

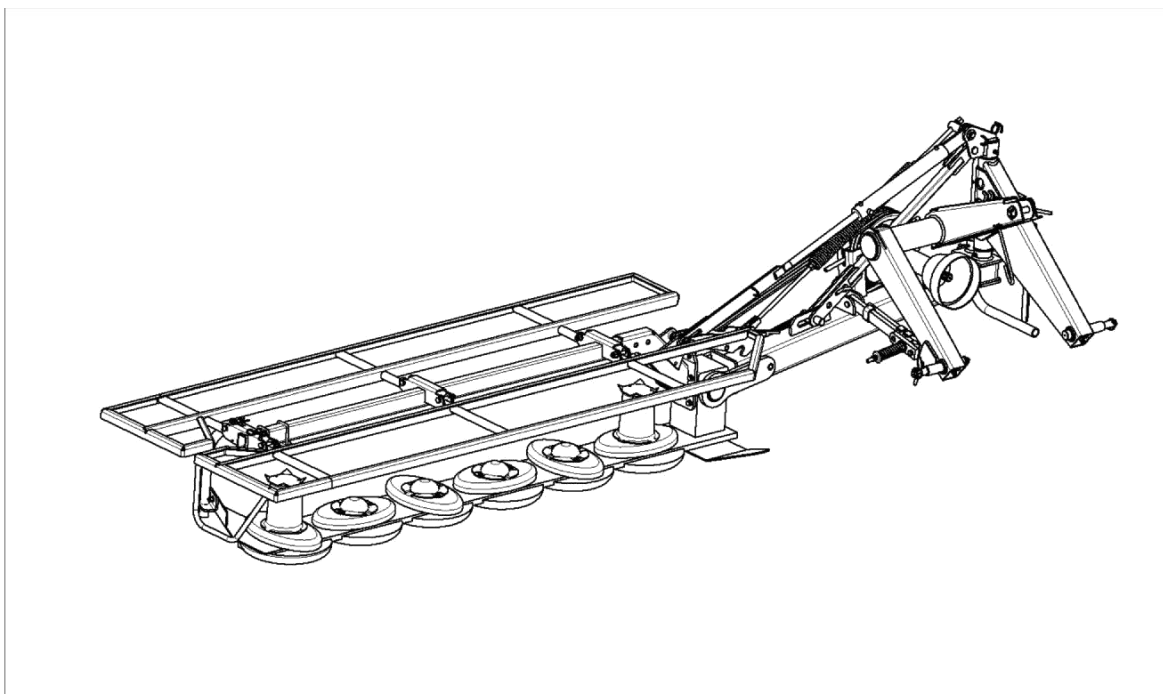
PMRiCZ KOWALSCY

DISC MOWER

Z-030/1 KTM symbol: **0824-314-503-011**

Z-030/2 KTM symbol: **0824-314-503-024**

Z-030/3 KTM symbol: **0824-314-503-037**



USER MANUAL
Version I – 2014.



PRODUCTION OF AGRICULTURAL MACHINERY AND SPARE PARTS KOWALSCY REGISTERED PARTNERSHIP



62-300 Września, ul. Działkowców 11



Phone: (0-61) 43 60 566

Fax: (0-61) 43 60 566

NIP: 789 175 13 60

REGON: 302240510

DISC MOWER

Z-030/1

Z-030/2

Z-030/3

Symbol

Serial number.....

Year of production.....

Warranty card number.....



1.	Introduction	7
2.	Identification of the machine.....	8
3.	Guidelines for warranty	9
4.	Proper use of the machine	10
5.	Residual risk	10
6.	Safety at work	11
6.1.	General safety rules	11
6.1.1.	<i>Personnel qualifications</i>	12
6.1.2.	<i>General health and safety requirements</i>	12
6.1.3.	<i>Cooperation with tractor</i>	13
6.1.4.	<i>Work with the mower</i>	14
6.1.5.	<i>Cleaning the machine</i>	14
6.1.6.	<i>Transport journeys</i>	14
6.1.7.	<i>Safety precautions during repair work</i>	14
6.1.8.	<i>Safety instructions during operation of the hydraulic system</i>	15
6.1.9.	<i>Safety instructions during storing</i>	15
6.1.10.	<i>Safety instructions during operation</i>	16
6.2.	Safety signs	16
7.	Delivery – disc mower Z – 030	21
8.	Construction of the mower	22
9.	Technical characteristics	23
10.	Using the disc mower Z – 030	24
10.1.	Coupling the machine with the tractor	24
10.1.1.	<i>Suspension of the machine on the tractor</i>	25
10.1.2.	<i>Articulated telescopic shaft</i>	27
10.1.3.	<i>Connecting hydraulic hose</i>	28
10.2.	Transport	28
10.2.1.	<i>Procedures for changing the position of the mower</i>	30
10.2.2.	<i>Travel on public roads</i>	34
10.3.	Mowing	35
11.	Maintenance	37
11.1.	Maintenance – repair activities	37
11.1.1.	<i>Replacement of blades</i>	37
11.1.2.	<i>Breaker adjustment</i>	39
11.1.3.	<i>Tensioning of v-belts</i>	39
11.1.4.	<i>Torques of screw connections</i>	40

11.2.	Everyday maintenance	41
11.3.	Lubrication	41
11.3.1.	<i>Bevel gear</i>	42
11.3.2.	<i>Cutting unit bar</i>	43
11.4.	Post-season maintenance and storing of the mower	44
11.5.	Transporting	44
12.	Dismantling and utilisation	45
13.	General rules of warranty proceeding	46
13.1.	Warranty card	48
13.2.	Warranty repairs records	49
13.3.	Complaint coupon	50

www.MARGUČIAI.LT

Fig. 1 Location of the nameplate	8
Fig. 2 Location of pictograms	20
Fig. 3 Construction of the disc mower	22
Fig. 4 Setting the THP pins of the machine	24
Fig. 5 Suspension of the machine on the tractor	25
Fig. 6 Location of yellow reflex reflectors	29
Fig. 7 Transport position	29
Fig. 8 Locking pin	31
Fig. 9 Positions of transport lock	31
Fig. 10 Rest position	32
Fig. 11 Holder for articulated telescopic shaft	33
Fig. 12 Cutter bar	35
Fig. 13 Spring breaker	36
Fig. 14 Replacement of blades	38
Fig. 15 Blades	38
Fig. 16 Adjustment of the spring breaker	39
Fig. 17 Tensioner of v-belts	40
Fig. 18 Bevel gear	42
Fig. 19 Cutter bar (lubrication)	43
Fig. 20 Lifting points.....	45

1. Introduction

The term machine describes disc mower Z-030, which is used exclusively for mowing standing grass (grasses, clover, alfalfa etc.) collected for direct feeding of animals or further processing.

This manual constitutes the basic equipment of the machine. One must in a ruthless way follow its recommendations.

It contains a description of risks that can occur when the safety rules are not observed at work, transportation and operation of the machine. The precautions to be taken in order to minimize or avoid these risks are also listed.

This manual also contains rules for the proper use of the machine, it explains how to adjust it to work and what maintenance operations need to be performed on the machine.

Before first putting the machine into operation, read the manual carefully. Only precise adherence to the below rules and guidelines guarantees the use of the machine without disruptions and accidents, as well as a long service life. If you cannot fully cope with the machine, you should read the manual again and eventually contact the Manufacturer to resolve any doubts.

We remain at your disposal:

**PRODUCTION OF AGRICULTURAL MACHINERY AND SPARE PARTS
KOWALSCY**

**62-300 Września, ul. Działkowców 11 phone/fax 061-
436-05-66 NIP 789-175-13-60 REGON 302240510**

Warning symbol



This symbol indicates important information regarding the risks specified in the manual. If you see this symbol, beware of the dangers and carefully read the relevant information and inform the other operators.

The machine can only be used for its intended purpose. Otherwise, in the event of damage incurred all rights under the guarantee are lost. The use of the machine for the intended purpose also relates to the compliance with the conditions of operation and maintenance recommended by the manufacturer, as well as the use of original spare parts.

Definitions employed in this manual: left side, right side, back, front - refer to the position of an observer facing the direction of travel of the machine. The Manufacturer means: Production of Machines and Spare Parts Kowalscy.

The Manufacturer reserves the right to make design changes refining the products, which cannot always be introduced into the manual on a regular basis. This does not involve the commitment that they will be introduced also for machines already delivered.

2. Identification of the machine

Identification data of the disc mower Z-030 are shown on the nameplate located on the front of the machine.

Please write data presented there in the appropriate boxes on the first page of this manual. They will be needed while ordering spare parts from the Manufacturer.

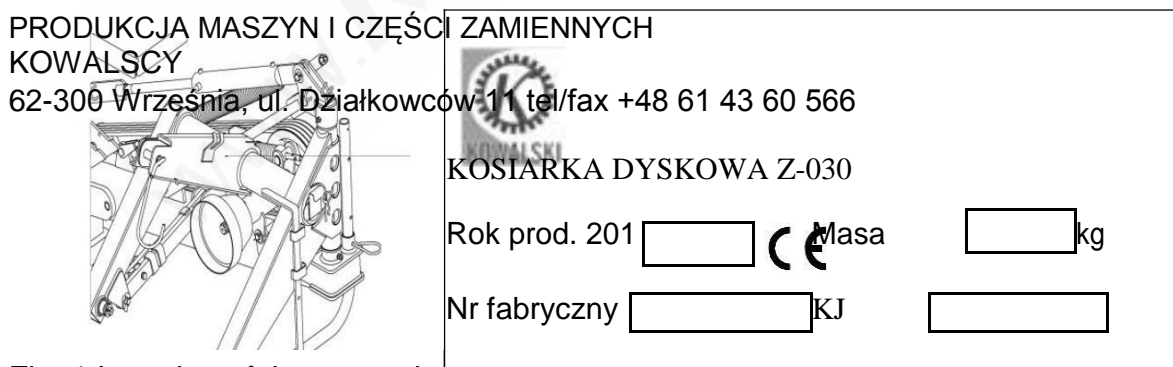


Fig. 1 Location of the nameplate

Nameplate is a document and cannot be removed, blanked or altered.

