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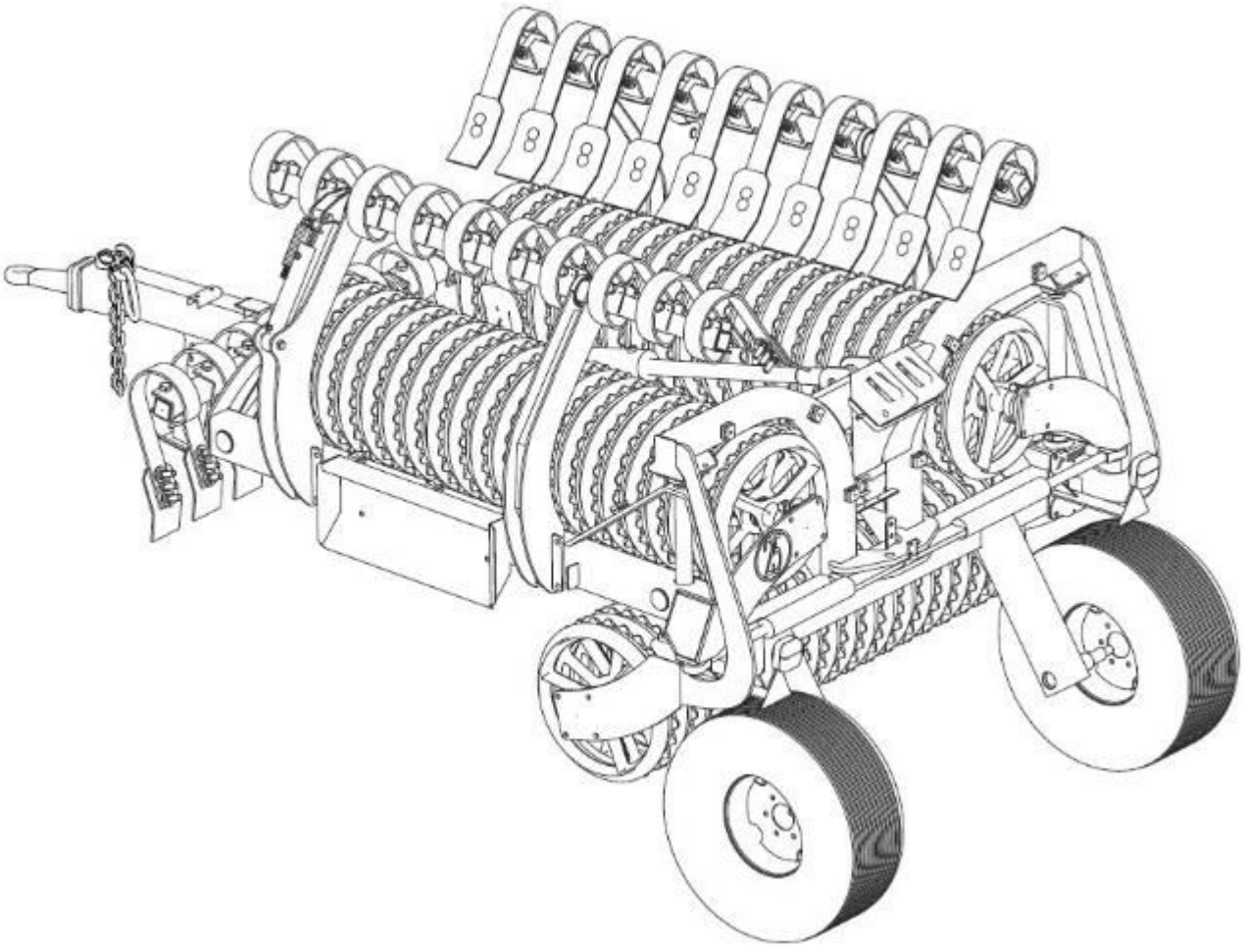
Pack Roller HD



EN **User manual**

EC DECLARATION OF CONFORMITY

„EXPOM" Sp. z o.o.
ul. Parkowa 2,
99-340 Krośniewice

Acting as a manufacturer:
Declares with full responsibility that the complete machine:

CULTIVATION ROLLER
TITAN (Pack roller HD)

Type/model: .....
Year of production: .....
Serial number: .....

As detailed in this declaration fulfils the requirements of:

Regulation of the Minister of Economy of 21 October 2008 on essential requirements for machines (Journal of laws no. 199, item 1228) and **European Union Directives**: 2006/42/EC of 17 May 2006 on machinery (Official Journal of the EU L157 of 09.06.2006, p.24 – 86)

The following harmonised standards were applied in order to assess compliance.

PN-EN ISO12100-1:2005+ Ap1:2006+A1:2009, PN-EN ISO 4254-1:2009, PN-EN ISO12100-2:2005+A1:2009

Standard and regulations:
PN-ISO 3600:1998, PN-ISO 11684:1998

Person authorized to prepare technical documentation:

First and last name.....adress Parkowa 2 st. 99-340 Krośniewice

This EC declaration of conformity becomes invalid if the machine is changed or rebuilt without the manufacturer's consent.
THE OPERATING MANUAL CONSTITUTES THE BASIC EQUIPMENT OF THE MACHINE!!!

Krośniewice.....

Place and date of issue

mgr inż. Wietrzyk Marek - President of the Management Board

Full name and signature of the authorised person

1. General information

**Congratulations on purchasing the modern Pack Roller HD tillage roller.
We are convinced that the roller will meet the customer's expectations.**

Upon purchase, the user receives a complete machine, factory-assembled and ready for operation.

In order to use it correctly and safely, we recommend that you read this user manual carefully.

**The manual is an important part of the machine and should be kept for future reference.
The manual includes a catalog of machine parts and a warranty card.**

Proper use of the machine, along with proper maintenance, lubrication and storage, will help keep it in good condition and ready for operation.

