



Crimper Bagger

1400 / 2000 S2x2 CB



Operator's Manual

Machine Nr.

Roller Cassette Nr.

Date of Purchase

AIMO KORTTEEN KONEPAJA OY

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EC Declaration of Conformity for Machinery

(Directive 89/392/EEC, Annex II, sub. A; en)

Manufacturer:
Aimo Kortteen Konepaja Oy
Pohjolantie 2
FIN-84100 Ylivieska
Finland

Herewith declares that

Murska 1400 S2X2 / CB

Frame Nr: _____ Cassette Nr: _____

is in conformity with the provisions of the Machine Directive
(Directive 89/392/EEC), as amended, and with national
implementing legislation.

Ylivieska, Finland 11th August 2008

AIMO KORTE
Managing Director

The CE Mark is on the Machine Identification Label.

Warranty

Aimo Kortteen Konepaja Oy warrants its products to be in conformance to written specifications and to be free from defects in workmanship.

The warranty shall not apply to failure or deficiency which has been caused by misuse, neglect, improper assembly, or unauthorised repair or modification.

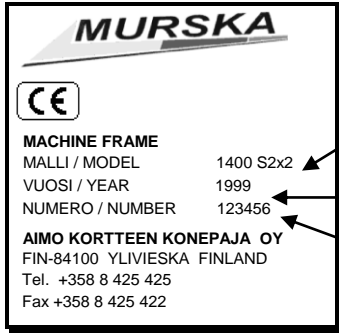
Rapid wearing may occur in the rollers if not correctly adjusted.
Please pay particular attention to adjusting them correctly.

Other conditions according to
ORGALIME S 92

Thanks to continuous product development the manufacturer can introduce improvements to the machine. This does not mean that a machine produced prior to the date of introduction of such improvement, would be modified by the manufacturer free of charge.

Product Identification

Frame Identification Label



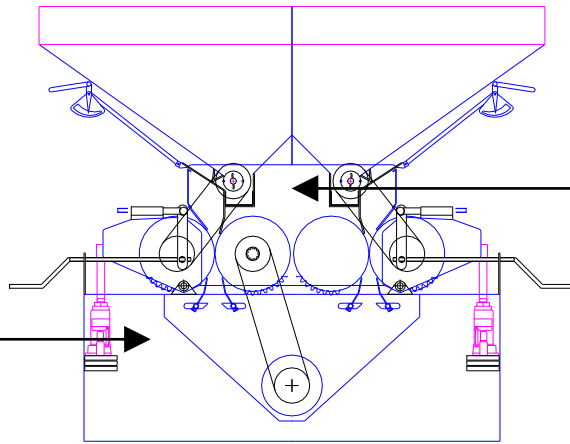
Roller Cassette Identification Label (behind the guard)



Model

Year of manufacture

Serial No.

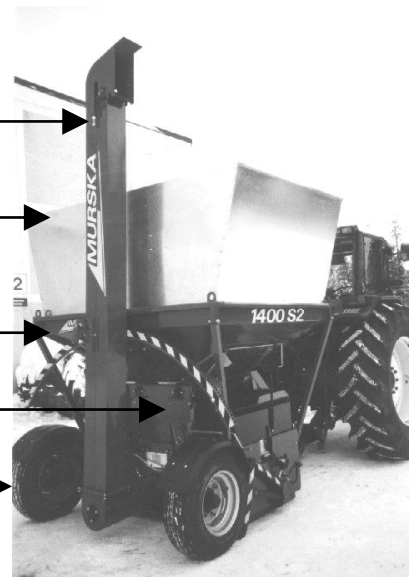


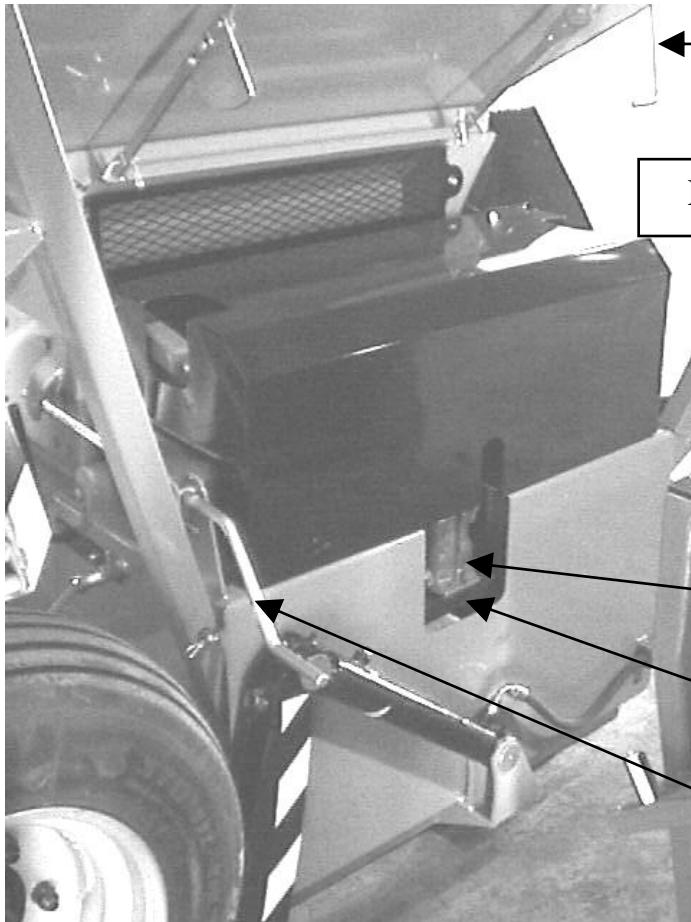
Frame Identification Label

Roller Cassette Identification Label

Controls & Features

- Elevator
- Additional Hopper
- Hopper
- Roller Cassette
- Hydraulic Set of Wheels





Grain Feed Controller Handle

Locking Nut

Spacer Bolt



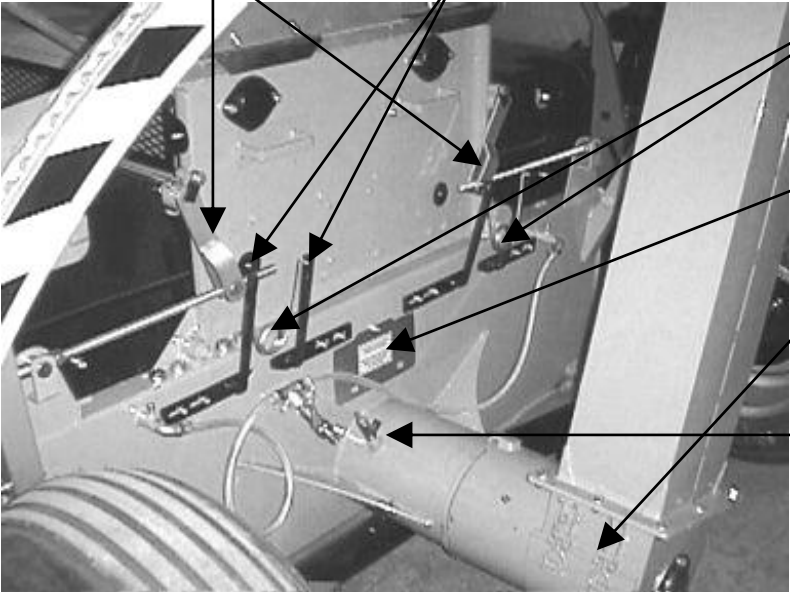
Bottle Jack

Jack Spring

Roller Adjusting Crank

Roller Adjusting Shaft Arms (2)

Scraper Knife Rods (4)



Scraper Knife Springs (2)

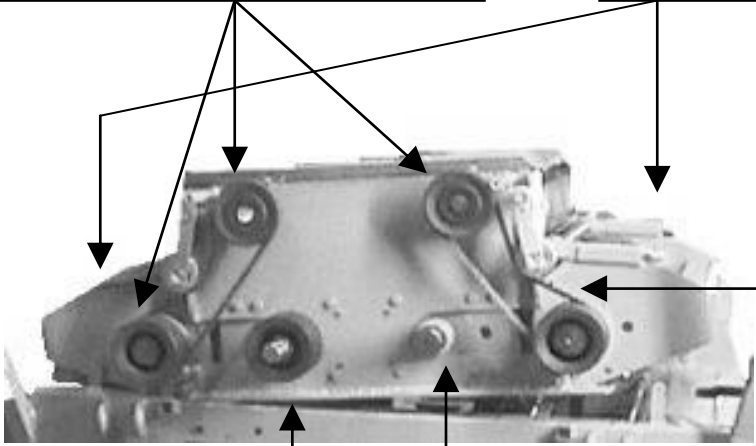
Auger Access Hatch

Elevator Access Hatch

Hose Connector for Liquid Applicator

Taper Lock Drive Pulleys (6)

Adjustable Rollers

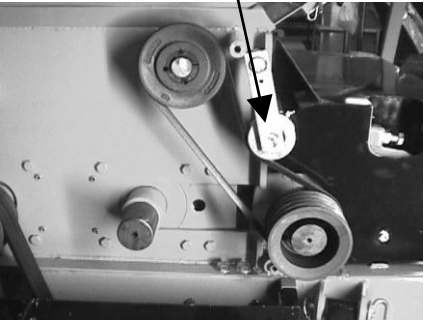
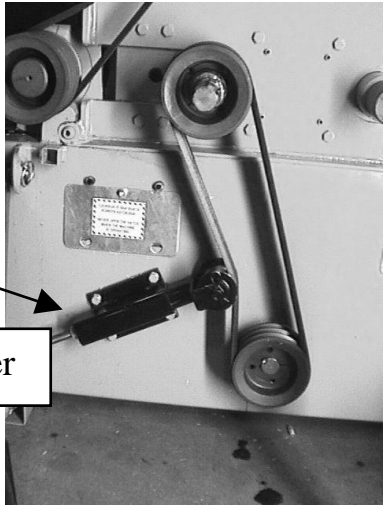


Feeder Drive Belts

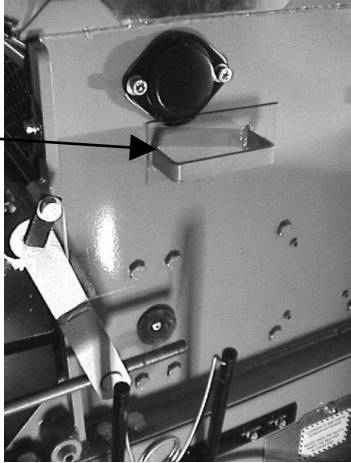
Fixed Rollers

Bottom Auger & Elevator Belt Tensioner

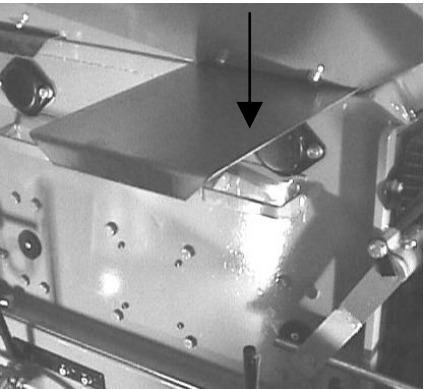
Feeder Belt Tensioner



Magnets & Stone Trap

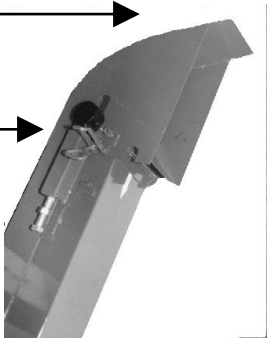


Cut-off Plate Slot



Elevator Hat

Elevator Chain Tensioner



Introduction

Murska Crimper ■ model 1400 S2x2
 ■ model 2000 S2x2

Purpose: The machine can be used to crimp grain for crush ensilage or to crush dry grain.