3. Guidelines for warranty

Warranty conditions and information about repair service are included in a warranty card (appendix to the manual).

The warranty card is an essential document entitling the purchaser of the machine to use the warranty service.

- At the time of delivery of the equipment check whether there are no transport damages, the equipment is complete and a serial number is stamped on the nameplate; any objections must be submitted in writing within 6 days.
- Warranty claims can be considered only if the purchaser kept the conditions laid down in the agreement.
- The warranty is voided as a result of unauthorised repair performed by the purchaser, or the installation of non-original spare parts, the device is changed and the potential loss is usually linked with these changes.

The rules of a warranty proceeding and the rights arising from them are given in the chapter "General rules of warranty proceeding".

4. Proper use of the machine

Disc mower Z-030 is intended for work in agriculture or similar (for mowing all green crops, e.g. grasses, alfalfa, etc.).

The use of it for other purposes will be interpreted as improper use. The fulfilment of the requirements for use, operation and repairs of the machine in accordance with recommendations given by the Manufacturer and strict compliance with them is a prerequisite for intended use.

The machine should be operated, maintained and repaired by persons familiar with its specific characteristics and acquainted with the rules of conduct on the safety.

Accident prevention regulations and all basic rules for safety and occupational medicine, as well as traffic regulations must always be observed.

Unauthorised changes to the machine without the Manufacturer's consent may release the Manufacturer from liability for any resulting damage or injury.

Improper uses

- It is forbidden to use the machine for purposes other than those specified in the manual, such as transport of people.
- It is forbidden to use the machine for mowing ditches, pitches and other places where the distance to bystanders may be less than 50m.
- The machine is not designed to work on the ground with a slope above 12°.

5. Residual risk

The greatest risk arises from the presence of bystanders, particularly children, or animals in the vicinity of vulnerable zones of the mower during its operation. With inadequate attention to the warning pictograms the risk increases.

In particular, it is dangerous to:

- stay at a distance of less than 50m when the mower is operating,

- touch exposed rotating parts during operation,
- clean the mower during operation,
- raise the mower during operation,
- check gearbox and articulated telescopic shaft during operation,

Observation of the instructions for use and safety regulations will minimize the occurrence of risks to minimum.

When operating the mower and its daily operation observe the following rules:

- carefully read the user manual,
- observe the ban on approaching of bystanders to working mower at a distance of less than 50m,
- use the mower only for its intended purpose,
- wear only a tight-fitting clothes, i.e. no loose parts,
- only the person who previously familiarised himself with the operating instructions and safety rules can operate the mower,
- inspections and repairs must be carried out only by a trained person,
- protect the machine during repairs and daily maintenance,

When the above instructions are followed the residual risk will be minimized.

6. Safety at work

6.1. General safety rules

Persons employed for the operation, repair and maintenance of the machine, as well as people located in the area of its operation are required to comply with national safety regulations.

Most of the accidents at work, repair, maintenance or transport are caused by failure to observe basic safety rules. Each user of the mower should be thoroughly familiar with its construction and operation, as well as should observe the following guidelines and information for safe operation.



Observe the following recommendations

6.1.1. Personnel qualifications

- Due to the fact that the machine works with cooperation of a tractor, it can be operated only by a person authorised to operate the tractor.
- The machine can only be operated by people who are familiar with its operation and with the following user manual.
- It is forbidden to operate the machine by minors, persons in the disease state or under the influence of alcohol.
- Before starting work, one must familiarize himself with all the controls and their operation. During operation, it is too late.
- Work on the hydraulic system may be performed only by a person with the necessary qualifications.

6.1.2. General health and safety requirements

- The mower can be operated by a single operator from the driver's seat of the tractor cooperating with the machine.
- User clothing should be tight fitting. Avoid loose clothing. Use only work footwear.
- It is forbidden to use the mower for other purposes than the ones given in this manual.
- During first start check the operation of all mechanisms.
- Before starting work, check the technical condition of the mower. Do not start operation if any damage was found.
- Riding on the mower during operation and during the transport is forbidden.
- It is unacceptable to use the mower at a distance less than 50m from bystanders.
- Tractor windows from the side of the mower (right side and back) must be protected by a metal guard rail.

- The machine is run only when all guards have been installed and are in the protective position.
- Do not stay in the area of rotating parts.
- Do not leave the tractor with coupled machine without supervision (with the engine running). Before leaving the tractor lower the machine to the ground, switch off the engine, remove the key from the ignition and engage the parking brake.
- If there are no safety signs on the machine or they are damaged or illegible they must be replaced with new ones.
- Risk of fire. It is recommended to have a fire extinguisher in the workplace.
- In order to avoid the risk of fire, keep the machine in perfect working order and clean.
- It is prohibited to smoke and use of open fire during the mowing.

6.1.3. Cooperation with tractor

- Coupling and uncoupling the machine to or from the tractor must be performed on a level, solid surface with extreme caution. Most of the accidents occur within the rear suspension system.
- Coupling the machine to tractor on a three-point suspension system must be safe and properly secured.
- The mower should be coupled only to tractors with power and class consistent with the information contained in the "Technical characteristics". In order to maintain the required steering, the tractor must be equipped with front weights, so that the front axle load of the tractor is at least 20% of the tractor weight.
- Cooperation of the mower with the tractor of a lower grade than recommended in the manual is unacceptable and threatens overturning the unit.
- Work on slopes exceeding 12° is not allowed.
- It is forbidden to stand between the tractor and the machine with the tractor engine running.
- Inspection of the technical condition, regulation and execution of ad-hoc repairs, maintenance and cleaning of parts or working groups is permitted after immobilization of the tractor engine and removal of the key from the ignition. The machine or its components must be protected against accidental change of position.
- During each break, the drive should be switched off.

- Machine uncoupled from the tractor leave on a flat, hard surface - set in the rest position.

6.1.4. Work with the mower

- Before starting the machine and during operation, the operator must be sure that within the machine area (especially in the vicinity of the cutter bar) there are no bystanders. Before turning on the drive and moving the tractor beep (2 times).
- Do not use the mower as a lifting device.
- It is forbidden to carry passengers or animals on the machine (during work and transport).

6.1.5. Cleaning the machine

- Cleaning the machine can be done only in the working position when the machine is lowered on a hard, level surface (the cutter bar is on the ground).
- Removal of pollutants should be done with the use of water under pressure, it is prohibited to stay between the tractor and the mower during cleaning.
- While cleaning the machine, exercise all precautions, such as. anti-skid gumboots.

6.1.6. Transport journeys

- For transport journeys mower arm must be set in the transport position.
- For transport journeys transport lock must be in the transport position, the danger of crushing.
- During transport journeys it is forbidden to stay within the area of cutter bar.
- During transport the mower must to be raised to such a degree that the clearance is at least 25 cm. Lift arms of three-point hitch of the tractor must be tensioned (the machine cannot swing to the sides).
- Transport speed of the machine cannot exceed 20km/h.

6.1.7. Safety precautions during repair work

- All works related to the technical inspection, adjustment, repair and maintenance and cleaning of parts or workgroups can be carried out only when the machine is lowered and set on the ground, all of its parts are protected against uncontrolled movement, while the tractor engine is off and key is removed from the ignition.

- It is unacceptable to perform any repairs under machine raised and unsecured against falling.
- For repair or maintenance use appropriate tools and gloves.
- NOTE sharp parts of the cutter bar - blades.

6.1.8. Safety instructions during operation of the hydraulic system:

- Carefully connect and disconnect the hydraulic hose from or to the tractor. Hydraulic oil under the pressure can penetrate the skin and cause serious injury!
- Flexible hydraulic hoses should be checked periodically and, if damaged or after the expiration of the period of use (age), replaced. Replaced hoses must meet the technical requirements of the Manufacturer.
- Period of usage of flexible hydraulic hoses should not exceed 5 years (including a possible two-year storage period). Hoses are subject to a natural process of aging. Therefore their period of use and storage is limited.
- Waste oils contain substances harmful to the environment. They should be handed over to the companies purchasing secondary raw material or send for recycling and utilization.
- Never drain oil on the ground, into drains, rivers or lakes. For the temporary storage of waste oils use only sealed containers. Do not use for this purpose containers after food products, beverage or other easily confused with them containers.

6.1.9. Safety instructions during storing

- Store the mower in a clean state.
- During the storing period, the cutter bar must be based on ground and secured against displacement by a security pin.
- Hydraulic hoses should be placed on appropriate hangers.
- Mower should be stored in places where there is no possibility of accidental injury to humans or animals, on a flat hard surface, preferably under shelter.
- During the storing period, loose v-belts.

Failure to follow these rules can lead to dangerous situations for the health and life of humans, damaging the mower or other objects. The user is responsible for damages resulting from non-compliance of these rules.

6.1.10. Safety instructions during operation

All operation activities must be performed in accordance with general provisions stated in chapter 6. Particular attention should be paid to the risks arising from the rotational motion of working elements.

Therefore, before performing any maintenance one should firmly secure the set against:

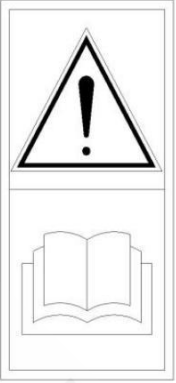
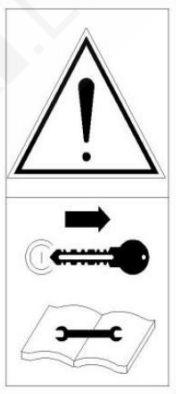

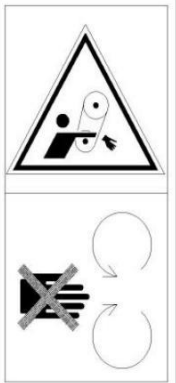
- loss of stability - any work must be performed on a flat, paved surface,
- uncontrolled operation - turn off the tractor engine by removing the keys from the ignition,
- rolling – engage the parking brake,
- lowering the cutter bar – lower and base its entire surface on the ground.