The machine was designed and manufactured taking into account all requirements related to its safe use, in accordance with applicable standards. However, it is necessary to follow all recommendations contained in the operating manual and applicable legal regulations regarding the use of the machine.

It should be borne in mind that despite the use of solutions aimed at meeting all requirements of national and international standards in the field of ergonomics and safety of use, threats related to, for example, residual risk, as well as situations whose occurrence during operation are difficult to predict cannot be ruled out.

Using the embankment for other purposes will be understood as use inconsistent with its intended purpose.

Additional information regarding the rules of use and spare parts can be obtained on the website: https://my.agrisem.com, directly or by phone at AGRISEM or at machine sales points.

Any deviation from the manufacturer's requirements and applicable legal regulations, including any changes to the machine's structure without the manufacturer's consent, the use of spare parts other than the original ones will be understood as use inconsistent with the requirements.

For the damages incurred then, AGRISEM is not responsible.

The product is identified by the rating plate located on the main frame beam of the unit.

The nameplate contains the following data:

- name and address of the manufacturer
- machine name
- machine type
- year of construction
- serial number
- mass
- KTM symbol

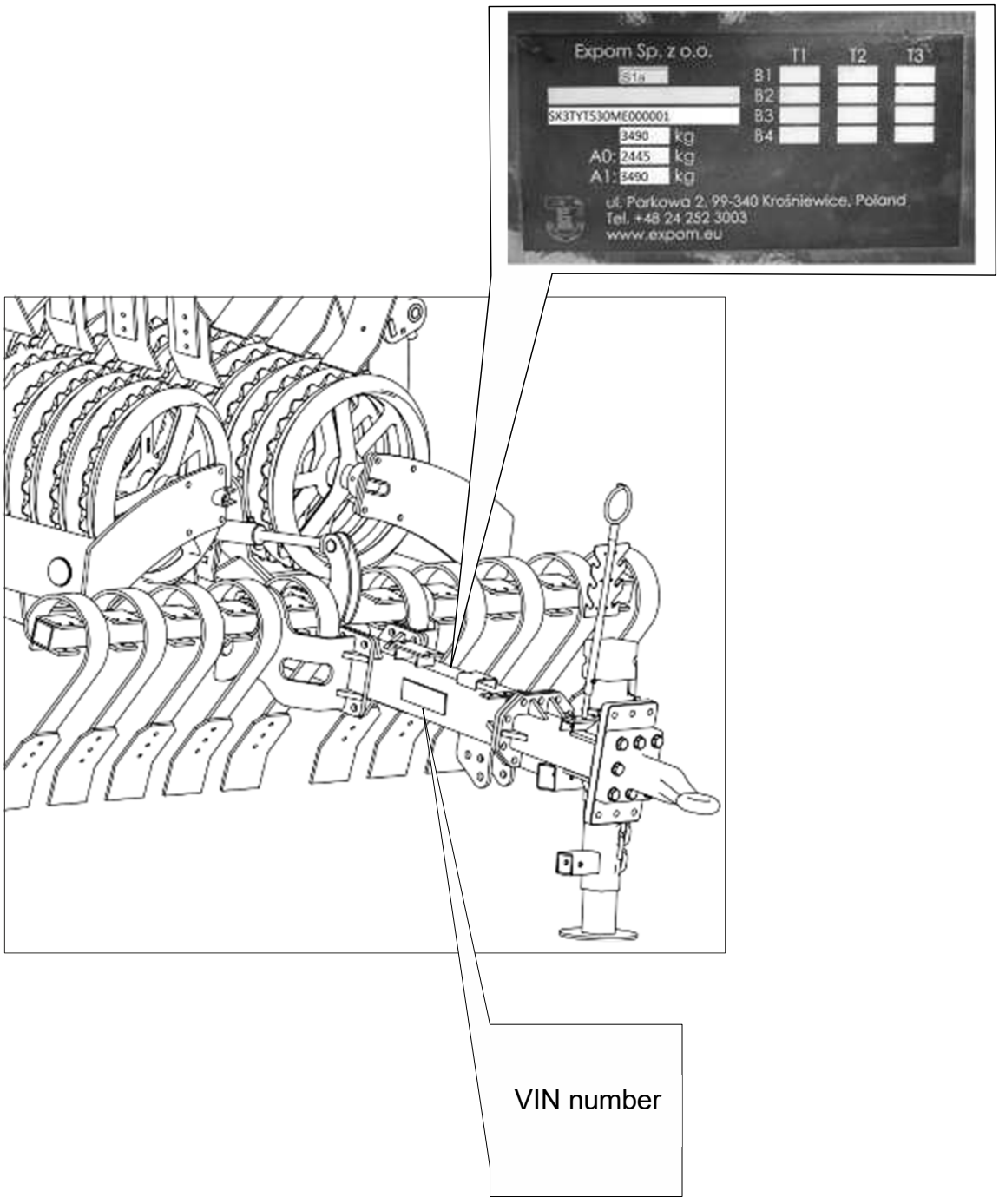


Fig. 1. Rating plate

2. General safety regulations

In order to avoid hazards, before starting to work with the machine, please read this user manual and follow the following recommendations:

The operation and use of the machine may only be entrusted to a person who has appropriate qualifications to operate tractor agricultural units and has read this manual. Operation should only be performed from the ground, after lowering the machine onto a level, hardened surface.

The shaft should be connected to the tractor correctly, in accordance with the instructions in the operating manual, securing the connecting elements with factory pins and pins.

Before starting the roller, make sure there are no bystanders, especially children, or objects nearby that could pose a threat. Only the operator is allowed in the roller operating zone.

Before using the machine, pay attention to its technical condition, especially the method of mounting individual working units and the connection system (hydraulic) to the tractor. Check whether all components work properly.

You must not operate a machine that is not technically functional!

The shaft's working units may pose a threat, but due to the functions they perform, they cannot be covered. While working, the operator must make sure that there are no bystanders near the working roller. Ensure good visibility of the area around the embankment. The safe distance from the working roller is 5m.

