MULTIVA

CULTIVATING THE FUTURE

Operation and maintenance manual

Field Roller

RUMBLER MAX 630-820

Original manual

EN

1.00

www.multiva.info

Table of contents

1. Foreword

Multiva agricultural machinery is manufactured in Finland. The modern technology used in the manufacture of the machines, high-quality raw materials, and careful manufacturing and finishing guarantee a high-quality product.

We thank you for your trust in choosing a high-quality Multiva field roller. We hope that the product you have chosen will meet your requirements and serve you well for a long time. Please read these instructions carefully before using the machine. The inspection and maintenance measures mentioned in this manual are essential for the proper functioning of the machine and the validity of the warranty.

All instructions, warnings, and prohibitions related to the use of the machine must be strictly observed. They have been created with the safety of the user and the durability of the machine in mind.

This operating and maintenance manual covers the Multiva RUMBLER MAX 630 and RUMBLER MAX 820 models of trailed field rollers.

1.1. Purpose of the Machine

The Multiva field roller is designed as a multi-purpose machine. It can be used in spring, summer, and fall. The main purpose of the field roller is to compact the surface of the field and press stones down to ground level. Rolling ensures the sprouting of spring cereals and can facilitate the rooting of autumn cereals in the spring. In autumn use, the roller is mainly used to break up clods in the field. Rolling can also break up crusts. The front levelling board available for the roller can be used to level any bumps in the field. A small seed drill is also available for rollers, which can be used to sow cover crops and catch crops or to resow grassland and autumn grain fields, for example, in conjunction with rolling. Rollers can also be used to sow grassland and aerate lawns.

Drive at a sufficiently slow speed, especially when turning. The speed increases significantly at the outer edges of wide rollers, causing the rings to break the surface of the field. The roller should always be driven forward. When reversing, pay attention to the front attachments, which may be damaged if they are not lifted out of use. The machine must not be used for any other purpose.

1.2. Specifications

Table 1, Specifications

RUMBLER MAX [1)]	630	820
Weight with standard equipment kg	4190	5070
Working width cm	630	820
Transport width cm	245	245
Number of sections pcs	3	3
Roller ring diameter cm	62	62
Number of roller rings	111	145
Number of double-acting hydraulic spools	2	2
Tyre size	400/60x15.5"	400/60x15.5"
Tractor power requirement hp	80-100	100-120

[1)] Specifications with standard equipment.

Due to continuous product development, we reserve the right to make technical changes. Some of the equipment described in the user manual is available as optional extras.

1.3. Type plate

The machine has a type plate similar to the one below. Mark the details accordingly in this manual. When dealing with a Multiva machine seller or factory representative, mention the model and serial number of the machine. This will avoid delays and unnecessary misunderstandings.

Explanations of the different fields on the nameplate:

Serial = Machine serial number
Model = Model of the machine
Year= Year of manufacture of the machine

2. Safety instructions

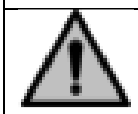
2.1. Residual risks

	Read this operating and maintenance manual thoroughly before operating and follow the instructions given.
	**There is a risk of crushing when connecting and disconnecting.** Safety distance 10 m. Exercise extreme caution if another person is in the vicinity of the roller and the tractor to guide you in the connecting and disconnection situation.
	**Risk of crushing when performing maintenance and repair work.** Exercise extreme caution.
	**Risk of crushing when placing the roller in the working and transport position.** Safety distance 10 m. Make sure that no people are around.
	**Be careful not to pinch or cut your hand or fingers into the feeder of the hopper.** Make sure that there is no power to the control unit and the tractor, the key is off the ignition and the handbrake is on when there is personnel near the machine.
	**Risk of pinching and cutting between the machine's transmission during maintenance and repair work.** Before servicing, make sure that there is no power to the control unit and the tractor, the key is out of the ignition and the handbrake is on.
	**Risk of crushing when performing maintenance or repair work.** Apply the tractor's handbrake and remove the key from the ignition. Set the roller to the working position and depressurize the hydraulic system.
	**A life-threatening jet of liquid can discharge from pressurized hydraulic hoses. High-pressure fluid can also pose a risk of crushing, shear, and impact.** Depressurize the hydraulic system before handling, connecting or disconnecting pressure hoses. Before carrying out maintenance work, depressurize the hydraulic system and disconnect the hoses. Do not touch hydraulic cylinders, hoses, and hydraulic fittings when operating cylinders.
	**Risk of falling.** It is forbidden to go on the machine and roller rings of the machine.

	**Risk of falling when working on the working platform.** You may only climb the steps of the treatment platform when the machine is in working position. Use caution when working on the working platform.

	Risk of crushing when lifting the seed bags from the pallet with a front loader. Safety distance 10m. Excercise extreme caution.
	Before moving, ensure that the tractor's hitch is locked.
	Before moving, make sure the wing sections are locked in their transport position.
	Before starting to move or start to work, check the condition of the roller at least visually. Items to be checked include tire pressure, machine cleanliness, towing eye bolts and the condition of hydraulic hoses.
	Ensure that the brake drum and other brake components have cooled down before any servicing or repairs. Burn hazard.
	During operation, stones may be thrown from the machine. Safety distance 10m
	The operation of the machine and any maintenance or repair work should only be carried out on a flat and load-bearing surface.
	Avoid awkward working positions. Lifting assistance must be used when handling heavy parts and objects
	Depressurize the hydraulic system, disconnect hoses and tractor electrical connections, and allow the machine to cool down before performing any maintenance work.
	The machine has a pressure accumulator. If the pressure accumulator is damaged during operation, contact an authorized service center.
	Avoid inhaling the dust from the seed dressing agent while filling the container. Seed dressing agent poses a serious health hazard. Familiarise yourself with the safety data sheets of the dressing agent you are using and pay attention to the warnings in them.
	Do not go under the lifted load. Make sure that no one is on top of the roller.
	Wear safety glasses when filling the tank, handling oils or lubricants, and performing maintenance. Follow the safety data sheets for the substances you are handling.
	Wear protective gloves when filling the tank, handling oil or grease, and when switching and disconnecting the hydraulics. Avoid skin contact with oil and grease to prevent skin irritation or damage.

2.2. Symbols used in the operating manual

	**DANGER** warns of a hazardous situation that could result in death or serious injury.
	**CAUTION** warns of a hazardous situation that could result in damage to the equipment.

2.3. Using the machine

Placing the worker and transport position must be done on as flat a ground as possible.
Moving the wing sections of the roller to the working and transport position may only be done when the roller is connected to the tractor and the tractor is stationary.
The tractor must be prevented from moving by a handbrake or wheel wedges when coupling the machine and maintenance operations.
The machine must be adjusted in accordance with these instructions and these instructions must be followed in both operation and maintenance.