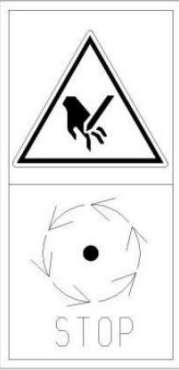
6.2. Safety signs

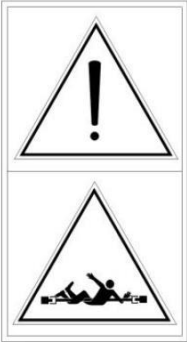





Safety signs and information in the form of labels (pictograms) were placed on the machine at marked in Fig. 2 locations. They warn against existing or potential hazards and provide guidance for the proper operation of the machine. In Table 1 all pictograms located on the machine are listed and explained.

Safety signs and inscriptions should be protected against loss and loss of legibility. Lost or illegible must be replaced. It is required that new elements used during the repair were marked with all safety signs provided by the Manufacturer.

Table 1 Warning pictograms

No.	Description	Sign
1	Read the user manual	
02	Switch off the engine and remove the key before starting maintenance or repairs	
3	Do not stay near lift arms of the hitch during hitch operation	
4	Do not open and remove safety covers if the motor is in motion	

No.	Description	Sign
5	Keep a safe distance from the mower blade area when the tractor engine is running and the PTO is engaged	 <p>The sign consists of two parts. The top part is a triangular warning sign with a black border, containing a black silhouette of a hand being cut by a blade. The bottom part is a rectangular sign with a black border, showing a black silhouette of a person standing to the right of a vertical rectangle, with a double-headed horizontal arrow between them, indicating a safe distance.</p>
6	Maintain a safe distance from the machine	 <p>The sign consists of two parts. The top part is a triangular warning sign with a black border, containing a black silhouette of a person falling. The bottom part is a rectangular sign with a black border, showing a black silhouette of a person standing to the right of a vertical rectangle labeled '50 m', with a double-headed horizontal arrow between them, indicating a 50-meter safe distance.</p>
7	Do not reach into the area of crushing if the elements can move	 <p>The sign consists of two parts. The top part is a triangular warning sign with a black border, containing a black silhouette of a hand being crushed between two moving parts. The bottom part is a rectangular sign with a black border, showing a mechanical assembly with diagonal hatching and curved arrows indicating movement.</p>
8	Do not touch the machine before all the element stops	 <p>The sign consists of two parts. The top part is a triangular warning sign with a black border, containing a black silhouette of a hand touching a rotating blade. The bottom part is a rectangular sign with a black border, showing a circular blade with arrows indicating rotation and the word 'STOP' written below it.</p>

No.	Description	Sign
9	Note, the possibility of pulling the whole body - the drive transmission of the mower	
10	Note, shaft rotation 540 rpm	
11	Avoid exposure to liquid flowing under pressure. Refer to the instructions in the user manual.	
12	It is forbidden to operate the mower with the presence of bystanders at a distance of less than 50m	
13	Fixing point of lifting equipment.	
14	The permissible transport speed.	

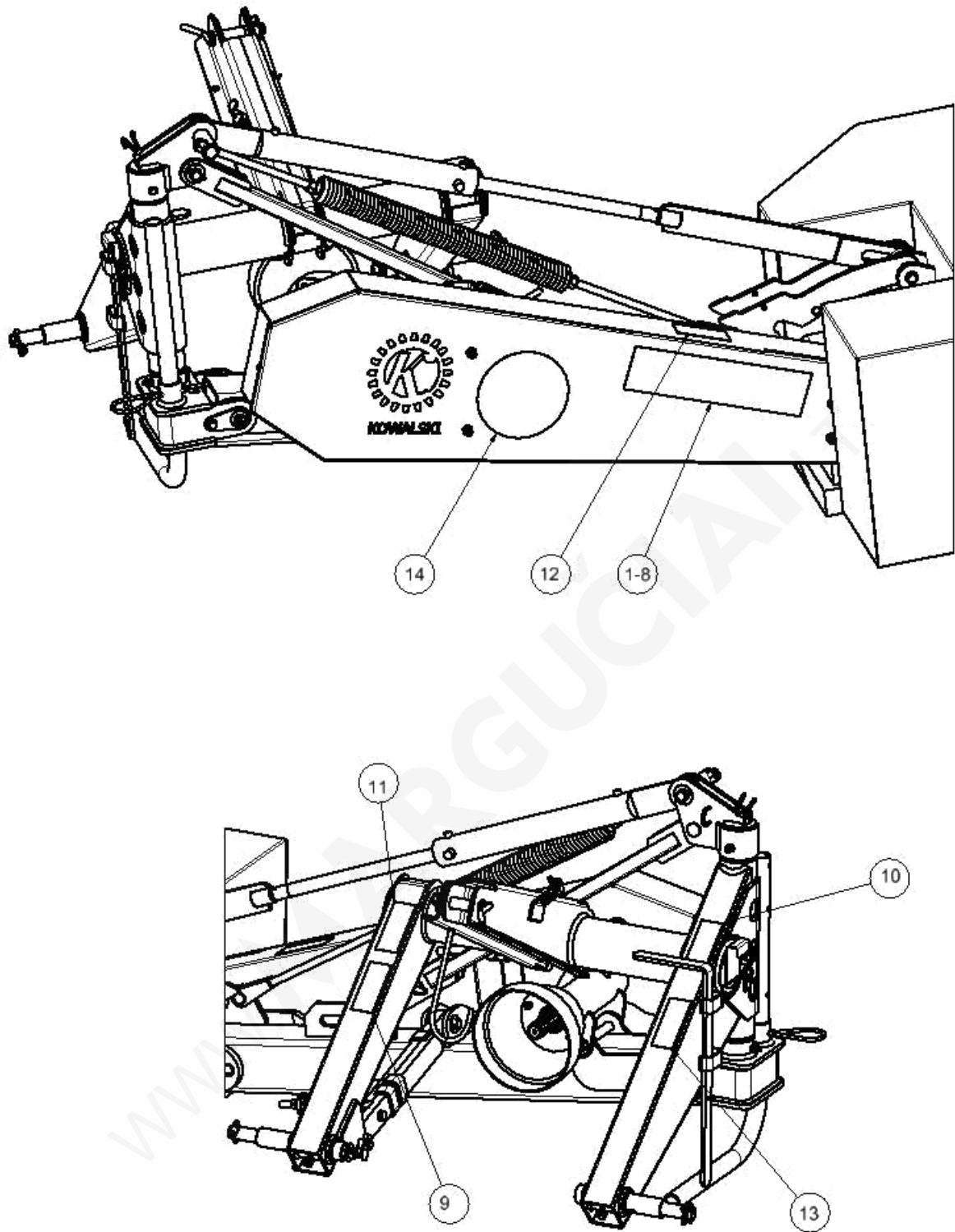


Fig. 2 Location of pictograms

7. Delivery – disc mower Z – 030

Disc mower Z – 030 can be purchased directly from the Manufacturer:

PRODUCTION OF AGRICULTURAL MACHINERY AND SPARE PARTS KOWALSCY

62-300 Września, ul. Działkowców 11 tel./fax 061-
436-05-66

NIP 789 175 13 60; REGON 302240510

or at points of sale of agricultural machinery.

The mower is supplied complete, assembled, and ready for use. The machine can be supplied to the user by automotive or railway means of transport according to the regulations in force for the loading and transport.

NOTE

Loading on means of transport (and unloading) using lifting equipment with capacity min. 800kg.

Suspending points for lines (12) are indicated in Fig. 3



The mower must be transported in the storage position (cutter bar resting on the ground, support lowered).

During the transport of the mower by automotive or railway means of transport it should be placed on a flat surface in the rest position and fasten with appropriate belts.

The buyer with the machine receives the user manual and set of expendables:

- Left blade 2 pcs.
- Right blade 2 pcs.

8. Construction of the mower

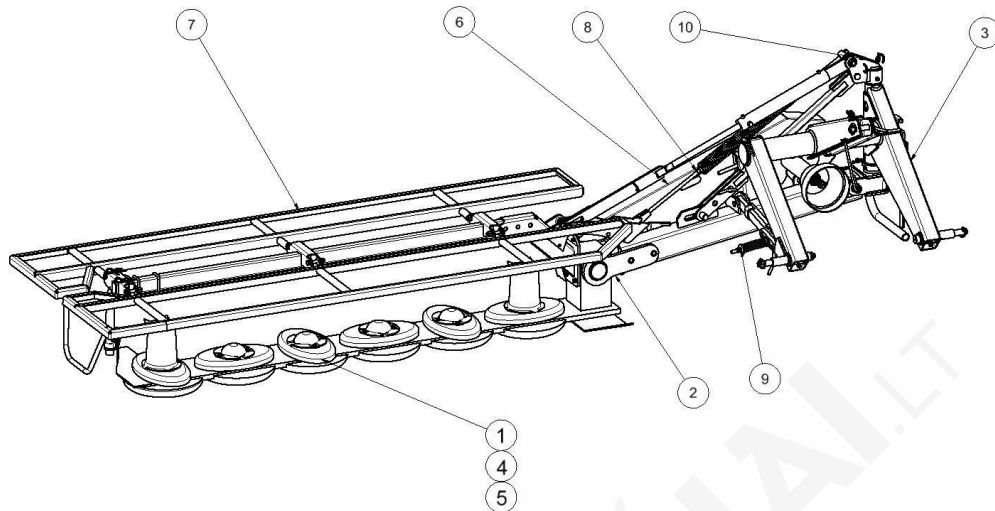


Fig. 3 Construction of the disc mower Z-030

1 – cutting unit bar; 2 – bevel gear; 3 – suspension frame; 4 – disc;
5 – blade; 6 - belt drive (guard); 7 – rotors cover; 8 – compensation springs;
9 – breaker; 10 – hydraulic cylinder;

The principal elements of the mower are: the suspension frame, boom, bar with the cutting unit elements and drive assemblies.

Suspension frame of the machine (3) is adapted for mounting on a tractor via the three point hitch. In the vertical tube of the suspension there is a rotatable pivot mounted that enables tilting back the boom with the cutting unit after the activation of the breaker (9). Bevel gear (2), screwed to the bar of the cutting unit (1) is mounted on the boom.