When working with the shaft, if there is a threat to the operator or bystanders, immediately stop the tractor, turn off the tractor engine, lower the machine to the rest position and apply the handbrake.

The roller operator should wear buttoned clothing while working. Loose items of clothing can be caught in rotating parts, posing a hazard to the operator.

The roller must not be moved backwards with the machine lowered.

It is prohibited to transport people or objects that do not constitute roller equipment on the machine.

It is forbidden to leave the tractor cabin while the shaft is moving.

Before leaving the tractor, lower the machine to the ground, turn off the tractor engine and remove the key from the ignition. The machine must not be left on slopes.

It is forbidden to get between the tractor and the machine when the engine is running or if it is not secured by applying the parking brake and placing chocks under the wheels.

Shaft operation is only permitted if the safety devices are functioning properly.

The manufacturer is not liable for damage resulting from improper use of the machine, incorrect or inaccurate adjustments, use of the machine contrary to its intended use, use of replaceable parts other than the factory ones, or changes made by the user to the structure without prior agreement with the manufacturer.

If the inscriptions and signs placed on the machine are damaged or become illegible, they should be immediately replaced with new ones (order from the manufacturer or at the point of sale).

Meeting the requirements for using the machine, servicing and repairing it according to the manufacturer's recommendations and strictly observing them is a condition for proper use.

Failure to comply with the above rules may lead to threats to the operator and bystanders, as well as damage to the unit. For any damage resulting from this, AGRISEM is not responsible.

2.1. Connecting to a tractor

Before connecting or disconnecting the shaft from the three-point hitch, check whether the tractor's control levers are in a position that will prevent unintentional raising or lowering of the lift arms.

When connecting the machine to a three-point hitch, make sure that the connection systems are of the same category.

There is a risk of crushing or cutting in the area of the suspension rods. When operating the lift, no one may be between the machine and the tractor.

2.2 Hydraulic system

When connecting the hydraulic system conduits to the tractor, make sure that there is no pressure in the system. However, when disconnecting the installation, lower the machine to the ground, reduce the pressure and turn off the tractor engine.

Sockets and plugs in the hydraulic system should be properly marked to avoid errors when connecting. Incorrect connection of cables may lead to hazards for the operator. In case of replacement and installation, new hydraulic lines must have the same technical specifications as those being replaced.

Leaks in the hydraulic system should be removed using available methods that do not pose any hazards.

Hydraulic fluid escaping under pressure can cause personal injury and pose a serious threat to the operator. If you suffer a personal injury, consult a doctor immediately.

Hydraulically lowered elements can only change position when there are no bystanders, objects or devices within their range.
(E.g. Power lines) that may pose a threat.

In accordance with applicable legal regulations, used oil and grease should be sent to appropriate points (refineries, gas stations) collecting lubricants.

2.3 Maintenance and repair activities

Repair activities may be performed by a person with appropriate qualifications.

Maintenance and repair activities requiring connecting the machine to the tractor should be performed with the handbrake on and the tractor and machine engine turned off.

When performing maintenance and repair activities, it is prohibited to get under the machine, which must be in the rest position.

Replace damaged elements with new original ones. Disassembly and assembly of parts in the unit can be performed by a properly trained person, using appropriate tools.

Bolts and nuts should be checked and tightened regularly.

Elements loosened for repairs or inspection must be reattached.

Podczas pracy z elementami ostrymi należy stosować odpowiednie narzędzia i rękawice ochronne.

When working with sharp elements, use appropriate tools and protective gloves.

When replacing parts, use original spare parts with the same technical specifications.

2.4 Road transport

When traveling on public roads, comply with applicable legal regulations regarding road safety, vehicle and machine lighting.

When traveling, please remember that the embankment exceeds the transport width of 2.5 m and may pose a threat to people and animals passing by during transport.

You may only drive on public roads with the roller arms folded into the transport position and mechanically secured against accidental unfolding.

For driving on public roads, the embankment must be equipped with lighting devices and appropriate signs for slow-moving vehicles.

3. Warning and information graphics

Pack Roller HD roller is factory marked with the following graphics:

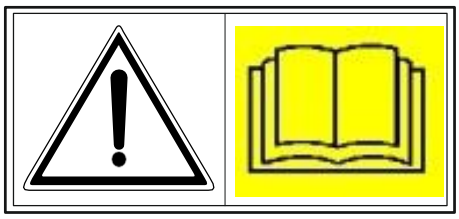
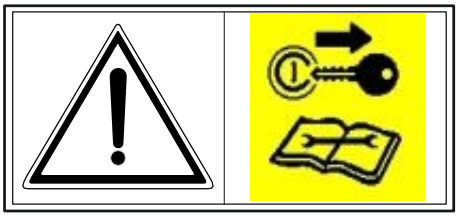
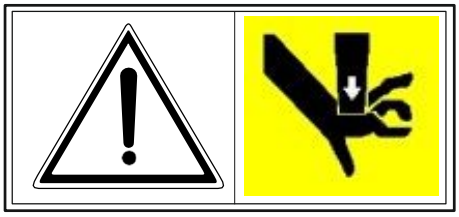
Symbol (sign) of safety	Meaning of the symbol	Placement on the machine
	Read the user manual	The central beam of the unit
	Turn off the engine and remove the key before servicing or repairing the vehicle	The central beam of the unit
	Crush - aggregate wing	Left and right side arms of the unit
	Crushing the fingers of the hand	Unit frame hinge
	Crushing the toes	Frame of the roller

Fig. 2. Warning and information graphics

4. Purpose of the roller

The Pack Roller HD cultivator roller is designed to compact the top layer of soil immediately after ploughing, before or after sowing, and to create its lumpy structure.
It is particularly useful on compact, clayey soils, where it perfectly crushes ploughed furrows and clods, simultaneously compacting and leveling the top layer of soil.
Thanks to the special profile of the rings, they penetrate the soil and cause its surface compaction. The significant weight per meter of width causes sufficient hardening and leveling of the top layer.
Thanks to this, deep ruts are not formed during subsequent passes, and due to the better capillarity of the soil, a much higher ability of plant emergence is achieved.

