER

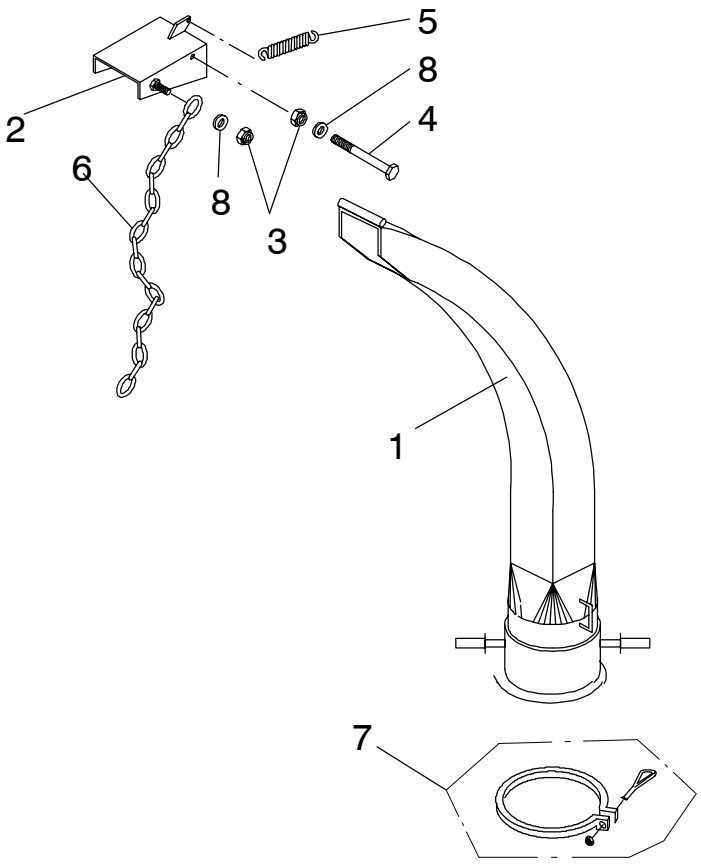
SPARE PARTS 03485700

03297130 . Disk, 3–knife, complete



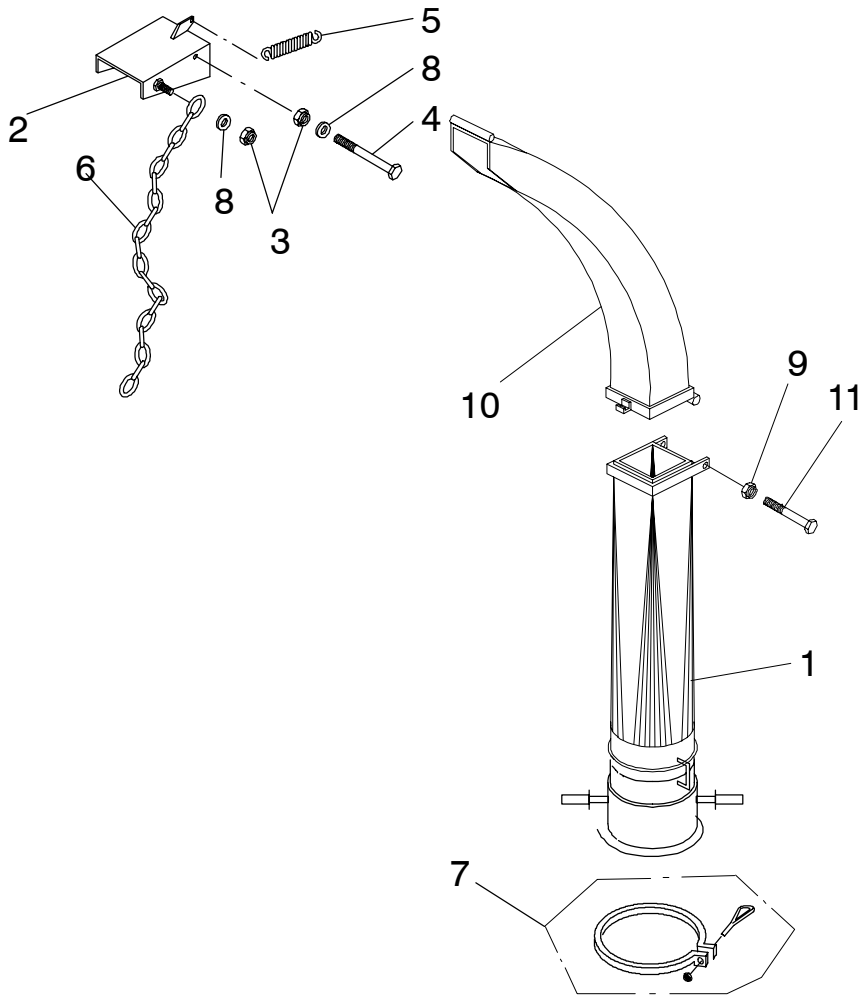
Part	Order no.	Description	Remarks	Qty.
1.	13297210	Disk		1
2.	23293905	Knife bracket		3
3.	43298410	Knife		3
4.	43290741	Support plate		3
5.	52117215	Lock nut	M20x1,5 DIN985 10.9	6
6.	52001526	Screw	M12x30 DIN7984 10.9	9
7.	52211059	Washer	M12 DIN127	9
8.	52111051	Nut	M12 DIN936	9