Drive on bevel gear (2) is transmitted from the tractor PTO via belt drive (6). From the bevel gear, by means of spur gears in the supporting bar, drive is transmitted to the discs of the rotors with the blades (5) which constitute the cutting unit. The cutting unit consists of six discs (4) with two blades mounted on each. A hydraulic cylinder (10), powered by external hydraulic system of the tractor, is used to lift the cutting unit to the transport position. Cutting unit bar (1) rests on skids. Above the cutting unit there is a rotors cover (7), extreme discs have cylindrical swath flingers.

9. Technical characteristics

Table 2. Technical data of disc mower Z – 030

Mower type	Z030/1 (KD21)	Z030/2 (KD25)	Z030/3 (KD28)
Mowing width [m]	2,10	2,42	2,80
Number of blades [pcs.]	10 (2x5)	12 (2x6)	14 (2x7)
Tractor PTO rotation [rev./min]	540		
Power of the tractor [HP]	from 30	from 45	from 60
Working efficiency [ha/h]	~2	~2,5	~3,0
Transport length [mm]	1300		
Transport width [mm]	1815		
Width in the working system [mm]	3956	4300	4505
Transport height [mm]	2520	3340	3280
Weight [kg]	475	500	525
Cutting linear speed [m/s]	91		
Discs rotational speed [rev./min]	2950		
Tractor class	0,6	0,9	0,9 - 1,4
Working pressure of hydraulic installation [MPa]	up to 32		
3-point hitch	Cat. II		

10. Using the disc mower Z – 030

10.1. Coupling the machine with the tractor

Tractors with a capacity of at least 30 HP and equipped with three-point hitch (TPH), category 2 are intended to cooperate with the mower. Before coupling the machine to the tractor one should pay attention to the setting of TPH pins of the machine. In order to adapt the machine to work with a tractor equipped with a three-point hitch category 2, remove the screw (B), pull out the pins (A) so that the mowing track was approx. 10 cm outside of the wheel track, and then tighten the screw (B). Follow the same procedure for the second pin (C).

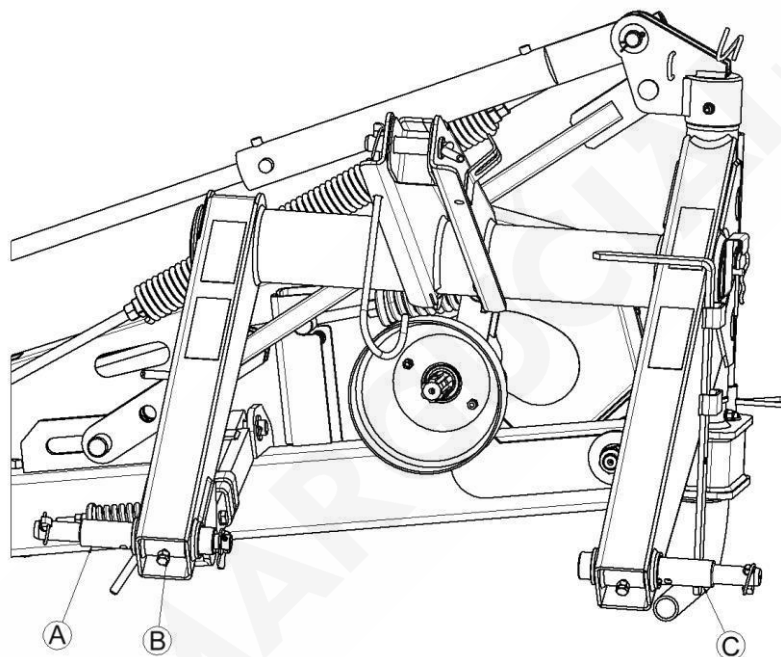


Fig. 4 Setting the TPH pins of the machine

NOTE

In order to maintain the required steering of the tractor (with the suspended mower) the tractor must be equipped with a front axle weights, so that upon their installation the front axle load is at least 20% of the tractor weight.



The mower can be connected only with the tractor of the appropriate class guaranteeing safe operation of the system.

Coupling the mower to the tractor must be carried out by one person while maintaining all the safety measures. With the engine off, do not stand between the tractor and the machine.

10.1.1. Suspension of the machine on the tractor

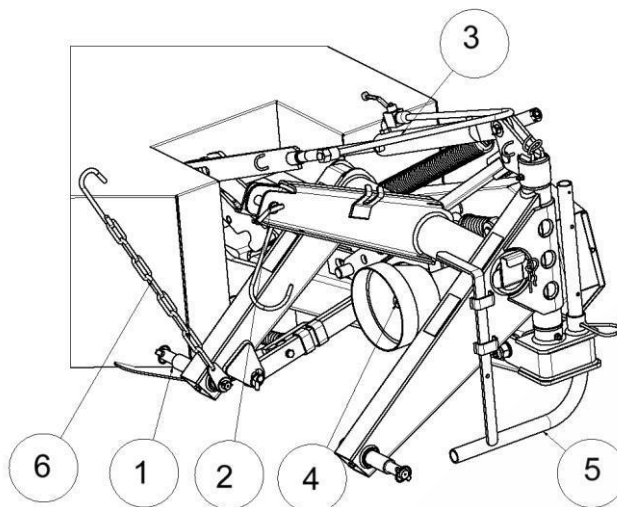


Fig. 5 Suspension of the machine on the tractor

1 – TPH pins of the machine, 2 – ear of the top link of machine suspension, 3 – hydraulic hose with quick coupling, 4 – power input connection (PIC), 5 – support, 6 – limiting chain;



NOTE
It is forbidden to aggregate the mower to a tractor not meeting the requirements outlined in the manual.

The mower is suspended on three-point hitch (TPH) of the tractor. The coupling is performed as follows:

- Level the lower tractor lift arms (usually by turning the right hanger of the lift arm).
- Drive the tractor close to the mower. By controlling the lift arms set the holes of the ball joints of the lower arms of the tractor TPH close to the pins (1) of the mower frame.
- Switch off the tractor engine, engage the parking brake, and remove the key from the ignition.



NOTE
Suspension of the mower on the tractor must be performed on a flat, level ground after securing the tractor from rolling and eventual starting by bystanders.

- Install the ball joints of the tractor TPH lift arms on the lower TPH connecting points on the mower (1) and secure with lynch pin.



NOTE

To secure the pins and pivots use only original pin in good condition. It is forbidden to use substitutes in the form of screws, rods, etc.

- Connect the upper TPH connection point (2) with the tractor top link and secure with lynch pin.
- Check whether the tensioners of the lower lift arms are properly tensioned.
- Adjust the top link so that the TPH frame was perpendicular to the ground.
- Attach the limit chain on the pin of the top link of the tractor TPH and adjust its length, providing distance of 30 cm between the pivots of the point hitch of the mower and ground.
- Lift the mower support (5) to its maximum height and secure with a cotter pin.



NOTE

It is forbidden to stand between the tractor and the machine when the tractor engine is running.

- Put the articulated telescopic shaft on the tractor PTO and PIC of the mower (4) and immobilize the shaft cover.




NOTE

Tractors to be used with the mower should be equipped with PTO cover.

- Connect the hydraulic hose of the mower cylinder (3) with tractor hydraulics plug.

NOTE

Before connecting the hydraulic hose to the tractor, check the cleanliness of quick connectors and plugs.

 When connecting the hydraulic system of the mower with the hydraulic system of the tractor, always make sure the oils that are found in the hydraulic system of the tractor and the machine may be mixed together. If it is not allowed, the oil in the hydraulic system of the machine must be replaced for the same as in the tractor, after flushing the system.

When connecting (and disconnecting) the mower hydraulic hose from the tractor plug, make sure that both the tractor and the machine hydraulic systems are without pressure.

10.1.2. Articulated telescopic shaft

The mower is powered by a tractor PTO via articulated telescopic shaft with the following parameters:

- **nominal torque transmitted to the machine 460Nm,**
- **nominal shaft revolutions 540rev/min,**
- **power transferred 35KM,**
- **number of projections 6,**
- **right backstop,**

Example of a shaft: type 4310-T401010ENC12R12 made by Comer.

NOTE

 Use only articulated telescopic shaft recommended by the Manufacturer.

Work is only permitted with articulated telescopic shaft having the CE mark, which is in good condition and with undamaged guards. Work with the shaft without or damaged guards is not allowed.

During installation of the articulated telescopic shaft one should remember that the outer tube of the shaft guards was on the tractor side. To install the shaft one must:

- push the shaft on the machine PIC and the tractor PTO and secure against slipping with use of latches,
- check that the latches firmly secure the ends,
- attach chains of the shaft guards, one to fixed element of the tractor and the other to the mower suspension frame.

Observe the frequency of lubrication of the shaft, which is given in the diagram in the shaft user manual.

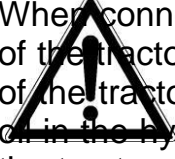
Read the shaft manual and follow the recommendations given in it.

If necessary, adjust the length of the PTO by shortening its length in accordance with the Manufacturer's instructions.


10.1.3. Connecting hydraulic hose

NOTE

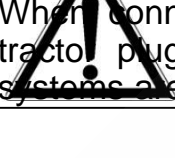
Before connecting the hydraulic hose to the tractor, check the cleanliness of quick connectors and plugs.

 When connecting the hydraulic system of the mower with the hydraulic system of the tractor, always make sure the oils that are found in the hydraulic system of the tractor and the machine may be mixed together. If it is not allowed, the oil in the hydraulic system of the machine must be replaced for the same as in the tractor, after flushing the system. During factory tests the mower hydraulic system is filled with oil Hipol 15

NOTE

 The ball valve placed on the actuator is also used to control the rate of the actuator work, for this purpose after connecting to the tractor one should adjust the valve. Too fast lowering or rising of the strip may lead to its destruction.

NOTE

 When connecting (and disconnecting) the mower hydraulic hose from the tractor plug, make sure that both the tractor and the machine hydraulic systems are without pressure.