5. Roller description

The Pack Roller HD consists of three parts:

1. Roller central frame,

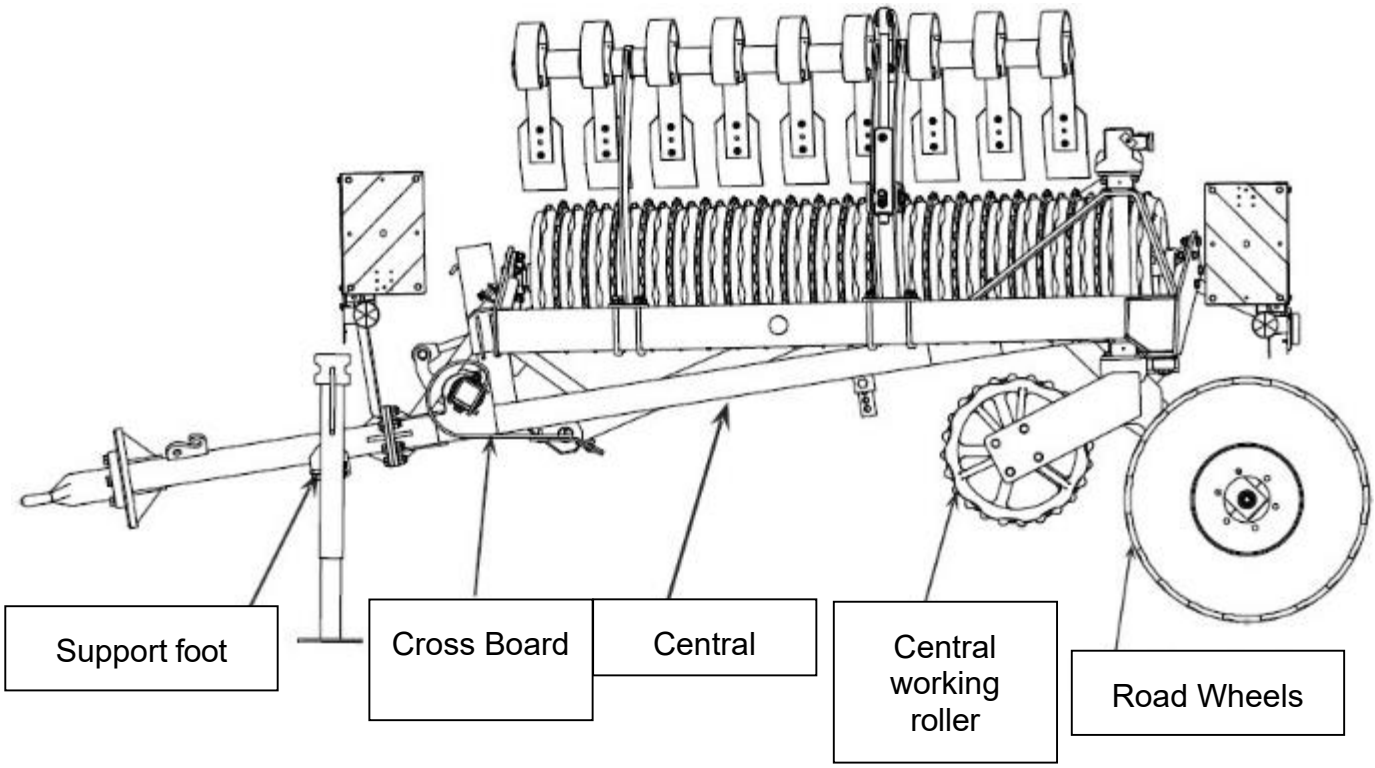
2. Working section - left and right wing

3. Drawbar,

4. Spring levelling board

The main part of the shaft is the central frame and wings folded into the transport position using a hydraulic system.
The transport width is the same for each working width and is 2.5 m.
The running wheels of the shaft are attached to the frame. The central frame can change position in the vertical plane (using the main cylinder), thanks to which it is possible to achieve the transport position.
The central shaft and the working sections (left and right wings) are attached to the central frame by hinges.
The working section consists of a series of cast iron rings placed on a steel rod and is mounted at the ends in bearing units.
The working sections are folded hydraulically for transport. The working sections constitute the main working part of the machine. The sections can be optionally equipped with CAMBRIDGE 500 mm, CAMBRIDGE 530 mm or CAMBRIDGE 600 mm,
ZIG-ZAG 530 mm rings.
The bearing units used are characterized by very high resistance to contamination and misalignment, which guarantees trouble-free operation for a long time of use.
The shaft drawbar is a welded structure made of a section and its task is to connect the machine to the tractor.
There are special saddles on the drawbar, on which the working sections are supported during transport.
The leveling harrow is rotatably mounted in front of each working section. It consists of a row of spring tines with a wide coulter. The angle of the harrow setting can be adjusted using hydraulic cylinders or mechanically, using a turnbuckle mounted on each harrow section.
The harrow can be switched off by turning it to a horizontal position, for example when rolling after sowing, rolling winter crops, or grassland.