2.4. Towing on public roads

Before driving:

- Make sure the lights and reflectors of the machine and the slow vehicle plate are clean and intact
- Make sure that the tractor lights are clean and in working order. Note especially the visibility of the tractor's rear turn signals.
- Clean the machine of loose soil
- Inspect the machine at least visually for the following items:
    - Towing eye
    - Axle condition
    - Bolt tightness
    - Tyre condition and pressure
    - The stone boxes have been emptied
- Make sure that the machine towing eye is properly connected to the tractor
- Make sure that both wing sections of the machine are locked into transport position and locked, see 4.2 Rendering the machine to the transport position.

When transporting the machine on public roads:

- Exercise caution and observe all road traffic regulations, as well as specific regulations concerning slow-moving vehicles
- The maximum permitted transport speed of the roller on an even and in good condition is 40 km/h. On a road in poor condition, the maximum permitted transport speed is 25 km/h.

3. Commissioning and basic settings

3.1. Lifting the roller

Lifting can be carried out from below the drawbar with the help of forklift or from lifting points with a crane. The lifting points are marked with stickers on the machine. Ensure that the lifting device and lifting aids have sufficient lifting capacity. The weights of the rollers are shown in section 1.2 **Virhe. Viitteen lähdettä ei löytynyt.**.

3.2. Connecting to tractor

DANGER
Crushing hazard when hitching the machine. Observe a safety distance of 10 m. Exercise extreme caution if another person is near the machine and tractor guiding in the connecting situation.

DANGER
Apply the tractor's handbrake and remove the key from the ignition switch.
Depressurize the hydraulic system before disconnecting the hydraulic hoses. Follow the tractor manufacturer's instructions.
Exercise extreme caution when connecting or disconnecting the compressed air hoses. The compressed air hose can make a surprising impact movement.

- Wear protective gloves when disconnecting the machine from the tractor.

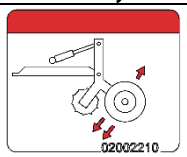
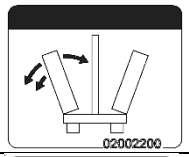
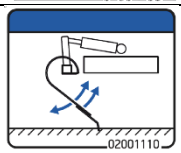
1. Connect the towing eye of the machine's drawbar to the tractor's hydraulic hitch.
2. Make sure that the tractor's hitch locks and that the hook is not left on the support of the linkage.
3. Adjust the tractor's drawbars to a height that prevents them from engaging when turning to the drawbar and hoses.
4. Lift the support leg up
5. Connect the machine's hydraulic hoses to the tractor's double-acting hydraulic outlets.
    - Make sure that all tractor valves are securely connected to double-acting operation.

Hydraulic hoses are marked with colored collars. Markings are shown in

- Table 2, Markings on hydraulic hoses

6. Connect the light plug and brake hoses (if equipped with a brake system) to the tractor

Table 2, Markings on hydraulic hoses

Function	Hose marking	Color code and symbol
Frame working position	1 x Red	
Frame transport position	2 x Red	
Wing sections closed	1 x Black	
Wing sections open	2 x Black	
Levelling board down	1 x Blue	
Levelling board up	2 x Blue	

3.3. Synchronisation the hydraulic circuit of the levelling board

When the roller is taken into use after a longer break, the piston rods of the cylinders connected in series must be extended completely out with the hydraulics and the pressure of the tractor's hydraulic lever must be kept on at a low flow for 30 seconds.
Hydraulic oil flows through the entire system, synchronising the cylinders and removing any air. Synchronising must always be carried out even after the cylinder or hoses have been replaced.
The cylinders must also be synchronised from time to time during work. Then it is enough to hold the pressure for a few seconds.

3.4. Basic adjustment of the levelling board

The cylinders have a thread on the piston rod from which the cylinder can be adjusted. The adjustment is made by unscrewing the locking nut (36 mm) and turning the piston rod (point 1, 24 mm). By lengthening the shaft, the front levelling board rises upwards and by shortening it lowers. However, before adjusting, you need to roll for a while and synchronise the cylinders. This ensures that the unevenness of the position is not caused by differences in the length of the cylinders.

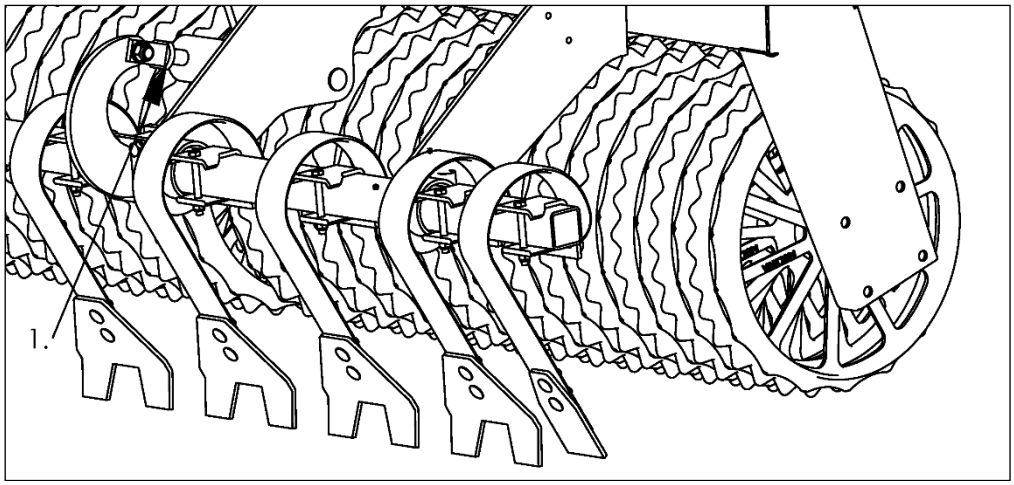


Figure 3.4-1, Basic levelling board adjustment

4. Adjusting and operating the machine

Roll at a slow enough speed, especially in curves.
The speed is appropriate when the patterns on the discs are clearly visible on the ground.
Recommended speed 8-12 km/h

4.1. Rendering the machine to the operating position

NOTE! Make sure that the reach area of the wing sections is clear. Remember to keep a safe distance!

