ENGLANTI

HAKKI PILKE 1X 37

FIREWOOD PROCESSOR

-ASSEMBLY INSTRUCTIONS
-OPERATOR MANUAL
-SAFETY REGULATIONS
-SERVICE INSTRUCTIONS
-SPARE PART LIST
-GUARANTEE TERMS
-EC DECLARATION OF CONFORMITY

THE MACHINE MUST NOT BE OPERATED BY A PERSON WHO IS NOT FAMILIAR WITH THESE INSTRUCTIONS !

MAASELÄN KONE OY

www.maaselankone.fi

+ 358 8 7727 300

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GENERAL SAFETY INSTRUCTIONS OF HAKKI PILKE 1X FIREWOOD PROCESSOR

The machine must not be operated by a person who is not familiar with the operation, service and safety instructions of the machine.

The machine has to be operated in such a way that no harm will be caused to the operator, environment, persons at close range, animals or other objects.

The operator must always familiarise himself carefully with these instruction before starting to operate the machine. He must study the instructions so thoroughly that he will know the operation principles of the machine and all matters that can possibly cause a risk situation or an accident.

The machine shall be operated very prudently and calmly. Should there be problems in the operation of the machine, the trees which are intended to be processed, or in the working environment, which may cause a risk, the situation must be cleared up calmly and in a way that does not cause any damage or a risk situation.

CHILDREN ARE NOT ALLOWED TO OPERATE THE MACHINE!

Only one person must operate the machine at a time. The risk zone around the machine is 10 m. Outsiders may stay inside this range only temporarily. Persons staying inside the risk zone may not participate in the operation of the machine or operate the machine unless he or she is fully aware of the operation, service and safety instructions. The person staying within the risk zone must follow the operation and safety instructions of the machine with the same caution as if he were operating the machine himself.

THE HAKKI PILKE 1X37 firewood processor is intended for making firewood of lopped trees, which are free of knots, or other lopped and pre-processed wood such as logs. Making firewood from such pre-processed wood, which in addition to wood material also contains other substances such as construction waste, is forbidden. Feeding the machine with any material other than wood, such as plastic, steel or stone etc. is forbidden.

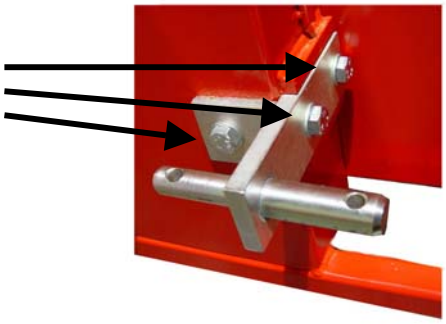
The maximum capacity of the machine in terms of log diameter and length may not be exceeded. The maximum permissible diameter of the tree is 37 cm and the maximum permissible length is 60 cm.

The operator must be fully aware of the operation principle and the controls of the machine before putting the machine into service.

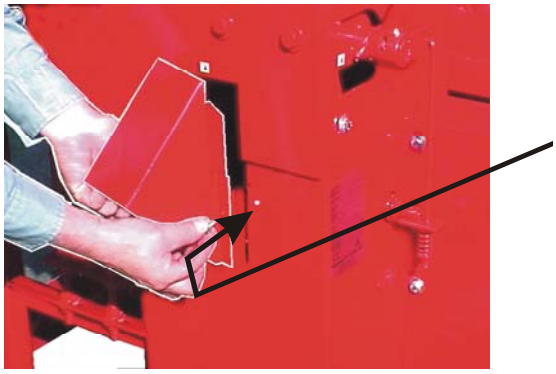
Preparations before putting a new machine into service

Dispose of the packing material in an environmentally friendly way!
Assemble the parts that were delivered packed with the machine:

Attach the bracket with pins for drawbars of tractor with two bolts to the frame of the machine. Tighten the screws with a wrench.

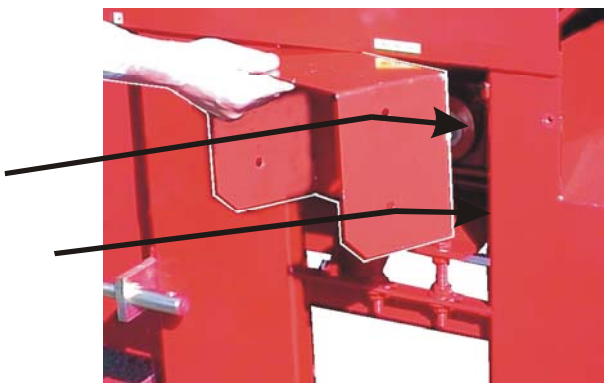


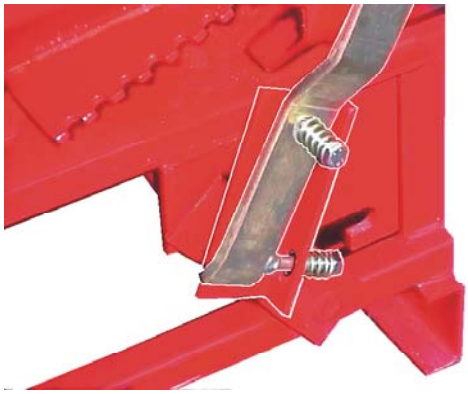
Note! There are pins for drawbars with both small and big eyes in the same bracket. The pins that are going to be used to connect the machine to the tractor should be placed outwards.



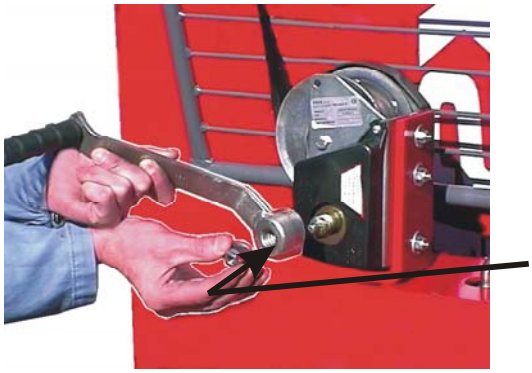
Attach the sawdust cover that leads from the saw chain with two bolts, to the frame of the machine. Tighten the bolts with a wrench.

Attach the cover of the articulated shaft with four bolts to the frame of the machine, to the front part of the angular gear.
Tighten the bolts with a wrench.





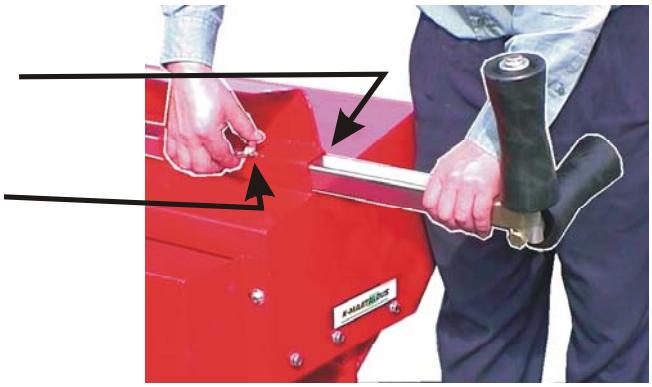
Attach the height adjustment lever of the splitting blade as illustrated in the picture. Place the spring, which keeps the lever in its adjustment slot, on the outside under the cap of the bolt.
Place the spring, which enables the blade to move, under the nut. The bolt and the nut are correctly tightened when the spring starts to tighten.



Turn the control handle of the conveyor winch in place and lock it with the nut.
Note! Do not tighten the nut, but leave a 3 mm space between the crank and the nut !

Machine with fixed table:

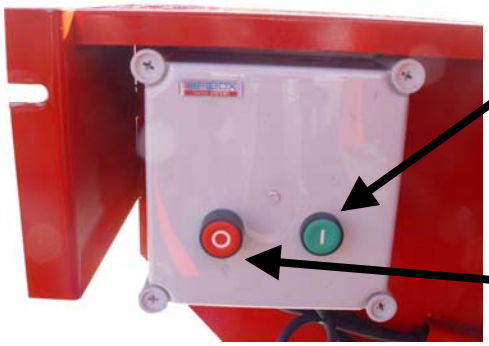
Place the extension of the crosscut table in the square pipe in the corner of the table.
Lock the extension to the desired length with the locking nut.



Start and stop buttons on the electric machine

The start-up box is located behind the protection plate at the rear of the machine.

The protection plate is fastened with locking bolts.

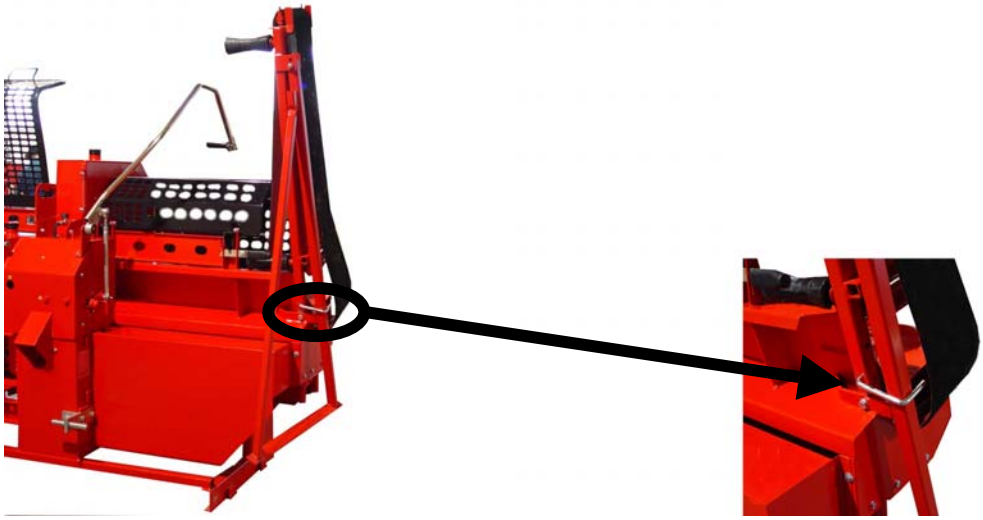


The machine cannot be started by pressing the green button if the stop button in the front of the machine is not in the upper position.

Bu pressing the red button the machine can be stopped.

The start-up box is located on the right of the levers. The start-up button of the machine is the green button in the start-up box.
The red button in the start-up button is the stop button of the machine. **NB ! The button must be in the upper position for the machine to be able to start.** In order to bring the button in the upper position it has to be slightly rotated clockwise.

Swinging the feed conveyor into work position



Locking handle

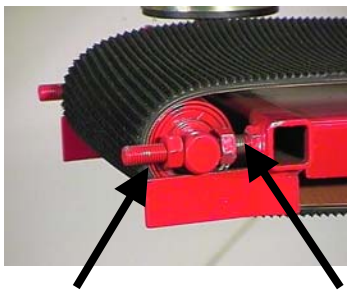
1. Remove the split cotter of the locking peg

2. Remove the locking peg of the support 1.

Maintain the split pin of the locking handle and the locking handle of the support.

3. Turn the conveyor down to the horizontal position and place the support of the conveyor in the slots at the bottom end of the machine frame

PUTTING THE CONVEYOR INTO TRANSPORT POSITION IS CARRIED OUT IN THE REVERSE ORDER OF PUTTING IT INTO WORK POSITION.
REMEMBER THAT THE LOCKING PEG LOCKS THE SUPPORT IN PLACE 2!!!



Locking nuts

Adjustment nuts

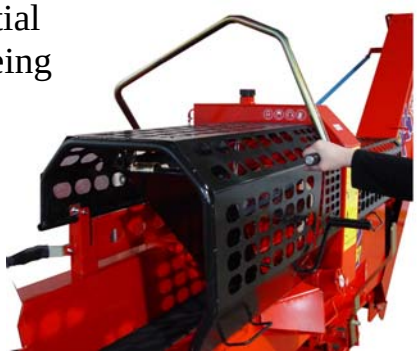
Adjustment of the belt:
Open the locking nuts and adjust the belt to the correct tightness with the adjustment nuts, then screw the locking nuts tightly.

If the belt has a tendency to travel towards the edge of the conveyor, extend the edge with the nut on the same side as the belt is moving to, in order to make the belt run in the centre of its frame.

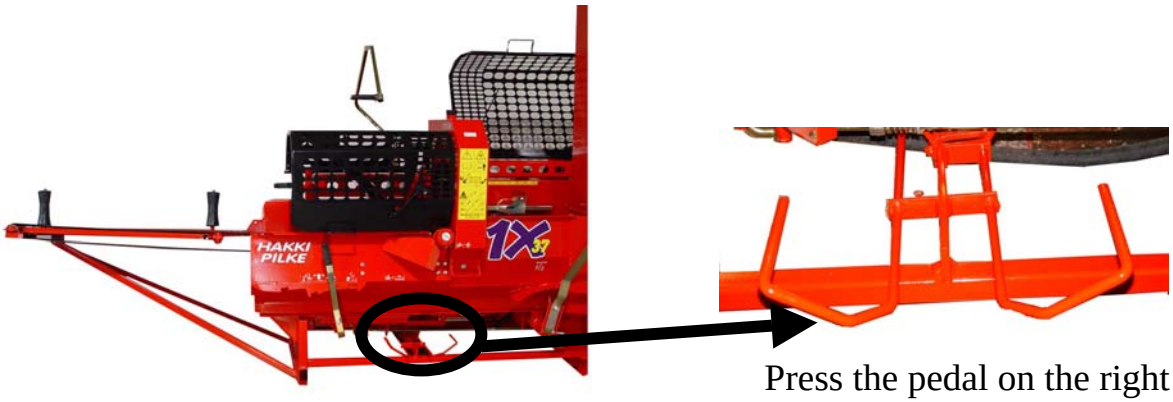
Operation of the feed conveyor

The feed conveyor will start transferring wood as soon as the cross-cut lever has been moved upwards from its initial position

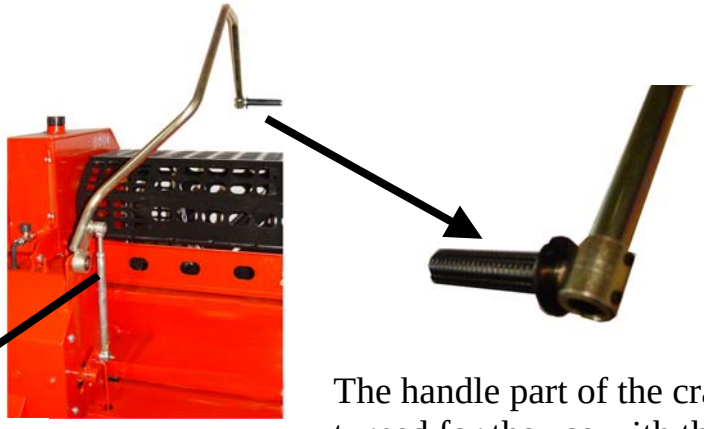
The conveyor will stop if the lever is brought to it s initial position or the wood is being cut.



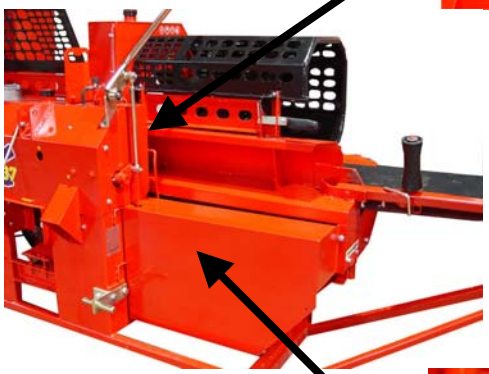
Reversing the wood with the feed conveyor



Press the pedal on the right side until the conveyor has transferred the wood the desired distance.