5.1 Roller Construction



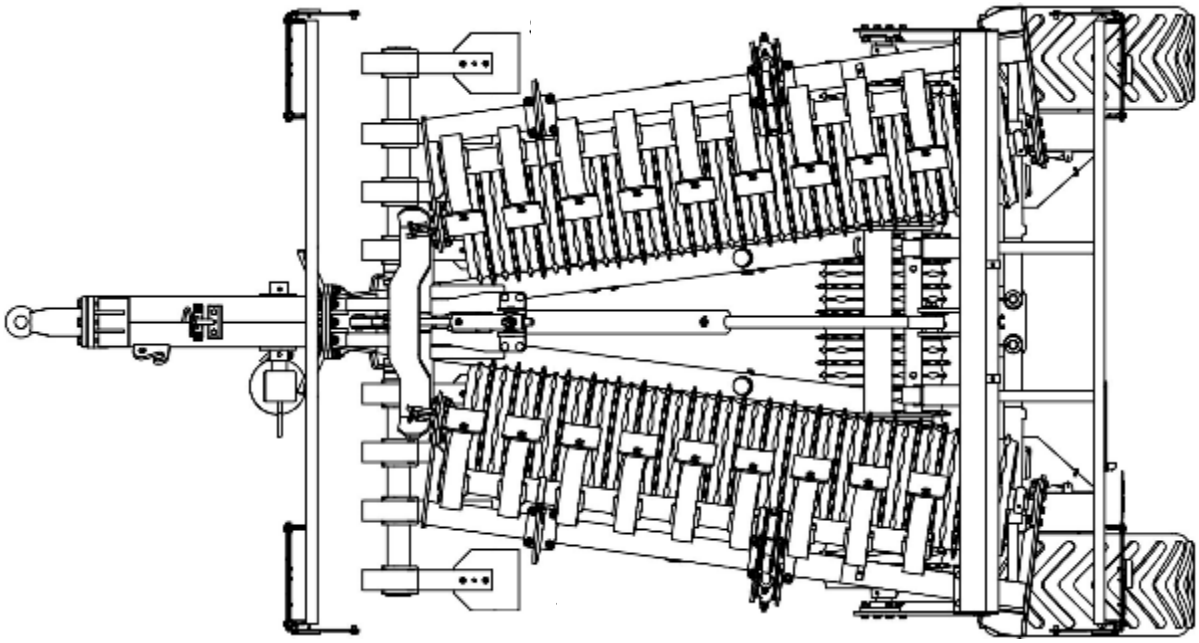
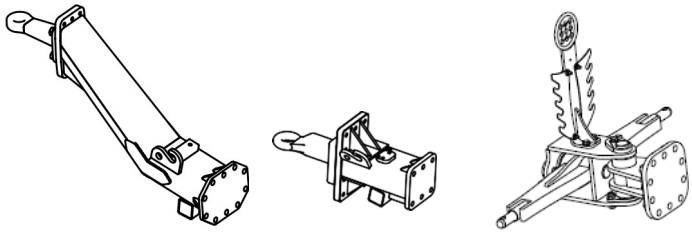


Fig.3. Construction of a cultivation wick Pack Roller HD



- Linkage between tractor and Drawbar

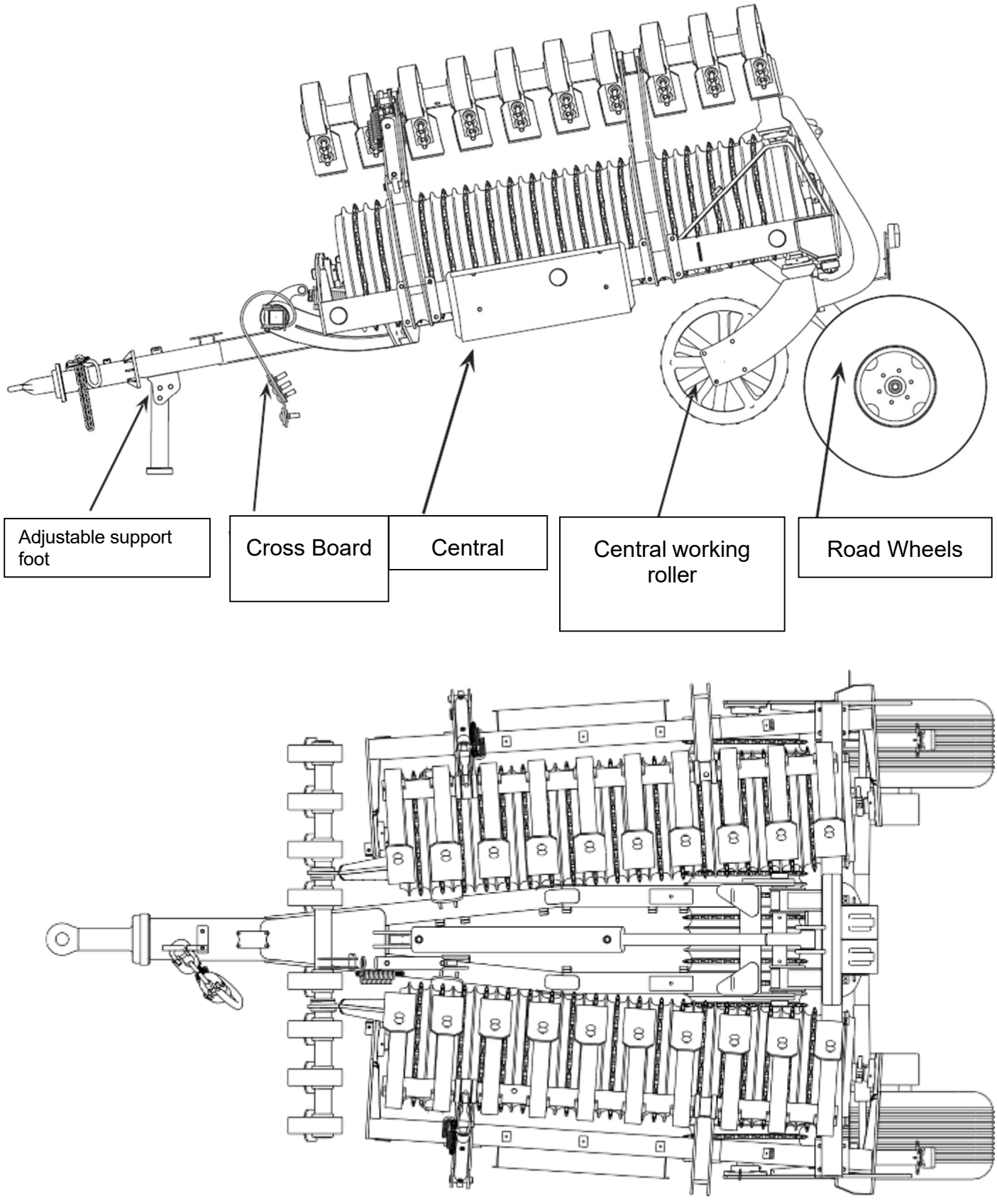


Fig.4. Construction of the cultivation embankment Pack Roller HD

6. Working with the roller

6.1 Roller connection with the tractor

! Before attaching the unit, check whether the tractor lift connectors are the same length;