1. Lift the wing sections all the way up using the drawbar cylinder

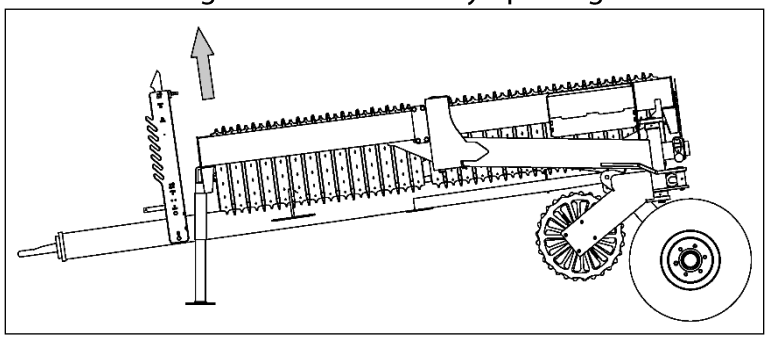


Figure 4-1, Lifting the wing sections

2. Open wing sections
   Make sure the cylinders have reached their full length.

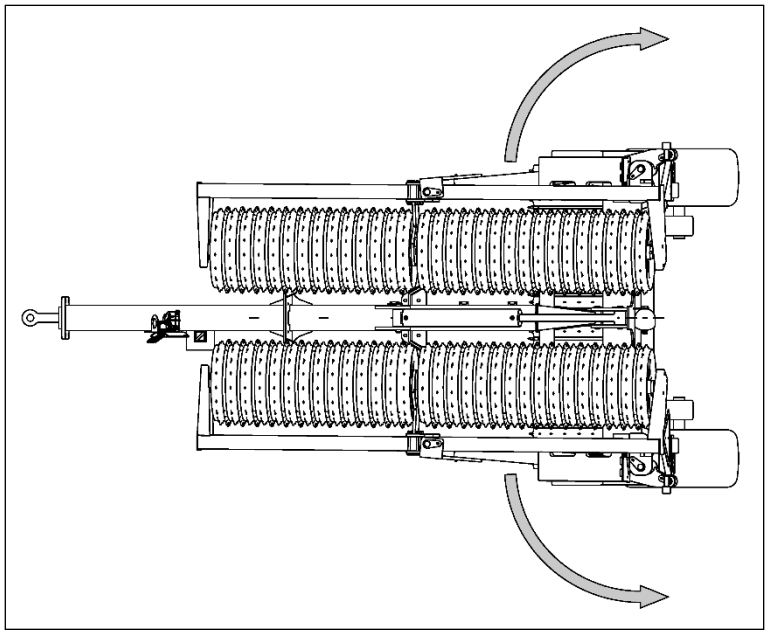


Figure 4-2, Opening the wing sections

3. Lower the wing sections using the drawbar cylinder
   The cylinder rod should be fully in and the tractor valve should be switched to the float position.

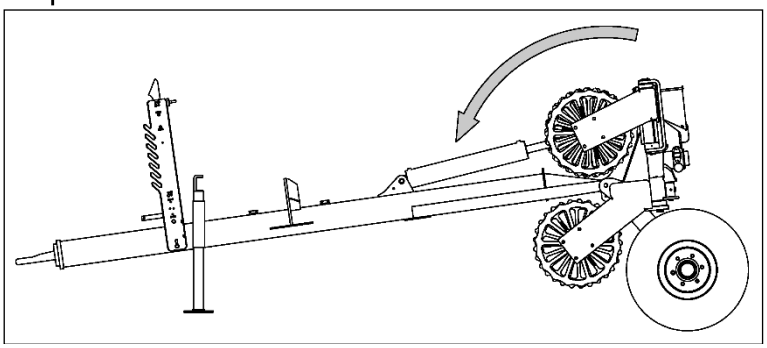


Figure 4-3, Turning the Frame Down

4. Lower the wing sections down until the pressure gauge's indicator rises. The pressure is used to press the wing sections downwards and achieve an even pressure over the entire working width. The recommended pressure is 15-30bar. During the work, the pressure of the wing sections can be monitored and, if necessary, the pressure can be adjusted. When the desired pressure is reached, the tractor's double acting valve must be switched to float mode.

4.2. Rendering the machine to the transport position

NOTE! Make sure that the reach area of the wing sections is clear. Remember to keep a safe distance!

1. Lift the wing sections using the drawbar cylinder
   Make sure the cylinders have reached the extreme position

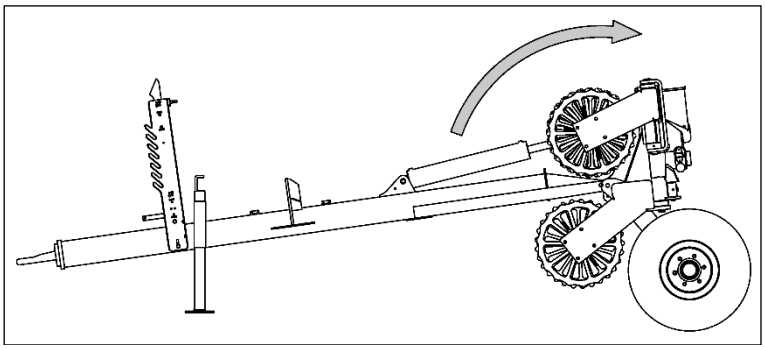


Figure 4-4, Lifting the wing sections

2. Turn the wing sections to the transport position
   Make sure the cylinders have reached the extreme position

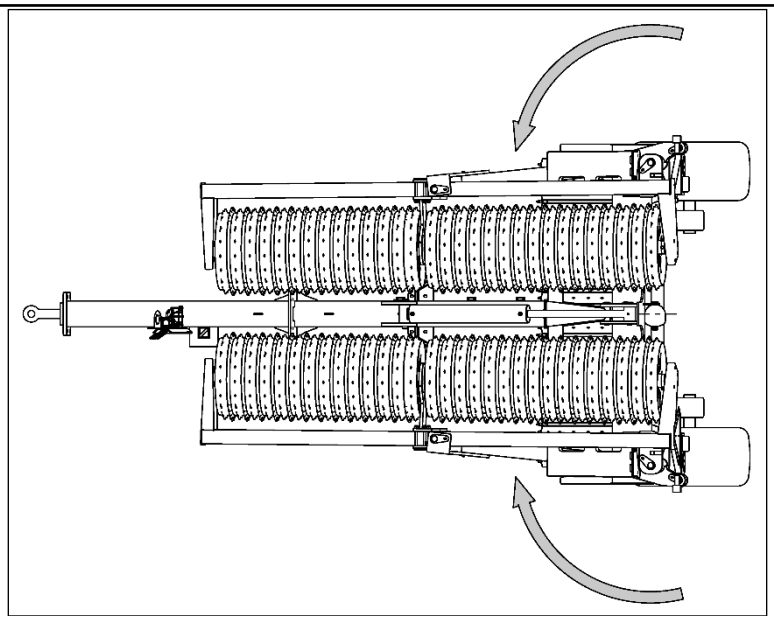


Figure 4-5, Closing the Side Blocks

3. Slowly lower the wing sections into the transport supports.
   Finally, remove pressure from the drawbar cylinder by switching the double-acting valve into float mode.