03296450 . Short discharge pipe, complete



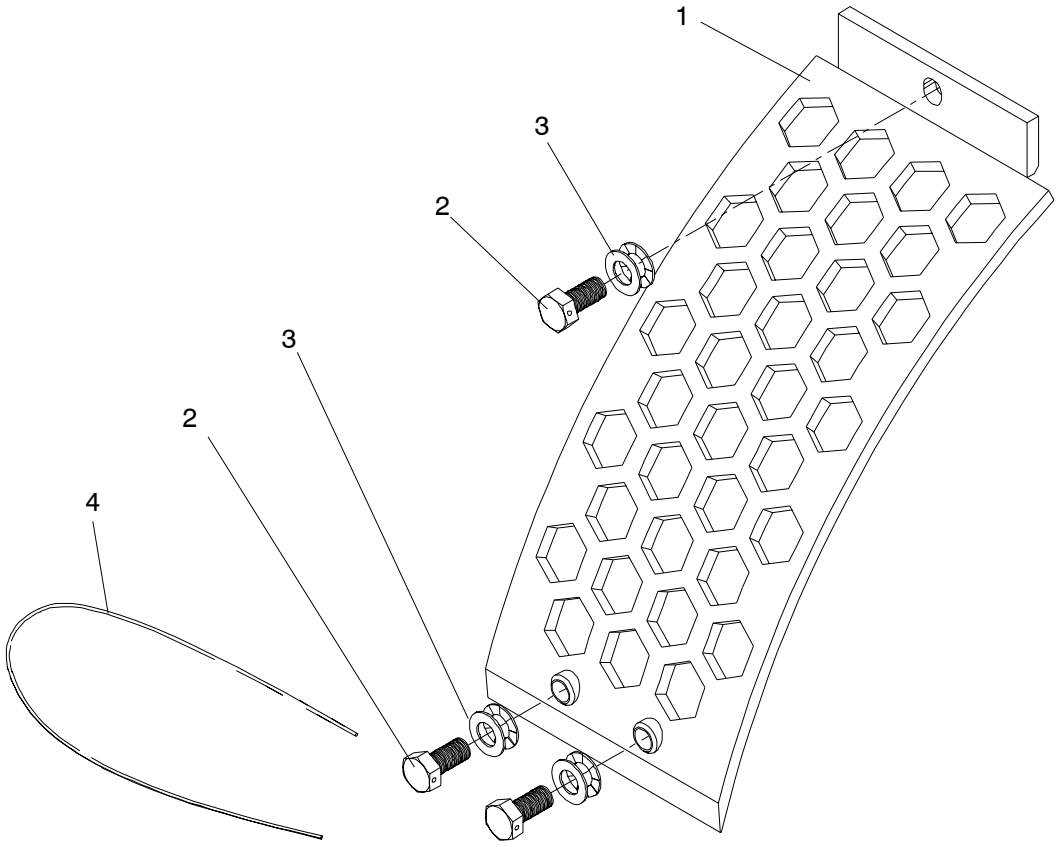
Part	Order no.	Description	Remarks	Qty.
1.	23296430	Discharge pipe		1
2.	43314509	Lid		1
3.	52117108	Lock nut		2
4.	43314533	Hinge screw		1
5.	94612082	Spring	DU26 DL2,6 L106	1
6.	03314556	Chain	L1600	1
7.	43482320	Lock band, complete		1
8.	52200045	Washer	M10 DIN126	2