Made in Finland, EU.

Technical Data	1400 S2x2/CB	2000 S2x2/CB
Capacity maximum	30 tonnes/h	40 tonnes/h
Power demand	75 kW	95 kW
Hopper capacity	1300 (+3500) litres	1500 (+4000) litres
Lifting height of standard elevator	330 cm	330 cm
Length	235 cm	260 cm
Width	235 cm	260 cm
Height without elevator	180 cm	180 cm
Weight	2450 kg	2950 kg
Rotation rate (wet grain)	200 - 300 rpm	200 - 300 rpm
Production rate (maximum)	30 tonnes/h	40 tonnes/h

Rollers

Fluted and spring loaded	+	+
Gear drive	+	+
Width	700 mm	1000 mm
Diameter	300 mm	300 mm
Weight	160 kg each	190 kg each

Equipment (supplemental)

Liquid applicator device	+	+
Tempered rollers	+	+
Dry grain rollers	+	+
Maize rollers	+	+
Elevator extension	1 m and 2 m	1 m and 2 m
Roller resurfacing service at factory	+	+

General Safety



Attention!



Wear eye protection!



High noise level!



Wear protective clothing!



1. While operating, the machine should be kept on a solid base.



2. The machine should not be moved when the grain hopper is full or being filled.



3. All guards must be in place and properly secured when the machine is operating.



4. It is recommended that safety goggles are used whilst operating the machine.



5. The noise level of the machine when operating can be between 98 and 116 dB. Ear muffs of approved type for noise levels above 100 dB must be worn. Any person who comes close to the machine for a period of hours should also wear similar ear muffs.



6. Keep hands, clothing, tools etc. away from the hopper.



7. Do not stand on the PTO shaft or linkage or between the tractor and the machine.



8. Do not allow anyone onto the tractor whilst operating the machine, especially when making adjustments.



9. Maintenance and repairs / adjustments should be carried out when the machine is stationary with the tractor engine stopped and the PTO shaft out of gear.



10. If a liquid applicator is used, full protective clothing should be worn in accordance with the additive manufacturer's instructions, and legislative regulations must be applied.

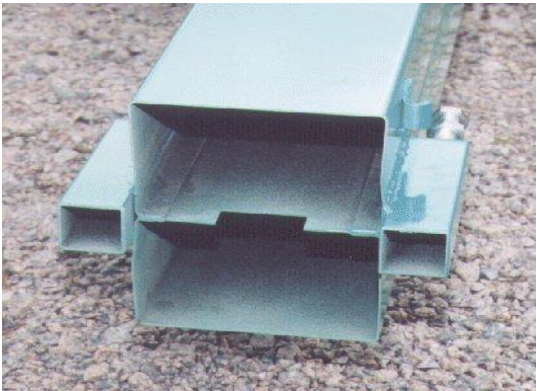


11. Do not operate the machine with roller clearance less than 0.3 mm. A smaller clearance makes the rollers wear sooner and may cause damage to the rollers.

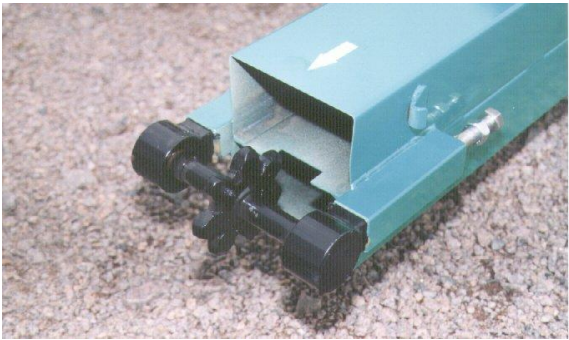
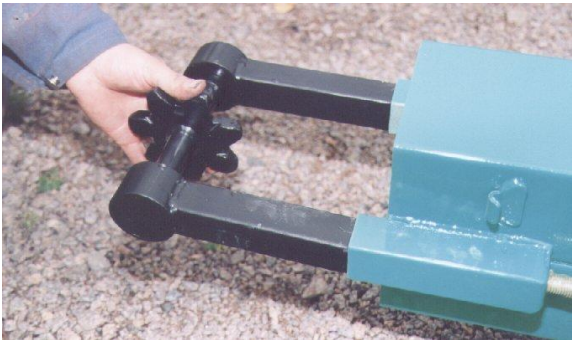
12. A mask should be worn in dusty conditions.

Elevator assembly

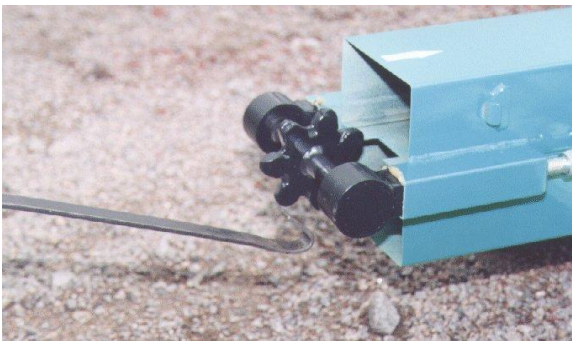
1.



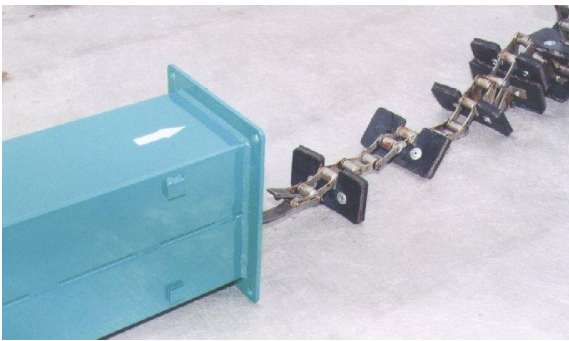
2.



3.

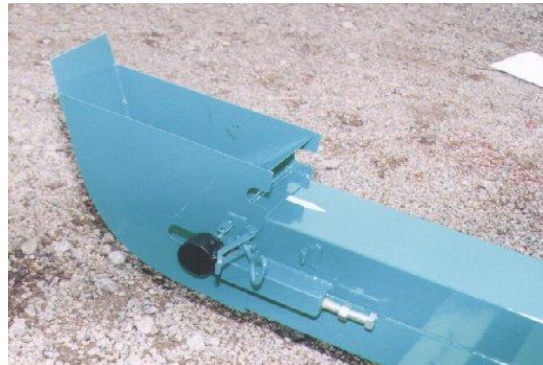
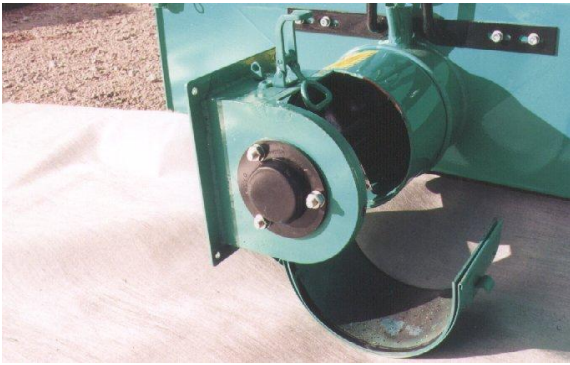


4.

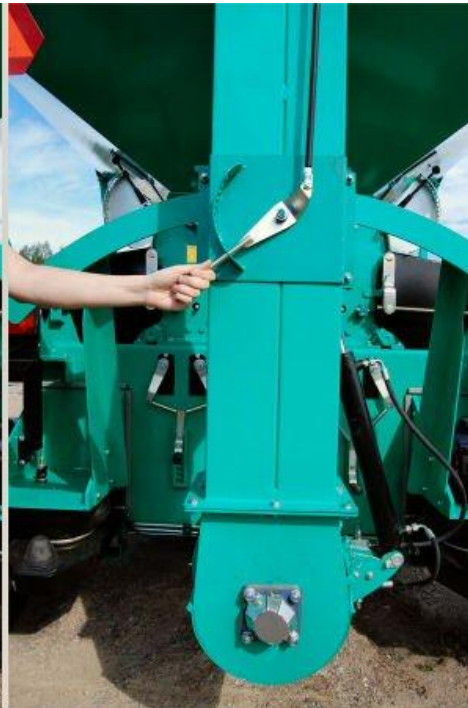


5.

6.



Elevator hat adjustment



Take notice, that the Crimper machine has two pairs of rollers, a pair on each side. All adjusting, maintenance and operating procedures apply for both pairs individually.

Operating Instructions

Recommended Procedures:

1. Check-List

Carry out first before proceeding to any other routines, also once a day when the machine is in daily use, and each time the machine is started after a period of being idle.

2. Roller Adjustment

Proceed to Roller Adjustment after finishing the Check-List. Check Adjustments once a day when the machine in daily use.

3. Starting Up

Proceed to Starting Up after finishing the Check-list and Adjustments.

4. Closing Down

Carry out each time the machine is stopped.

Check-List

Carry out first before proceeding to any other routines, also once a day when the machine is in daily use, and each time the machine is started after a period of being idle.

1. Check all nuts, bolts and Allen screws for correct tightness. Replace or tighten if required.
2. Remove the Auger Access Hatch. Turn Elevator to vertical position and check Elevator Chain tension (sideways movement should be possible). Adjust the tension if required and fit Auger Access Hatch.
3. Check the Feeder Belt tension. Adjust or replace if required.
4. Check Auger / Elevator Belt tension. Adjust or replace if required.
5. Check Force Feeder. Clean and straighten if necessary.
6. Observe the functioning of the hydraulic components.
7. Apply grease to grease nipples.
8. Check and calibrate the liquid applicator for additive output to correspond with the average output of the crimper. The proper dosing is dependent on the preservative used, grain humidity etc.