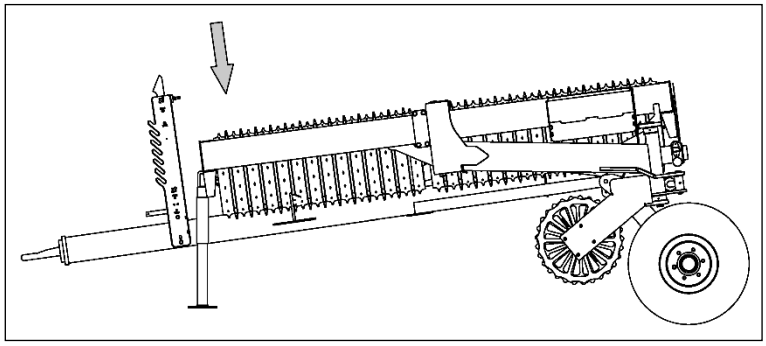


Figure 4-6, Lowering the wing sections

4.3. Using the front levelling board

The purpose of the levelling board is to crumble lumps and even out the unevenness of the field surface. A properly adjusted board derails and rubs lumps underneath, but does not carry a large wall of soil in front of it. This also saves on fuel costs, as excessive use of the board requires a lot of power from the tractor. The position of the board can be adjusted hydraulically while driving according to the soil type and the need for levelling.

4.4. Disconnecting from the tractor

DANGER
Risk of crushing when disconnecting the machine. Minimum safety distance 10 m. Take special care if another person is in the near the machine and tractor guiding you in a disconnection situation.

DANGER
Apply the tractor's handbrake and remove the key from the ignition switch.
Depressurize the hydraulic system before disconnecting the hydraulic hoses.
Follow the tractor manufacturer's instructions.
Take special care when connecting or disconnecting the connections of the compressed air hoses.
The compressed air hose can make a surprising impact movement.

NOTE! Wear protective gloves when disconnecting the machine from the tractor.

1. Remove the brake hoses (if equipped with a brake system) from the tractor.
2. Disconnect the light plug from the tractor.
3. Remove the hydraulic hoses from the tractor and place them on the hose rack.
4. Lower the support leg.
5. Remove the drawbar from the tractor hitch.

4.5. Using the braking system

The parking brake of rollers with pneumatic brakes is found in the brake actuators. The spring-loaded parking brake is activated by pulling the red button (2) all the way out on the parking brake valve (1).

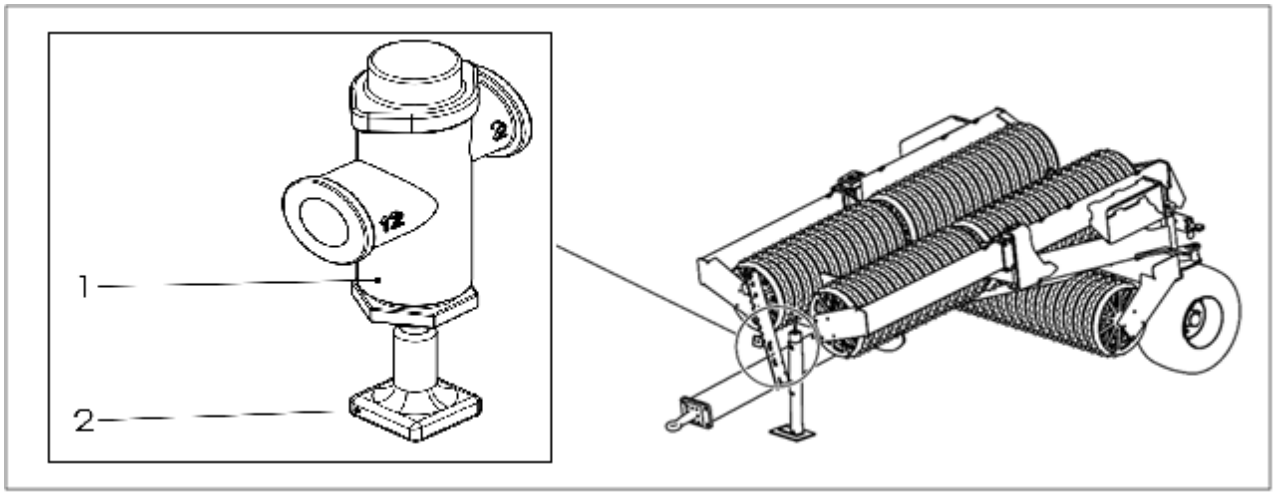


Figure 5-6 Parking brake button

The brake release valve allows the brakes to be released when the roller's pneumatic brake system is not connected to the tractor's brake system. The brake release valve knob coloured black (1) is located on the drawbar. Pressing the button all the way down (direction up) releases the brakes. Release requires pressure in the compressed air tank.

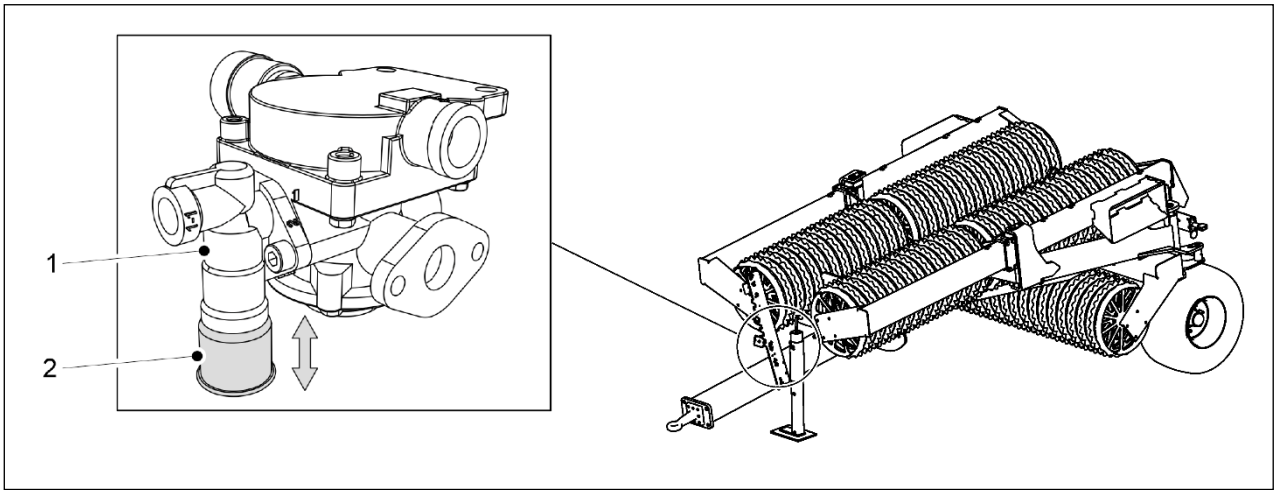


Figure 4-7, Brake release button

4.6. Storing the machine

DANGER
Take special care when placing the roller in a storage location or when using it from a storage location. Safety distance 10 m.

1. Clean the machine of loose dirt.
2. Lubricate all lubrication points, see 5.2 Lubrication.
3. Adjust all hydraulic cylinders so that the chrome-plated piston rod is as little visible as possible.
4. Protect the visible parts of the piston rod with grease or thick oil.
5. Leave the roller for seasonal storage in a dry place protected from sunlight.