The handle part of the crank can be turned for the use with the other hand, or lifted to the required height.



The sensitivity of the feed conveyor can be adjusted at the linkage of its control valve.

The crank movement adjuster is located behind the protection cover of the valve.

Protection cover of the feed conveyor and log fastener

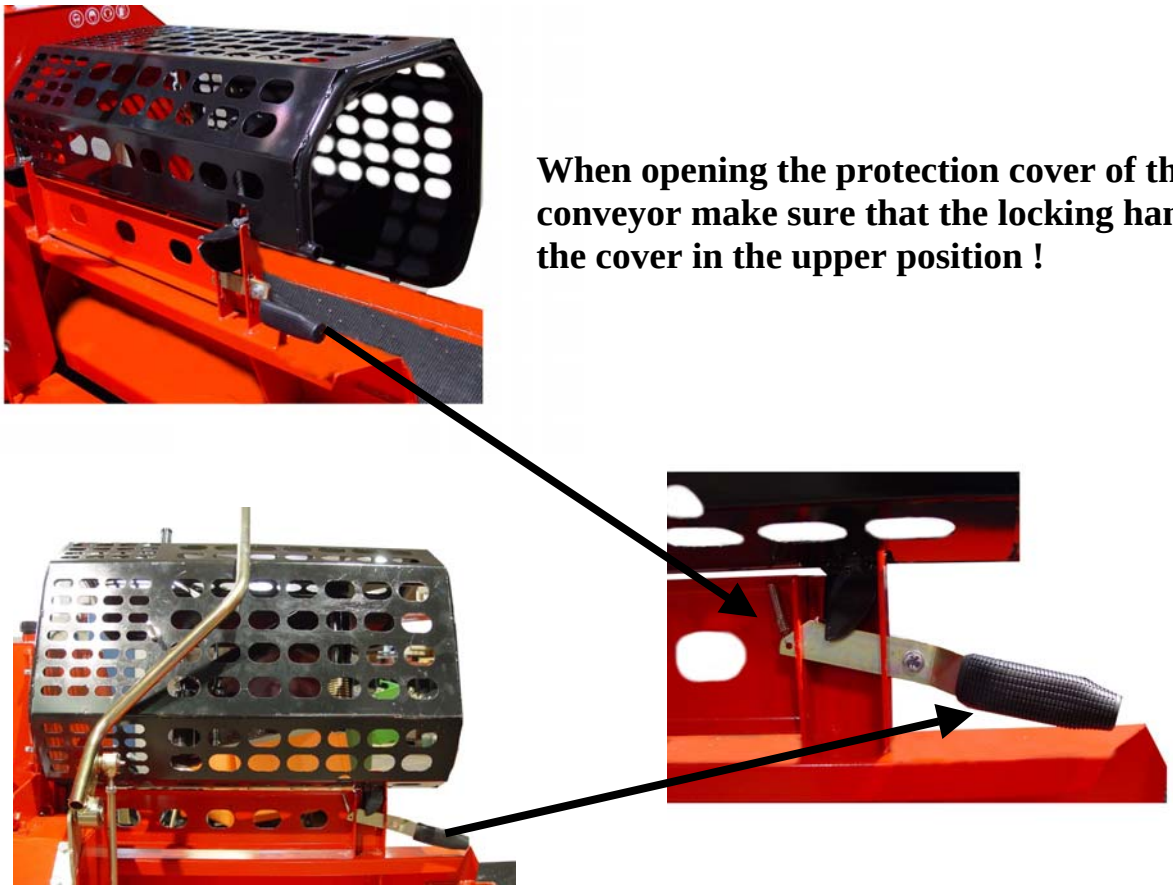
The log handle keeps the log in required position.
Do not place your hand between the log handle roller and feed conveyor mat !

When opening the protection cover of the feed conveyor:

Bring the chopping control lever in the STOP position

Hold the handle when lifting and lowering the protection cover of the feed conveyor !

Make sure that the protection cover of the feed conveyor is locked; the cover has to lock in the upper position ! (see next page)



When opening the protection cover of the feed conveyor make sure that the locking handle locks the cover in the upper position !

When closing the protection cover of the feed conveyor the cover has to be shifted backwards and the locking of the cover has to be released. Lower the protection cover. **DO NOT LET FALL !**

THE PROTECTION COVERS MUST NOT BE REMOVED !!!

Discharge conveyor
Swinging the conveyor into work position

1. Unwind some line from the winch

2. Push the conveyor towards the machine and release the locking of the conveyor by lifting the locking peg upwards

3. Pull the conveyor until the line of the winch tightens

4. Lower the conveyor with the winch to horizontal position

5. Lift the feed conveyor extension from the handle.

6. Straighten the conveyor to its full length

7. Adjust the conveyor with the winch to desired inclination and lock it with the lock in the bottom of the conveyor and ring cotter.

8. Swing the belt holder to the side of the conveyor

9. Lock the mat clamp with split pin.

CHECK THE CONDITION OF THE CONVEYOR WINCH AND ITS PARTS DAILY.
REPLACE THEM IF THEY SHOW THE SLIGHTEST FAULT.

NB !
DO NOT GO UNDER THE FEED CONVEYOR !!

Swinging the conveyor into transport position

Bringing the conveyor into transport position is carried out in the reverse order to instructions in chapter ”Swinging the conveyor into work position”.

1X37 firewood processor into transport position

Always secure the locking after bringing the conveyor into transport position!
When the locking mechanism does not lock the feed conveyor must not be used !
Repair or replace faulty parts !

Connecting the machine to the tractor

Always connect the machine alone. Make sure that there are no other persons or animals in the cabin that could accidentally touch the controls during the connection. Check all the connection parts of the machine and tractor before attachment. If they are faulty, repair or replace them with new ones. It is absolutely forbidden to connect the machine with faulty devices or parts.

Always carry out the connection calmly in one go without interruption. Secure the locking of the pins with appropriate cotters. Check once more after completion of the connection that the procedure has been completed successfully.

When connecting of the shaft has given. **It is absolutely forbidden to connect an unprotected shaft to the machine !**

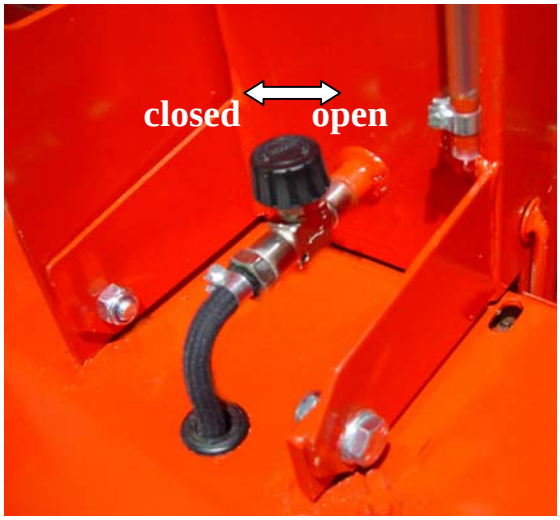
The maximum power demand of the machine is 7,5 kW (Model Easy 10 kW). Dimension the articulated shaft according to this.

Test run and testing of the functions

Always carry out the test run and testing of the functions before starting work.

1. Immediately after starting, make sure that the lubrication of the crosscut chain is working correctly.

The oil level in the tank can be checked in the plastic hose



Adjustment of oil flow to the chain;

1. Turn the flow regulation valve to a position in which the oil flow to the chain is sufficient.
In summer about ¾ of a round,
In winter about 1 round,
from closed-position.

2. Observe the oil flow to the chain as the weather conditions change. When the weather is warm, the oil is less viscous and flows easier to the chain, thus the valve needs to be adjusted to a smaller flow ! If the weather is cold, do the opposite.

Lubricating the saw chain

NOTE! The chain lubriction opens up and closes automatically when the machine is started or shut down. The flow regulation valve is only used for adjustment of flow.

Observe the oil flow to the sawbar and the chain if the weather conditions are changing. In warm weather, the oil is less viscous and flows more easily to the chain. The valve should be adjusted in the direction of lower flow ! For cold weather, the procedure is the opposite.

2. Move the splitting lever to the ’IN OPERATION’ position

3. Press down the crosscut lever and let it return to its initial position

4. Check that the splitting beam moves close to the splitting blade and afterwards returns to its initial position, i.e. the splitting movement is operating correctly.

Stopping the splitting movement

Move the splitting lever to the ’STOP’ position

Note ! If the control lever is shifted to the STOP position, the sawbar must be in the upper position. As the sawbar is in the upper position and the control lever is brought to the STOP position, the sawbar will be lockes in the upper position by the locking peg controlled by the control lever

Return of the splitting movement

The splitting chute cover can only be opened when the sawbar is in the upper position and the control lever for splitting is in the STOP position

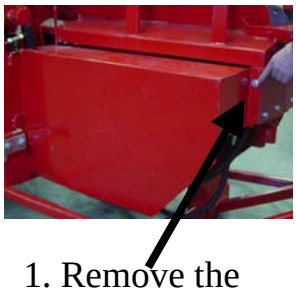
Move the splitting lever to its extreme position on the right

IMPORTANT! If the splitting control lever is in the 'IN OPERATION' position and it is possible to open the splitting chute cover, then it is **strictly forbidden to operate the machine.** The locking defect must be repaired immediately, i.e. The opening of the splitting chute cover should only be possible when the control lever for splitting is in the STOP position.

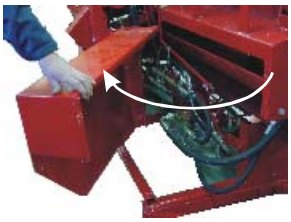
NEVER PUT YOUR HAND IN THE CUTTING OPENING WHEN THE MACHINE IS IN OPERATION. ALWAYS STOP THE MACHINE FOR SERVICING.

Splitting speed acceleration valve with automatic

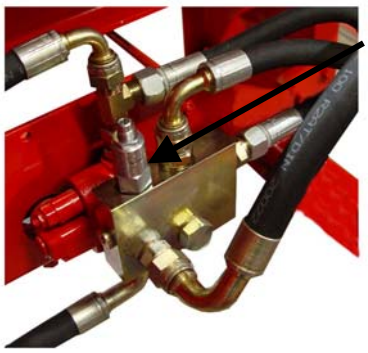
Operation of the automatic acceleration function (which is permanently connected). The movement will slow down the splitting force will increase if the splitting resistance increases to about 120 bar (the factory setting). The threshold value for the reduction of the splitting movement speed can be adjusted as follows;



1. Remove the locking peg of the valve unit cover.



2. Open the valve unit cover.



3. Loosen the locking nut of the setscrew for the accelerator valve pressure adjustment

1 turn = about 10 bar

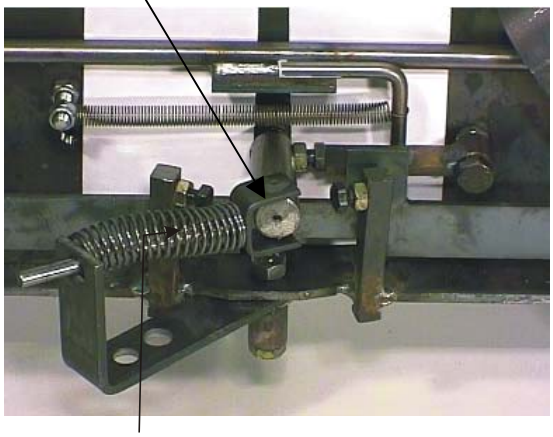
4. Adjust the desired pressure setting by the setscrew.
Direction of adjustment:
Closing – the movement slows down at higher resistance
Opening – the movement slows down at lower resistance

An acceleration of 33% in the splitting movement can be achieved using the acceleration valve. NOTE ! The increased speed correspondes to decreased splitting force.

Warning ! Never turn the accelerator valve setscrew to the completely closed position **!** Open it from the closed position by at least one turn.

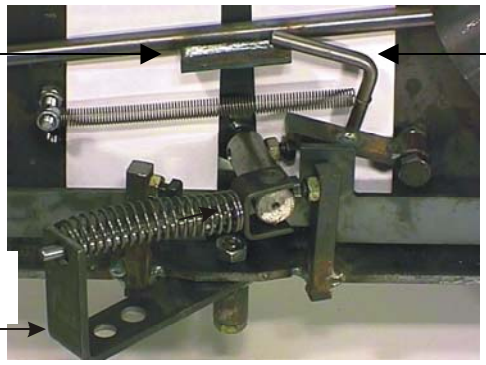
The operation of the valve linkage/splitting lever system

1. In the start position the articulated lever of the valve is in the centre position



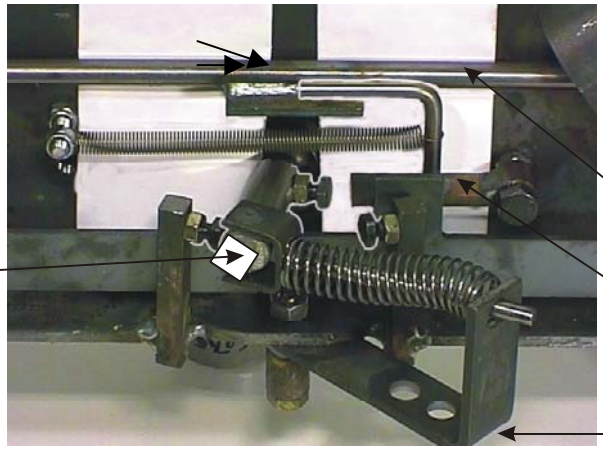
2. The spring thrusts the articulated lever to the right

3. When the cross-cut lever is lifted up after cutting the tree, the release lever for splitting will also come up and lift the release bar up. As the release bar is in its upper position, the spring will push the articulated lever to the right and the splitting movement will start.



Valve lever

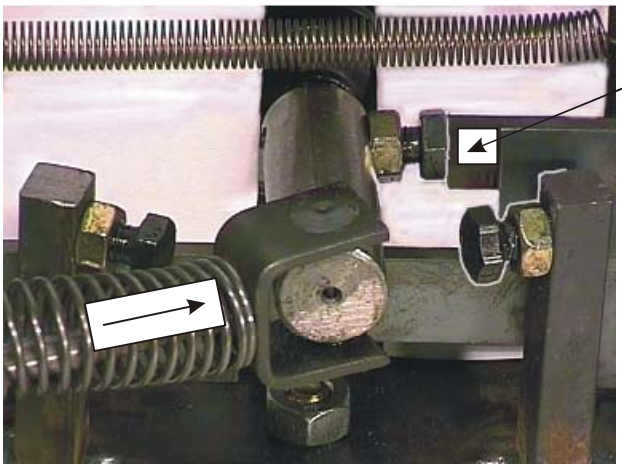
4. When the splitting beam approaches the splitting blade, the lever of the valve swings to the right and forces the spring to thrust the articulated lever to the left, making the splitting beam return to its initial position.



5. When the articulated lever is at the left, the release lever for splitting and the release bar will come down to their initial positions

Valve lever

6. When the splitting beam reaches its initial position, the lever of the valve, which is thrusting the spring, will swing to the left and force the spring to thrust the articulated lever to the right.