Roller Adjustment

1. Release Locking Nuts and release all pressure on Spacer Bolts.
2. Adjust Jack Spring to a reasonable pressure by pumping the Bottle Jack 2-3 times (half the maximum pressure).
3. Wind the Roller Adjusting Crank so that the Roller Adjusting Shaft Arm is pointing straight down.
4. Finger tighten Spacer Bolts.
5. Tighten Spacer Bolts 1/3 turn clockwise (or 2 flats).
6. Disengage Scraper Knives by removing the Scraper Knife Spring.
7. Start tractor and engage the PTO at minimum revs.
8. Check and adjust if necessary the Spacer Bolts until silent running is just maintained. Ensure that rollers are parallel (placing a light under the rollers will make it easy to observe the space between the rollers if necessary).
9. Secure Spacer Bolts with Locking Nuts.
10. Engage Scraper Knives.
11. Carry out this adjusting procedure for both pairs of rollers, one side at a time.

Release tension from first adjusted side before adjusting the second, so you can easily hear when rollers are correctly adjusted for silent running.

- If rollers are allowed to touch, excessive wearing will occur which is not covered by the warranty.
- You may now proceed to the Starting Up routine.

Do not operate the machine without all the guards in place and properly secured.

Starting Up

1. Ensure that the **Check-list** has been carried out.
2. Ensure that the **Roller Adjustment** has been carried out.
3. Ensure the Additive Applicator is calibrated and ready. Close Feeder Hatch.
4. Fill up the Hopper.
5. Wind the Roller Adjusting Crank until the Roller Adjusting Shaft Arm is vertical.
6. Apply maximum tension to the Jack Spring by pumping the Hydraulic Handpump until the overload valve is operating.
7. Check all Guards are fitted and secured.
8. Engage tractor PTO at 540 rpm.
9. Open Feeder Hatch to provide a uniform flow of grain on the rollers. As flow increases, tractor revs may require adjustment.
10. Check that the flow of grain is just sufficient to be pressed without a build up of grain on the rollers.
11. If dough balls are produced and the grain is mushy, increase the space between the rollers by turning the Adjusting Crank clockwise.

When turning the lever anti-clockwise do not let the Roller Adjusting Shaft Arm pass the vertical position as the rollers will touch.

12. The degree of crushing is also increased by reducing the output (Feeder Hatch).
13. Start the Liquid Applicator when a sample is produced where all grain is crimped and no dough balls are produced.
14. Add water if required (ideal moisture content of the grain is about 35-40 %).
15. Increase PTO speed to approximately 540 rpm if required.

It is very important that the rollers do not touch. As a routine procedure, always check the temperature of the rollers immediately they are stationary.

Do not operate the machine without all the guards fitted and properly secured.

Fault Finding

1. Grains are too crushed, i.e. have a doughy appearance:

- Rollers are adjusted too close to each other.
- Machine speed is too high.
- ➔ Widen the distance between the rollers and reduce the speed so that the grain slides through the rollers and does not stick to the roller surface. The recommended PTO operation speed is 400 - 550 rpm.

The machine is now ready for Start Up Procedure - refer to page 11.

2. A mixture of whole uncrushed grains and doughy grains:

- Rollers are not parallel to each other.
- ➔ Adjust the rollers so that the distance is the same at both ends.
- ➔ Check tension of leaf spring/jack.

The machine is now ready for Starting Up - refer to page 11.

3. Rollers have a doughy appearance and some grains are scattered around:

- Scraper knives under the rollers are incorrectly adjusted or spring not fitted.
- ➔ Clean scraper knives and check they peel the grains off the surface of the rollers evenly. If necessary, adjust the spring or replace the knives. The spring should press each knife against the roller.

The machine is now ready for Starting Up - refer to page 11.

4. The Discharge Auger clogs up:

- Elevator belt or tension is loose.
- ➔ Tighten the elevator chain and tighten or replace drive belt and belt tension spring.
- ➔ If the grain is too coarse, wind the crank anti-clockwise (taking care that the rollers do not touch) to get the rollers closer to each other; or if the grain is too fine, wind the crank clockwise to get rollers further apart.
- ➔ Check that the flow of feed is not too high.
- ➔ Check cross auger is clean from previous use.
- ➔ Check PTO speed is between 400 - 540 rpm.

The machine is now ready for Starting Up - refer to page 11.

5. If the tractor stalls or the PTO slips:

- ➔ Close applicator and water.
- ➔ Switch off the power and disconnect PTO.
- ➔ Close grain feeder hatch.
- ➔ Release pressure on jack.
- ➔ Remove auger well cover and elevator belt cover to clear blockage.
- ➔ Check and clear the build-up of grain between the rollers and check that no metal or stones are trapped between the rollers or auger, turn rollers backwards by hand to clear obstruction.
- ➔ Check that the flow of feed is not too high.
- ➔ Check tractor speed is correct in relation to flow.

The machine is now ready for Starting Up - refer to page 11.

6. The flow of grain stops - the Feeder Belt starts to "smoke":

- The force feeder is bound in straw.
- The force feeder is jammed.
- The rollers have stopped turning.
- ➔ Switch off power and disengage PTO.
- ➔ Close applicator and water.
- ➔ Insert the cut-off plate to hopper
- ➔ Remove the straw, stones etc.
- ➔ Manually reversing the rollers sometimes clears the obstruction.
- ➔ Remove the cut-off plate

The machine is now ready for Starting Up - refer to page 11.

7. Output is reduced:

- PTO speed is not correct
- Stones etc. loose on top of rollers
- Straw wrapped round butterfly-screw.
- Main drive belt stuck or not adjusted correctly.
- Auger/elevator belt worn or tensioning spring needs replacing.
- ➔ Close grain feeder door.
- ➔ Close applicator and water.
- ➔ Switch off power and disengage PTO.
- ➔ Insert the cut-off plate to hopper
- ➔ Release tension on jack and allow roller to fall back to stops and clear obstruction.
- ➔ Open grain feeder door
- ➔ Remove grain, stones etc. from rollers and butterfly.
- ➔ Close feeder door.
- ➔ Remove the cut-off plate.

The machine is now ready for Starting Up - refer to page 11.

Closing Down

1. Close the Liquid applicator and the Feeder Hatch.
2. Wind the Adjusting Crank clockwise 3-4 turns to increase the space between the rollers. Let the machine run until the hopper is empty and the machine is clean of grain.
3. Stop the tractor and disengage PTO drive.
4. Adjust the tension from the Jack Spring to half of the working pressure via the Hydraulic Handpump.
5. Check the rollers immediately for uneven or excessive heat.
6. If excessive or uneven heating occurs:
 - Check uneven alignments (refer to page 10).
 - Clear stones by removing the Roller Adjusting Shaft.
7. Replace bearings if necessary.
8. Clean the crimper of all loose grain and debris.
9. Disengage Scraper Knives by removing the Scraper Knife Spring. The Scrapers are reached by removing the Access Plate below the drive roller. Ensure the Scraper Spring is replaced.
10. Clean and straighten the Force Feeder and clean the Elevator.
11. Clean the Bottom Auger thoroughly after use.

Daily Maintenance

Switch off all power to the machine before any maintenance.

Carry out these checks daily during the season.

Check the Belts and Chain Drive (Elevator / Bagging Unit)

The Auger Belt and the Feeder Belt are spring loaded. Replace if worn.

Check the Elevator Chain

When the Elevator is in vertical position, the Chain can be checked through the Auger Access Hatch. Sideways movement should be possible on the sprocket.

Check the Hopper Bolts

Check the Hopper Bolts and Nuts every day, in order to avoid the bolts dropping on to the Rollers.

Lubricate the Bearings

When the machine is in constant use, the bearings require a minimum of two strokes of grease gun daily.

Check the Drive Pulleys

Check for tightness of Allen screws and alignment.

Check the Rollers

Alignment should be checked and adjusted if necessary. Also check for any signs of over-heating.

Clean the Auger

Remove Bottom Auger pan-tray to clean at end of day to minimise contamination of feed and to minimise any possible corrosion.



Clean the machine properly after use. Wet and mould spoil the quality of crimped grain and damage the machine.

End-of-Season Maintenance

Switch off all power to the machine before any service.

1. Clean the crimper thoroughly with a power hose. Do not aim the jet of water straight on the bearings.
2. Remove the elevator chain and put it into a suitable container filled with oil. Leave chain to soak for at least half an hour. Re-install the chain again.
3. Apply anti-corrosion protective material on all surfaces to minimise corrosion.
4. If the paintwork is damaged, apply anti-corrosive paint.
5. Check roller surfaces. If they are smooth, contact your Distributor's representative for resurfacing advice.
6. When not connected to a tractor, the PTO shaft should be supported so that it does not get damaged or foul the protecting guard.
7. The crimper should be kept in a dry place when not in use.
8. During the winter period ensure that the Jack Spring is under $\frac{3}{4}$ of full tension and the Bottle Jack pumped on half pressure.
9. For longer bearing life, turn the rollers by hand half a turn once or twice during the winter.
10. If any bearings are dismantled, they should be washed and greased thoroughly before being reinstalled.

Murska 1400/2000 CB "Crimper Bagger" and Murska Bagger How to make a "crimped moist grain ensilage tube" ?

1. Lower the bottom door as low as possible by loosening the chains. Put the bag over the tunnel, behind the front edge. With $\text{Ø}1,5\text{m}$ tunnel the bag size must be $\text{Ø} 1,5 - 1,7\text{m}$ (5' - 5,5'), with $\text{Ø}2,0\text{m}$ tunnel is $\text{Ø}2,0\text{m}$ (6,5') bag suitable.
2. Lift the bottom door higher by adjusting the chains in both sides equally.



3. Drag the bag out from underside over the tunnel. Folded plastic tube must run out from the underside! Drag bag out about 2-3 meters, close the bag by knot, string, tape, etc.



4. Turn and place the closed bag end under the bottom door and tunnel.
5. Start the bag against a wall or for example against a square or round bale, etc. There must be a "barricade" behind the bag during first 1-2 meters bagging. After this there is enough weight in the bag to keep it in place.



6. Lock the hydraulic brakes by pumping max pressure (about 150-170 bar) with the hand pump. Now crimper-bagger do not move forward during the start.