5. Maintenance

DANGER
Service the machine only on an even and firm surface. Prevent the harrow from moving during maintenance by lowering the ground support to its down position and engaging the parking brake (if equipped)

DANGER
Crushing hazard when performing servicing and maintenance.
Engage the tractor handbrake and remove the key from the ignition.
Depressurise the hydraulic system and disconnect the hoses and tractor electrical connections before servicing.

- Ensure adequate lighting at the service site.

5.1. Inspections

5.1.1. Quick guide, inspections

	After the first 10 hectares	Every 50 ha	every 500 hectares or once per operating season[1)]
5.1.2 Bolt tightness	X		X
5.1.3 Checking the tyre pressure			X
5.1.4 Checking the wheel hub bearing clearance			X
5.1.5 Checking the clearance of the roller pack			X
5.1.6 Inspecting the towing eye			X
5.1.7 Inspecting the condition of hydraulics	X		X
5.1.8 Inspecting the brake system			X

(1) Carry out inspections in the spring when the machine is put into operation after winter storage.

Follow the table based on the amount of work to be done. Perform maintenance when the specified number of hectares or working days is reached.

5.1.2. Bolt tightness

- Check the tightness of all bolts after approx. 10 ha of work and then every 500 ha or once a season.

Table 3, Bolt Information

Bolt Location	Bolt size	Key (mm)	Tightening torque (Nm)
Wheel bolt nuts	M18	24	320
Towing eye	M16	24	210
Mounting the bearings of the roller pack	M16	24	210
Mounting the hinge pins	M10	17	50
Mounting the levelling board tines	M12	19	120
Mounting the levelling board points	M12	19	90

5.1.3. Checking the tyre pressure

DANGER
Risk of injury in the event of a tyre explosion or sudden release of tyre pressure by other means. Follow the indicated tyre pressures and replace damaged or excessively worn tyres. It is forbidden to inflate a damaged tyre.

Table 4, Air pressures of roller tyres

Roller model	Tire size	Air pressure (bar)
RUMBLER MAX 630-820	400/60-15,5"	4,0

5.1.4. Checking the wheel hub bearing clearance

Check and adjust the bearing clearance especially during the first period of use, after 50 to 200 ha when the bearings settle. After this, it is sufficient to inspect every 500 hectares or once a season.

- Check the bearing clearance before lubricating the hubs. Any play is then easier to detect than after lubrication. At the same time, check the tightness of the wheel nuts.

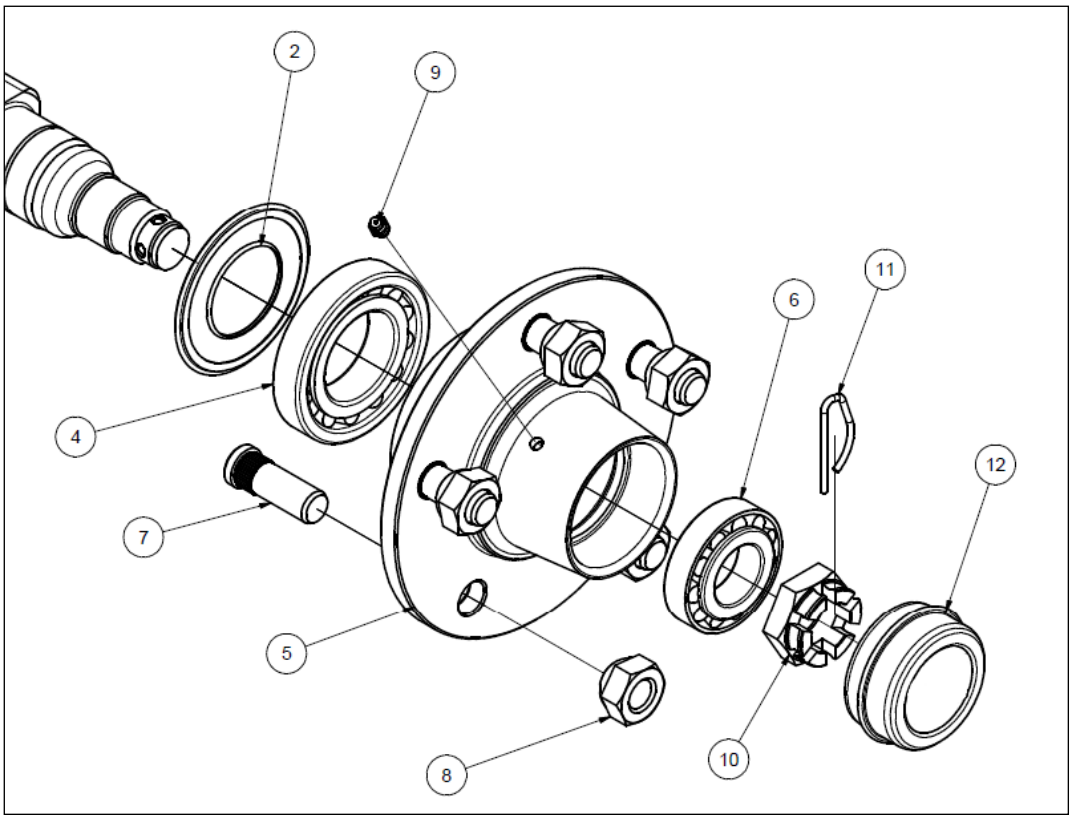


Figure 5-1, Adjusting the wheel hub bearing

1. Render the roller to the operating position
2. The wheel is held firmly and check for play in the bearings:
   - The wheel should spin freely, but there should be no play in the bearing. If there is play in the bearing, tighten the bearing according to steps 3-8.
3. Open the hub cup (12) by turning it counterclockwise.
4. Remove the crown nut locking pin (11)
5. Tighten the crown nut (10) while rotating the wheel until a slight resistance is felt in the bearing.
6. Loosen the nut until the locking pin fits into the next nut slot.
   - If the nut is already aligned with the hole, open the nut until the next slot, no more than 30 degrees.
7. Lock the pin in place.
8. Fill a third of the cup volume with grease and secure the hub cup in place by turning the hub cup clockwise.
   - The tightening torque is 50 Nm.
9. Squeeze grease into the hub until it comes out between the seal and hub (2).
10. Finally, also check the tightness of the wheel nuts.

5.1.5. Checking the clearance of the roller pack

The roller pack should be tightened when the pack is clearly loose (there is a large gap between the roller ring and the toothed ring).