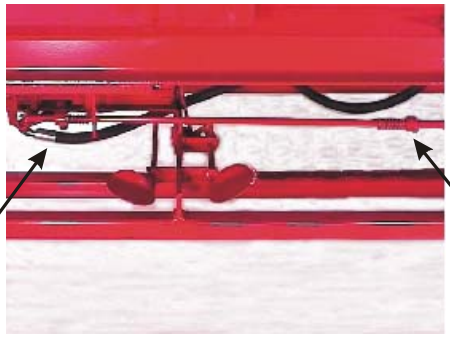


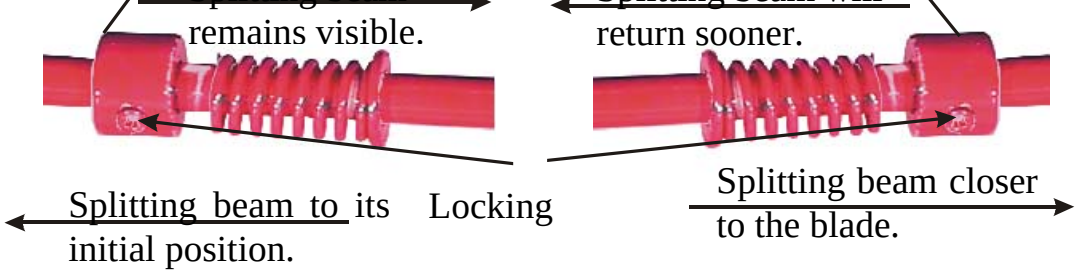
7. The release bar, which has returned down, will stop the articulated lever in its centre position, thus stopping the operation of the splitting system.

Adjustment of the splitting system and the length of the splitting movement

The start position of the splitting beam is adjusted by moving the stopper on the left side.

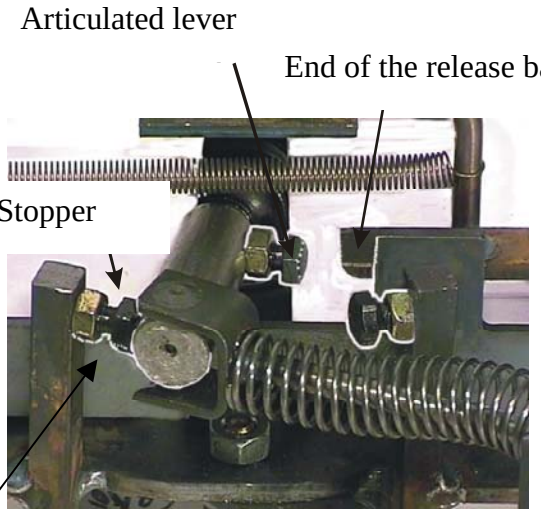
The return movement of the splitting beam, i.e. how close to the blade the beam will come during the splitting movement, is adjusted by moving the stopper at the right side.





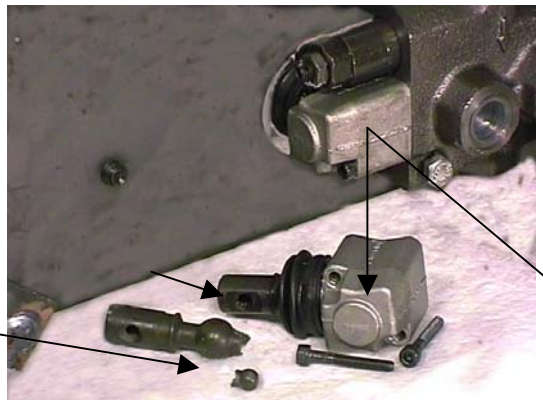
Adjustment of the valve linkage

When in its extreme position, the articulated lever must always come into contact with the stoppers in the linkage. If the articulated lever is in its extreme position and does not touch the stopper, adjust the position of the stopper towards the articulated lever so that it will touch the lever and move it towards the centre position by about 2 mm.



If the machine keeps making a continuous splitting movement, the cap of the bolt in the articulated lever or the end of the release bar can be rounded. File the rounding off or replace these parts.

The hydraulic pressure can be adjusted with the pressure relief adjuster, which is located on the upper side of the ball joint.



If the articulated lever comes to its extreme position without being stopped by the stopper, it can break the ball joint, which moves the spool of the valve.

The broken ball joint can be replaced by removing it from the valve.

How to make firewood, general instructions

Do not start making firewood until;

- you are familiar with the control levers of the machine and you know how to operate them
- you know everything about the operational safety of the machine
- you wear clothes suited for the work, i.e.
    - safety boots with non-slip soles
    - gloves that give you a firm hold of the wood
    - suitable clothes that are not too loosely-fitting

    Avoid too loosely-fitting clothes because they may cling to the wood or the machine and as a result of this an accident !
- you wear appropriate face and eye shields and ear protectors
- you have arranged the work site so that it is even and safe
- you have observed the temperature and that heat and frost cannot cause you any harm
- you have observed that the weather is such that neither rain nor blizzard can cause harm to yourself or to the machine
- you have taken care that strong wind cannot cause harm during the operation either to yourself or to the machine
- you have observed that the working environment is sufficiently illuminated to avoid accidents during the connection, operation, transportation and storing of the machine

When starting to make firewood please observe the following:

- if the machine has been stored in temperatures below 10 degrees, all its movements will be slow to start with. In this case you should test the crosscut and splitting movements several times to heat the oil up and to make the movements of the machine normal
- if the firewood is processed in temperatures above 20 degrees, the oil may overheat and the work must be stopped until the oil has cooled down

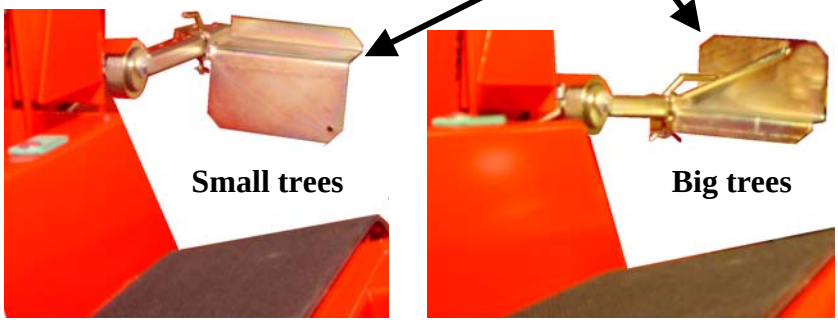
How to make firewood, general instructions

You can start making firewood as soon as the machine has been connected to the power source and the test run has been completed according to these instructions, and the operator has familiarised himself with all safety precautions related to the operation of the machine.

1. Adjust the length of the wood to be cutbring the splitting lever into the STOP position and open the cover of the splitting chute.
2. Set the wood length limiter in the splitting chute to the desired length by first removing the cotter of the locking peg and then the peg itself. Lock the limiter in the desired position with the peg and put the cotter in place.
3. Close the splitting cover and move the splitting lever into the IN OPERATION position.

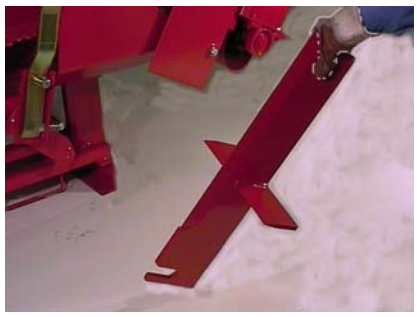
NOTE ! If the diameter of the wood exceeds 30cm, turn the limiter to !!!!

4. Check that the splitting beam is in its initial position and has not moved towards the splitting blade



5. Adjust the height-position of the splitting wedge using the crank in accordance with the diameter of the tree.

Note! The splitting wedge can also be removed.
1. Lower the wedge with the crank
2. Lift the wedge away
3. Reassembly of the wedge takes place in reverse order



6. Cut long, thick and warped trees, which make the lifting more difficult and can cause a danger or injury as the tree is being lifted, in advance with a chainsaw. Mind your back while lifting the tree! Do not use your back for lifting! Lift with your legs !

7. Put the tree for cutting onto the machine and place yourself in the working position by the machine as illustrated in the adjacent picture.

8. Transfer the wood against the length limiter either by hand or with the feed conveyor.

9. Hold the tree, which you intend to cut, with your left hand and press the cross-cut bar lightly against the tree using the cross-cut crank.
DO NOT HIT!
Cut the tree by pressing smoothly

10. As soon as the wood has been cut and it drops into the splitting chute, hold the cross-cut lever down and check the position of the wood in the splitting chute. If the wood aligns with the chute and does not have burls, big branches or anything else that could make it stick to the splitting blade, lift up the cutting lever.

If the wood is placed in the chute at an angle, it is likely that it will also hit the splitting blade at an angle and get stuck in it. Should this happen, do the following:

Lift up the cross-cut bar. Shift the control lever for splitting into the "Stop" position before the splitting beam starts to push the tree against the splitting wedge. Reverse the splitting beam by shifting the control lever into the "Reverse" position

Open the cover of the splitting chute, with the splitting lever in the STOP position, and straighten the wood in the chute.

Close the cover and bring the splitting lever to the IN OPERATION position.

Start the splitting of the wood by pressing down the cross-cut lever or by pressing the splitting release pedal in the front at the lower part of the machine.

Always press the cross-cut lever completely down when cutting trees. The return movement of the cross-cut lever is spring-loaded and it must, therefore, always be cushioned with the hand, and must never be allowed to return to its initial position only with the spring force.

The sawbar must always be supported in its upper position by the spring except when the wood is being cut. The sawbar must never remain visible in the upper part of the cutting opening. The return spring of the sawbar must be kept tight enough that it will be able to keep the sawbar up. The tightness of the spring can be adjusted with the nut in the upper part of the frame.

Take care when transferring the wood that the sawbar does not collide with the wood being transferred, a branch or stick that has perhaps loosened from the wood.

How to remove wood that is stuck in the splitting blade

If the force of the splitting cylinder is not enough to split the wood and the wood gets stuck in the splitting blade, do the following:

1. Stop the splitting by bringing the splitting lever to the STOP SPLITTING position.
2. Turn the splitting lever to the REVERSE position to make the splitting beam return.

3. As soon as the splitting beam has returned to its initial position, bring the splitting lever into the STOP SPLITTING position.
4. Open the cover of the splitting chute.
5. Remove the wood that is stuck in the splitting blade with some striking tool. Remove the wood carefully to avoid causing harm to the machine or to you.
6. After having removed the wood, place it in the splitting chute at such an angle that its splitting will be possible, and adjust the horizontal splitting blade to its lowest position in order to split the wood into only two parts with the vertical blade. If you think that the wood possibly cannot be split with the splitting system of the machine, remove the wood.
7. After having removed the wood from the blade and placed it back in the splitting chute, bring the splitting lever into the IN OPERATION position and start the splitting movement with the release pedal of splitting as instructed above.

How to split wood that has already been split

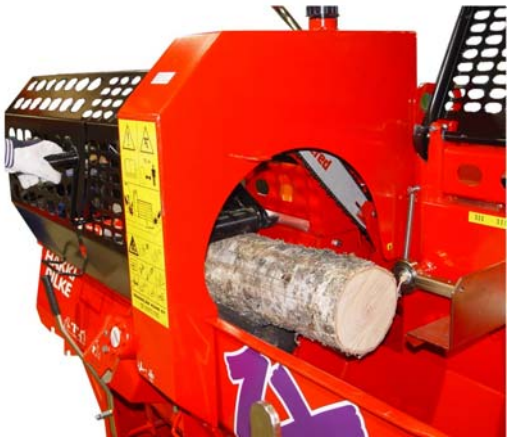
1. Bring the splitting lever to the STOP position and open the cover of the splitting chute.
2. Place the wood in the splitting chute. The splitting cylinder is in its initial position. Put down the cover of the splitting chute.
3. Bring the splitting lever to the IN OPERATION position and start the splitting movement with the release pedal of splitting.

How to cut the last log

Never transfer the log that you intend to cut last in the cutting opening in such a position that it will be inclined and pressed into the splitting chute.
When chopping the last log press the log fastener crank down so that log remains in its position.

Should this happen:
1. Bring the splitting lever to the STOP SPLITTING position.
2. Open the cover of the splitting chute and draw or lift the wood away from the chute. Never push the wood back through the cutting opening.
3. Close the cover of the splitting chute and bring the splitting lever to the IN OPERATION position.
4. Resume processing the firewood.

Always leave the full-size part of the last log on the side of the cutting table and the shorter part on the side of the splitting chute when transferring it for cutting. To cut the last log, press the wood with the supporting roll and cut it by pressing the crosscut lever down gently.



How to transfer the last log into the splitting chute

If the machine is equipped with the feed conveyor;

Loosen your grip from the handle of the cover and feed the wood into the splitting chute by lifting the crosscut lever to its upper position as instructed in the chapter ”How to operate the feed conveyor”.

If the machine is not equipped with the feed conveyor

Lift the cover of the cutting opening up by about 5 cm measured from the surface of the wood and push the wood into the splitting chute with a small rapid hand movement. NEVER PUT YOUR HAND FURTHER IN THAN TO THE LEVEL OF THE SUPPORTING ROLL !

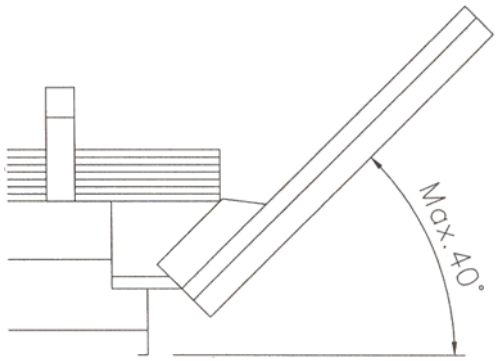
Always LOOK OUT FOR the spring-loaded cover of the cutting opening. NEVER put your hand between the wood and the roll during transfer of the wood. BE CAREFUL not to put your hand between the supporting roll and the cutting table or the conveyor belt.

How to make firewood with a machine without discharge conveyor

If firewood is processed with a machine that is not equipped with a discharge conveyor, all instructions given in this manual concerning the safe operation of the machine must be observed and in addition to this:

The finished firewood that heaps up next to the machine on the rear side of the splitting blades has always to be taken away immediately so that it does not cause risks or damage to the operator or the machine itself. Always stop the machine before removal of the firewood.

How to operate the discharge conveyor



Read the chapter: How to swing the conveyor into work and transport positions pages 13-15

The conveyor has to be placed at such an angle that it will be able to transfer all the finished firewood away from the firewood processor. It is forbidden to install the conveyor in such a steep position that the wood will roll back into the splitting chute!

During processing of the firewood the operation of the conveyor has to be followed and in particular the following matters have to be observed:

- The locking of the conveyor's drive wheel on the spline shaft (the shaft, to which the articulated shaft of the tractor is connected) of the angular gear has to be checked from time to time.
- The rotation of the conveyor belt has to be supervised, and if it stops, the machine has to be stopped immediately. The reason for stopping has to be cleared up when the machine is standing still. The fault has to be repaired immediately!
- It is forbidden to put your hand in the openings at the bottom and top ends of the conveyor during the operation.
- The conveyor trough, along which the firewood moves, must be kept free of ice, snow and wood waste.
- The ice, snow and wood waste that gather in the lower part of the machine and conveyor must be removed often enough that it won't cause damage or dangerous situations when working with the machine.

During processing of firewood ensure that:

- The firewood, which drops down from the conveyor, hitting the intended platform, cage, bed etc. is not allowed to fill the containers with more than they can reasonably hold.
- The load, which is intended to be transported, is structured in such a way that no firewood can drop from it during transportation.