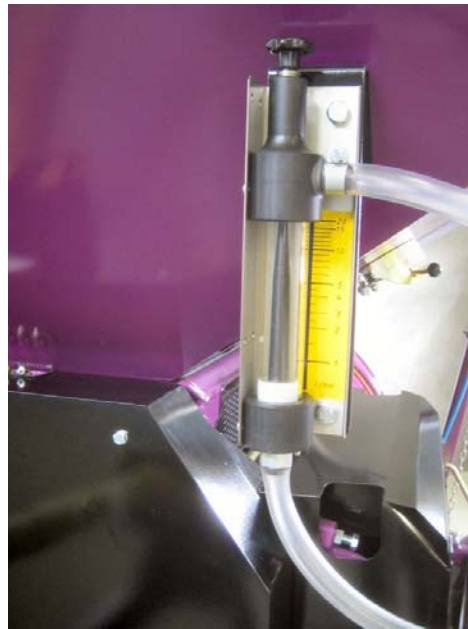
Note: The brakes have been adjusted in the factory, but it is necessary to “drive in” the brakes before first bagging operation: pump about 50 bar pressure to brakes and drag the machine with tractor few hundred meters. Now the brakes are in balance and both sides will brake equally.



7. Make sure, that there is no brakes on in the tractor! The pressure in the bag will push the whole system forward during the bagging process, tractor just runs the crimper through PTO-shaft. Tractor must be in streight line ahead to get a straight bag!

8. Load the hopper full of grain; feeding doors still closed.

9. Start crimping as normally, start tractor PTO about 400...500 rpm, pump max pressure to hydraulic jacks under the adjustable rollers, open preservative acid pump, open grain feeding doors, adjust roller gap with cranks, etc...



10. Now bagging auger start to push crimped grain in to the bag. Note, that you are not able to see inside the bag, but you can take a sample of crimped grain under the rollers to secure, that grain is crimped properly.

Note also, that the bagging screw will do “a second crimping” and grind the grain little more after the rollers! This is not happening with the elevator model. Therefore the rollers do not need to be so close adjusted as normally, and crimping grade will be still fine!

11. When the first meter, the bag-end, starts to be filed and bag start to stretch out, open the brake valve carefully so much, that the pressure is about 100 bar. The crimper & tractor starts now go slowly forward.

Control the speed by measuring the stretch in the bag: there must be about 5-10% stretch in the bag. In EuroBag bags there is lines printed in the bag for measuring the stretch (stretch from 500mm -> 540mm), in AgBag bags the scale is the printed “AG-BAG” logo, the logo must be at top side of the bag, between “10 and 14 o’clock”.

The weight on the crimper (full / empty hopper), surface, etc. effects to the pressure in the bagging. Let the bagging go on and control the stretch every now and then; do not adjust the brake pressure too often, and you get streight and even good looking bag!



For example: \varnothing 1,5m bag takes about 1,7 tons grain / meter. If crimping output is 30 tons/hour, system must move ahead about $30 / 1,7 \text{ m / hour} = 17 \text{ m/hour} = 30 \text{ cm / minute}$.



12. If you for some reason need to stop / halt the bagging and then continue again, just stop the crimper, but do not adjust or lock the brakes. In this way there is no discontinuity or uneven stretch in the bag.

13. When you finish the bagging (or 50 meters of bag is full), close feeding, run crimper empty, stop the crimper, release brake pressure and slowly move tractor ahead about 2-3 meters. Then cut the bag, close the bag by pressing air out from the end and close bag tightly.



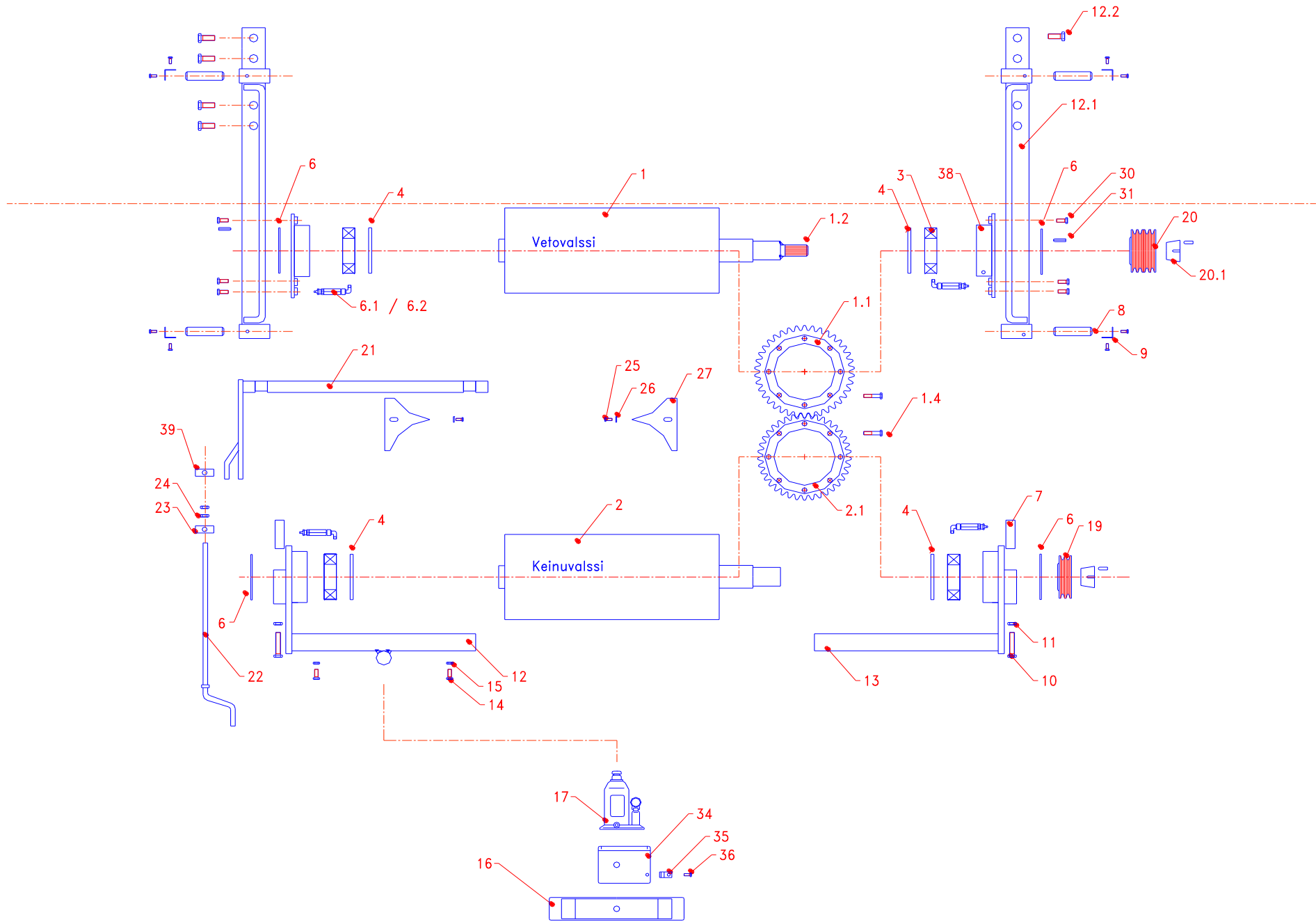
14. Cut the bag and press all air out from the bag end. Close the bag tightly. If there is still air or pressure left in the bag, cut a small opening to bag and press air out, then reape the bag with the tape, that is delivered with the bags.



15. Clean out all grains, that has been dropped off during the bagging. Grain attracts mice, rats and birds and these animals may damage the bag.

16. Control the bag daily. If there is pressure in the bag during first days after ensiling, let pressure out from the bag. Fix all openings with the tape.

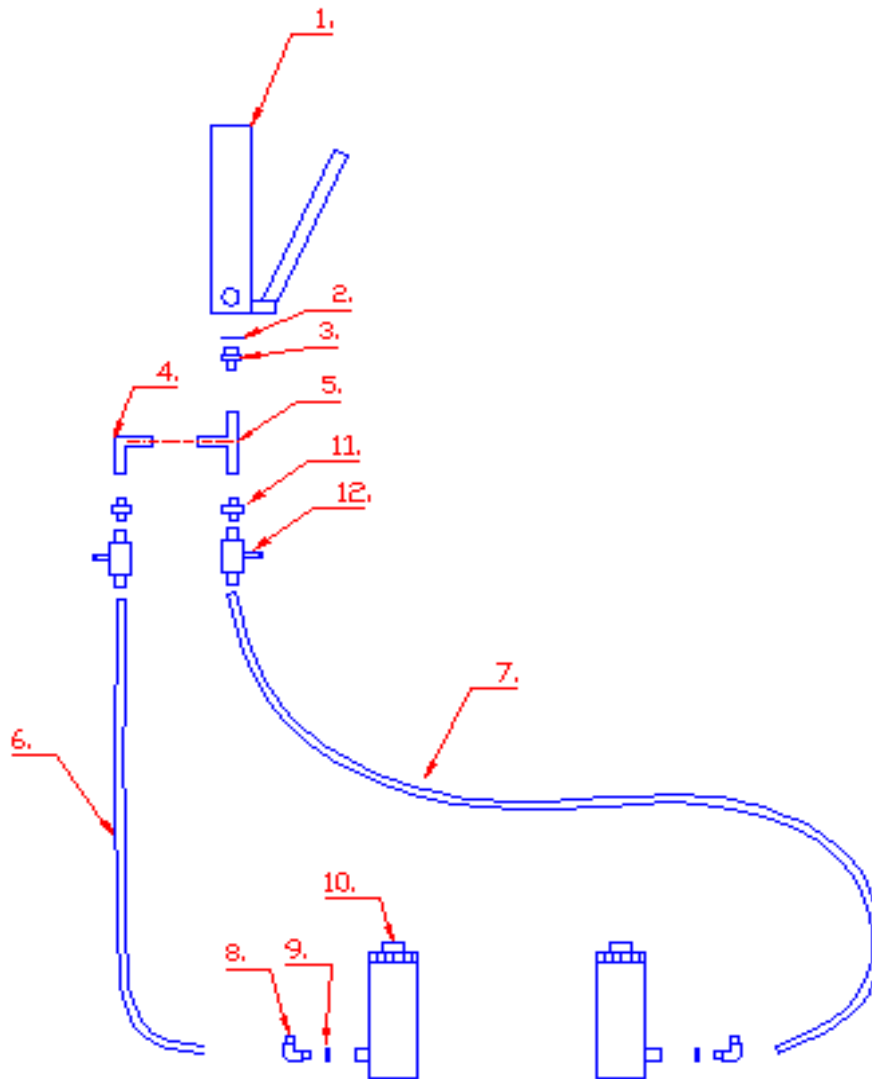
17. Open the bag earliest 3-4 weeks after ensiling; on that time the degree of acidity pH is 4...5. After opening the bag take daily minimum 15-20cm grain from the bag.