10.2. Transport

The machine is designed to work and to be transported with the tractor with a power more than 30kW. In the case of machine aggregation with another tractor, make sure that the total width of the set in the transport position does not exceed 3m.

Transport of the machine suspended on the tractor can be carried out only in the transport position (Fig. 7), in which the cutter bar unit is raised up by a hydraulic cylinder and secure with transport lock. The mower is raised on the tractor TPH at a height assuring adequate clearance (min 25cm).

When traveling on public roads, a portable light installation, which can be ordered from the Manufacturer or other points of sale of agricultural machinery, must be installed. Portable light installation consists of two portable warning signboards marked with stripes of alternating white and red colour, each with the light device (front white position light and rear red light). In addition, the mower must be equipped with a warning triangular for low-speed vehicles mounted in the holder located at the back of the machine, on the left side of the mower suspension frame. The mower should be also equipped with 2 yellow reflex reflectors mounted as shown in Fig. 6.

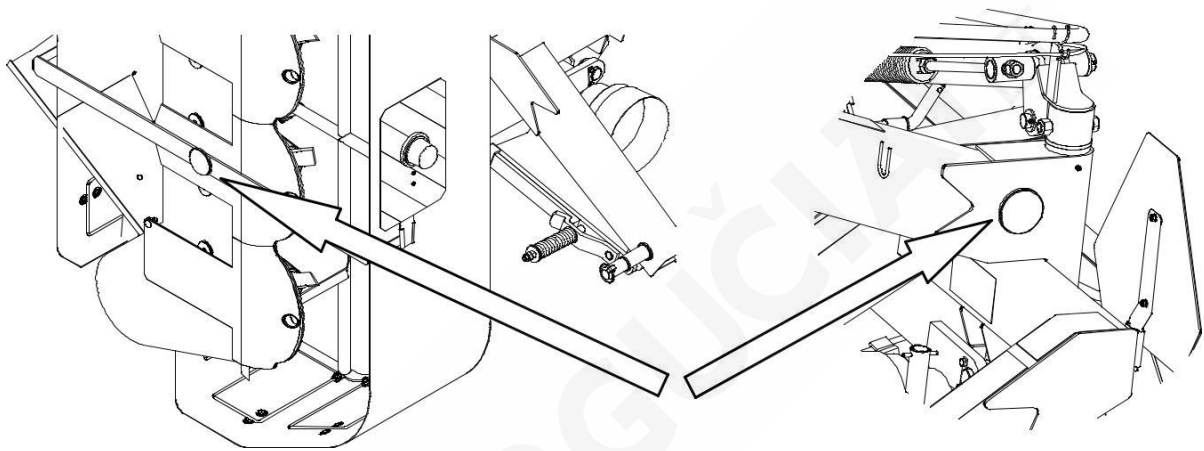


Fig. 6 Location of yellow reflex reflectors

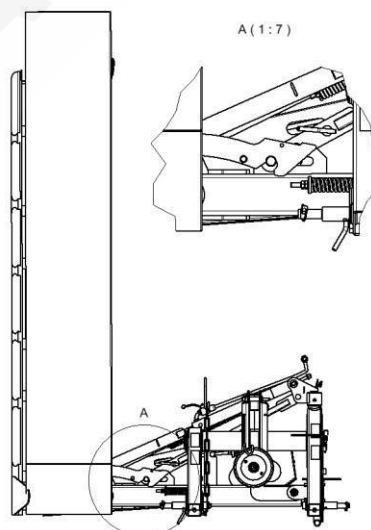


Fig. 7 Transport position


Portable warning signsboards must be in accordance with PN-R-41001 and PN-R-41002.

Mounting brackets for portable warning signsboards are made in accordance with PN-93/S-73103.

10.2.1. Procedures for changing the position of the mower

Setting the mower in the transport position after the suspension of the machine on the tractor.


NOTE

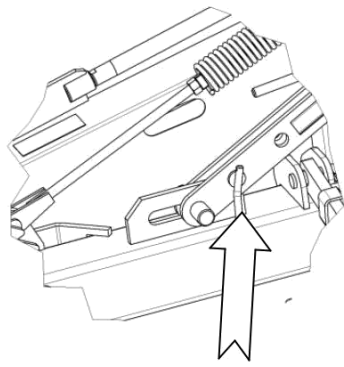
 Suspension of the mower on the tractor must be performed on a flat, level ground after securing the tractor from rolling and eventual starting by bystanders.

In order to set the machine in the transport position:

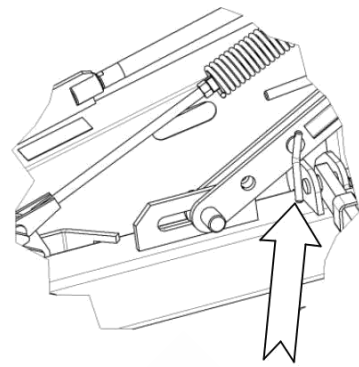
- remove the safety pin and put it in the holder (rest position and transport and working position Fig. 8),
- remove the articulated telescopic shaft from the tractor PTO and place it in the holder (Fig. 11),
- raise the cutter bar unit into a vertical position using a hydraulic cylinder, raise until the activation of the transport lock as shown in Fig. 7 and Fig. 9,
- slowly lower with the use of the cylinder until lock rests on the lock pin, close the cylinder ball valve.

NOTE

 In the transport position the cutter bar unit is in vertical position – forms an angle of 90° with the ground.



rest position
Locking pin

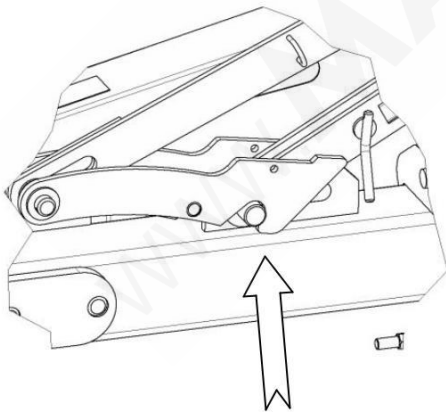


transport and working position Fig. 8

Setting the mower in working position from transport position

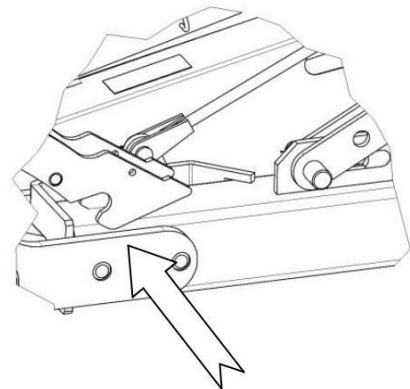
To set the mower in working position:

- remove the lights mounted on the bar of the portable light installation,
- open the cylinder ball valve,
- with the use of a cylinder raise cutter bar unit to the maximum position,
- release the transport lock with the use of a cable located in tractor cab,
- lower to working position until the discs touch the ground.



locked

Positions of transport lock



unlocked Fig. 9

NOTE

Do not operate the mower on uneven and stony fields because of the possibility of damaging the blades and other parts of the machine and because of safety reasons.

Setting the mower to rest position from transport position.

In order to set the mower in the rest position (Fig. 10):

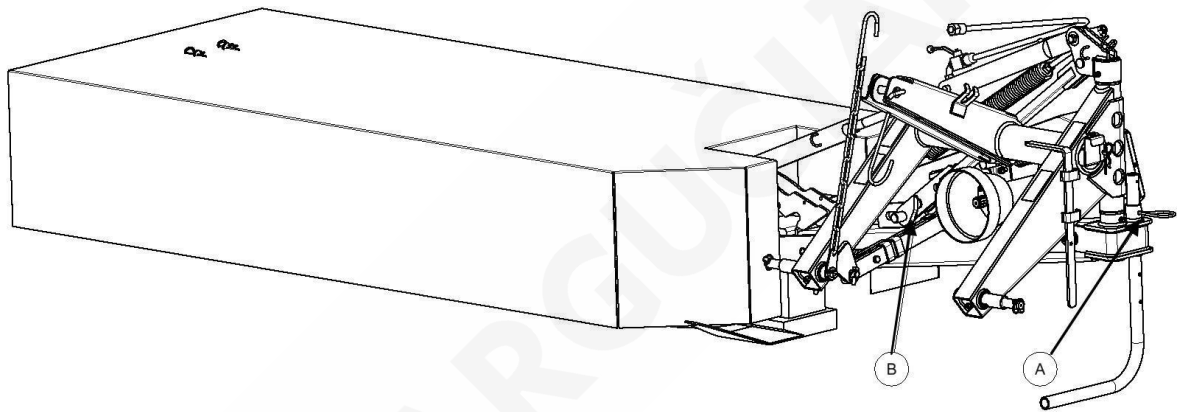


Fig. 10 Rest position

- remove the lights and the bar of the portable light installation located on cutter bar,
- leave the support and secure it with a cotter pin (A),
- with the use of a cylinder raise cutter bar unit to the maximum position, and release the transport lock with the use of a cable located in tractor cab,
- slowly lower the mower until all of its surface touches the ground

NOTE

All maintenance operations must be carried out on flat, level ground. When lowering the cutter bar, it is forbidden for bystanders to stay in the area of the mower.

- place safety pin (B),
- remove the limiting chain,
- lower tractor TPH until the mower rests on the support,
- remove the articulated telescopic shaft and place it in the holder as shown in (Fig. 11),

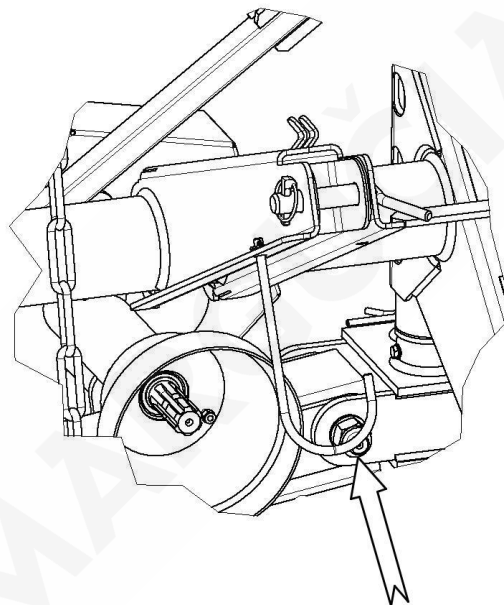


Fig. 11 Holder for articulated telescopic shaft

- disconnect the hydraulic hose from the tractor hydraulic system,
- disconnect the top link of mower TPH,
- pull the lynch pins out of the lower connecting points of the three-point hitch of the mower, then slide ball joints of the tractor lower lift arms.