- When the conveyor is in work position and the processing of firewood is underway, the distance between the top end of the conveyor and the firewood heap is not shorter than 50 cm.
- The conveyor is placed into transport position even for transfers at the work site.

Finishing the work

1. Make sure that there are no logs in the splitting chute or on the conveyor belt
2. Stop the power take-off of the tractor
3. Place the conveyor at a slightly steeper angle
4. Lift the machine with the three-point linkage of the tractor by about 10-15 cm and drive the tractor with the machine connected to it a bit further away from the processing site. Drive slowly and carefully in order to avoid damage to the machine and especially to the conveyor. TAKE CARE that the conveyor cannot bang into the platform, heap or anything else during the transportation.
5. Clean the machine as soon as you have arrived in a place where the cleaning of sawdust and other wood waste is possible.
6. Lower the machine onto the ground and bring the conveyor into transport position.

Transfer of the machine

Always make sure, when transferring the machine with a tractor, that:
- The conveyor is in transport position
- You have observed the necessary horizontal and vertical clearances, which the machine and the conveyor require. In other words:
- The height of the machine has to be so low that it cannot collide with any obstacles along the route.
- The machine has to be kept at such a distance from the ground that it cannot collide with any obstacles along the route such as stones, stumps or other obstacles.
- All cantilevers by the sides of the machine, such as the extension of the cutting table and the feed conveyor have been brought into transport position and during the transportation, especially in curves, care is taken that the machine with the conveyor will not collide with anything on the side.
- The transportation has to be carried out at such a low speed that no damage can occur.
- It is not allowed to carry any extra items on top of the machine during the transportation.
- The machine has to be lowered onto the ground even for short breaks, especially if the driver will leave the cabin.

Storing the machine

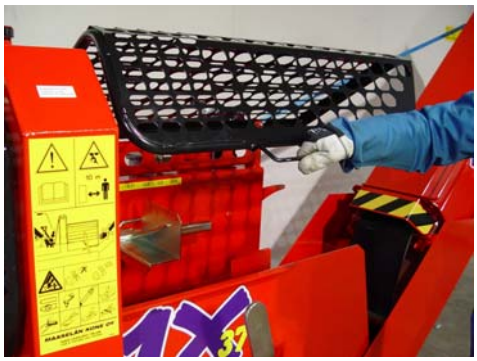
- Before putting the machine into storage it has to be cleaned of sawdust and wood waste.

- The machine shall be stored in a shed or, if it will be stored outdoors, must be covered with rain and snow proof material.
- The machine has always to be stored in its transport position and on such a base, that it cannot fall. It is absolutely forbidden to store the machine on an inclined base.
- The storing place has to be arranged so that it is impossible to bang into the stored machine.

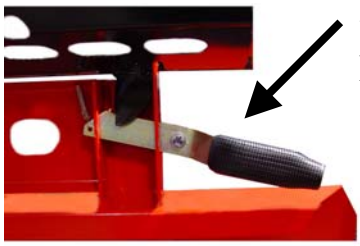
Sharpening the saw chain

USE GLOVES WHEN HANDLING THE SAW CHAIN !!!
The machine must be completely stopped when preparing the sharpening of the saw chain.

1. Set the chopping control lever in the stop position



2. Open the protection cover of the chopping groove



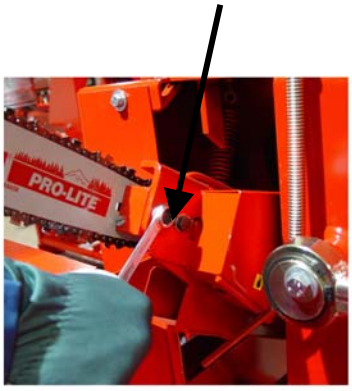
3. Lift up the protection cover of the feed conveyor and make sure that it locks in the upper position

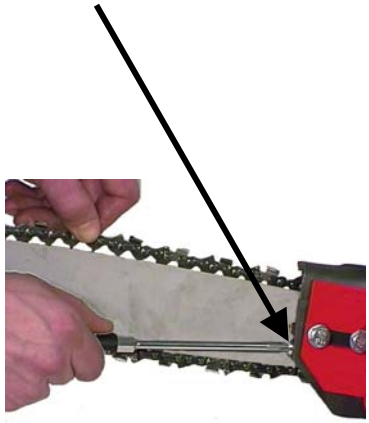
4. Open the protection box by using a screwdriver

5. Turn the blade opening protection in the rear position.
Be aware of the chopping blade !
Use protective gloves !

ALWAYS MAKE SURE THAT THE LOCKING PIN FOR THE CROSS-CUT BAR COVER LOCKS THE COVER IN ITS UPPER POSITION !!!

6. Loosen the fixing bolts (2 pcs) of the blade flange and the chain fastening screw so that the chain can be removed.





Blunt blades should be replaced with a new one or sharpened by filing it on a vice or a special sharpening device.

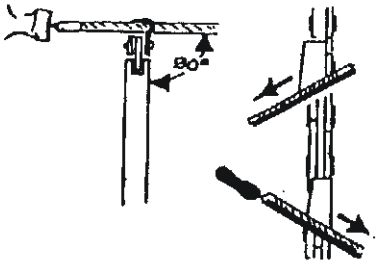
When sharpening the chain avoid the following mistakes:

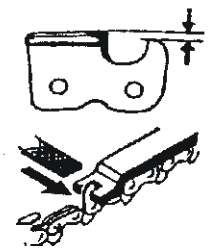
1. Filing too deep with too thin file

2. The depth of the saw chain is too big, should be 0.65 mm

3. The depth gauge is too small

When filing the saw tooth, keep the file at a 90º angle with regard to the sawbar and the chain. Always execute the filing thrust from the inside of the saw chain.



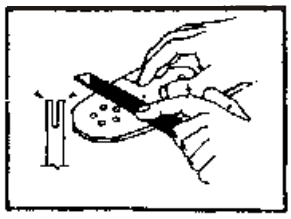


The right depth gauge is 0.65 mm.

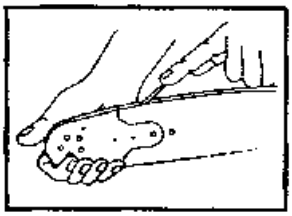
Maintenance of the sawbar

When necessary, service the saw chain and the sawbar according to the following instructions

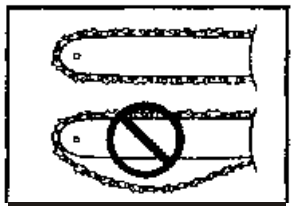
Remove the thread of the sawbar with a flat file

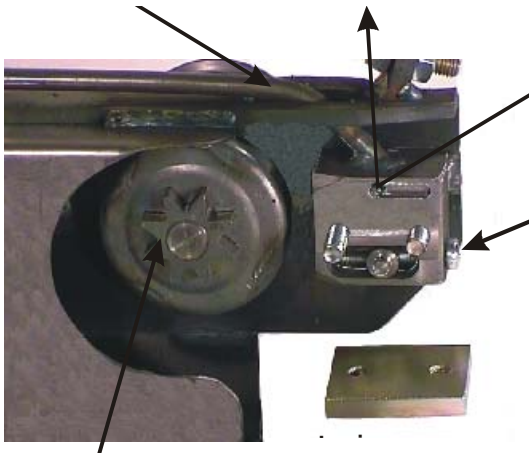


Clean the saw-bar groove



Remember the correct tight-ness of the chain !!!



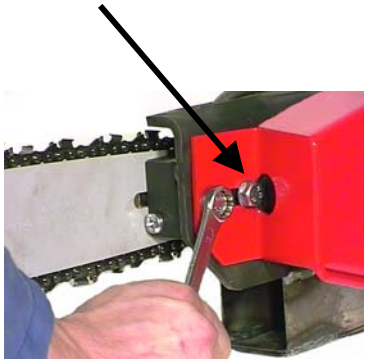


Replacement of the chain and the sawbar

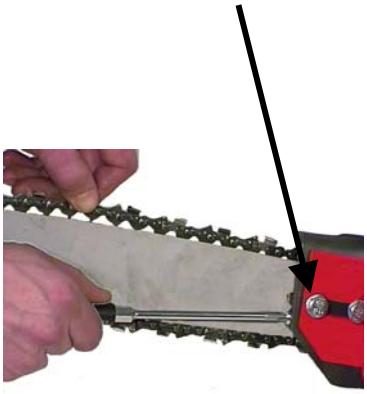
1. Unscrew the attachment bolts and the attachment plate of the sawbar as well as the saw chain
2. Before mounting the new chain or sawbar clean the saw chain oil opening
3. Screw the chain tightener to its initial position
4. Place the chain and the sawbar in place. Remember to place the chain in the right way, i.e. with the sharp edge of the tooth towards the sprocket at the lower edge of the sawbar
5. Mount the attachment plate of the sawbar and tighten the chain and the sawbar in place as instructed in the chapter “Tightening the saw chain”

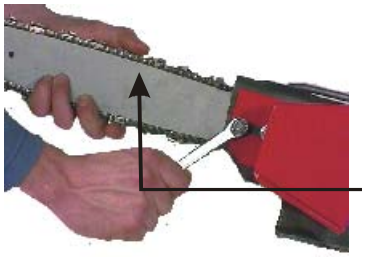
Tightening the saw chain

Loosen the attachment screws of the sawbar and adjust the chain to the correct tightness with the setscrew of the chain



Correct tightness of the chain:
When pulling the chain, one tooth remains visible at the lower edge, and after tightening, the chain will sit tight in the sawbar at its lower edge.

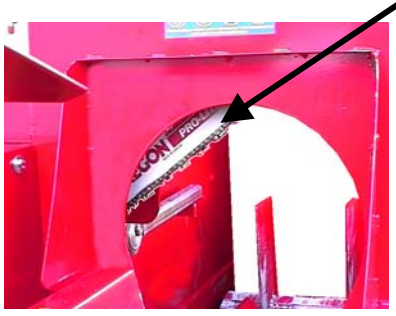


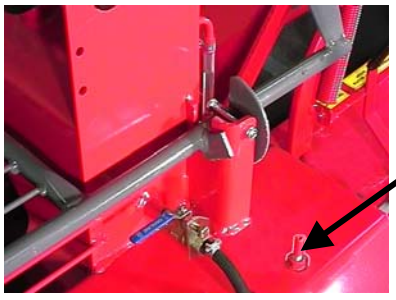


Attachment of the sawbar:
Raise the sawbar with hand and tighten the bolts

7.Once the sharpening is completed, swing the box cover of the chain down and lock it in place.
8. Swing down the cover of the splitting chute
9. Open the locking handle of the feed conveyor and lower the grid of the feed conveyor by holding from the handle only. Do not let fall !

It is forbidden to operate the machine if the crosscut chain will remain visible in the cutting opening and is not lifted completely up inside the cover !

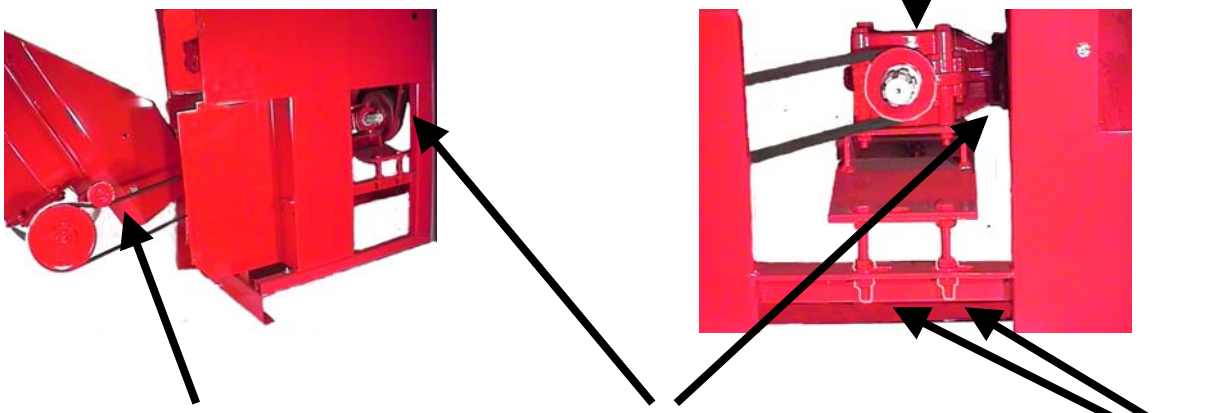




If the saw chain is not lifted completely up, tighten the spring that pulls the sawbar up with its adjustment nut. If the adjustment reserve is not enough, raplace the spring with a new one.

Adjustment of the v-belts and conveyor belts

Always stop the machine before adjusting the belts !!!



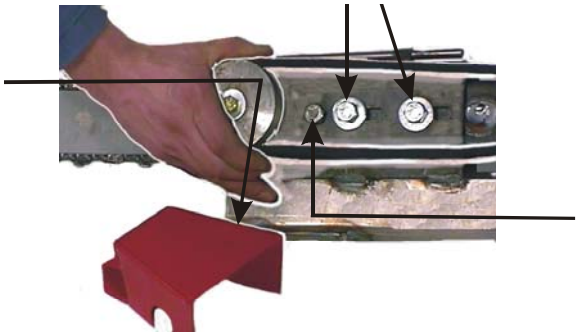
The spring-loaded tension wheel keeps the drive belt of the conveyor suitably tight.
Note! The tension wheel has to press the belt at its rear side.

The belts, between the angular gear and the drive shaft of the hydraulic pump can be adjusted with the adjustment bolts of the gear bracket.

Adjustment of the saw chain drive belt

2. Loosen the bolts of the v-belt adjuster

1. Remove the drive belt cover



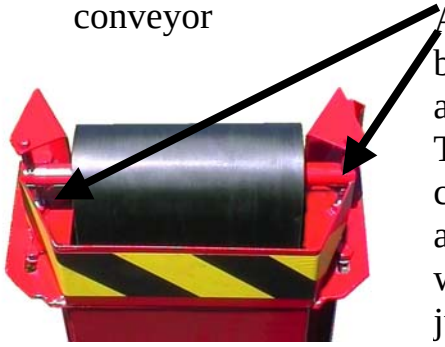
3. Adjust the tightness of the belt with its adjustment bolt and tighten the bolts of the adjuster

Tightness of the belts

The correct tightness of the belt between the angular gear and the drive shaft of the hydraulic pump as well as the drive belt of the saw chain:
The tightness is right when the belts stretch down about 20 mm when they are pressed down at the rear side of the belt exactly halfway between the pulleys.

Adjustment of the discharge and feed conveyor belts

Discharge conveyor

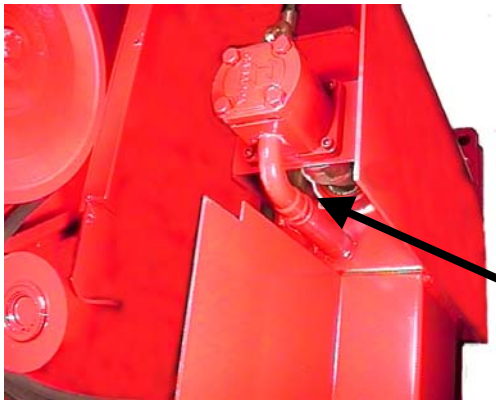


Adjust the tightness of the belt with the adjustment nuts at the ends of the conveyors. The tightness of the belt is correct if the conveyor belt is able to transfer the firewood without stopping. Do not adjust the belts too tight, as this will shorten their service life. A belt that has a tendency to travel to the side can be straightened up by extending the adjustment with the adjustment nut on that side to which the belt is travelling.