! After inserting the hitch pins into the three-point hitch holes, secure them with cotter pins;

! Reversing causes the roller to engage with the tractor;

! Connect the hydraulic lines to the tractor's external hydraulic sockets;

! Level the roller crosswise and longitudinally by shortening or lengthening the tractor's hitch rods accordingly;

It is not permissible to work with the roller in stony soil, as this may damage the machine's working elements

6.2 Unfolding the roller to the working position

! To unfold the roller to the working position, you must:
! Unfasten the chain connecting the side wings,
! Carefully direct the oil to the main (middle) cylinder, which will cause the side wings to slightly lift onto the transport saddles,
! Then direct the oil to the rear cylinders, which will completely unfold the side shafts,
! Direct the oil to the middle cylinder again and slowly fold it, which will cause the side sections to lie on the ground and the transport wheels to rise up,

When unfolding the wings, pay attention to the position of the spring drag teeth, especially those adjacent to the saddles on the drawbar. If necessary, tilt them by a certain angle so that they pass the saddles.

Before unfolding the shaft, make sure that there are no bystanders nearby

The shaft can be operated at a speed of up to 7 km/h

6.3 Hydraulic system

The hydraulic system of the Pack Roller HD cultivator consists of three double-acting cylinders:

Main cylinder - Pack Roller HD 6.3m CJ2F version - 100/56/800z,

Main cylinder - Pack Roller HD+ 6.3m CJ2F version - 100/56/800z,

Main cylinder - Pack Roller HD+ 8.3m CJ2F version - 125/70/800z,

And two cylinders for folding the wings: CJ2F - 63/36/320z, a common type for both versions.

The spring drag is controlled by cylinders of the following types: CD - 3626 - 50/28/200z.

The cylinders are connected to the tractor hydraulics using high-pressure hydraulic hoses. The hoses are connected to the tractor's external hydraulic sockets.

Before each season, check the condition of the hoses, system connections, and tightness of the installation. Remove any leaks and replace damaged pipes with new ones. Remember that during operation, the system contains oil under high pressure and abrasions or cuts may cause uncontrolled leakage, dangerous to the operator or the surroundings.

Regardless of the condition of hydraulic hoses, they should be replaced every 5 years with the same marked ones. Damaged hoses should be replaced with new ones and not repaired.

6.4 Adjustment of shaft operating parameters

A properly attached and adjusted roller should move evenly behind the tractor during operation and compact the soil evenly across the entire working width. The roller's central frame should be horizontal to the field surface.

The roller is supplied for sale ready to work. The roller's design limits possible adjustments to a minimum. After unfolding the roller to the working position, you only need to pay attention to the position of the upper pin of the main frame cylinder.

It is recommended that this pin be located in the middle of the longitudinal mounting hole. During the roller's operation, this will allow you to compensate for unevenness in the field without overloading the machine's hydraulic system.

The Pack roller roller is equipped with a leveling harrow and the inclination of the tines is adjustable, thanks to which we change the intensity of the harrow's operation.

Depending on the need, we set the degree of extension of the piston rods in the regulating cylinders and lock the set position of the tine inclination using special locks mounted on the piston rods. When rolling, for example after sowing, the harrow tines should be directed to the extreme upper position, so that the harrow does not participate in the work. In justified cases, when there is a need to increase the distance from the ground, the clearance can be increased by unscrewing the coulters from the tines. If greater leveling of the field surface is required, all the harrow tines can be connected using a special rod, which will increase the spring effect of the harrow.

6.5 Road transport

Each time, before the planned transport of the machine on public roads, the machine must be prepared. To do this, perform the following activities:

! Using the hydraulic system, fold the machine arms to the vertical position and secure them mechanically, using a pin controlled by a hydraulic cylinder,

! Disconnect the hydraulic hoses from the tractor and place them in the appropriate sockets;

! Fasten the light boards in the brackets placed on the unit;

! During transport, the unit should be raised to such a height that the clearance under the unit is about 30 cm. The transport speed must not exceed 20 km/h.

Moving on public roads without warning signs and lighting required by road traffic regulations may result in an accident.
Light and warning devices are not part of the unit equipment. The user can purchase them at agricultural machinery sales outlets.

7. Removing malfunctions

Symptoms	Reason	How to remove it
Cylinder does not work	Wrong connection Insufficient oil Installation leakage Blocked hole in the flange	Improve the connection Add oil Repair the leak Check the patency of the orifice
The rings don't spin	Damaged bearing	Replace bearing Unlock the rings
Uneven pressure on sections	Hydraulic lever in wrong position	Move the lever to the "floating" position
The sections unfold too slowly	Contaminated oil in the system	Check the cleanliness of the oil