Varaosakuva nro 1
Valssit

Partspicture No 1
Rollers

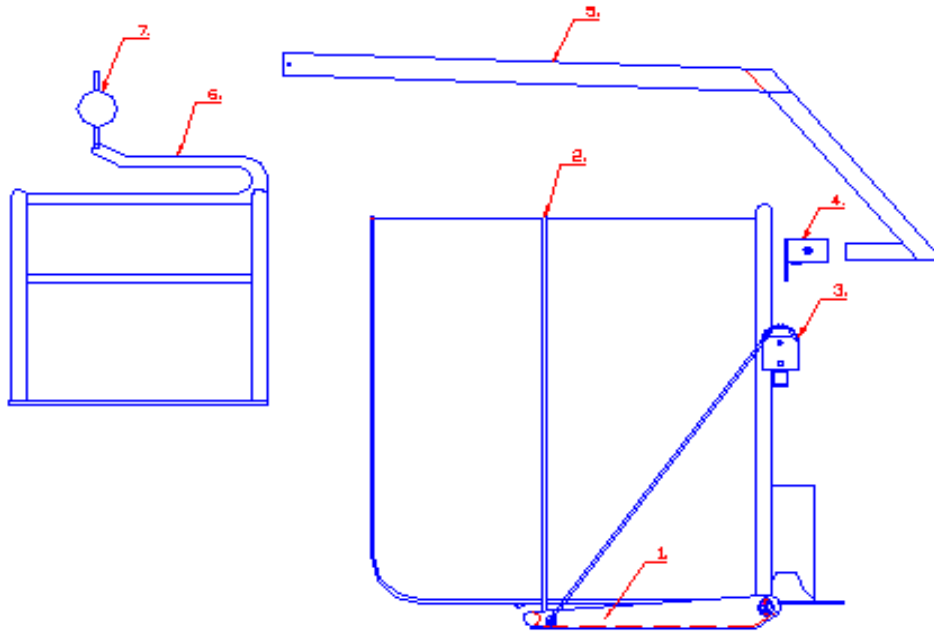
Viite	Osa nro	Kpl	Nimitys	Description	Koko
Ref.	Part No.	Pcs			Size
1	4771	2	valssi 1400S2x2 (kiinteä)	roller 1400S2x2, spot-fluted (fixed)	Ø300x700
	4920	2	valssi 2000S2x2 (kiinteä)	roller 2000S2x2, spot-fluted (fixed)	Ø300x950
	4772	2	valssi 1400S2x2 (keinu)	roller 1400S2x2, spot-fluted (adj.)	Ø300x950
2	4921	2	valssi 2000S2x2 (keinu)	roller 2000S2x2, spot-fluted (adj.)	Ø300x950
1.1	5394	2	hammaspyörä	gear wheel (fixed roller)	z = 38
2.1	5395	2	hammaspyörä (keinu)	gear wheel (adj. roller)	z = 37
1.2	4843	1	ura-akseli	spline-shaft	1 3/4" - 6 spline
1.4	5340	32	Kiinnityspultti	Fixing bolt	M16x65 12.9 DIN912
	W042716	32	Aluslevy	Washer	" Nord-Lock " Ø16
3	1684	8	valssinlaakeri	roller-bearing	22218 W33, Ø90/160x40
4	6111785	8	tiiviste	packing	GV 95x160x13 NBR
6	6111383	8	tiiviste	packing	R 90x140x13 NBR
6.1	5537	8	rasvanippa	grase nipple	1/8"
6.2	5154	8	rasvanipan jatkoholkki + 90°		
7	1562	4	neliötanko	square bar	30x30
8	3900	4	saranatappi	pivot shaft	Ø 25
9	7159	4	lukituslevy + ruuvi	locking plate + screw	
10	W105716 80	2	valssin säätöpultti	roller adjusting screw	M16x80 8.8 Zn DIN 933
11		2	lukitusmutteri	locking screw	M16
12.1	7603	1	Kasettirunko 1400S2x2	Cassette framework 1400S2x2	
	7388	1	Kasettirunko 2000S2x2	Cassette framework 2000S2x2	
12.2	W105716 40	8	Kiinnityspultti	Fixing bolt	M16 x 40 8.8 Zn
12	7508 b	2	keinun runko 1400 (elev. puoli)	Adj. Roller frame 1400, back side	left / right
13	7508 f	2	keinun runko 1400 (hinnan puoli)	Adj. Roller frame 1400, front side	left / right
12	7580 b	2	keinun runko 2000 (elev. puoli)	Adj. Roller frame 2000, back side	left / right
13	7580 f	2	keinun runko 2000 (hinnan puoli)	Adj. Roller frame 2000, front side	left / right
14	W105712 20	4	ruuvi	screw	M12x20
15		4	mutteri	nut	M12
16	7478	2	lehtijousipakka	leaf spring	90x20x465 mm, Ø12 mm hole
17			kts. varaosakuva 1b, korvaava paketti	see partpicture nr 1b, compensatory parts	Hydraulic tensioner
19	1665	2	hihnapyörä (keinu)	pulley (adj. roller)	SPB 140-2/2012
	1673	2	kartioholkki	taper-hub	2012 / 50
20	2608		hihnapyörä (vetovalssi)	pulley (PTO roller)	SPB 200-3 / 2517
20.1	1675		kartioholkki	taper-hub	2517 / 65
21	6935 L	1	säätöakseli 1400S2x2 (vasen)	adj. shaft 1400S2x2 (left)	940 x Ø 35
	6935 R	1	säätöakseli 1400S2x2 (oikea)	adj. shaft 1400S2x2 (right)	940 x Ø 35
	6643 L	1	säätöakseli 2000S2x2 (vasen)	adj. shaft 2000S2x2 (left)	1190 x Ø 35
	6643 R	1	säätöakseli 2000S2x2 (oikea)	adj. shaft 2000S2x2 (right)	1190 x Ø 35
22	6936	2	veivi	grank	
23	3907	2	ohjausholkki	guideliner	Ø 25
24		2	mutteri	nut	M16
25		2	ruuvi	screw	M8x20
26		2	aluslevy	washer	8
27	2587	4	ohjainmuovi	plastic wedge	
30	W105712 25	24	ruuvi (laakeripesä)	screw (bearing housing)	M12x25 8.8 Zn DIN 933
31		8	putkisokka	guide-pinn	Ø 10 x 30
34					
35					
36					
38	6114	4	laakeripesä (kiinteä)	bearing housing (fixed roller.)	Ø160
39		2	kierreholkki	thread sleeve	Ø25
	5950	1	Välilaakeripukki 1 3/4" - 1 3/4" ura-akseli	spline-shaft, double-ended 1 3/4" - 1 3/4"	1 3/4" - 1 3/4" 6-spline, 320mm
	8326	2	Laakeri 6209 2RS	bearing 6209 2RS	85 x 45 x 19
	8327	2	Lukkorengas i 85 DIN472	circlip i85 DIN 472	i 85 DIN 472



Varaosakuva nro 1 Part 17

Partspicture No 1 Part 17

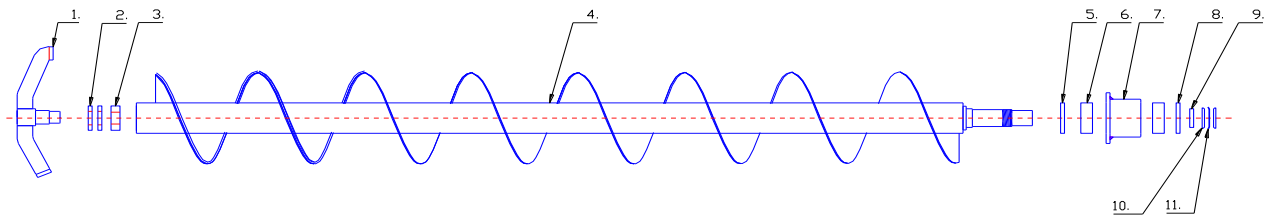
Viite Ref.	Osa nro Part No	Kpl Pcs	Nimitys	Description	Koko Size
	9848	1	Sylinteripaketti valssinsäätöön M1400S2x2	Roller tensioning hydraulic-system M1400S2x2	complete
	9849	1	Sylinteripaketti valssinsäätöön M2000S2x2	Roller tensioning hydraulic-system M2000S2x2	complete
1	9706	1	Käsi pumpu P19-120bar-1740psi	Hydraulic hand pump P19-120bar-1740psi	P19-120bar-1740psi
2	4063	1	Tiiviste R3/8	Sealing R3/8	R3/8"
3	9551	1	Kaksoisnippa 04000-04-06 1/4"-3/8"	Double nipple 1/4" - 3/8"	1/4"-3/8"
4	04510-04	1	Kulma 90° 1/4" 04510-04	Angle joint 1/4" 90°	1/4"
5	9547	1	T-haara 04880-04	T -pipe joint	04880-04
6	9843	1	Hydrauliletku l=890mm (M1400S2x2 oikea)	Hydraulic tube, flexible l=890mm (M1400 right-side)	1/4"
	9846	1	Hydrauliletku l=1010mm (M2000S2x2 oikea)	Hydraulic tube, flexible l=1010mm (M2000 right side)	1/4"
7	9844	1	Hydrauliletku l=2590mm (M1400S2x2 vasen)	Hydraulic tube, flexible l= 2590mm (M1400 left)	1/4"
	9845	1	Hydrauliletku l=2690mm (M2000S2x2 vasen)	Hydraulic tube, flexible l=2690mm (M2000S2x2 left)	1/4"
8	04510-04	1	Kulma 90° 1/4" 04510-04	Angle joint 1/4" 90°	1/4"
9	7982	2	Tiiviste R1/4"	Sealing R1/4	R1/4"
10	9720	2	Hydraulisylinteri	Hydraulic cylinder	Ø60/63x89
11	04040-04	2	Jatkonippa	Nipple	1/4" - 1/4"
12	4068	2	Kuulahanana	Closing valve	3/8"