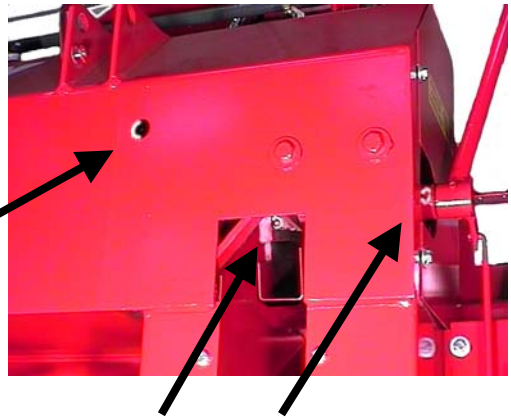
Feed conveyor

Lubrication of the machine

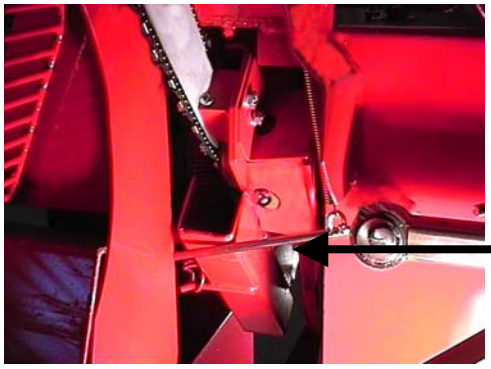
Lubricate with grease at intervals of 100 h



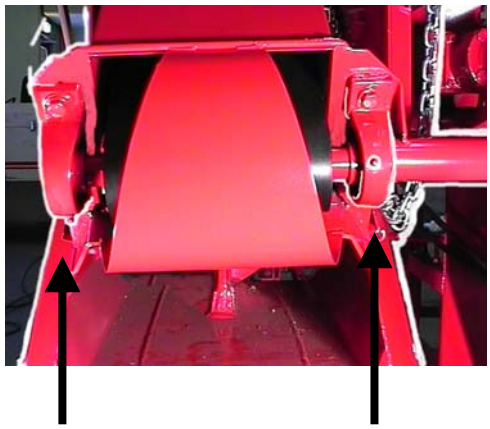
The bearings of the hydraulic pump drive shaft



The joints of the crosscut lever



The drive shaft of the saw chain

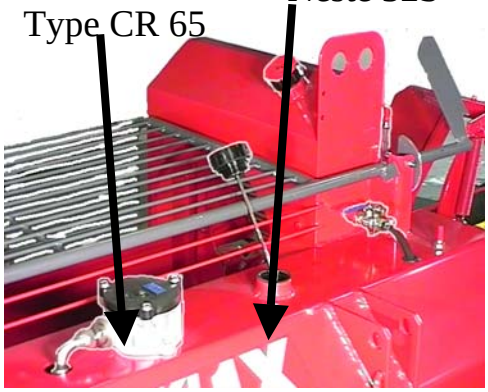


Bearings of the bottom roller of the discharge feed conveyor

Change once a year

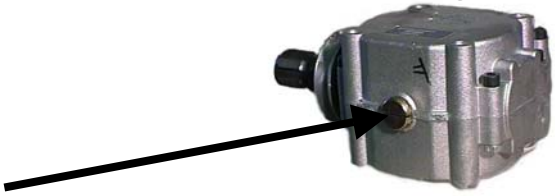
Hydraulic oil filter Type CR 65

Hydraulic oil, 40L e.g. Neste 32S



The oil in the angular gear.
E.g. EP 80/90

The correct oil level: in horizontal position the oil flows out through the filling opening



Technical specifications:

Power demand	7,5 kW (Model Easy 10 kW)
Cross-cut sawbar	0,325”/64 drive links
Sawbar	15”
Splitting cylinder/force	diam. 63 mm / 5,5 t or diam. 70 mm / 7,0 t (additional equipment)
Acceleration valve of splitting	standard as option
Splitting blade	a blade that splits into 4 parts, a blade that splits into 6 parts (additional equipment)
Hydraulic pressure	180 bar
Flow of hydraulic pump	44 l / min
Weight with conveyor	513 kg
Length of conveyor	4 m

Acoustic pressure level at the operator’s place	LAeq	95 dB
Acoustic power level	Lw	111dB
Maximum noise level at the operator’s place	Lcpeak	<130 dB (125 dB)
Weighted acceleration of hand vibration	aw	<2,5 m/s² (0,9 m/s²)

Manufacturer: ***MAASELÄN KONE OY***
Rajakatu 25, 85800 HAAPAJÄRVI, FINLAND
+ 358 8 7727300, f 7727320

EC DECLARATION OF CONFORMITY

MAASELÄN KONE OY
Rajakatu 25, 85800 HAAPAJÄRVI, FINLAND

Declares that the following machinery that is placed on the market

HAKKI PILKE 1X 37, firewood processor

Serial number……..

conforms to the provisions of the Machine Directive 98/37/ETY and to the national decrees (VNp 1314/94) through which they have been brought into force.

Haapajärvi 28.8.2000

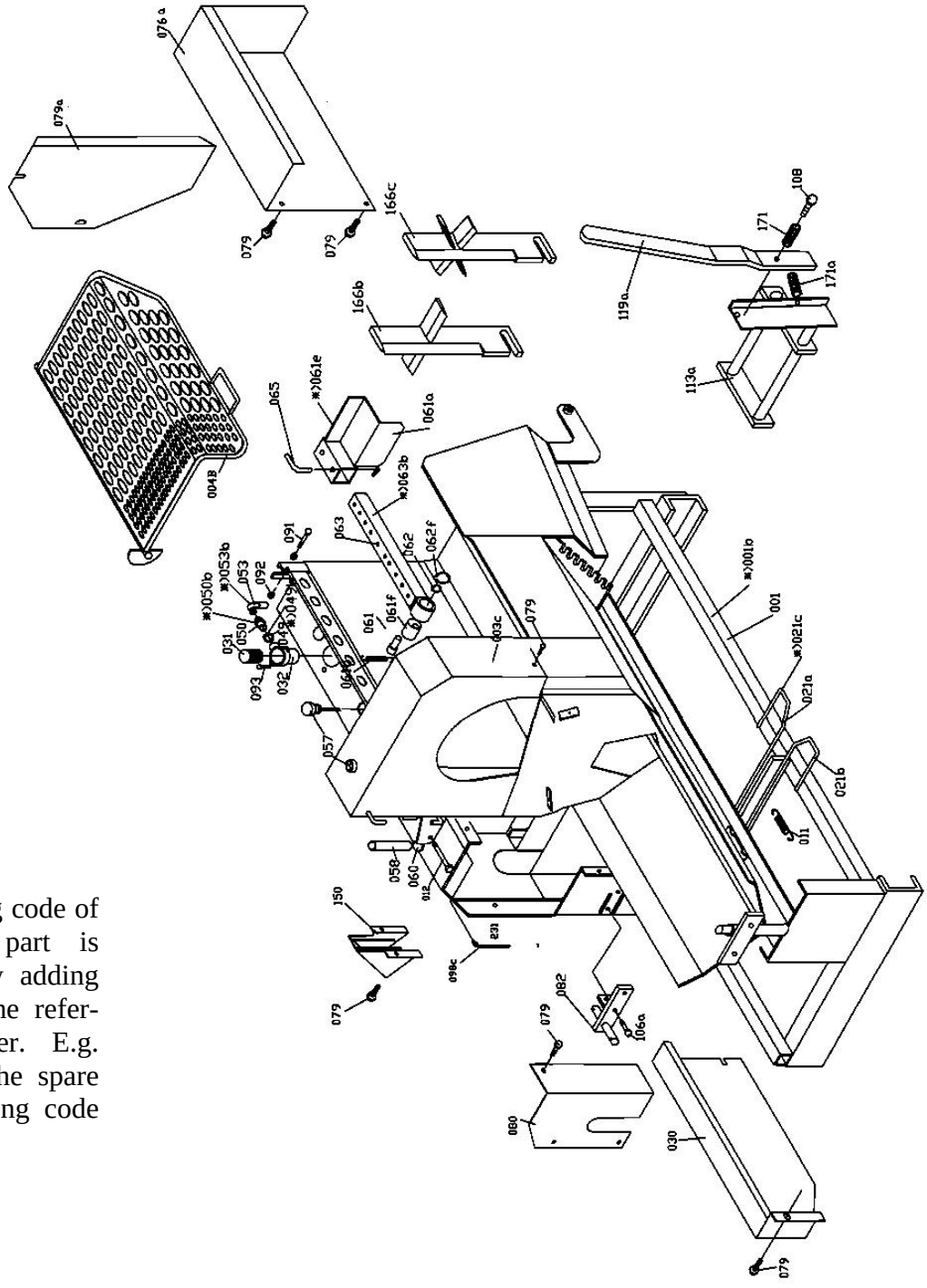
Ismo Hallapuro
Sales Manager

Spare part list

Ref	Item	Pc
37001	Frame	1
37001b	**Frame**	**1**
37002a	Angular gear B2021	1
37003	Valve SD4/1 neg spool	1
37003a	*Ball joint of level*	*1*
37003c	Top cover	1
37004	*Top protection*	*1*
37004B	**Top protection**	**1**
37005	Hydr.pump 16cm	1
37006a	Slide	1
37006b	**Slide**	**1**
37009	Bearing 6205RS	2
37010a	*Slide bracket*	*1*
37010b	Slide bracket	1
37011	Draw spring 0,9*9,8*100	1
37011a	Draw spring 0,9*9,8*40	1
37012	**Bolt**	**1**
37013	Intermediate rod	1
37014	Release rod	1
37015	*Release lifter*	*1*
37016	*Release lever*	*1*
37017	*Stop lever*	*1*
37017a	*Middle plate*	*1*
37018	*Compression spring 2*22*150*	*1*
37019	*Stop lever plate*	*1*
37020	*Bearing 6207RS*	*3*
37021a	Release leverage	1
37021b	Return leverage	1
37021c	**Release leverage**	**1**
37021d	Sawbar 16"	1
37023	*Release bar*	*1*
37024	*Intermediate rod*	*1*
37024d	*Intermediate rod (el.)*	*1*
37025	*Release bar*	*1*
37026	*Stop lever plate*	*1*
37027a	*Stop lever*	*1*
37028a	Saw chain 0,325"66-links	1
37029	*Attachment plate of level*	*1*
37030	Valve cover	1
37031	Filter cartridge CR 50	1
37032	Filter FIO 50/3	1
37034a	V-belt XPA850	1
37035	Spring tensioner	1
37036	Draw spring 3,5*30*190	1
37037	Attachment plate of sawbar	1
37038	Hose inside diam. 8mm	1
37039	Belt pulley 1A80 diam.25	1
37040	Drive shaft of chain	1
37041	Attachment plate of sawbar	1
37042	Cock	1
37043	Hose bracket diam. 35	1
37044	Attachment plate of sawbar	1
37045	Suction hose, inner diam.25	1
37046	Sawbar pin	1
37047	Angular 90 3/4"	1
37048	*Feed table*	*1*
37048a	*Table of feed conveyor*	*1*
37049	Usit seal 1/2"	6
37049b	**Usit seal 1/2"**	**2**
37050	Double nipple 1/2"	6
37050b	**Double nipple 1/2"**	**2**
37051	Usit seal 3/8"	4
37052	**Feed table**	**1**
37053	Hose 1/2" 1,7m	2
37053b	**Hose 3/4" 1,9m**	**2**
37054	Hose 1/2" 0,75m	1
37054b	**Hose 3/4" 0,8m**	**1**
37055	Hose 3/8" 0,4m	1
37055b	**Hose 3/8" 0,4m**	**1**
37056	Rod of extension roller	1
37057	Filling cap 1 1/2"	2
37058	Plastic hose, inner diam.8m m	1
37059c	Guide roller	1
37060	Hose bracket 8-14	2
37061	Shaft of wood length limiter	1
37061a	Wood length limiter	1
37061b	**Tensioning spring**	**1**
37061e	**Log length limiter**	**1**
37061f	Can	1
37062	Locking ring A25	2
37062f	Locking ring A50	1
37063	Tube of wood length limiter	1
37063b	**Tube of log length limiter**	**1**
37065	Locking screw	1
37066	Drive pulley 1A180/35	1
37067	Drive pulley 3A90/35	1
37068	Drive pulley 3A180/25	1
37069	Drive belt A38	3
37070	Locking ring A30	4
37071	V-belt A94 el.A96	1
37071b	**V-belt A98 el.A100**	**1**
37072	Bearing UCP 207	4
37073a	Drive shaft of pump	1
37074	Key 7*8*75	1
37075	Key 7*8*30	3
37076a	Cover	1
37077	Key 7*8*15	1