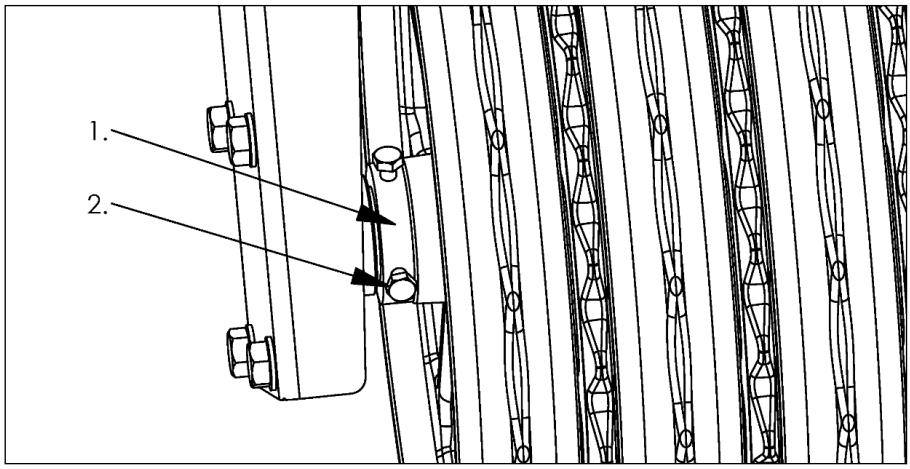


Figure 5-2, Checking the clearance of the roller pack

1. Find an even, firm surface for working.
2. Open the roller to its working position.
3. Unlock bolts (2)
4. Move the locking sleeve (1) onto the disc.
   - Make sure that the roller rings are attached to each other.
   - Make sure that the roller rings are centered on the shaft. There is the same amount of clearance on both sides
5. Tighten locking bolts (2)

5.1.6. Inspecting the towing eye

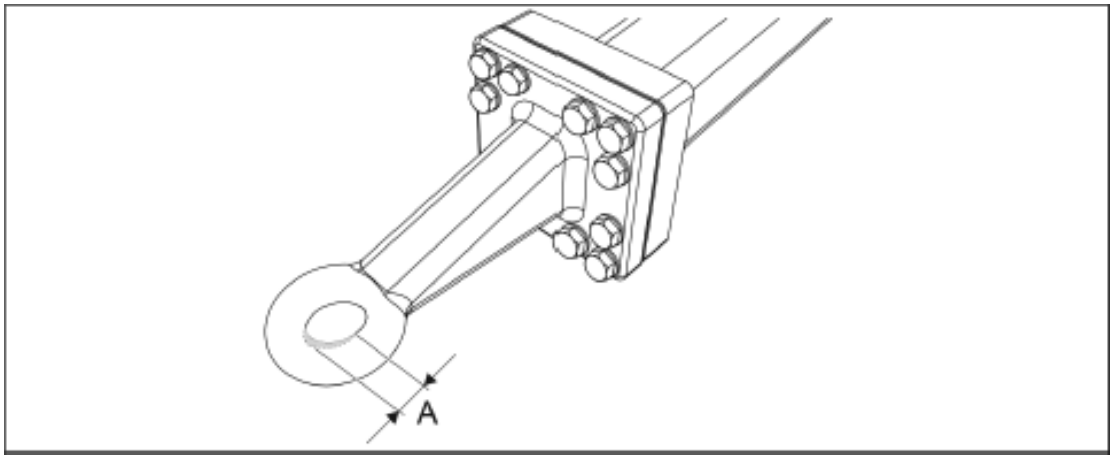


Figure 5-3. Inspction of the towing eye

1. Check that the towing eye is not too worn.
2. The maximum wear (A) is 2.5 mm.
3. Check that there are no fractures in the drawbar.
   - Replace the towing eye with a new one if necessary.

5.1.7. Inspecting the condition of hydraulics

DANGER
Hydraulic fluid leaks should never be searched by feeling with your bare hands. A life-threatening jet of liquid can discharge from pressurized hydraulic hoses. Depressurize the hydraulic system before starting the inspection.

DANGER
The machine has a pressure accumulator. If the pressure accumulator is damaged during operation, contact an authorized service center.

1. Open the roller to the working position and depressurize the hydraulic system. Note that there is a pressure accumulator in the circuit for turning the wing sections
2. Check the tightness of the joints of the hydraulic system.
3. If necessary, tighten the joints.
4. Check that the hydraulic cylinders are intact and do not show any leaks.
   - If necessary, contact service.
5. Check that the hydraulic hoses are intact and do not show any leaks.
6. Replace hydraulic hoses if necessary
   - Carefully open the connectors
     - There may be pressure in the hoses and oil will start to drain out of the connector.
   - Unscrew the connectors one turn and allow the oil to drain into the oil collection containers. A few litres of oil may come out.
   - When the oil has stopped draining: you can open the connectors completely.
     - Please note that oil will still come out of the hoses even after opening

5.1.8. Inspecting the brake system

The checks to be carried out on the roller's pneumatic brake system (if equipped) are shown in the following table.

	Daily	Every 500 ha or once a season
5.1.8.1 Removing water from the air tank	X	
5.1.8.2 Checking the brake lever adjustment		X
5.1.8.3 Checking the brake shoe wear		X
5.1.8.4 Cleaning the filters of the couplings		X

5.1.8.1. Removing water from the air tank

There is a water drain valve on the underside of the air tank, which can be opened by pulling down on the ring in the valve. Keep the valve open until the air coming out of the valve is dry.

5.1.8.2. Checking the brake lever adjustment

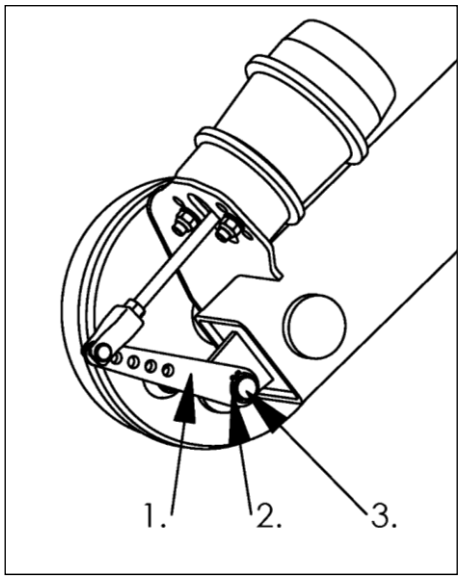


Figure 5-4, Brake lever adjustment

1. Check the brake cylinder travel.
   - If the brake cylinder moves more than 50 mm, adjust the brake lever according to steps 2-5.
2. Make sure the brakes are not engaged.
   - If necessary, you can release the pneumatic brakes with the brake release valve when the roller's pneumatic brake system is not connected to the tractor's brake system.
3. Remove the locking ring (2).
4. Turn the lever (1) on the brake camshaft (3) so that the brake cylinder movement is appropriate.
   - The appropriate stroke of the brake cylinder is 30-40 mm.
5. Attach the locking ring.
6. After adjusting, make sure that the brake is not dragging.
   - Perform steps 1-6 for both brakes

5.1.8.3. Checking the brake shoe wear

DANGER
Ensure that the brake drum and other brake components have cooled before beginning any servicing or repairs. Burn hazard.