Varaosakuva nro CB 5
CB Painekartio

Partspicture No CB 5
CB Compression tunnel

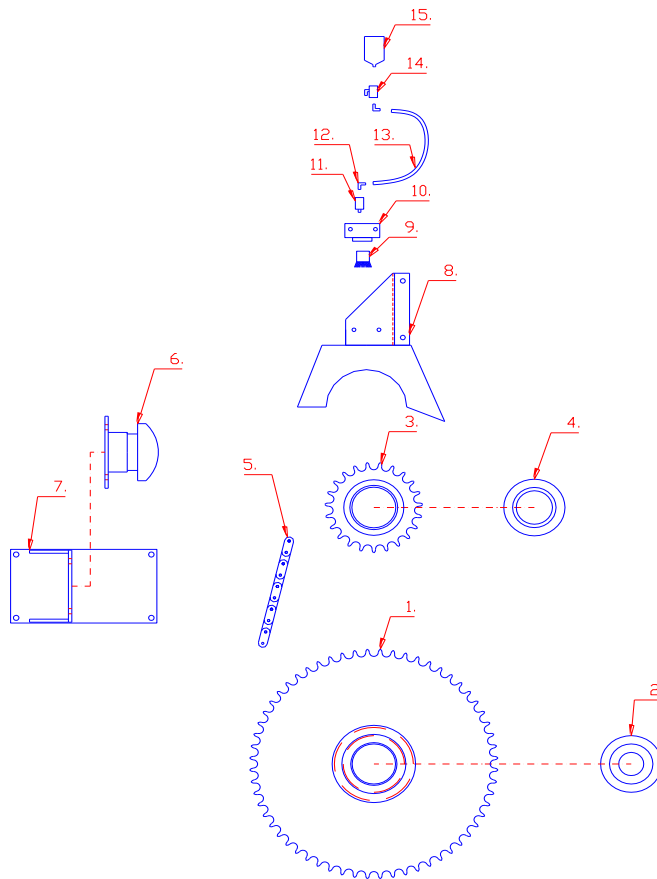
Viite Ref.	Osa nro Part	Kpl Pcs	Nimitys	Description	Koko Size
	9375	1	Painekartio 1,5m (5')	Compression Tunnel 1,5m (5')	Ø1,5m
	9390	1	Painekartio 2,0m (6,5')	Compression Tunnel 1,5m (5')	Ø2,0m
1	8815	1	Säkin alasuoja 1,5m	Bottom plate 1,5m	
	9351	1	Säkin alasuoja 2,0m	Bottom plate 2,0m	
2	9269	1	Kumiköysi Ø14mm	Rubber band Ø14mm	
3	10802	1	Alasuojan nostin 1,5m kartiolle	Bottom plate lifter (1,5m)	
3	10803	1	Alasuojan nostin 2,0m kartiolle	Bottom plate lifter (2,0m)	
4	10800	1	Kiinnityskorvake säkinnostimelle	Fixing bracket for bag-boom	
5	10132	1	Orsi säkinnostimeen	Bag boom	max 110kg
6	10133	1	Nostoteline 1,5m säkille	Bag cradle for Ø1,5m bag	
	10134	1	Nostoteline 2,0m säkille	Bag cradle for Ø2,0m bag	
7	10024	1	Ketjunostin	Chain lifter	max 250kg



Varaosakuva nro CB1
CB Pakkauskuljetin

Partspicture No CB 1
CB Bagging auger

Viite	Osa nro	Kpl	Nimitys		Koko
Ref.	Part Nr	Pcs		Description	Size
1	9384	1	Pohjaruuvun takalaakerin korvake	Bearing support	
2	8587	2	Akselitiiviste	Sealing	Ø40x72x10
3	8689	1	Laakeri 22207	Bearing 22207	Ø35/72x23
4	9856	1	Pohjaruuvi 1400S2x2 CB	Auger 1400S2x2 CB	Ø270
4	9857	1	Pohjaruuvi 2000S2x2 CB	Auger 2000S2x2 CB	Ø270
5	5633	1	Akselitiiviste	Sealing	Ø55x90x10
6	9045	2	Laakeri 33210	Bearing 33210	Ø50/90x32
7	9127	1	Painelaakerin pesä	Bearing housing	
8	9956	1	Akselitiiviste	Sealing	Ø68x90x10
9	9224	1	Stefan holkki	Sealing support ring	Ø50/55x10
10	9232	2	Akselimutteri KM 10	Nut KM 10	M50x1.5
11	8674	1	Varmistuslaatta KM 10	Securing plate KM 10	

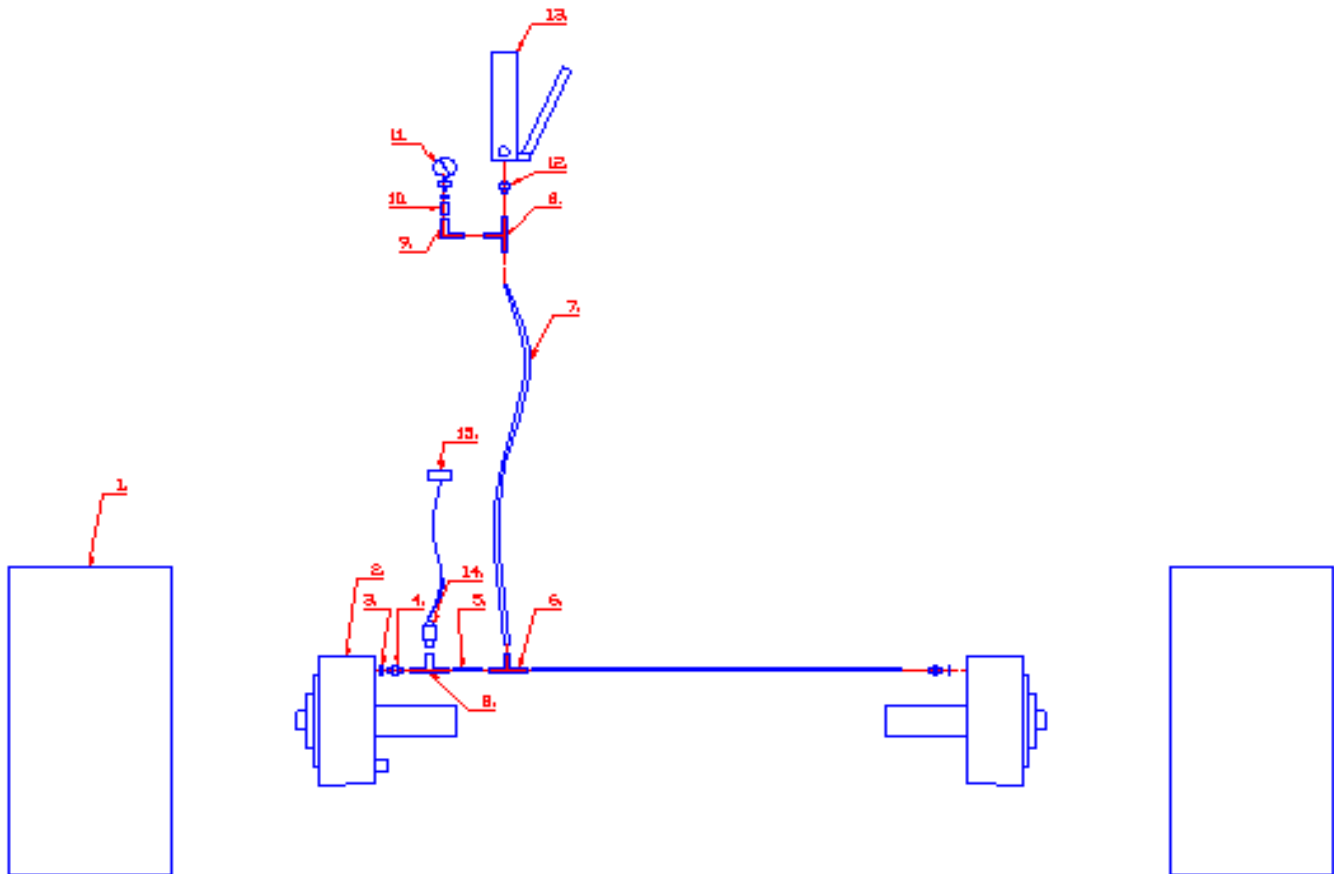


Varaosakuva nro CB2
CB Ketjupyörä, ketjut

Partspicture No CB 2
CB Chain drive

Viite	Osa nro	Kpl	Nimitys	Description	Koko
Ref.	Part Nr	Pcs			Size

1	8811	1	Ketjupyörä	Chain sprocket	S 1-49
2	9065	1	Kartioholkki	Taper hub	2517/45
3	8593	1	Ketjupyörä	Chain sprocket	S 1-20
4	1675	1	Kartioholkki	Taper hub	2517/65
5	8594	1	Ketju 1"	Chain 1"	87 links
5,1	8595	1	Liitoslenkki 1"	Connection link 1"	
6		1	Ketjunkiristin	Chain tensioner	ETR3-1"-S
6	8596	1	Ketjunkiristin	Chain tensioner	16B-1
6.1	9498	1	Kulutuspala	Running surface	
7	8817	1	Ketjunkiristäjän peti	Tensioner frame	
8	9552	1	Ketjurasvarin kiinnike	Greasing unit frame	
9	9027	1	Rasvausharja	Greasing brush	
10		1	Rasvausharja kiinnike	Brush fastener	
11		1	Supistusnipa	Reducer	
12		2	Kulma 90°	Bend 90°	
13	5539	1	Muoviletku Ø 6/9,6 mm	Tube Ø 6/9,6 mm	
14	5678	1	Kuulahana	Tab	
15	5457	1	Voiteluainepullo	Oil bottle	