NOTE


It is forbidden for bystanders to stay under the mower suspended on the tractor.

10.2.2. Travel on public roads

In order to adapt the mower for transport on public roads and ensure safety:


- ensure that the machine is in the transport position (Fig. 7),

NOTE

 Before any work associated with installation of lighting devices, one should make sure that the tractor engine is switched off and the parking brake is engaged. Take extra precautions when installing lighting devices.


- check all safety features, cotter pins, bolt,
- ensure that the condition of steering is met, if necessary add weight on the front axle of the tractor,
- mount triangle for low-speed vehicles into the support on the back of the mower on the left side of the suspension frame (Fig. 6),

NOTE

 It is not permissible to travel on public roads if the total width of the set exceeds 3m.

- Screw the lighting bracket (Fig. 6) to the cutter bar on the second disc using a retaining screw.

NOTE

 It is not permissible to travel on public roads if the cutter bar is not set at an angle of 90° to the ground.

10.3. Mowing

Starting the mower drive should not be executed immediately, but a few minutes after placing the cutting unit on the ground (even fill of the cutter bar with oil). The working height of the mower is 40 cm between the ground and the lower three-point linkage bolts.

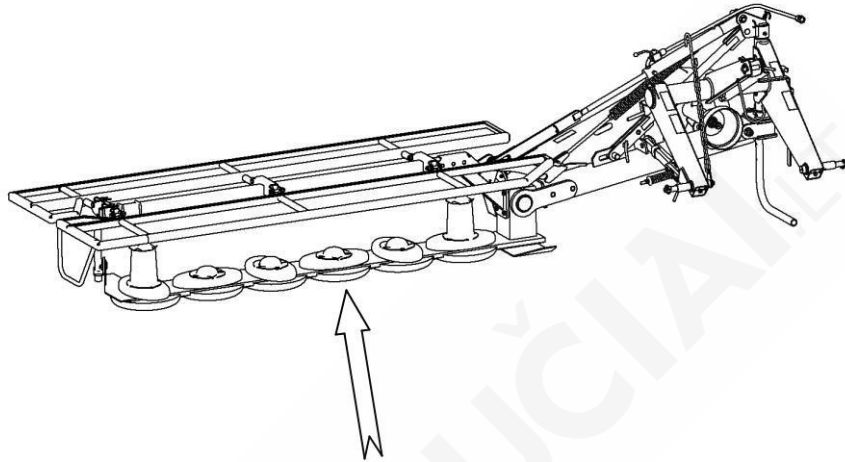


Fig. 12 Cutter bar

NOTE

Keep bystanders at a safe distance from the working mower of at least 50m.



NOTE

Before starting the mower the user must make sure that in the danger zone (also under the cover) there are no people (especially children) or animals.



Start-up of the machine should be slow. Mow possibly the entire working width at a speed set to match the size of the crop and ground conditions.

If the mower encounters an obstacle, the spring breaker (Fig. 13) allows the deviation of the mower cutter bar to the rear. The tractor must be then immediately stopped and the drive must be disabled. Breaker returns to its initial position after withdrawal of the tractor. Too strong tensioning of the springs may block the breaker, and hence damage the machine in the event of encountering an obstacle.

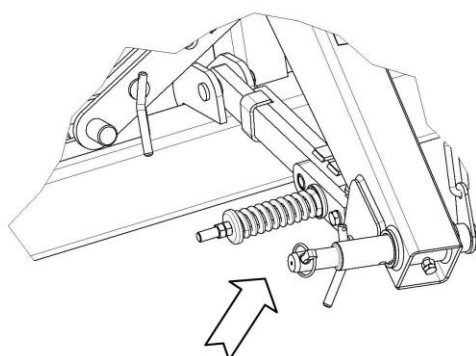


Fig. 13 Spring breaker

NOTE

The breaker does not prevent damage if an obstruction was encountered at the full speed.



NOTE

Each time after hitting an obstacle (e.g. stone, metal, etc.), Check the condition of the blades. If necessary, replace.



At turns, turn off the mower drive and to raise the cutting unit use only the mower hydraulic cylinder.

- **Adjustment of swath width (option)**

The swath width is adjusted with swath dividers. Dividers allow limiting the position of the swath between 70% of mower working width.

NOTE

Swath width adjustment must be carried out when the mower is in working position, after a complete stop of rotating elements.



11. Maintenance

NOTE

All maintenance works must be carried out when the mower is in rest position. It is forbidden for any bystanders to stand close to operated machine.



11.1. Maintenance – repair activities

11.1.1. Replacement of blades

To replace the blades:

- set the disc in position allowing easy access to the screw that secures the blade (Fig. 17 A),
- insert the key (delivered with the machine) between holder and plate and press down so that a gap is created that allows removal of the blade (Fig. 17 B),
- insert a new blade into the space between the disc and holder (or remove worn or damaged blade) (Fig. 17 C),
- remove the key , check that the blade rotates freely (Fig. 17 D) ,



A



B



C



D

Fig. 14 Replacement of blades

Worn or damaged blades (e.g. cracks, visible chipping, deflection) should always be replaced with the new ones. When replacing pay special attention so that the blade freely rotates on the pin. There are the right blades (A) and left (B). Right blades are used for the rotor rotating to the right, left blades on the rotor rotating to the left. The Manufacturer recommends the use of blades with dimensions 100x48x4- Ø21 and meeting the requirements of ISO 5718: 2002.

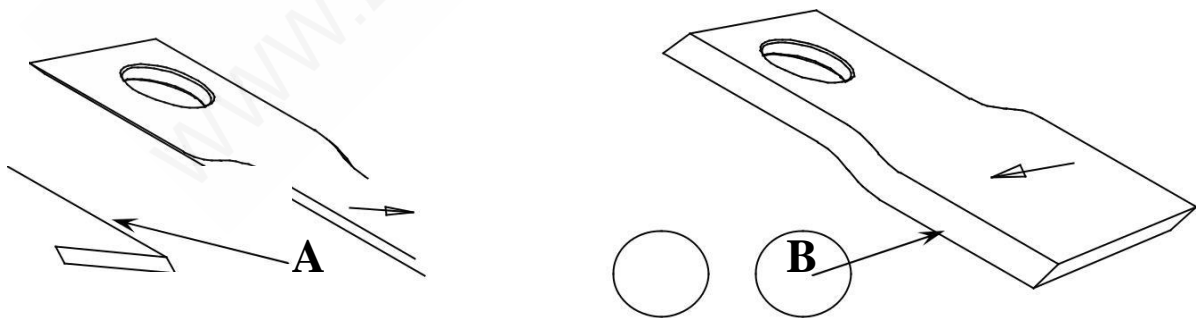


Fig. 15 Blades

A – left blade;

B – right blade;

11.1.2. Breaker adjustment

The mower is equipped with a spring breaker (Fig. 13) which is factory set and theoretically does not require adjustment. If necessary, the breaker should be adjusted with the use of the adjusting nut.

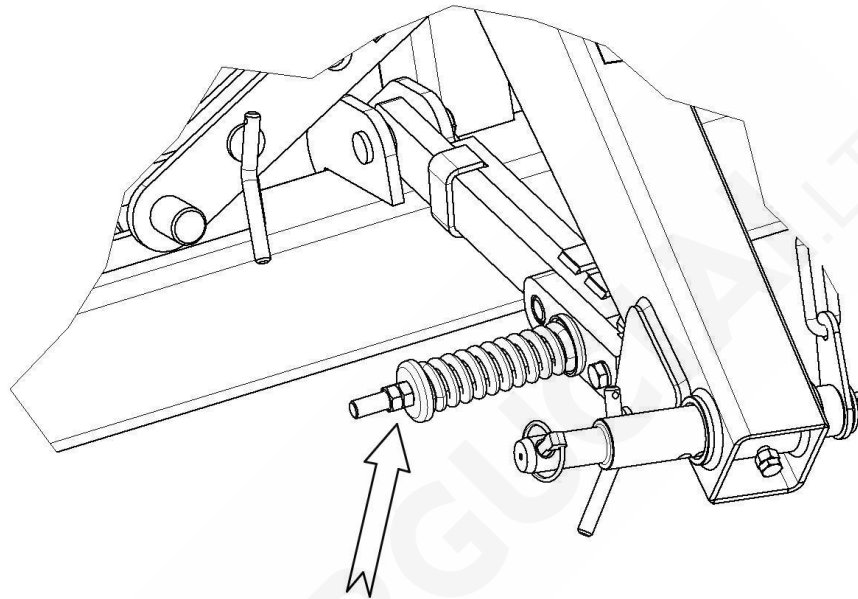


Fig. 16 Adjustment of the spring breaker



NOTE
Too strong tensioning of the springs may block the breaker, and hence damage the machine in the event of encountering an obstacle.

11.1.3. Tensioning v-belts

For proper transfer of power and achievement of the required service life of belts, an important factor is the correct belt tension. Belts must be tightened so that the slip did not occur during operation (slip less than 1%). Too little tension causes excessive belt slip in the pulley, too big tension reduces the belt's life and causes faster wear of bearings in the machine.