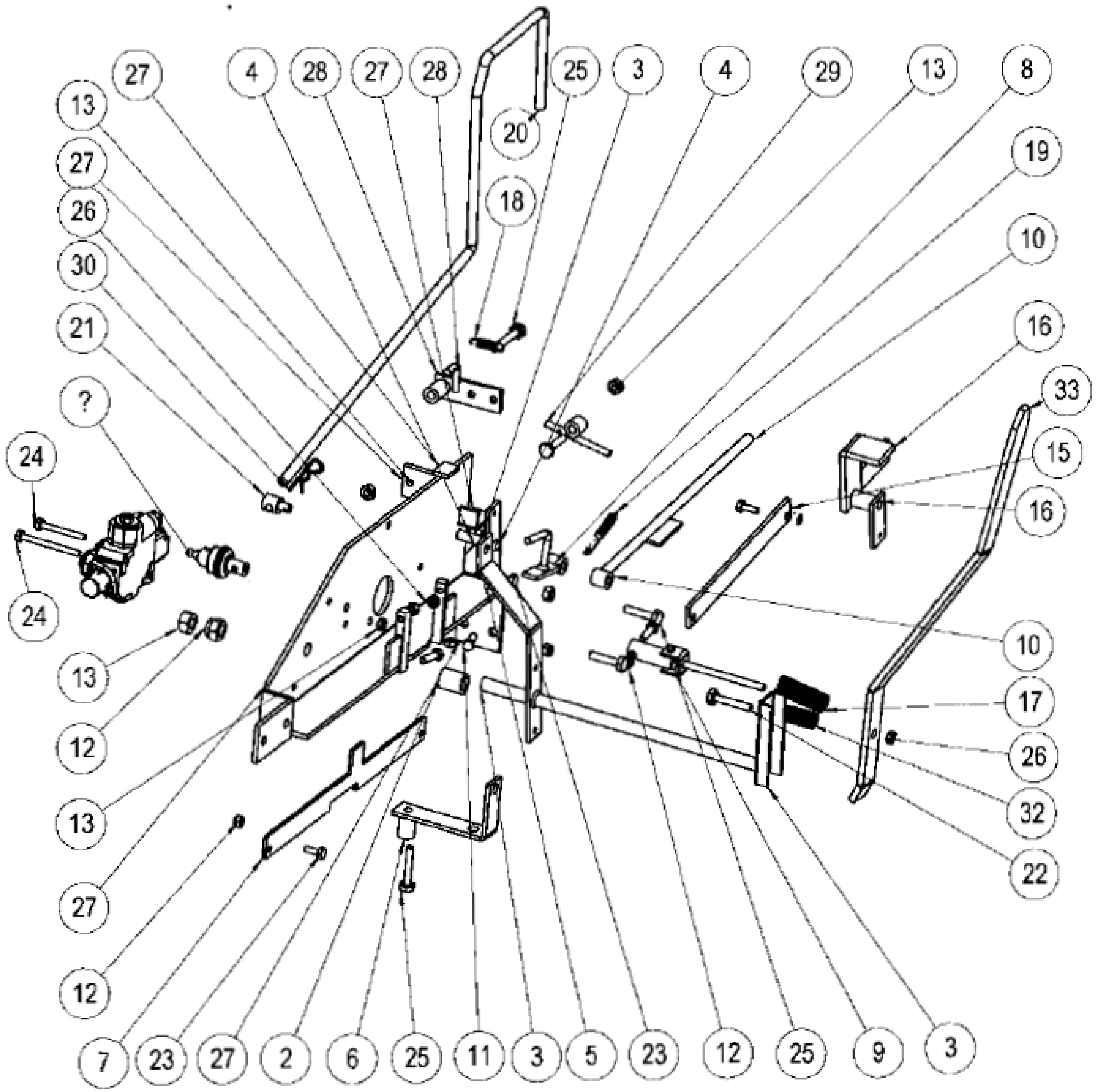
37078	Slot-headed screw M6*40	1
37079	Hexagonal screw M8*12	12
37079a	Cover plate of pump	1
37080	Cover	1
37081	Pump bracket	1
37082	Draw pin	2
37083	Sawbar plate	1
37084	Hexagonal screw M8*20 2pc 10.9	16
37085	**Shaft of sawbar**	**1**
37085a	*Shaft of sawbar*	*1*
37088	Hexagonal screw M8*55 10.9	1
37090	Hexagonal screw M8*30	10
37091	Hexagonal screw M8*60	4
37092	Hexagonal nut M8	48
37093	Hexagonal screw M6*20	2
37094	Washer M8	20
37095	Washer M10/36	4
37096	Washer M8/27	1
37097	**Washer M8**	**2**
37098	Hexagonal screw M10*30	6
37098c	Support bar of elevated tank	1
37099	Drive pulley 1A180/28	1
37100	Hexagonal screw M10*40	4
37101	Hexagonal screw M10*50	4
37102	Hexagonal screw M10*130	4
37103	Hexagonal nut M10	16
37104	Washer M10	4
37105	Drive pulley diam. 80mm	1
37106	Hexagonal screw M12*35	8
37106a	Hexagonal screw M14*35	4
37107	Hexagonal screw M12*45	4
37108	Hexagonal screw M12*70	1
37109a	Coupling half	1
37109b	Coupling half	1
37109c	Coupling rubber	1
37110	Hexagonal screw M12*75 full thread.	2
37111	Hexagonal nut M12 nyloc	17
37112	Washer M12	4
37113a	Blade adjustment lever	1
37114	Hexagonal nut M12	10
37115	Hexagonal screw M12*150	2
37116	Belt 240*6600	1
37117	*Short-linked chain 6,3*	*1*
37118	Locking screw M8*20	28
37119a	Blade adjustment lever	1
37120	Washer M20	4
37121	Rack of angular gear	1
37122	Split cotter 3,2*32	4
37123	Split cotter 2,5*20	3
37124	Stop screw M8*8	3
37125	Transporter frame	1
37126	Cotter pin 8*40	1
37127	Grease nipple M8*1	6
37127b	Fixing plate of rubber clapper	1
37128	Cotter bolt 3,5	1
37128a	Fastening plate of conveyor	1
37128b	Fastening plate of conveyor	1
37129	Fastening plate of winch	1
37129a	Hinge plates	2
37130a	Conveyor channel (upper)	2
37131a	Conveyor channel (bottom)	2
37132a	Top roller diam.100*240	1
37132b	Shaft of top roller	1
37133	Drive roller diam. 100	1
37134a	Side plate, left	1
37134b	Side plate, right	1
37134c	Upper cover of conveyor	1
37135	Belt scraper	7
37136	Belt jointing plate	2
37137a	Guide plates of wood	2
37138	Extenison plate	6
37139	Cylinder pin	1
37143	*Adjustment lever of blade*	*1*
37144	Hexagonal screw M10*20	1
37145	*Valve lever*	*1*
37149a	Tension wheel	1
37149b	Rod of tension wheel	1
37149c	Drive spring 2x20x100	1
37149d	Bearing 6203 2RS	1
37150	Sawdust guide	1
37152	Belt cover	1
37155	*Valve control rod*	*1*
37158	Drive roller of feed conveyor	1
37159a	Feed conveyor 2.2m	1
37159b	Table support	1
37159c	Locking pin	1
37160	Shaft diam.25	1
37160a	Roller	1
37162	**Intermediate rod L=335 diam.8**	**1**
37162B	**Bar for feed table valve 5x30x70**	**1**
37163	*Lever of feed conveyor*	*1*
37164	Cylinder 63/45-650	1
	piston seal SM63/51X20W	1
	rod seal TS45/55x10	1
	O-ring 3x58	2
37164a	Cylinder 70/45-650	1
	piston seal DAS 70/50X22	1
	rod seal TS45/55x10	1
	O-ring 2.62x65	2
37164b	Cylinder 63/45-710	1
	piston seal DAS 63/51X20W	1
	rod seal TS45/55x10	1

	O-ring 3x58	2
37164c	Cylinder 70/45-710	1
	piston seal SM63/51X20W	1
	rod seal TS45/55x10	1
	O-ring 3x58	2
37165	Shaft of angular gear	1
37166b	Splitting blade 2 /4 part 15mm	1
37166c	Splitting blade into 6 parts (optional equipment) 15mm	1
37167	*Joint lever*	*1*
37168a	Frame of acceleration valve	1
37171	Compression spring 2,5*20*38	1
37171a	Compression spring 3,5*22*38	2
37181	El.motor holder	1
37182	El. drive wheel 3A125	1
37182a	El. drive pulley 3A180	1
37182b	El.drive pulley 3A94 (combustion engine)	
37183	El. drive pulley 3A108	1
37184	Shaft cover	1
37185	**Hex screw M12*60**	**1**
37187	Activation case	1
37189	**Fastening plate for internal combustion engine**	**1**
37189 ?	*Hexagonal screw M12*60*	*1*
37190	Bearing UCFL205	1
37191	Shaft of combustion engine	1
37192	Lever	1
37192a	*Hose 1/2" 0,75m*	*1*
37193	Hose 1/2" 0,8m	2
37194	Hydr.motor OMP 400	1
37195	Valve. SD4/1 neg shaft Spring centering	1
37196	Belt 200*4600 (2,2m)	1
37197	El.motor 7.5kw/1500	1
37198	Motor starter 7.5kw	1
37199	Socket 5x32A	1
37200	Rubber clapper	1
37200a	Rubber cable 5x2.5x2.5	1
37201	Rubber cable 7x1.5x2m	1
37202	**Belt A36**	**3**
37203	*Drive belt A36*	*3*
37203a	**Wedge**	**1**
37204	Washer M12/44X4	1
37205	Slot-headed screw M4X20	4
37206	Hexagonal nut M4	4
37207	Hexagonal screw M8X80	2
37208	Battery rack	1
37209	Battery	1
37210	Combustion engine 13hv	1
37211	Cover	1
37212	Winch	1
37212a	Winch line 3m and hook	1
37213	Bolt	1
37218	Cover	1
37219	Roller	1
37221	Spring bracket	1
37225	Belt holder	1
37229	Locking bolt of conveyor	1
37229a	**Pull spring 2x15x150**	**1**
37231	Lubrication valve	1
37234	**Valve frame**	**1**
37235b	**Top protection**	**1**
37244	**4-block valve**	**1**
37303	**Compression spring 2,5x20x38**	**1**
37320	Locking bar of blade	1
37321	Fastening of locking bar	1
37325	**Accelerator valve**	**1**
37326	**Adjustment valve**	**1**
37327	**Banjo bolt**	**1**
37328	**Ball**	**1**
37329	**Spring**	**1**
37330	**Nipple**	**1**
37331	**Banjo bolt**	**1**
37341	**Front grid unlocking bar**	**1**
37350	**Front grid**	**1**
37358	**Torsion spring diam.5**	**1**
37360	**Application lever**	**1**
37363	**Grip attachment plate**	**1**
37369	**Blade application articulation**	**1**
37390	**Log press**	**1**
37391c	**Log press fastening pin**	**1**
37393	**Roll axle**	**1**
37394	**Adjustment rod regulator**	**1**
37395	**Adjustment rod**	**1**
37405	**Functioning, return lever bar**	**1**
37510	**Grip**	**1**
37650	**Shell**	**3**
37653	**Lock ring A25**	**1**
37654	**Lock ring A16**	**2**
37655	**Sliding bearing**	**2**
37656	**Tube cotter pin 8x40**	**1**
37657	**Chain**	**1**
37658	**Bearing 6203 2RS**	**2**
37661	**Screw**	**1**

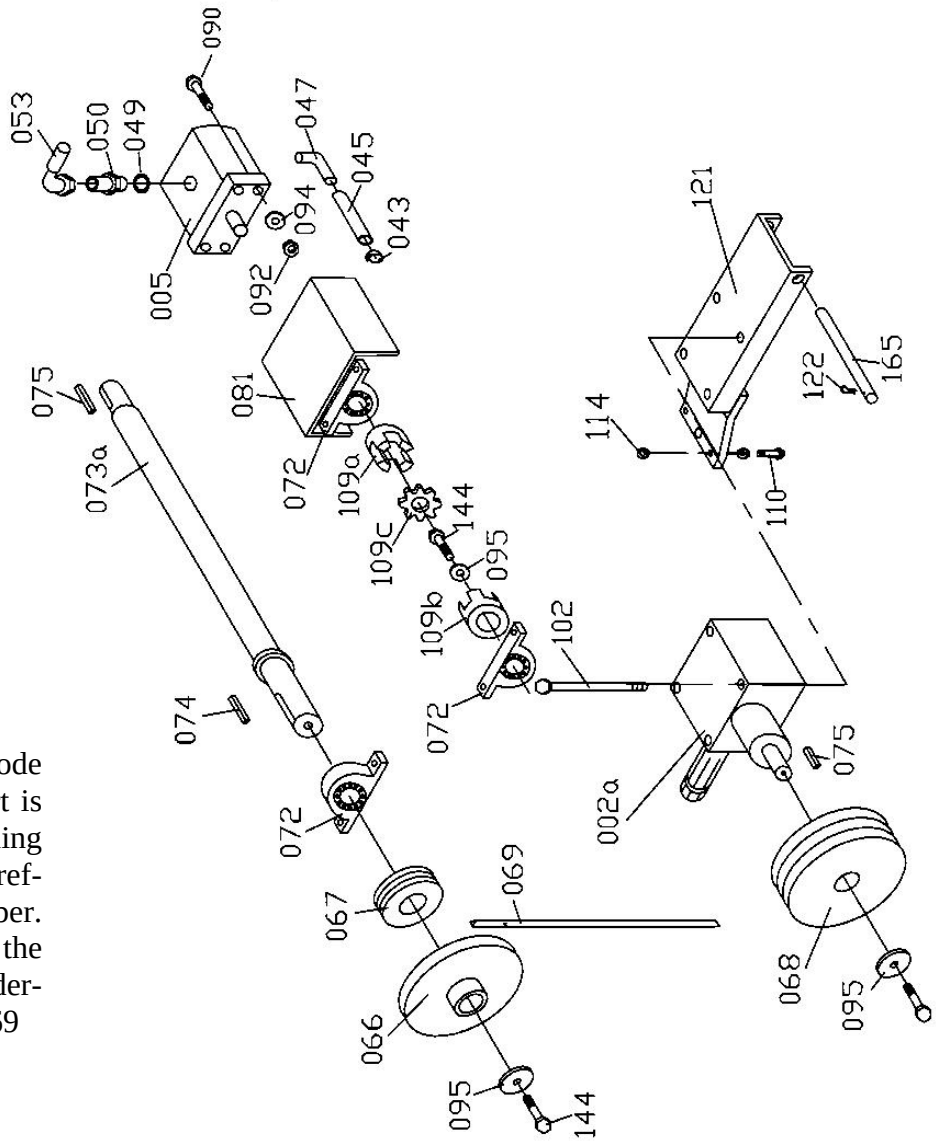


The ordering code of the spare part is made up by adding 37 before the reference number. E.g. Ref. 031– the spare part´s ordering code is 37031