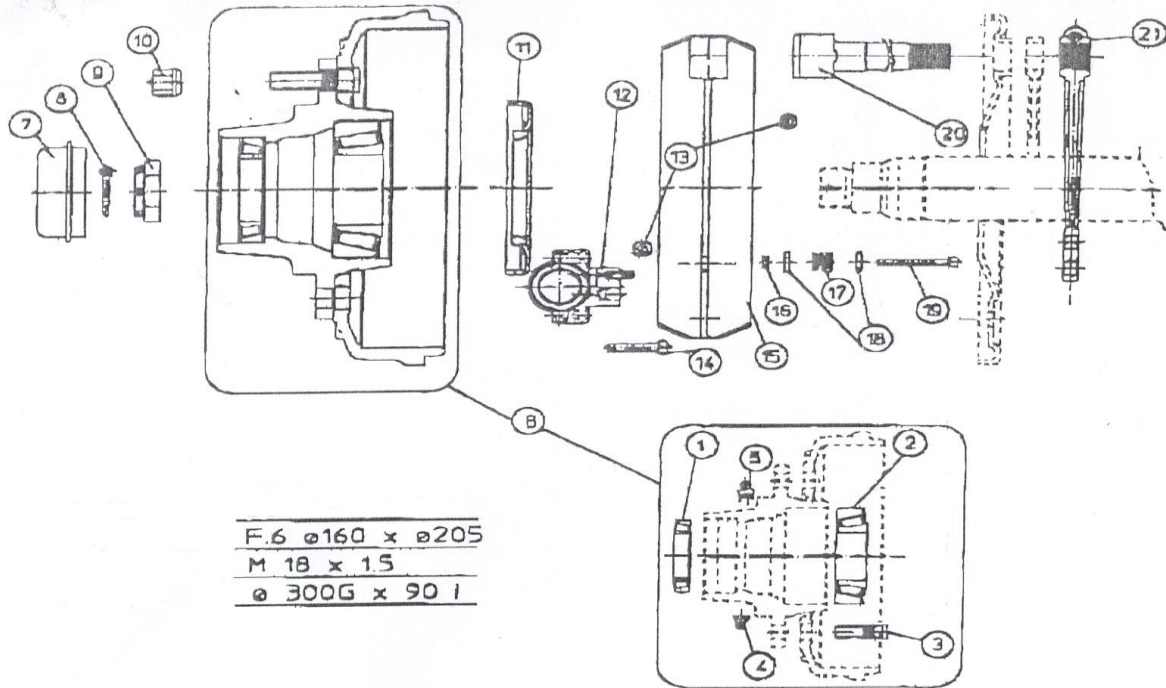


Varaosakuva nro CB 3
Jarrujärjestelmä

Partspicture No CB 3
Brake system

Viite	Osa nro	Kpl	Nimitys	Description	Koko
Ref.	Part Nr	Pcs			Size

1	8933	2	Rengas 400/60-15.5 14pr TRAC	Tyre 400/60-15.5 14pr TRACK	400/60-15.5
	G949	2	Rengas 400/60-15.5 14pr	Tyre 400/60-15.5 14pr	400/60-15.5
2	9178	2	Jarrullinen napa	Hub incl. hydraulic brake drum	70x205
3	4063	3	Tiiviste R3/8"	Sealing R3/8"	R3/8
4	9544	2	Putkiliitin BS-06R	Pipe joint BS-06R	BS-06R
5	6156	2	Hydrauliputki ZN Ø 6 mm	Hydraulic tube ZN Ø 6 mm	ZN Ø 6 mm
6	9545	1	T-haara TS-06	T -pipe joint TS-06	TS-06
7	9546	1	Hydrauliletku	Hydraulic tube, flexible	Termoplast 2140-04
8	9547	2	T-haara 04880-04	T -pipe joint 04880-04	04880-04
9	9548	1	Kulma 04510-04	Angle coint 04510-04	04510-04
10	9549	1	Holkki 1/4"	Bushing 1/4"	1/4"
11	9550	1	Painemittari max. 160 bar	Pressure gauge (manometer) max. 160 bar	
12	9551	1	Kaksoisnipa 1/4-3/8"	Double nipple	1/4-3/8"
13	9484	1	Hydraulinen käsipumppu	Hydraulic hand pump	P12-140bar
14	10607	1	Painekytin 1-10 bar	Pressure switch	1-10 bar 1/4"
15	10056	1	Jarruvalo Led	Brake light LED	

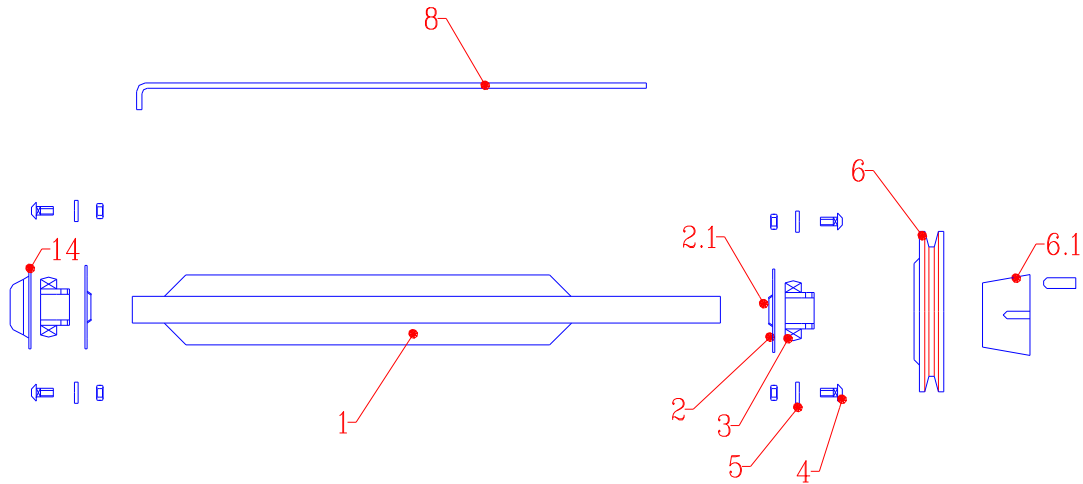


Varaosakuva nro CB 4
Jarrunavat

Partspicture No CB 4
Hydraulic brakes

Viite Ref.	Osa nro Part Nr	Kpl Pcs	Nimitys	Description	Koko Size
1	311F033		Ulompi napalaakeri	Outer hub bearing	
2	311F054		Sisempi napalaakeri	Inner hub bearing	
3	309F024		Pultti	Wheel bolt	F.6 Ø160xØ205 M18x1.5
4	318FM01		Venttiili	Valve	
5	318F002		Voitelunippa	Grease nipple	
6	323090FXSIV		Hub/Drum assembly	Hub/Drum assembly	
7	307F048		Navan suojakuppi	Hub Cap	
8	310F005			Split pin	
9	328F006		Kruunumutteri	Crown nut	
10	312F010		Pyörän mutteri	Wheel nut	
11	324F043		Tiiviste (stefa)	Retaining ring	
12	356A024		Hydraulisyylinteri	Hydraulic cylinder	
13	322F006	2	Jarrukengän palautusjousi	Upper brake shoe return spring	
14	335F045		Ruuvi	Screw	
15	316A052		Jarrukenkä	Brake shoe	Ø300 x 90
16	340F033		Mutteri	Nut	
17	509F1061.00		Jousi	Spring	
18	508F1153.00		Jousen pidin	Spring support	
19	335F046		Ruuvi	Screw	
20	301F502		Nokka-akseli	Camshaft	
21	320F013		Jarruvipu	Brake lever	

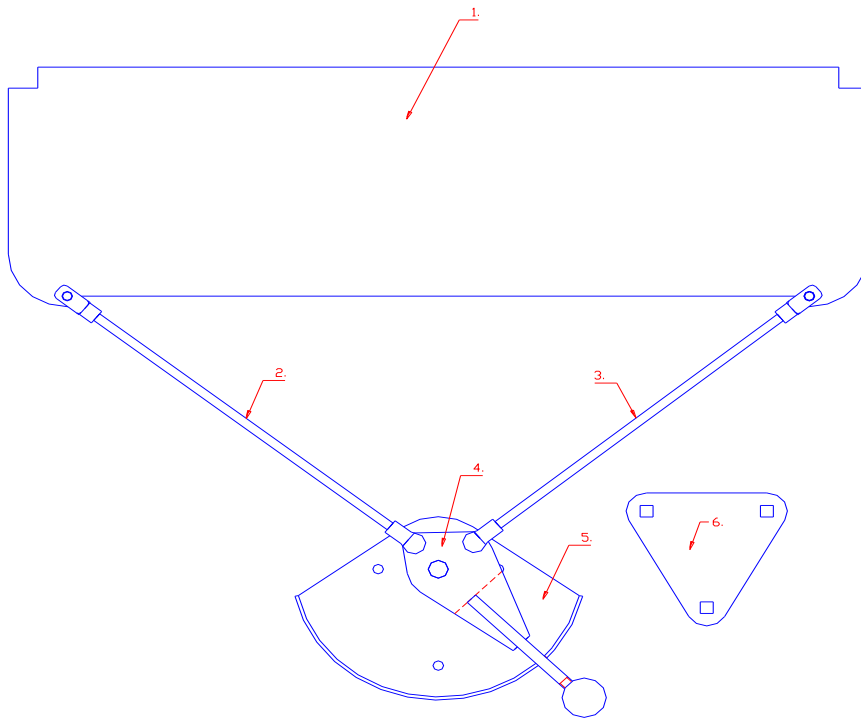
PARTSPICTURE 4



Varaosakuva nro 4
Karistaja

Partspicture Nr 4
Feeder

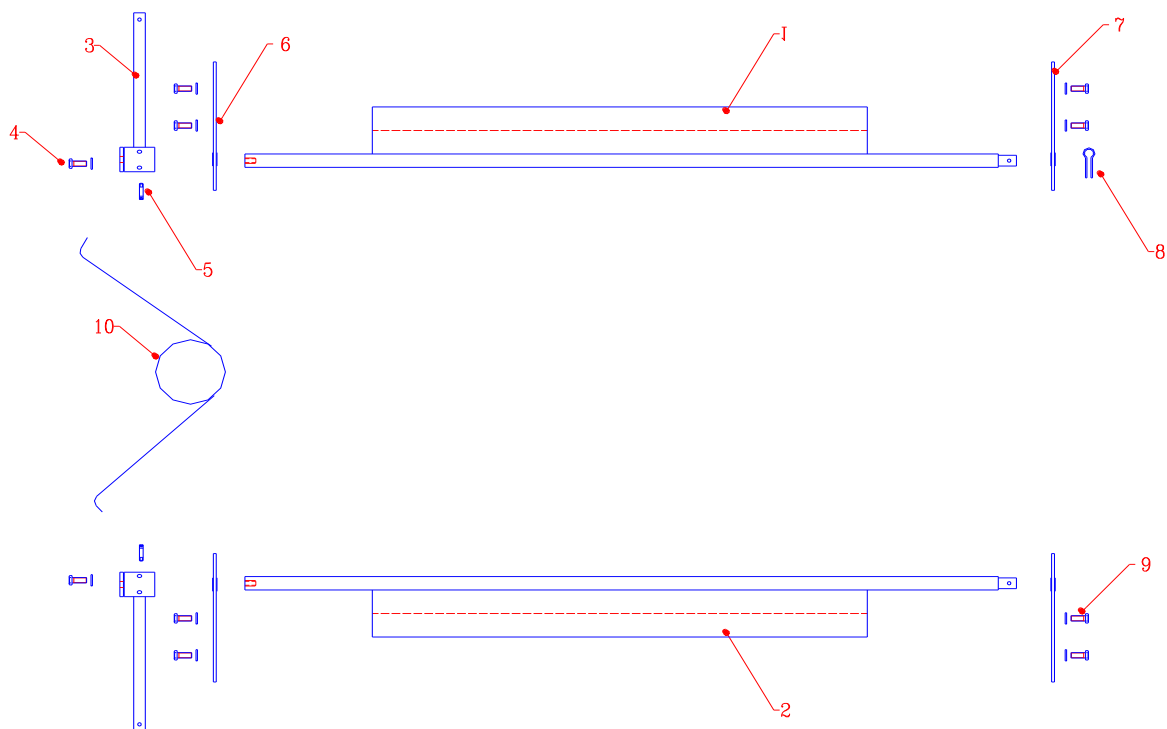
Viite	Osa nro	Kpl	Nimitys	Description	Koko
Ref.	Part Nr	Pcs			Size
1	5315	2	karistaja-akseli 1400S2x2	feedershaft 1400S2x2	Ø 35, steel-blade
1	4880	2	karistaja-akseli 2000S2x2	feedershaft 2000S2x2	Ø 35, steel-blade
2	4047	4	tiiviste	sealing	GA 35.45.7/10
		4	tiivistelaippa	flange for sealing	
3	3991	4	laakeri + valupesä (soikea)	bearing + housing	UCFL 207 Ø35/72x28
4		8	ruuvi	screw	M10x30 DIN 993
5		8	holkki	bushing	10
6	1663	2	karistajan hihnapyörä	pulley	SPB 140-1/ 1610
6.1	1678	2	kartioholkki	taper-hub	1610 / 35
14		2	suojakuppi	guard-cup	