03297370 . Long discharge pipe, complete



Part	Order no.	Description	Remarks	Qty.
1.	33297360	Vertical pipe		1
2.	43314509	Lid		1
3.	52117108	Lock nut		2
4.	43314533	Hinge screw		1
5.	94612082	Spring	DU26 DL2,6 L106	1
6.	03314556	Chain	L1600	1
7.	43482320	Lock band, complete		1
8.	52200045	Washer	M10 DIN126	2
9.	52117124	Nut	M12 DIN985	1
10.	33312513	Curved pipe		1
11.	43310796	Hinge screw	M12	1

03297630 . Plastic sheddering screen, complete

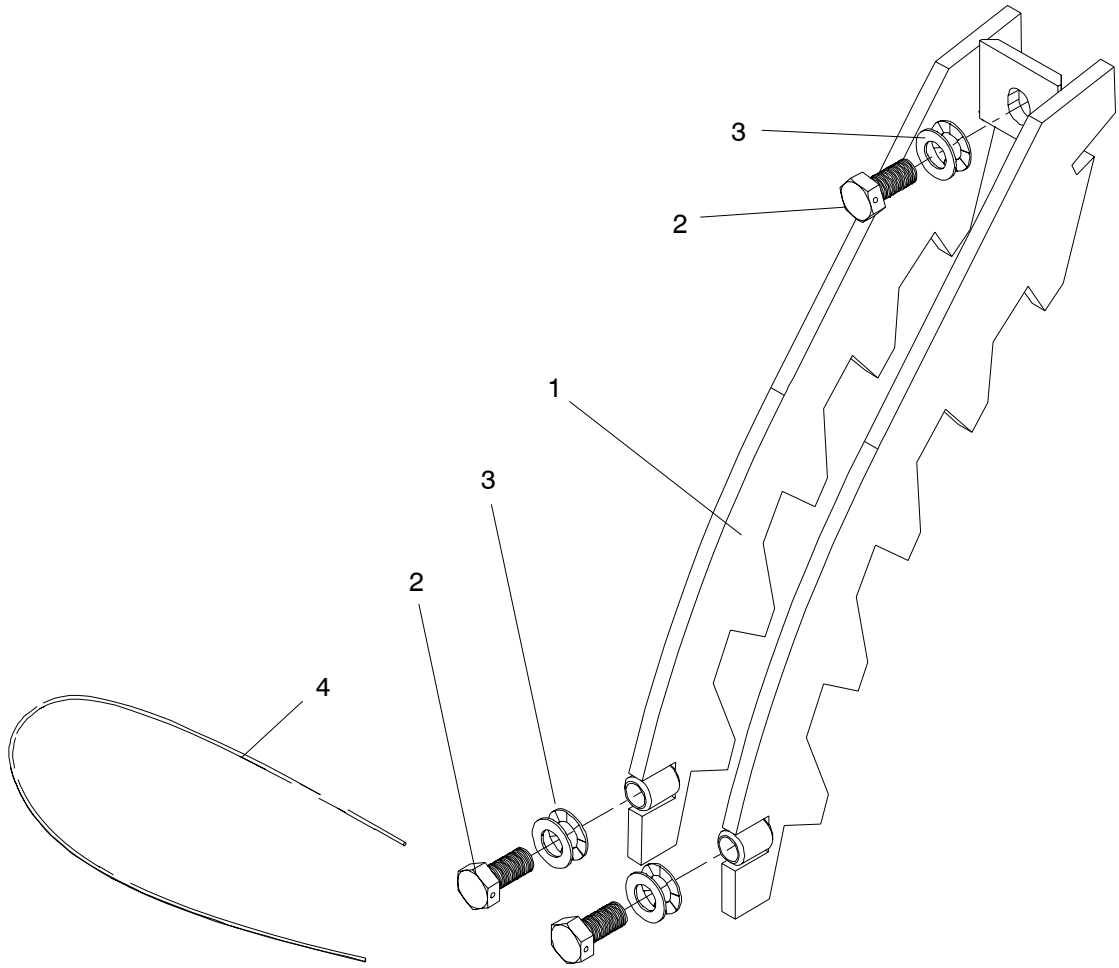


Part	Order no.	Description	Remarks	Qty.
1.	43297640	Plastic shredding screen		1
2.	43293580	Screw	M14 x 30	3
3.	52214277	washer	M14 Nord-lock	3
4.	54929609	Iron wire	∅2–240	1