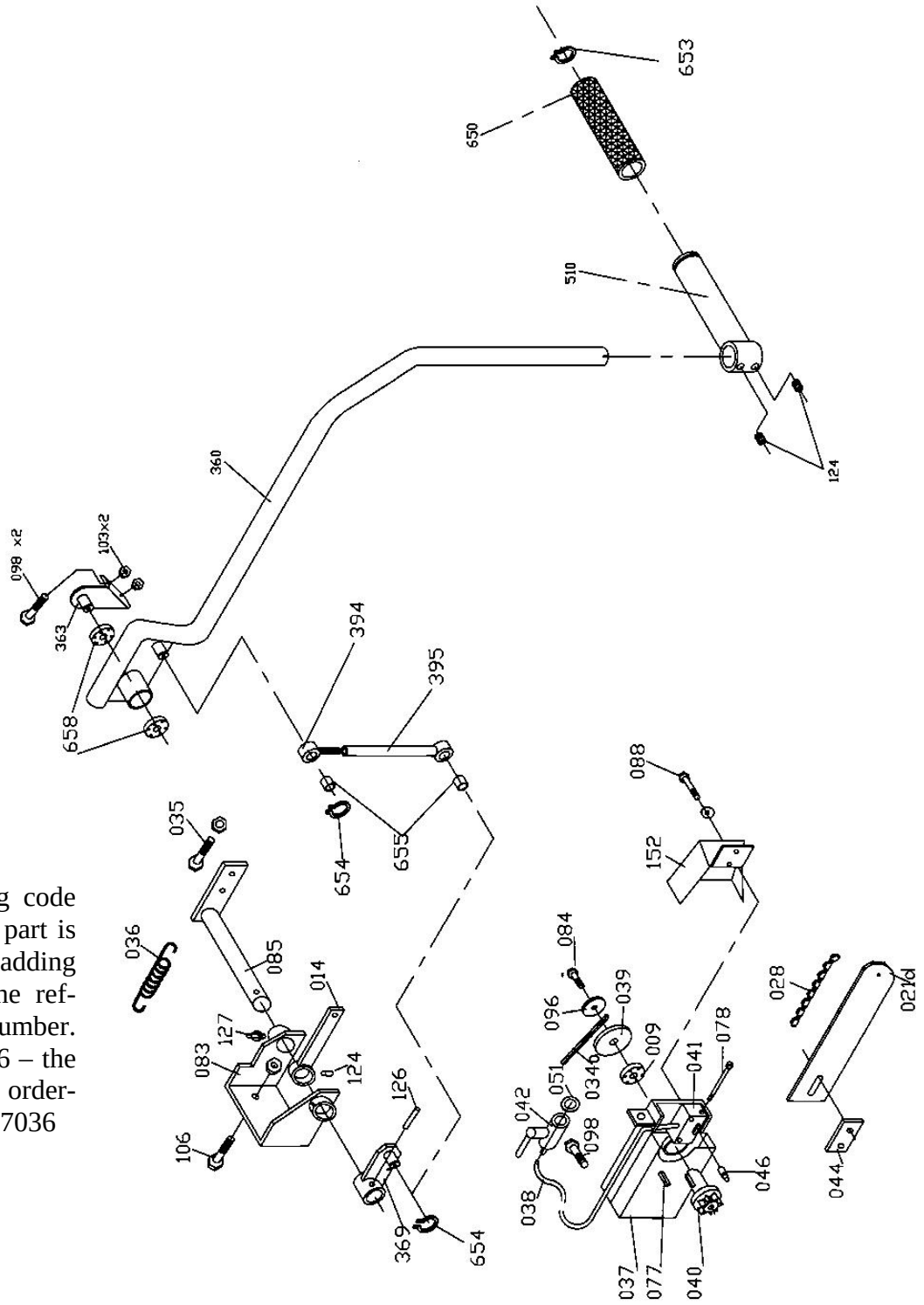
FRAME



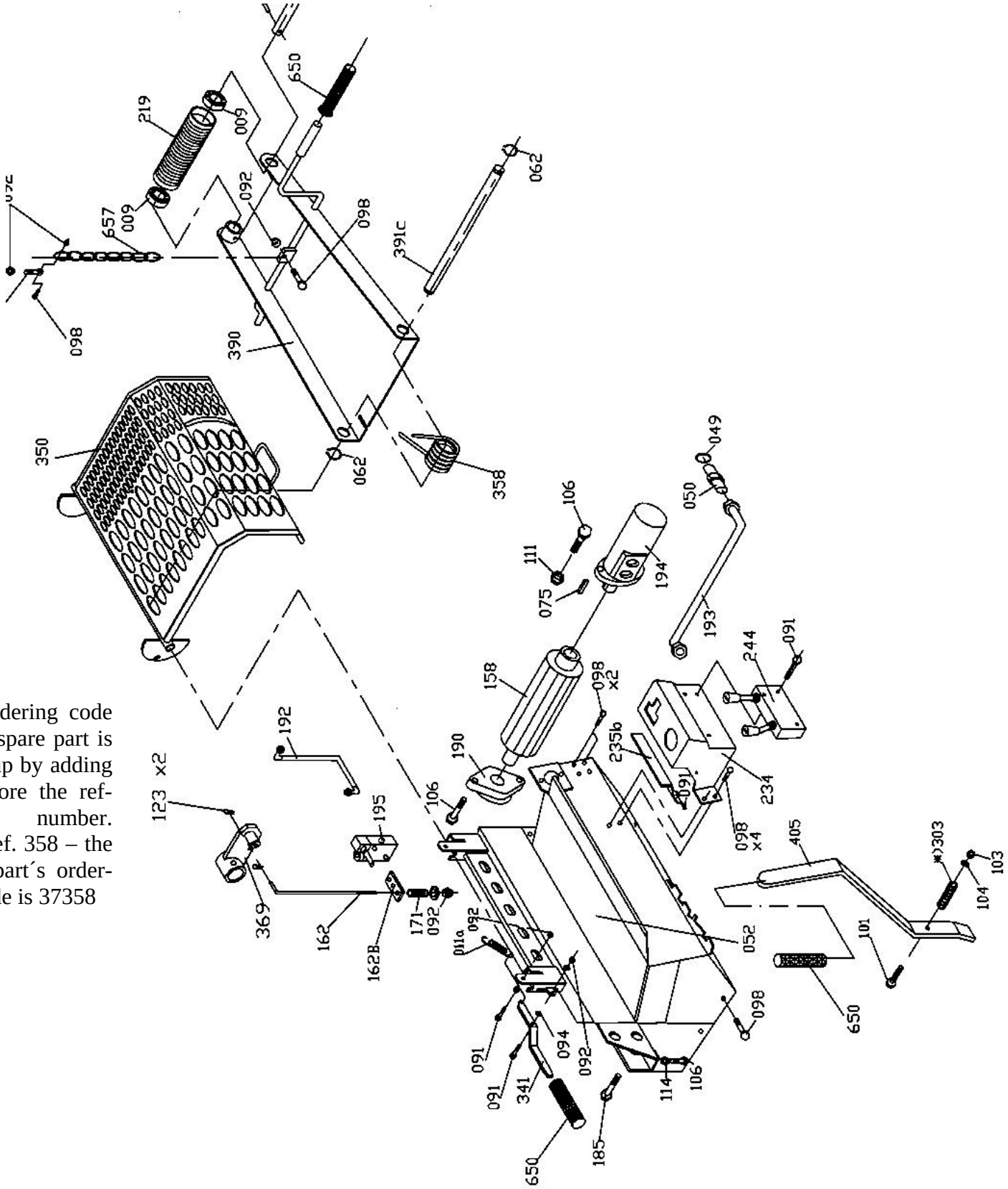
NO.	VARAOSA NO.	KPL.
1	10019h_Holkki	1
2	10386_Väliholkki	1
3	10385_Toimti&hakkien lukitus vivun osak	1
4	10375_Top.latan kiinnitys levyn osakokoonp.	1
5	10019_Pysäytysvivun latta	1
6	10145_Venttiilin vipulatta	1
7	10026_Pysäytysvivun latta	1
8	10023_Laukaisuvipu	1
9	10167_Nivelvipu	1
10	10025_Laukaisuvivun osakokoonpano	1
11	ISO 4017 - M8 x 25-N	4
12	Lukitusmutteri DIN EN ISO 10511 M8	8
13	Kuusiomutteri DIN EN ISO 4032 M8	8
14	10377_Välitanko etuhakin toppariin	1
15	10017a_Pysäytysvivuston latta	1
16	10017c_Pysäytys vivus akselin osakokoonp.	1
17	Puristusjousi 2x22x140 puristettu 65	1
18	10011a_Vetojousi Ø0.9xØ9.8 40	1
19	10011_Vetojousi Ø0.9xØ9.8 100	1
20	10319_Turvatanko	1
21	10321_Turvatangon nivelnippa	1
22	Kuusioruuvi DIN EN ISO 4016 M10x50	1
23	Kuusioruuvi DIN 961 M6x20	3
24	Kuusioruuvi DIN 933 M6x80	2
25	Kuusioruuvi DIN 931 M10x40	5
26	Kuusiomutteri DIN 934 M8	4
27	10029k_Venttiilin rungon kokoonpano	1
28	10016_Laukaisuvipu	1
29	10015_Laukaisuvivun nostin	1
30	neulasokka	1
31	Venttiili	1
32	Puristusjousi 2.5x20x38	1
33	10406_vipu b	1



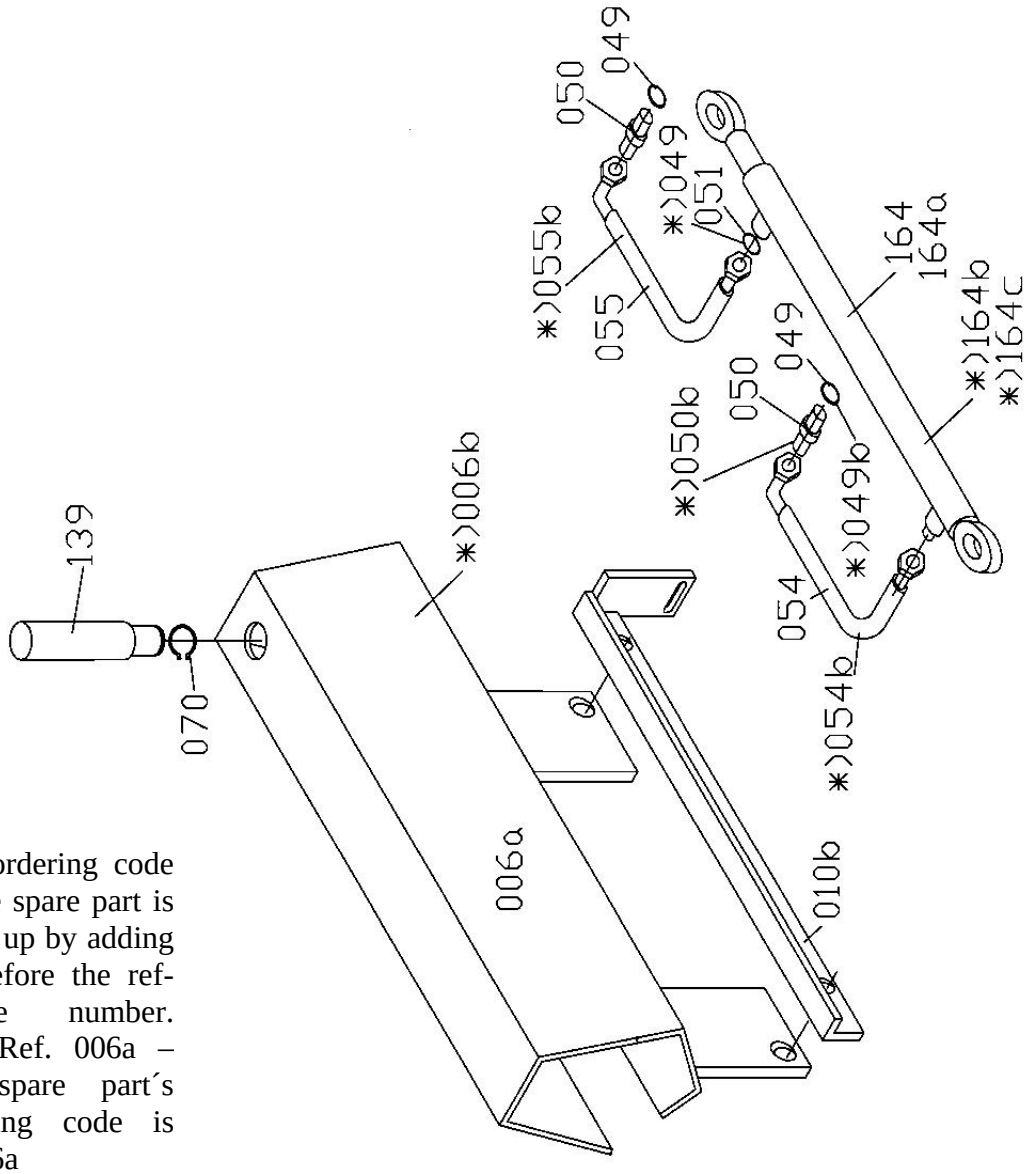
The ordering code of the spare part is made up by adding 37 before the reference number. E.g. Ref. 069 – the spare part´s ordering code is 37069



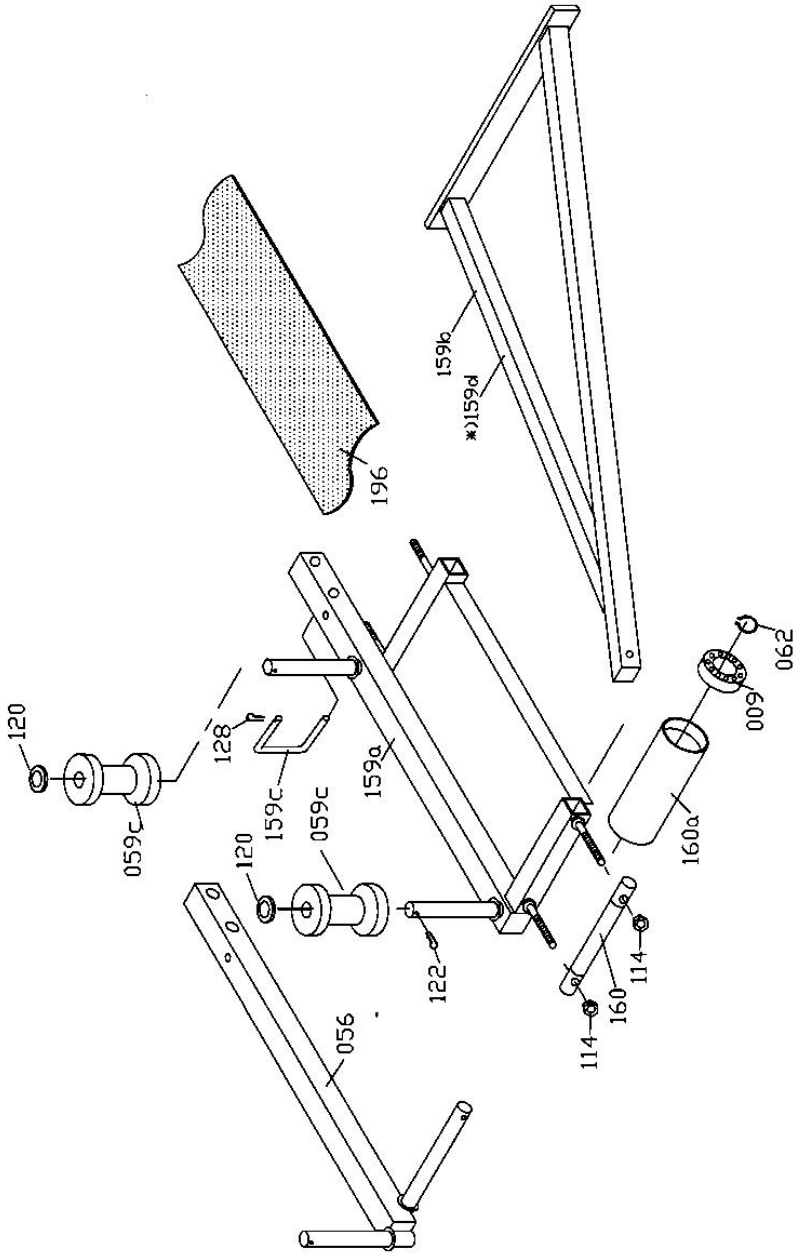
The ordering code of the spare part is made up by adding 37 before the reference number. E.g. Ref. 036 – the spare part´s ordering code is 37036