1. Check the brake shoes for wear.
   - New brake shoes if the remaining tread thickness is less than 1.5 mm.

5.1.8.4. Cleaning the filters of the couplings

The filters are integrated into the coupling connectors of the roller's pneumatic brake system (2 pcs).

1. Remove the filter cartridges from the couplings.
2. Wash the filter cartridges with a cleaning agent.
3. Dry the filter cartridges with compressed air.
4. Reattach the filter cartridges to the couplings.

5.2. Lubrication

CAUTION
The use of so-called “pin greases” in the lubrication of the machine is prohibited. In wheel hubs, the use of these may cause the bearings to break.
Perform lubrication before putting it into winter storage and after washing the machine.

Use all-purpose grease that contains lithium soap and EP additives for lubrication. When lubricating, make sure that the grease nipple of the object to be lubricated is open. 1-2 compressions with a grease gun are enough for the grease nipples. Excess grease is wiped off.

5.2.1. Quick instructions, lubrication

	After the first 10 hectares	Every 50 ha	every 500 ha or once a season
1–2. Lubrication of roller bearings		X	
3–11. Lubricating the hinge pins			X
12. Lubrication of wheel bearings			X
13. Lubricating the towing eye			X

The locations of the lubrication points are shown in Figure 6–2.

5.2.2. Lubrication points

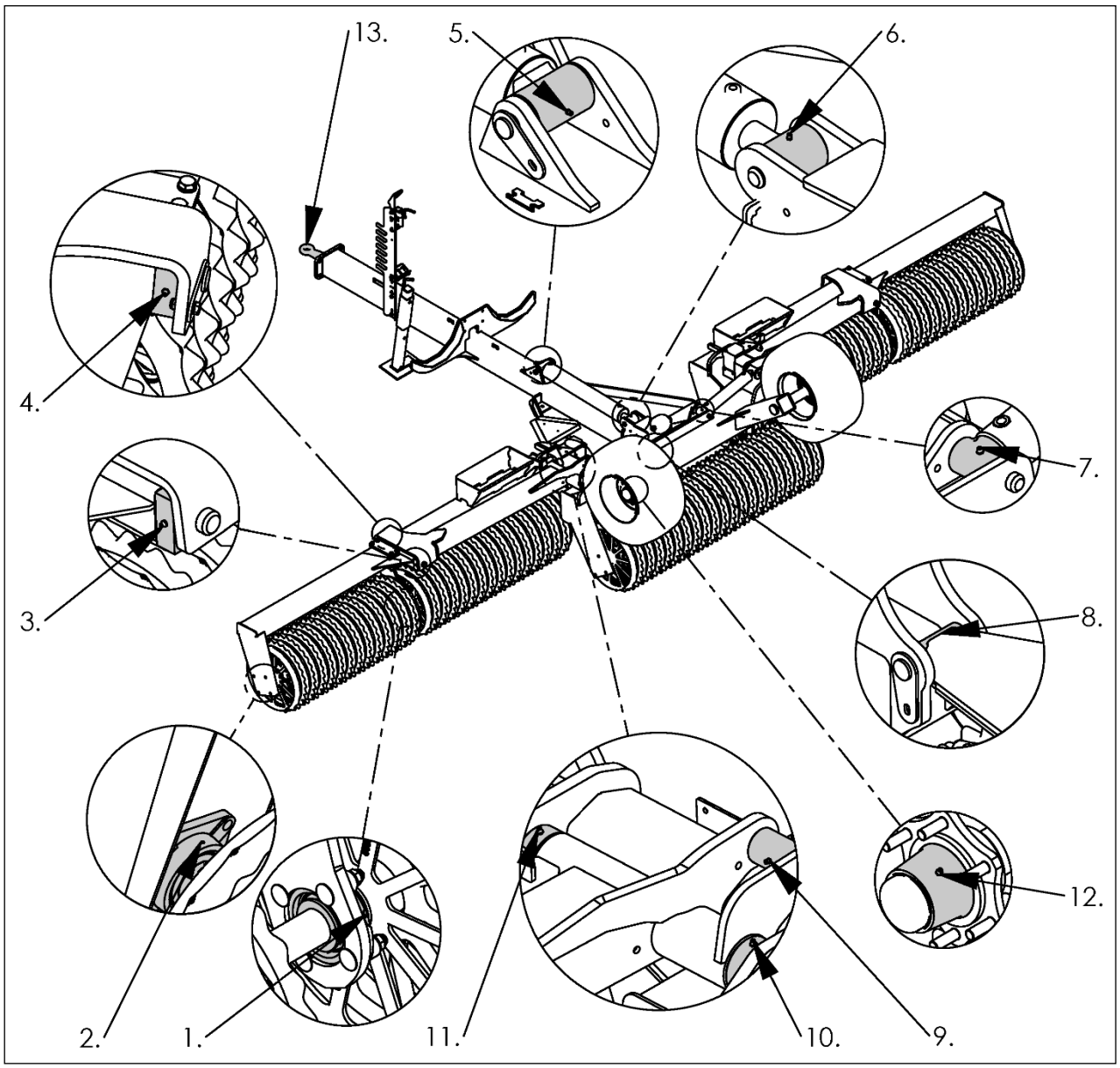


Figure 5-2, Lubrication points

5.2.3. Braked wheels - Changing the wheel hub grease

DANGER
Risk of injury when removing and mounting a wheel. If necessary, ask another person to assist.

DANGER
Ensure that the brake drum and other brake components have cooled before beginning any servicing or repairs. Burn hazard.

- The lubricant change interval for wheel hubs is 5000 hectares or 5 years, whichever comes first.
- The instruction only applies to wheel hubs with brakes

1. Remove the wheel hubs with the brake drums.
2. Clean all parts with a degreaser.
3. Check the brake shoes for wear.
    - Replace brake shoes if the remaining tread thickness is less than 1.5 mm.
4. Clean the wheel hubs inside and out.
5. Remove all old lubricant from the wheel hubs carefully with a cloth and degreaser.
    - Watch out for the sharp edges of the plate on the back of the bearing.
6. Wash the bearings and seals thoroughly.
7. Visually check the condition of the bearings.
    - If the bearing is worn or damaged, replace it with a new bearing.
8. Fill the space between the roller ring and the inner ring of the bearing with lubricant on the larger side, rotating the roller ring occasionally, until lubricant gushes out of the smaller end.
    - Use a grease designed for wheel bearings. Using the wrong lubricant may cause damage to the hub.
9. Reinstall the bearings and seals.
10. Reinstall the wheel hubs.
11. Adjust wheel hub bearing clearances in accordance with section 5.1.4 Checking the wheel hub bearing clearance
12. Reinstall the wheels you have removed.
13. Tighten all wheel bolt nuts.
    - The tightening torque is 320 Nm.
14. Check the tightness of the wheel bolt nuts after sowing 10 hectares with the machine.