For longer periods of storage it is recommended to reduce belt tension. Change of V-belts tensions is made using the adjusting screw (Fig. 17)

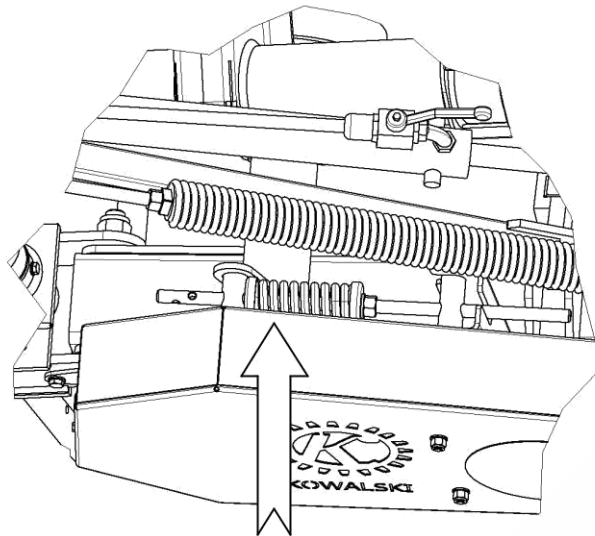


Fig. 17 Tensioner of v-belts

11.1.4. Torques of screw connections

It is important that threaded connections were tightened to the correct torque. Recommended torques are shown in the table below. The values given here should be used unless otherwise specified.

Screw/nut	Torque [Nm]
M8	25
M10	50
M12	90
M14	140
M16	210
M20	410

11.2. Everyday maintenance

NOTE

All maintenance works must be carried out when the mower is in rest position.



Before each operation check the oil level in the bevel gearbox and the cutter bar. Inspect the exterior visible parts and assemblies and their connections. All screw loose connections must be tightened and worn or damaged parts replaced with new ones - original spare parts.

Check the tension of v-belts. Perform lubrication according to the lubrication instructions of the mowers and articulated telescopic shaft.

After finishing the work, clean the working parts of the machine with water under pressure. Cleaning can be done only when the machine is aggregated with a tractor and is in the rest position. Make sure that the tractor is immobilized, the key is removed from the ignition and auxiliary brake is engaged.

Not removed mud, the rest of grass, etc. can cause premature wear of machine components.

11.3. Lubrication

For a long service life, it is very important to change oil in the cutting unit bar after the first twenty hours. Further oil changes should be made every 100ha or every year. Accurate data on the location and frequency of lubrication are shown in table below.

Table 3 Lubrication of disc mower Z -030

No.	Name of lubrication place	Lubrication frequency	Number of lubrication points or oil volume	Lubricant
1	Frame pivot	50 hours	1	Grease
2	Bevel gear	once a year or every 100ha	ok.0.7 litre	SAE 90EP
3	Cutting unit bar	once a year or every 100ha	Z-030/1 -2,1 litre Z-030/2 -2,7 litre Z-030/3 -3,2 litre	SAE 90EP

11.3.1. Bevel gear

Before you start to mow, check the oil level and if necessary fill it. Checking the oil level must be carried out in the working position of the mower. After removing the plug at the top of the gearbox (Fig. 18), top up the oil by controlling the level through the bottom plug (Fig. 18) on the side of the gear on the side of the machine frame, which is also the oil drain plug. Proper lubrication of the bevel gear is obtained when the oil level reaches the bottom of the opening. Draining the oil is done by unscrewing the side plug and setting the machine in transport position.

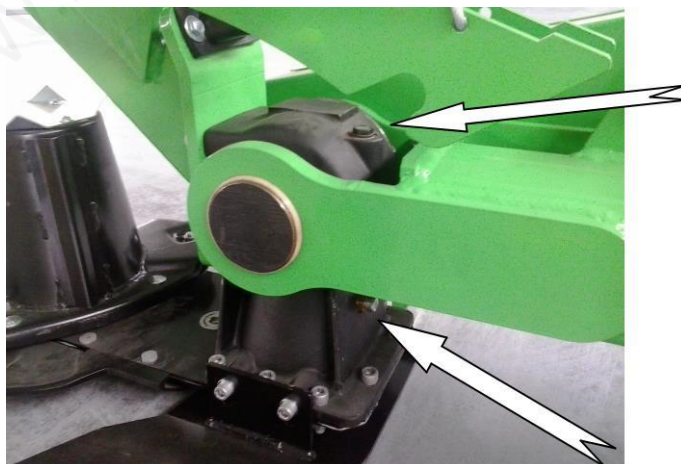


Fig. 18 Bevel gear

11.3.2. Cutting unit bar

The filling of bar with oil is done via the opening closed by a plug, which is located in the body of the cutter bar as shown in Fig. 19 A. The appropriate level of oil is obtained when the oil reaches 5-7 mm from the bottom of the strip when it is in a horizontal position. To drain the oil from the mower, lift the arms of the hitch, then tilt the mower to the transport position by a hydraulic cylinder so that oil can freely flow out through the drain plug (Fig. 19 B) to the vessel.

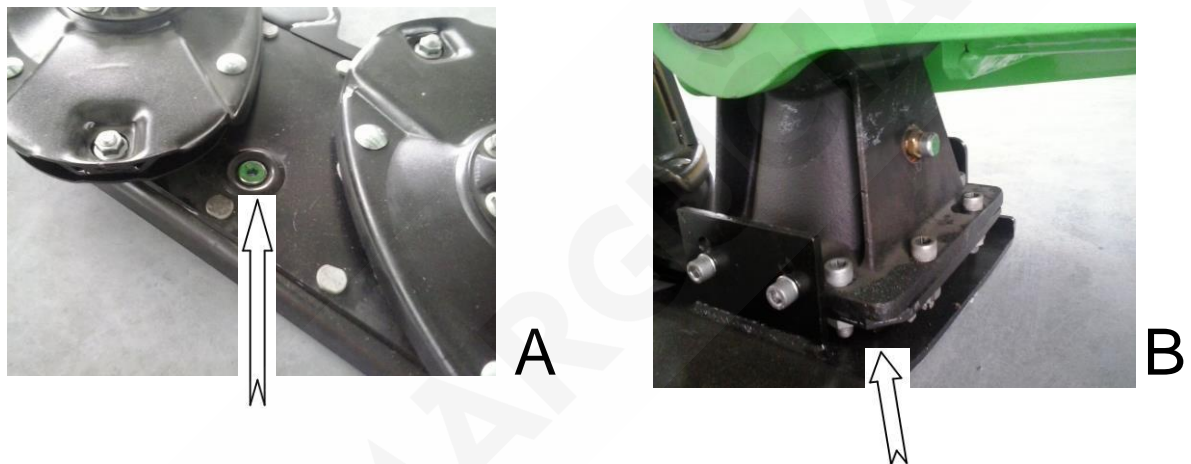


Fig. 19 Cutter bar (lubrication)

A – filler plug (level control);

B – oil drain plug;



NOTE
During work temperature of the bar and oil in the system can reach up to 90°C.
Take all precautions - possibility of burns.

11.4. Post-season maintenance and storing of the mower

After the end of the agro-technical season:

- thoroughly clean the mower from dirt,
- carry out a detailed technical review of individual parts and assemblies,
- worn or damaged parts must be replaced with new ones,
- loosen v-belts,
- carry out maintenance of the mower:
 - places with damaged top enamel coat complete by performing touch-up;
 - the working surfaces of parts where there is abrasion of paint (pins of the suspension frames, working and slide plates) coat with anticorrosive agents (temporary protection), for example: grease "Akorin N" or "Karpolast C"
- replace the oil in the gearbox and the cutter bar according to the lubrication table.

For the storing period of the mower should be greased and positioned on the supports under a roof. For the storing period the mower should be protected from the harmful effects of weather conditions and unauthorized persons. When storing the mower for a period longer than six months, lubrication and maintenance treatment must be carried no less frequently than every 6 months.

11.5. Transporting

The mower can be transported on vehicles that meet the requirements to carry this type of cargo within the framework of existing legislation.

When loading caution should be exercised to observe all applicable regulations. During loading and unloading the mower on the means transport, attention must be paid to the correct position of the transport lock and safety pin. To raise the mower use lifting straps attached at the points shown in the figure (Fig. 20).

Before transporting the machine, make sure that the machine is in rest position. It is unacceptable to transport the machine in a position other than the rest position.

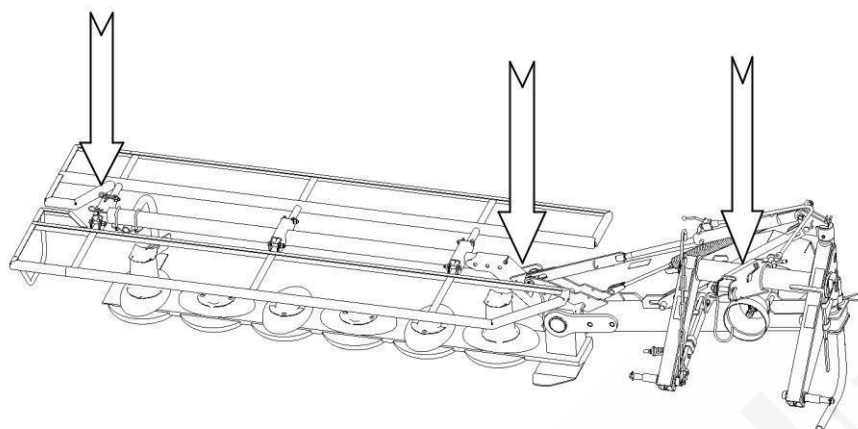


Fig. 20 Lifting points

Placing and securing the mower on the means of transport must be done carefully and safely. The assemblies dismantled during transport must be adequately and securely fastened and secured. During transport and unloading take extra precautions. For transport secure the mower from slipping from the platform.

12. Dismantling and utilisation

Mower user at the time of liquidation of the product, replacement of worn parts and operating fluids should take the following actions:

- parts suitable for further use should be regenerated or stored.
- metal waste should be sent to a scrap collection point.
- Plastics elements, rubber, oil etc. should be sent to recycling point.
- Used oil should be sent to companies collection of used oil.

or follow local regulations on the management of metallic, organic and mixed waste.

When removing parts, assemblies etc. one should use the parts catalogue.

Due to the weight of the mower components exceeding 20 kg, during disassembly use the lifting equipment.

NOTE

Lifting equipment used during disassembly, can be operated only a person with appropriate permissions and qualifications.