CH 260 CHIPPER

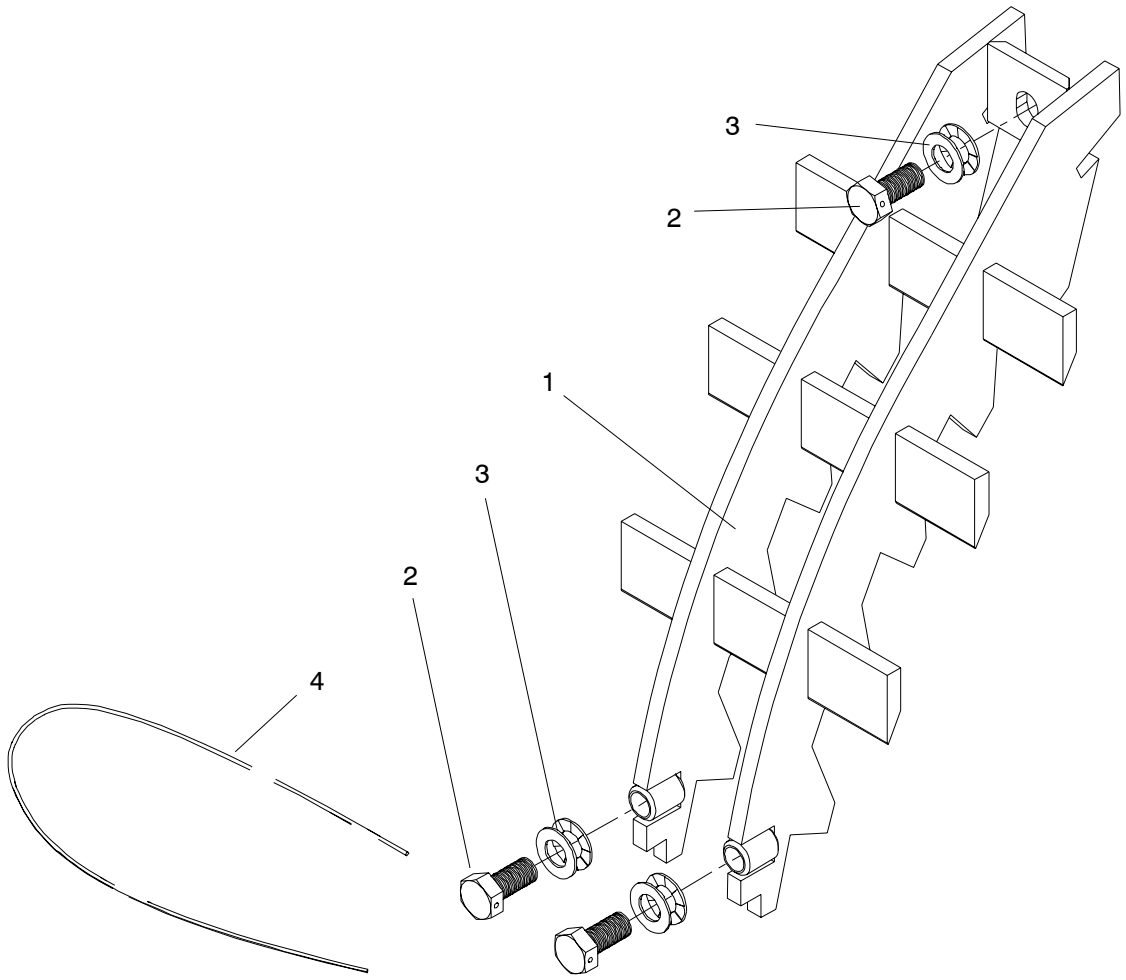
SPARE PARTS 03485700

03297650 . Twig crusher, complete



Part	Order no.	Description	Remarks	Qty.
1.	43297560	Twig crusher		1
2.	43293580	Screw with hole	M14x30	3
3.	52214277	Washer	M14 Nord-lock	3
4.	54929609	Iron wire	∅2-100	1