5.3. Cleaning

CAUTION
Do not spray water directly on electrical appliances

The machine must be cleaned and lubricated thoroughly for extended storage. If the machine is washed with a pressure washer, the spray should not be directed directly at the cylinders, bearings or labels. The nozzle of the pressure washer should be at least 30 cm away from the object to be washed.
All lubrication points must be lubricated after washing.

6. Troubleshooting

6.1. Troubleshooting the roller

Problem	Cause	Procedure
The function operated by hydraulics does not work.	1. The hose is not connected the tractor.	1. Check that the connector is connected.
	2. The hydraulic hose is not connected to the tractor's double-acting outlet.	2. Connect the hose to the double-acting outlet.
The front levelling board is not in the same line in all sections.	1. The cylinders do not move at the same pace.	1. Perform the synchronisation of the cylinders according to the instructions 3.3 Synchronisation the hydraulic circuit of the levelling board.
	2. The boardis not adjusted in the same line.	2. Perform the basic adjustment of the board according to the instructions 3.4 Basic adjustment of the levelling board .

7. Appendices

Appendix 1.

EC DECLARATION OF CONFORMITY FOR MACHINERY

DOMETAL OY
Kotimäentie 1
FI-32210 Loimaa
Finland

Hereby states that the following

RUMBLER MAX 630 starting from serial number YK9030306T0034001
RUMBLER MAX 820 starting from serial number YK9030308T0034001

comply with the provisions of the Machinery Directive 2006/42/EC on the construction of machinery.

In addition, the following harmonised standards have been used in the design of the machine:

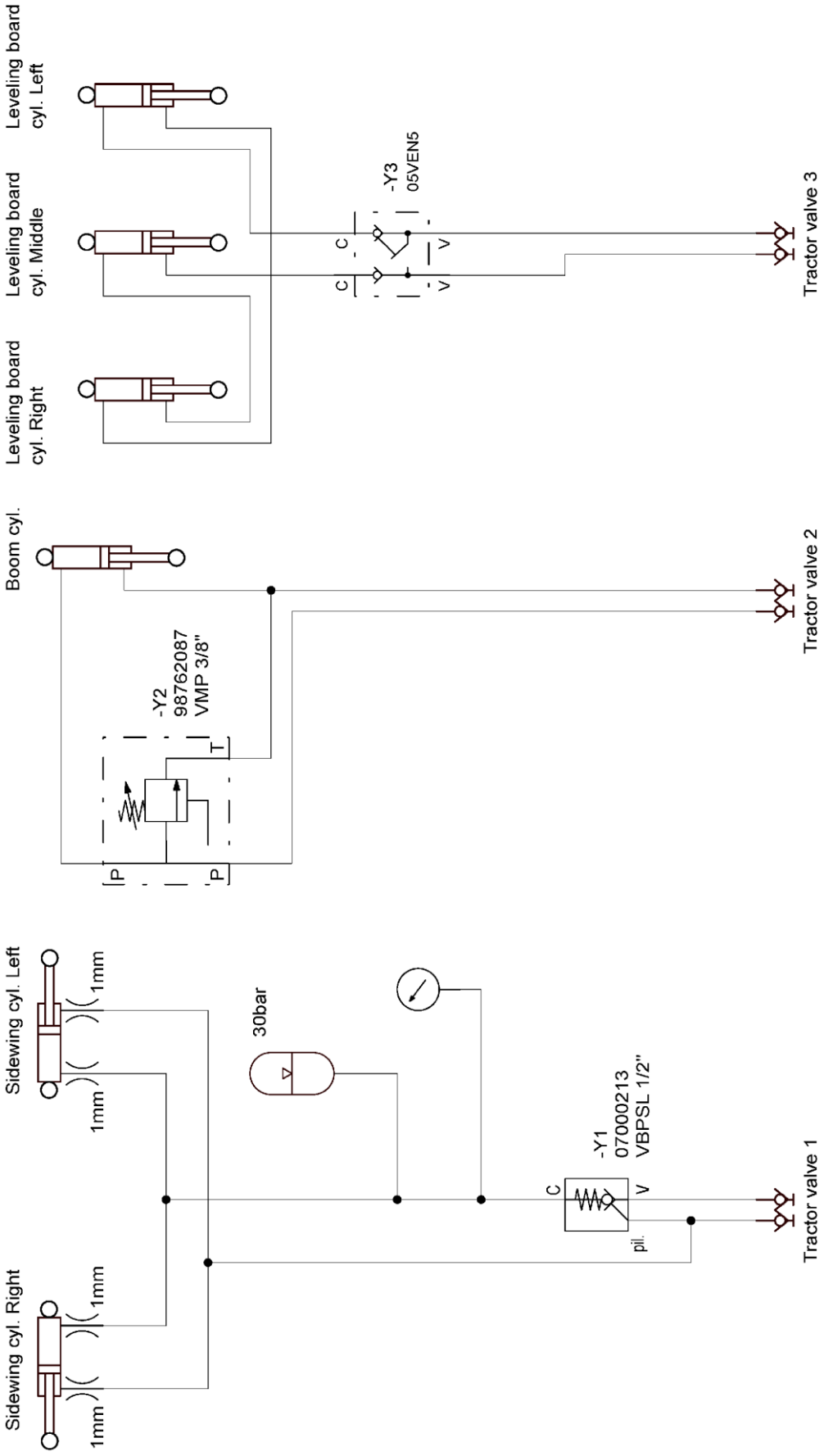
EN ISO 12100:2010
ISO 4254-1:2013

Loimaa 23.10.2025

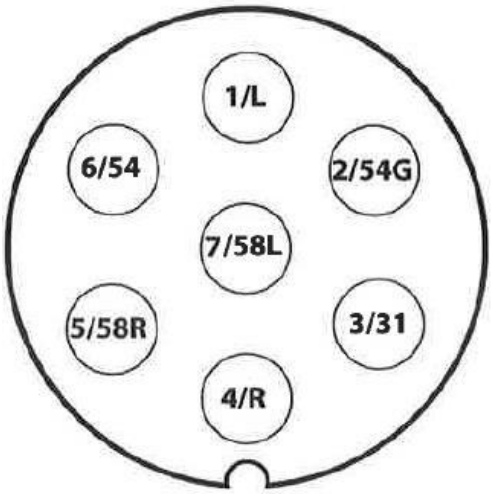
Vesa Mäkelä
Kotimäentie 1
FI-32210 Loimaa
Finland

The undersigned is authorized to compile the technical file of the machine.
Original

Appendix 2. Hydraulic Diagram



Appendix 3. Connection of the socket in accordance with ISO 1724



1/L	Left turn signal	Yellow
2/54G	Free/ rear fog light	Blue
3/31	Ground	White
4/R	Right turn signal	Green
5/58R	Right rear light + rec. Light	Brown
6/54	Stop/Brake Light	Red
7/58L	Left rear light	Black