Varaosakuva nro 5 **Partspicture Nr 5**
Syöttöluukku **Feed controller**

Viite	Osa nro	Kpl	Nimitys	Description	Koko
Ref.	Part Nr	Pcs			Size
1	9303	2	syöttöluukku 1400S2x2	feeder-door 1400S2x2	3 x 228 x 728
	9304	2	syöttöluukku 2000S2x2	feeder-door 2000S2x2	3 x 238 x 980
2	9307	2	säätötanko 2 330	adjusting rod 1400S2x2	330mm
	9306	2	säätötanko 1 340	adjusting rod 2000S2x2	340mm
4	9477	2	Säätövipu	feed controller handle	
5	9476	2	Säätövivun runko	feed controller frame	
6	9299	2	Säätövivun taustatuki	feed controller back plate	

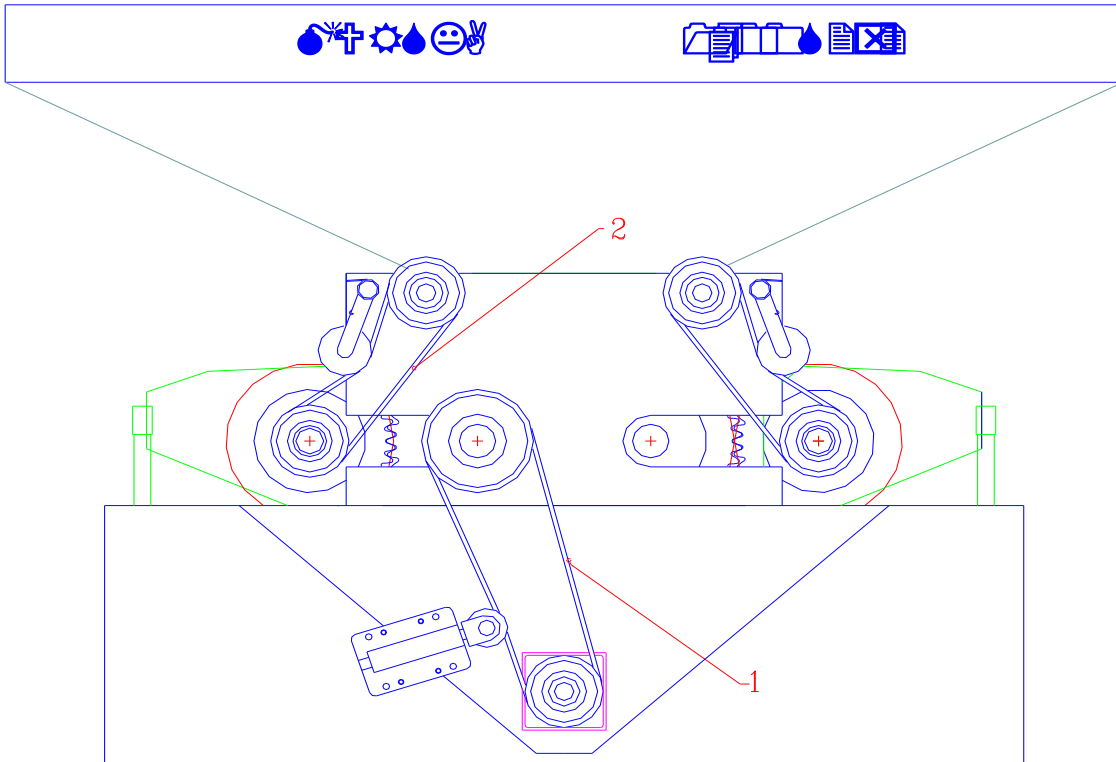
PARTSPICTURE 7



Varaosakuva nro 7
Kuorintaveitset

Partspicture Nr 7
Scrapers

Viite Ref.	Osa nro Part Nr	Kpl Pcs	Nimitys	Description	Koko Size
1	4785	2	veitsi 1400S2x2 (kiinteä)	scraper knife 1400S2x2 (fixed roller)	
	5317	2	veitsi 2000S2x2 (kiinteä) (täydellinen)	scraper knife 2000S2x2 (fixed roller) (complete)	Ø16
2	4785	2	veitsi 1400S2x2 (keinu)	scraper knife 1400S2x2 (adj. roller)	
	5317	2	veitsi 2000S2x2 (keinu) (täydellinen)	scraper knife 2000S2x2 (adj. roller) (complete)	Ø16
3	7733	4	kahva	handle	
4		4	kuusiokoloruuvi + aluslevy	Allen screw + washer	M8 x 20
5		8	pidätinruuvi	clamp screw	M6
6	7734	4	kiinnitys- / säätölaippa	fixing / adjusting flange (rear)	
7	7735	4	kiinnitys- / säätölaippa	fixing / adjusting flange (front)	
8		4	lukitusoska	spline pin	
9		16	kuusiokoloruuvi + aluslevy	Allen screw + washer	M8 x 20
10	6331	2	kuormitusjousi	spring	Ø 4

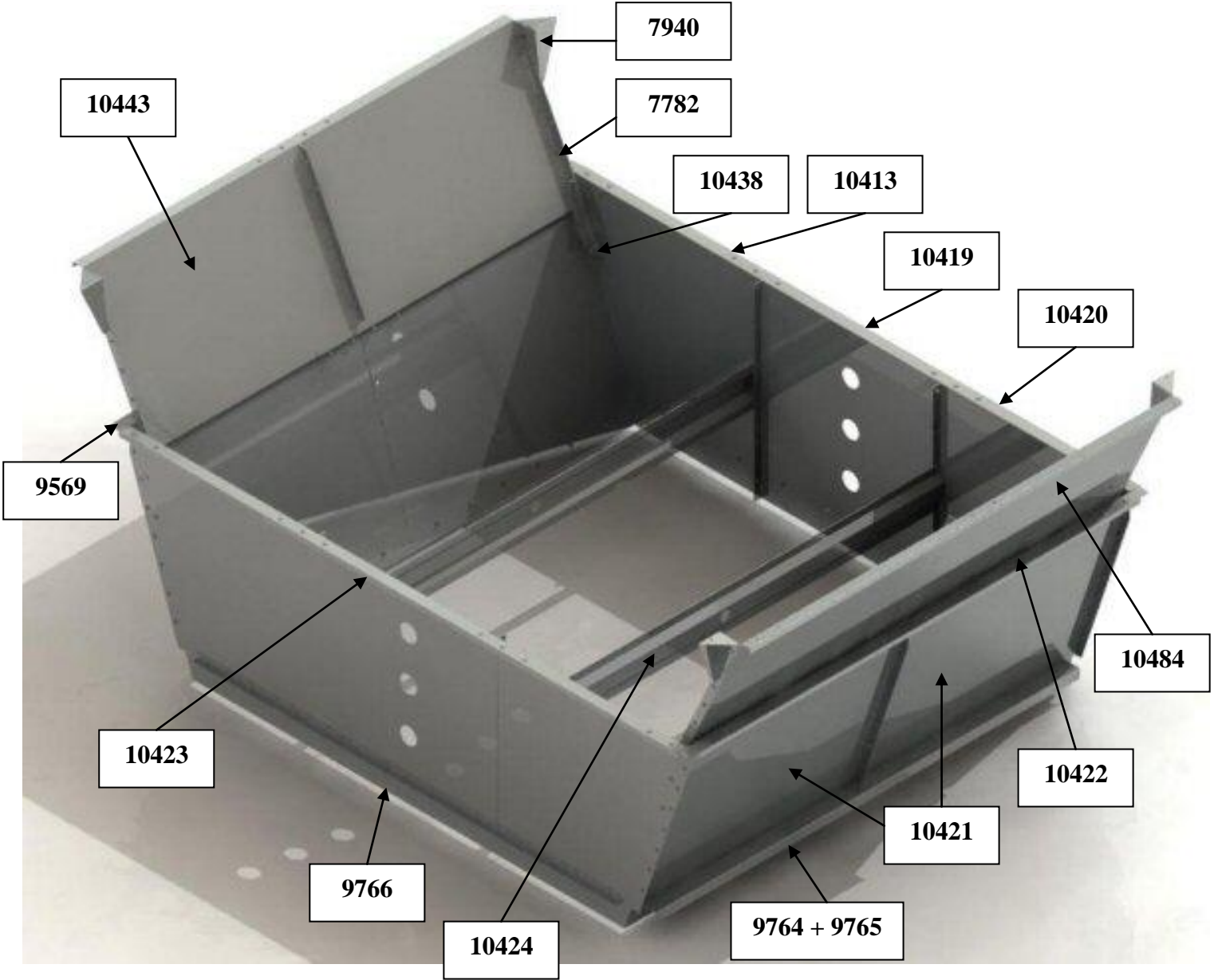


Varaosakuva nro 9
Kiilahihnat

Partspicture Nr 9
V-belts

Viite Ref.	Osa nro Part Nr	Kpl Pcs	Nimitys	Description	Koko Size
1	9372	3	Kiilahihna	V-belt (screw conveyor)	Hi-Power MN B73 1905
2	1737	2	Kiilahihna	V-belt (feeders)	Hi-Power MN B46 1220
	7706		Hihnasuoja	Belt quard plate	
	7720		Valssinsuoja, vasen	Roller quard, left	
	7728		Valssinsuoja, oikea	Roller quard, right	

Lisäsäiliö S2X2



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