03298150 . Cross braker for slab, complete

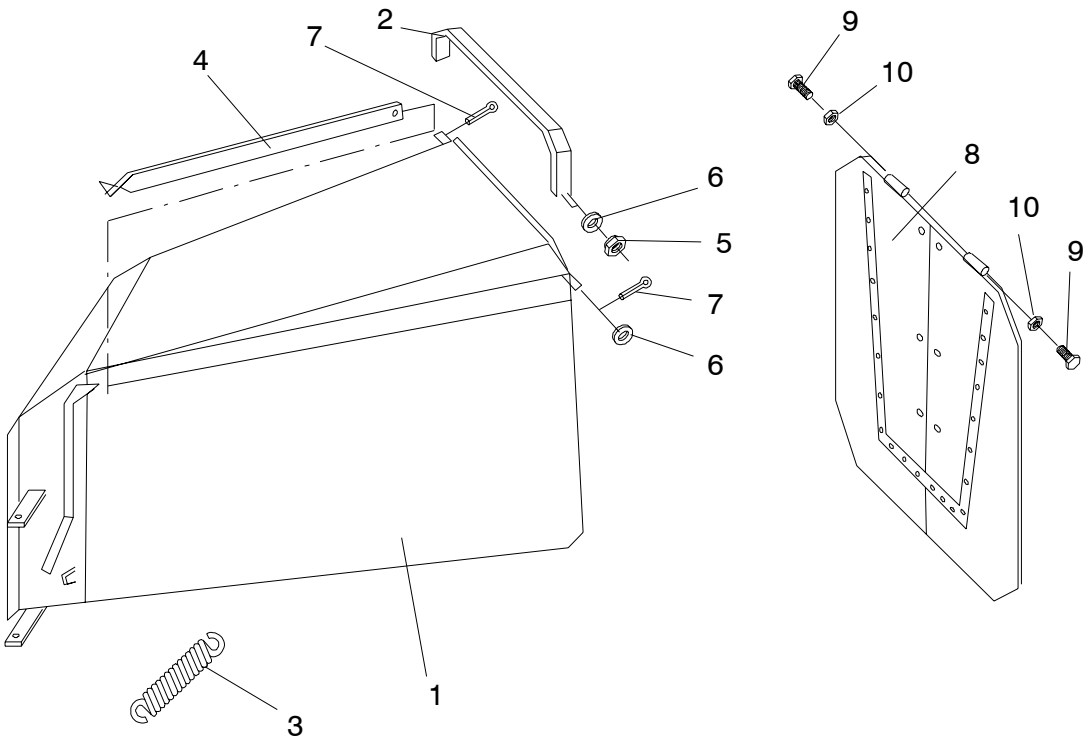


Part	Order no.	Description	Remarks	Qty.
1.	43298140	Cross braker for slap		1
2.	43293580	Screw with hole	M14x30	3
3.	52214277	Washer	M14 Nord-lock	3
4.	54929609	Iron wire	∅2-100	1