Fig.5. Removing malfunctions

8. Technical characteristics

8.1 Pack Roller HD

No	Parameters	Unit	Working width (m)
			6,3
1	Machine type	-	dragged
2	Frame type	-	hydraulically foldable
3	Working depth	mm	max 50
4	Dimensions: working position Length Width Height	 mm mm mm	 4620 2100 2500
5	Dimensions: transport position Length Width Height	 mm mm mm	 4200 6710 1420
6	Ring type Cambridge Ø500 ZIG-ZAG Ø530 Cambridge Ø530	 pcs pcs pcs	 121 64 127
7	Power demand	HP	99-130
8	Shaft weight (with drag) Cambridge Ø500 ZIG-ZAG Ø530 Cambridge Ø530	kg	 3000 3660 3200
9	Generator operation	person	1
10	Tires Standard Option	 - -	10.0/75-15.3
11	Transport speed	km/h	max. 20

Fig.6.Technical characteristics Pack Roller HD

8.2 Pack Roller HD +

L.p.	Parameters	Unit	Working width (m)	
			6.3	8.3
1	Machine type	-	dragged	
2	Frame type	-	hydraulically foldable	
3	Working depth	mm	max 50	
4	Dimensions: working position Length Width Height	 mm mm mm	 5000 2100 2200	 5800 2100 2300
5	Dimensions: transport position Length Width Height	 mm mm mm	 4200 6710 1420	 4950 7900 1420
6	Ring type Cambridge Ø500 Cambridge Ø530 Cambridge Ø600 ZIG-ZAG Ø530	 pcs pcs pcs pcs	 121 127 121 123	 165 168 109 157
7	Power demand	HP	130-180	
8	Shaft weight (with drag) Cambridge Ø500 Cambridge Ø530 Cambridge Ø600 ZIG-ZAG Ø530	kg	 3150 3350 3850 3860	 4100 4100 5100 5150
9	Generator operation	person	1	
10	Tires		400/60-15.5	
11	**Transport speed**	km/h	max. 20	

Fig.7.Technical characteristics Pack Roller HD

9. Lubrication points

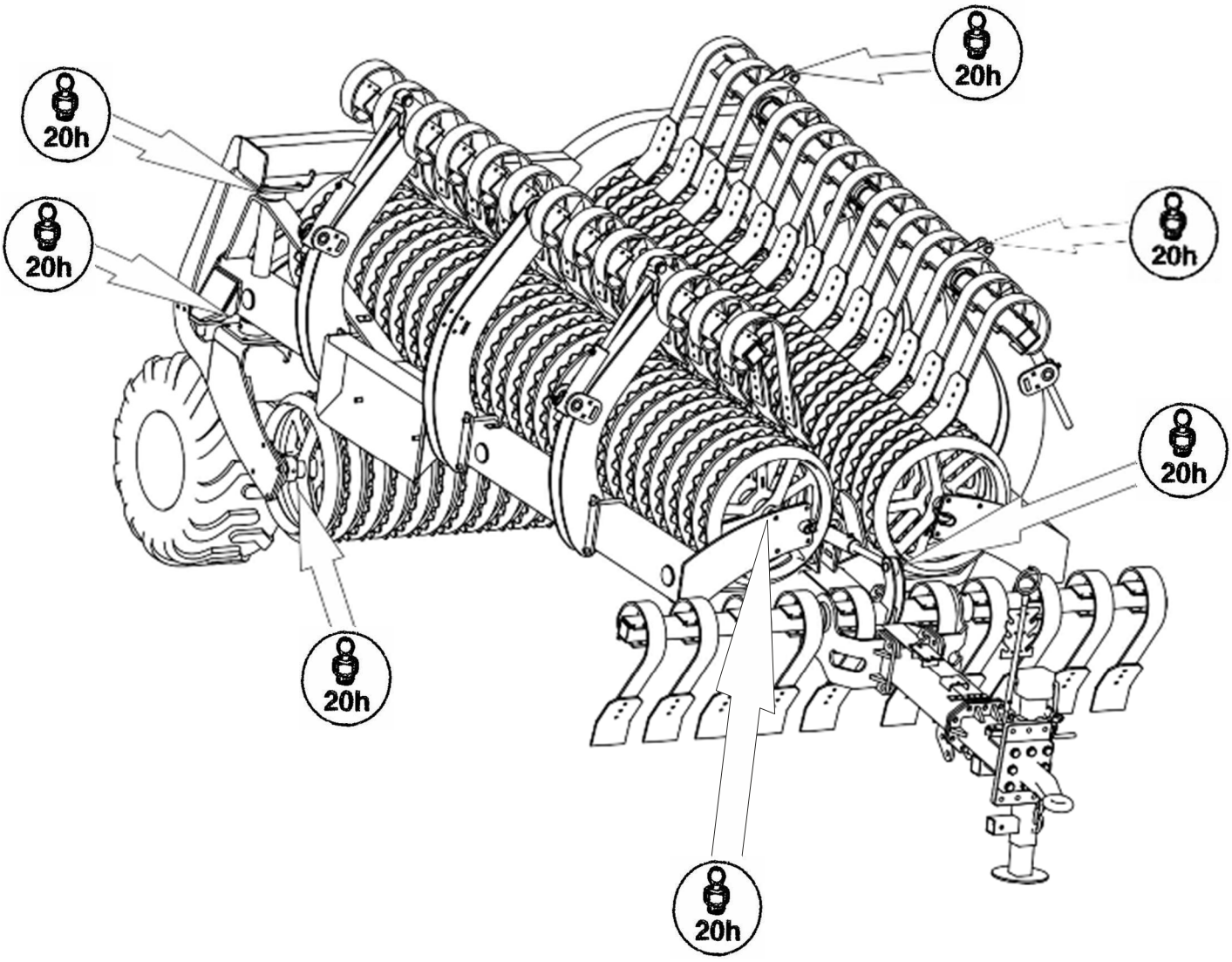


Fig.8. Pack Roller HD shaft lubrication points

10. Maintenance and storage

The service life and operational reliability of the shaft strictly depend on properly performed operation and maintenance.

After the first 10 hours of operation, tighten all screw connections. Each time after work, the roller should be carefully inspected and cleaned of any remaining soil or dust.

Before a longer stop, for example in the winter, the working elements of the machine in direct contact with the soil should be preserved by lubricating their surfaces with oil. Losses in paint coatings should be filled.