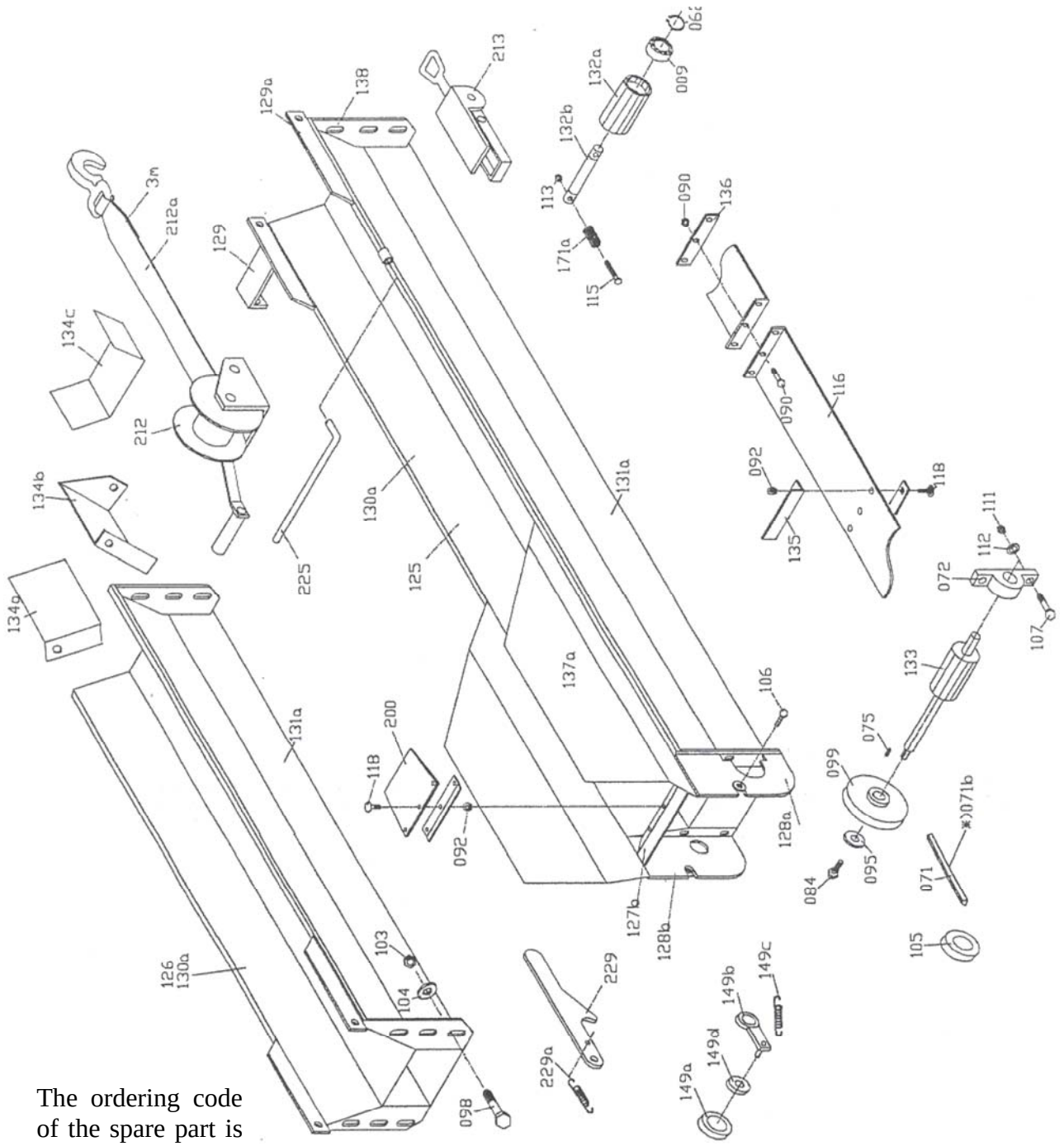
The ordering code of the spare part is made up by adding 37 before the reference number. E.g. Ref. 358 – the spare part´s ordering code is 37358



The ordering code of the spare part is made up by adding 37 before the reference number. E.g. Ref. 006a – the spare part´s ordering code is 37006a

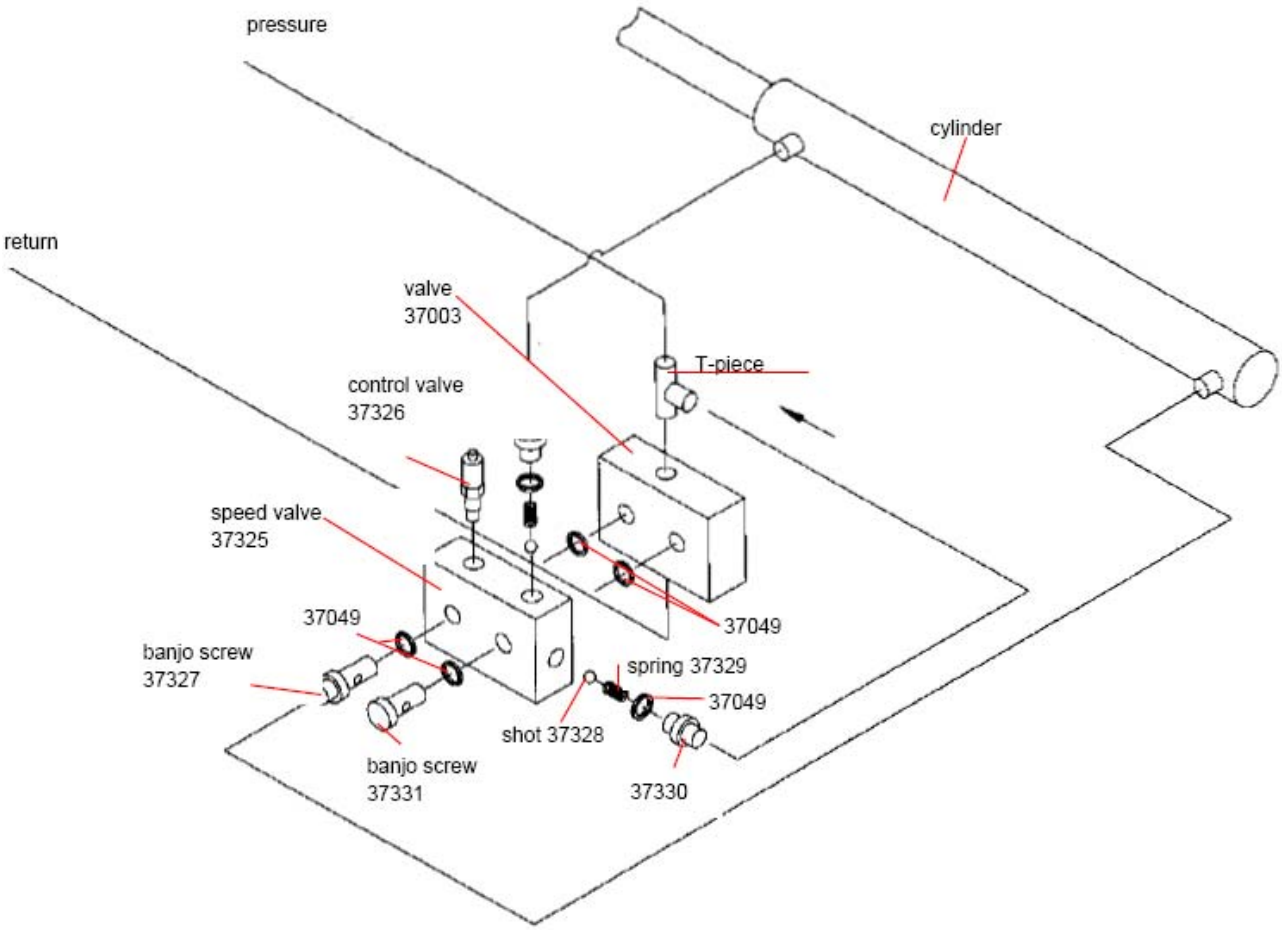


The ordering code of the spare part is made up by adding 37 before the reference number. E.g. Ref. 196 – the spare part´s ordering code is 37196

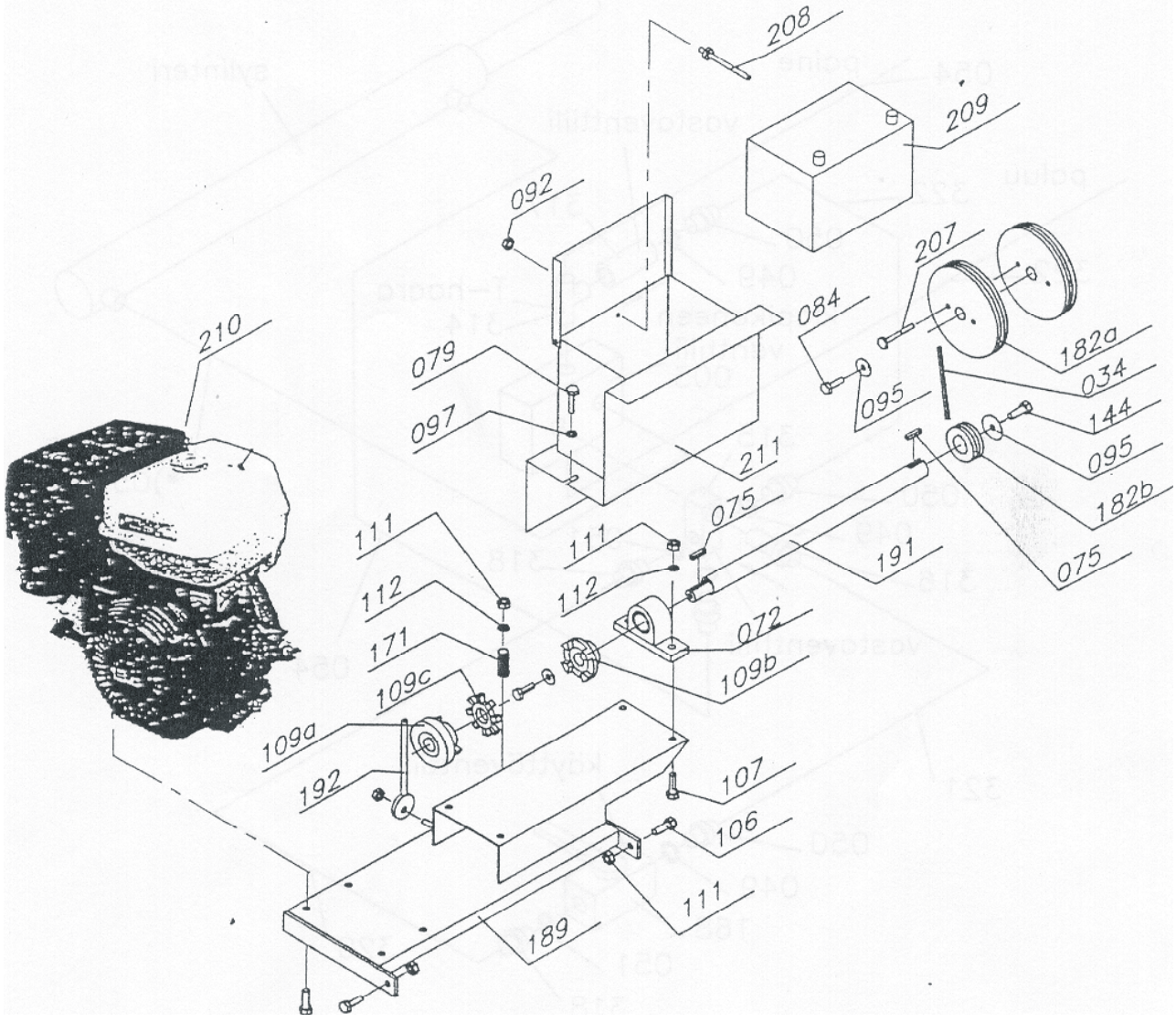


The ordering code of the spare part is made up by adding 37 before the reference number. E.g. Ref. 071 – the spare part´s ordering code is 37071

Assembly of automatic speed valve / spare parts

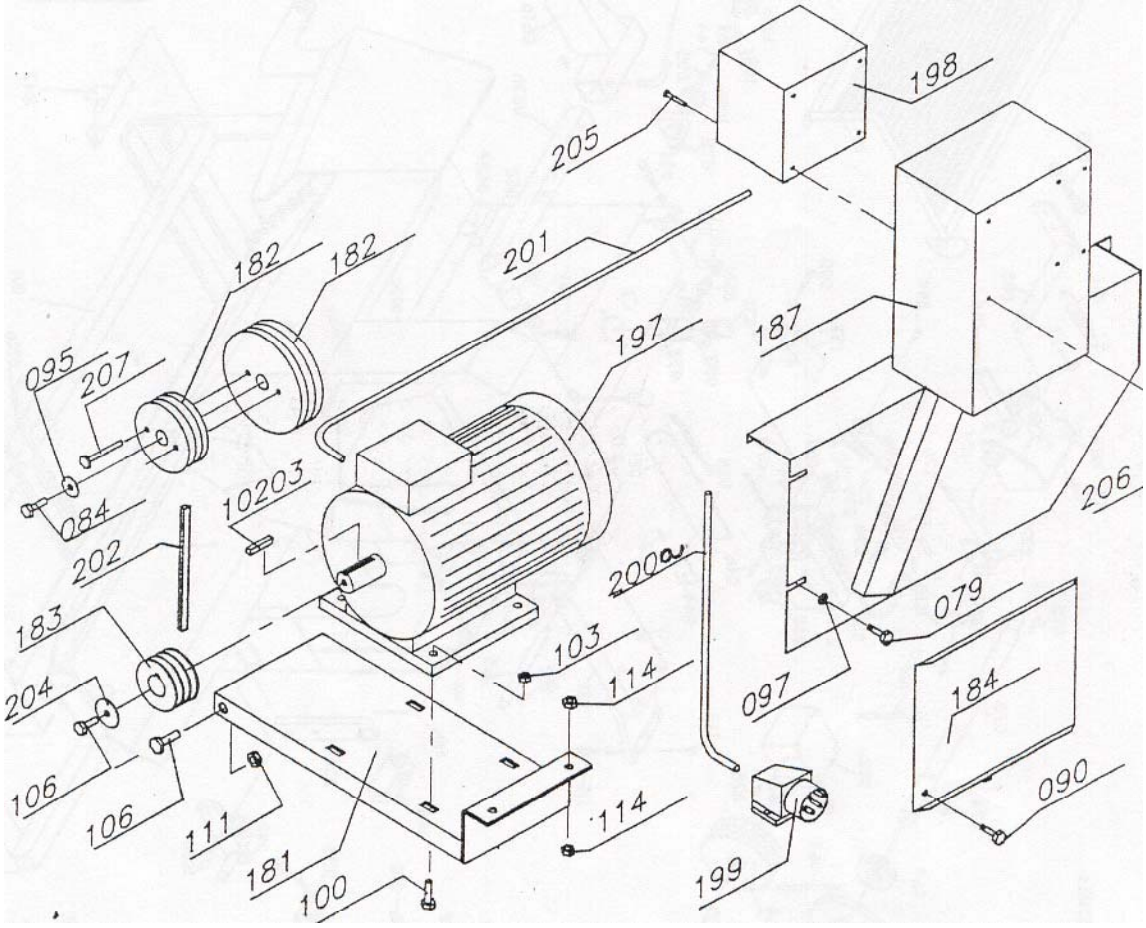


The ordering code of the spare part is made up by adding 37 before the reference number. E.g. Ref. 079 – the spare part´s ordering code is 37079
COMBUSTION ENGINE



The ordering code of the spare part is made up by adding 37 before the reference number. E.g. Ref. 079 – the spare part´s ordering code is 37079

ELECTRIC DRIVE



WARRANTY CONDITIONS ON MAASELÄN KONE OY PRODUCTS:

Warranty on the products manufactured by Maaselän Kone Oy is subject to the following conditions:

1. The warranty includes all defects due to manufacturing and material defects excluding components of the machine which wear out in normal use.

2. The warranty is valid for one (1) year from the initial purchase of the machine or a maximum of 1000 operating hours.

3. The warranty is invalid if the machine has not been used in accordance with the instruction manual or any other recommendations from the manufacturer. The warranty is invalid if parts other than original spare parts have been fitted, or if scheduled maintenance of the machine has been not been carried out.

4. The warranty claim must be notified to Maaselän Kone Oy, via the supplying dealer, immediately after any defect has been noticed. The dealer has to verify that the warranty is valid.

5. The warranty does not include normal adjustments, user instruction, maintenance or cleaning of the machine.

6. Warranty is invalid if the machine has been repaired before the manufacturer (Maaselän Kone Oy) has been notified in writing.

7. The warranty repairs can only be carried out by an authorized repairer. All cleaning and maintenance costs including oil and fuel are excluded in warranty repairs.

8. Repair costs are determined solely by the manufacturer (Maaselän Kone Oy), and this cost schedule cost can be inspected upon request.

9. Warranty does not cover travelling costs that might occur due to warranty repairs

10. Spare parts are delivered using the most economic delivery option. Special deliveries are paid by the consignee.

11. The manufacturer (Maaselän Kone Oy) and their distributors are not liable for any indirect or consequential loss.

Y-tunnus 0550899-7

MAASELÄN KONE OY
RAJAKATU 25
85800 HAAPAJÄRVI, FINLAND
+ 358 8 7727300