CH 260 CHIPPER

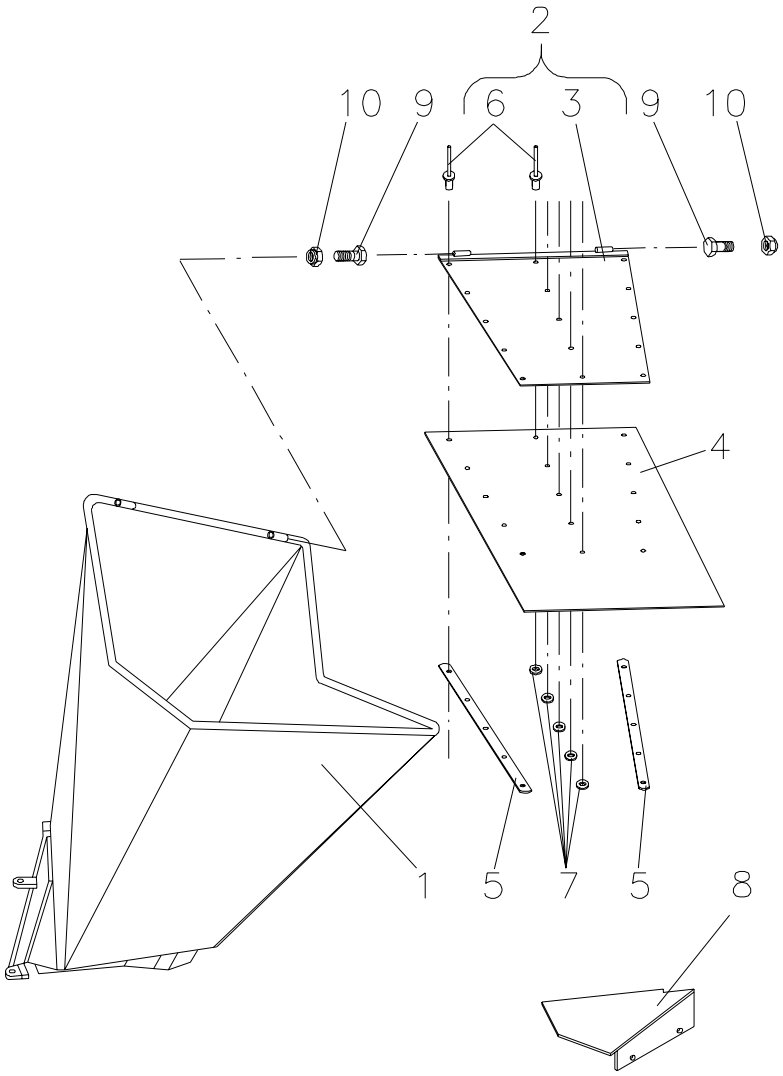
SPARE PARTS 03485700

03297520 . F250 feed chute, complete



Part	Order no.	Description	Remarks	Qty.
1.	03291242	Feed chute		1
2.	33291212	Control handle		1
3.	94613098	Spring		1
4.	43291418	Rod		1
5.	52117108	Nut	M10	1
6.	52200045	Washer	M10	3
7.	52813177	Split pin	∅5 x 30	2
8.	03293255	Lid		1
9.	52060399	Screw	M8 x 80	2
10.	52117082	Nut	M8	2

03295086 . DF250 SH Drop spout, complete



Part	Order no.	Description	Remarks	Qty.
1.	33295098	Drop spout		1
2.	43295286	Lid, complete	incl. parts 3-7	1
3.	43295294	Lid		1
4.	43295377	Flap rubber		1
5.	43294339	Plates		2
6.	52832094	Rivet	4,8x15	15
7.	52200011	Washer	M5 DIN126	5
8.	33297240	Adaptor piece		1
9.	52060399	Bolt	M8x80 DIN931	2
10.	52117082	Locknut	M8 DIN985	2

LIMITED WARRANTY

Valby products are warranted to be free from defects in materials and wormanship for 12 months from the date of purchace, or one month from in–service, whichever is longer. The warranty covers parts replacement only. The free replacement of parts is exclusive. The manufacturer is not liable for any incidental or consequential damages. No labor costs are included.
This warranty does not cover defects resulting from:

– misuse of the product
– inadequate maintenance or
– modifications of the product

The cutting knives are not covered by the warranty

The warranty is effective only, if the lower portion of this page is completed and returned to the manufacturer within 14 days of receipt of the product.

IMPORTANT:

Do not operate your machine without reading the operators manual! If the operators manual was lost, a new manual can be obtained from importer (write address below or call 607–589–6160).

NORTHEAST IMPLEMENT CORP.

476 Halsey valley Road

SPENCER, NEW YORK 14883

FARMI Forest
Ahmolantie 6
FIN–74 510 PELTOSALMI
FINLAND

Date of delivery: ____ /____ 20____

Dealer: _____

Dealer's address: _____

Dealer's tel: _____

Product: _____

Serial number: _____

Return to the manufacturer

Date of delivery: ____ /____ 20____

Dealer: _____

Dealer's address: _____

Dealer's tel: _____

Customer: _____

Customer's address: _____

Customer's tel: _____

Product: _____

Serial number: _____

Notes: _____

_____