Hydraulic lines should be cleaned, the plugs should be protected against dirt or moisture, and they should be placed in the appropriate sockets on the machine.

When performing maintenance and repair work, wear appropriate protective clothing and gloves.

Maintenance operations should be performed after ensuring an appropriate free zone around the machine.

The roller should be stored on an even, hardened, horizontal surface in a dry, airy place, protected from weather conditions, in a way that does not pose a threat to people or animals.

During storage, the roller must rest on the ground in an unfolded state.

11. Disassembly and disposal

The disassembly of the machine should be carried out by persons familiar with its structure and appropriate qualifications, equipped with appropriate personal protective equipment and working clothes. These activities should be performed using appropriate tools, after placing the machine in the rest position, on an even and hard surface.

Due to the forces that may exceed 200 N, when dismantling individual components such as the frame, wings, etc., lifting devices should be used, using structural nodes as hooks.

Lifting equipment used during disassembly may only be operated by a properly qualified person.

The machine should be decommissioned after its complete disassembly. Used lubricants and oil from the hydraulic cylinder should be sent through collecting gas station networks or directly to the refinery.
The dismantled shaft should be taken to a scrap collection point or as secondary material.

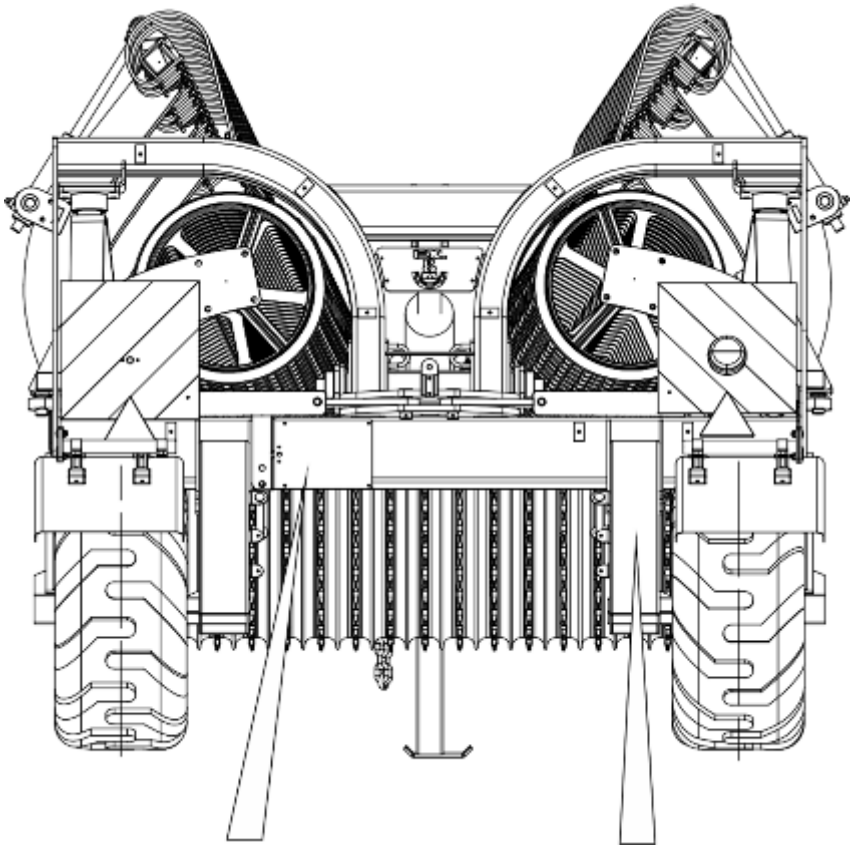


Photo No. 1. The places where the machine is supported by the lift.

12. General rules of warranty proceedings

1. The warranty covers defects and damage resulting from the manufacturer's fault, material defect, poor processing or installation.
The user receives a guarantee of failure-free operation of the unit for a period of time **12 months from the date of purchase.**
When granting a warranty, the manufacturer undertakes to:

- free repair of the complained equipment,
- providing the user with new, properly made parts free of charge,
- covering costs including labor costs and reimbursement of transport costs incurred;

2. The warranty does not cover parts that are worn out as a result of normal use or as a result of use inconsistent with the recommendations of this manual;

3. Warranty service is provided by the manufacturer;

4. In the event of minor damage, the user receives free / return old / new parts needed for repair, after the manufacturer accepts the complaint.

5. The User is obliged to submit a complaint immediately, but no later than within 14 days from the date of the complaint;

6. The warranty is extended by the period during which the equipment was repaired;

7. The manufacturer has the right not to accept a complaint if:

- the machine does not have a factory nameplate,
- during the warranty period, any technical changes or repairs were made to the equipment without the manufacturer's knowledge,
- the equipment was stored or used contrary to its intended use and instructions in the manual,
- the buyer is unable to present the original equipment manual with the date of purchase and appropriate entries identifying the machine;

8. The basis for settling a complaint is a complaint coupon with the date of purchase of the equipment confirmed on it;

9. A warranty card without the name of the machine, type, model, attached proof of purchase, date and place of sale, and a legible signature of the buyer is invalid.

WARRANTY CARD

Order number ..... serial number ..... Year of production.....

Date of sale (in words).....

The warranty is valid for 12 months from the date of sale.

Warranty service on behalf of the manufacturer is provided by:

.....
(completed by the seller)

.....
(seller's signature and stamp)

.....
(date of issue of the warranty card)

WITH THE TERMS AND CONDITIONS OF THIS WARRANTY I HAVE READ AND ACCEPT THEM

.....
(legible signature of the buyer)

When making a complaint, you must present the warranty card.

ATTENTION !!!

The seller receives a warranty from the equipment manufacturer for a period of **12 months** from the date of delivery of the equipment.
After this period, the seller provides a warranty to the buyer at his own expense.

13. Notes