13. General rules of warranty proceeding

- Warranty covers defects and damage resulting from the Manufacturer's fault caused by defects in materials, improper treatment or improper installation.
- During the warranty period, the Manufacturer or seller undertakes the obligation to repair the equipment by covering the costs of parts, labour and travel.
- The warranty does not cover parts whose normal operational wear occurs within the warranty period.
- The warranty claim user reports directly to the dealer or warranty service contractor, entered by the dealer on the warranty card, no later than 14 days since the time of the malfunction occurrence.
- Warranty repair deemed reasonable and the resulting under the current warranty must be made immediately, but no later than within 14 days from the time of notification and physical access to the machine for repair, unless the user has given his written consent to the extension of this time period.
- Party entitled to warranty service is entitled to exchange the machine for a new one in case of 4 significant breakdown of the same component or part.

- Damage to the machine caused by the fault of the user during the warranty period can be removed at the user's expense only by the Manufacturer's representative or the persons authorized by him.
- User loses the warranty in the following cases:
 - damage to the machine due to the random incidents or a collision independent of the quality and technical performance of the machine,
 - make modifications and design changes without the written permission of the Manufacturer,
 - failure to implement a mandatory maintenance and service described in user manual,
 - lack of proper care and operation of the machine not in accordance with its intended purpose, and continuation of working with faulty components,
 - when the damaged machine was not presented for inspection before repair,
 - repair was done by unauthorized persons,
 - user prevents the repair or consideration of the complaint,
 - the use of the machine contrary to its intended purpose.

I have familiarised myself with the warranty terms

(Date i user's signature)

.....

13.1. Warranty card

PMR i CZ Kowalscy
ul. Działkowców 11
62-300 Września

WARRANTY CARD

Machine name : **DISC MOWER Z-030**

Serial number.....

The Manufacturer guarantees the proper operation and the quality of the purchased machine and undertakes to bear the costs of its repair, if during the warranty period manufacturing damage or defects will be revealed.

Submitted complaint will be considered only if proper operation in accordance with the instructions is determined.

Date of sale.....
(day, month in words, year – fills the seller at the time of sale)

This warranty is valid 12 months form the date of sale.

Warranty service on behalf of the Manufacturer performs:

Contractor name:
(fills the seller)

Contractor address.....
.....
.....
(fills the seller)

(signature and stamp of the seller)

NOTE : Buyer should carefully read the warranty card and refuse acceptance if it is filled incompletely or has any amendments.

13.2. Warranty repairs records

Beginning of repaid Date	End of repaid Date	Warranty protocol number	List of damaged parts	Extension or cancellation of the warranty Date, signature	Signature and stamp of Warranty contractor

www.MARGUCIAL.IT

13.3. Complaint coupon

Point of sale stamp

COMPLAINT COUPON

PMR i CZ Kowalscy – Września; ul. Działkowców 11,
/ send to the Manufacturer /

Machine name: **DISC MOWER Z-030**

Serial number.....

Purchased on:

.....

(point of sale - enter the day, month and year)

Complaint protocol number:

.....

Send the completed claim to the Manufacturer, with complaint protocol.

NOTE : When purchasing the machine, pay attention to carefully fill the complaint coupon by the seller.

.....

(point of sale stamp)

Additional explanation for the Manufacturer:

.....

.....

.....

Equipment in good working condition after repair I accepted on

.....

.....

.....

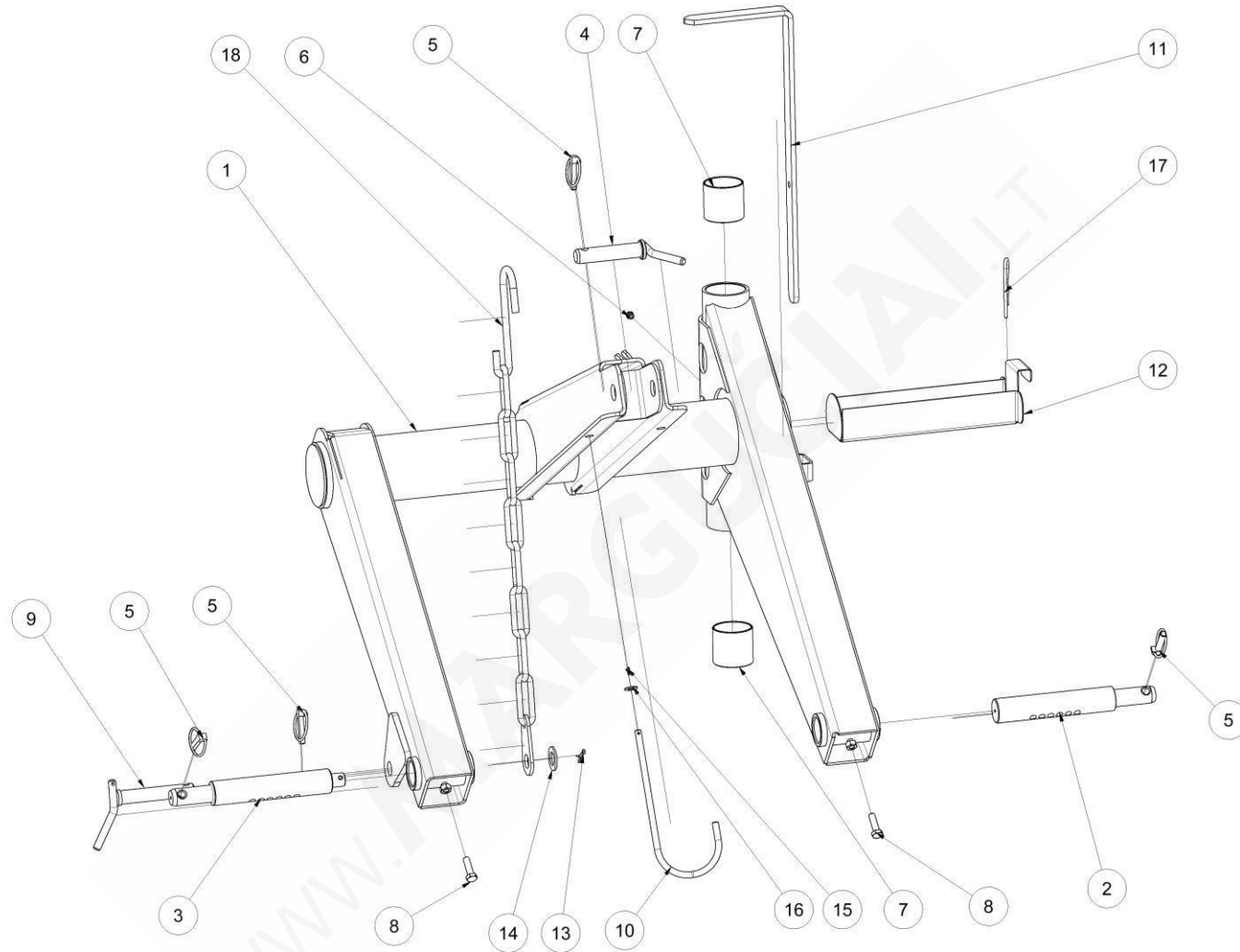
.....

(date, stamp, user's signature)
signature)

(date, stamp, warranty contractor'
signature)

Disc Mower

SUPPORTING FRAME



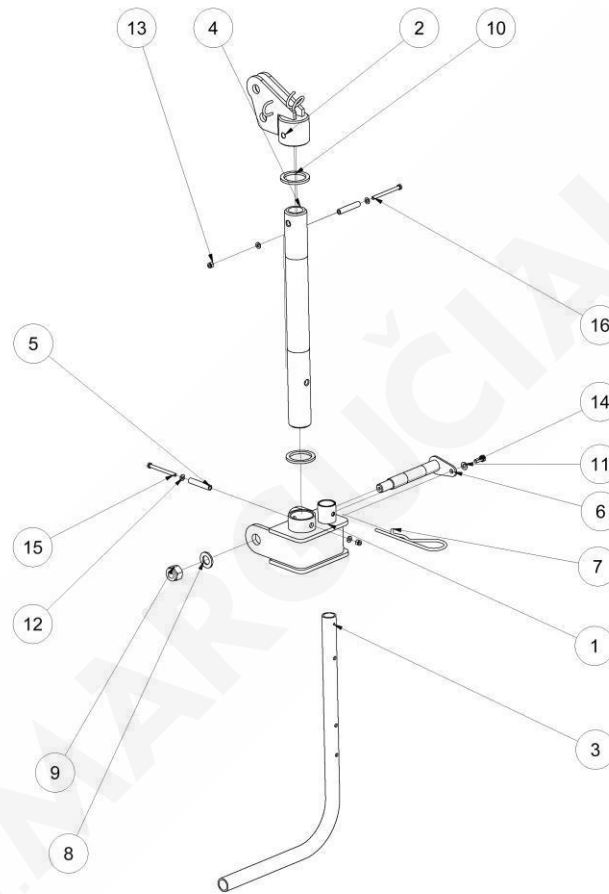
Disc Mower

SUPPORTING FRAME

Position number	Number	Name	Quantity
1	KD25.01.01.000	Supporting frame	1
2	KD25.01.00.001	Lower coupling pin	1
3	KD25.01.00.002	Lower coupling pin	1
4	KD25.01.00.010	Lower coupling pin	1
5	Pin 45-35-10	Pin	4
6	Type A StM10x1 PN-76/M-86003	Nipples – angle hydraulic couplings Type A	1
7	TUP2 60.60	Slide sleeve	2
8	Screw M10x35-8.8-A PN-85/M-82101	Hexagon screw - A	2
9	KD25.01.00.020	Breaker pin	1
10	KD25.01.00.005	Shaft hanger	1
11	KD25.01.00.006	Blade key	1
12	KD25.01.00.007	Drawer	1
13	PN-76/M-82001 - 4 x 32	Pins	1
14	PN-78/M-82005 - 23	Round washers	1
15	PN-76/M-82001 - 3,2 x 25	Pins	1
16	PN-78/M-82005 - 10,5	Round washers	1
17	Spring pin 5 mm	Pin	1
18	KD25.13.00.000	Chain set	1

Disc Mover

HEAD



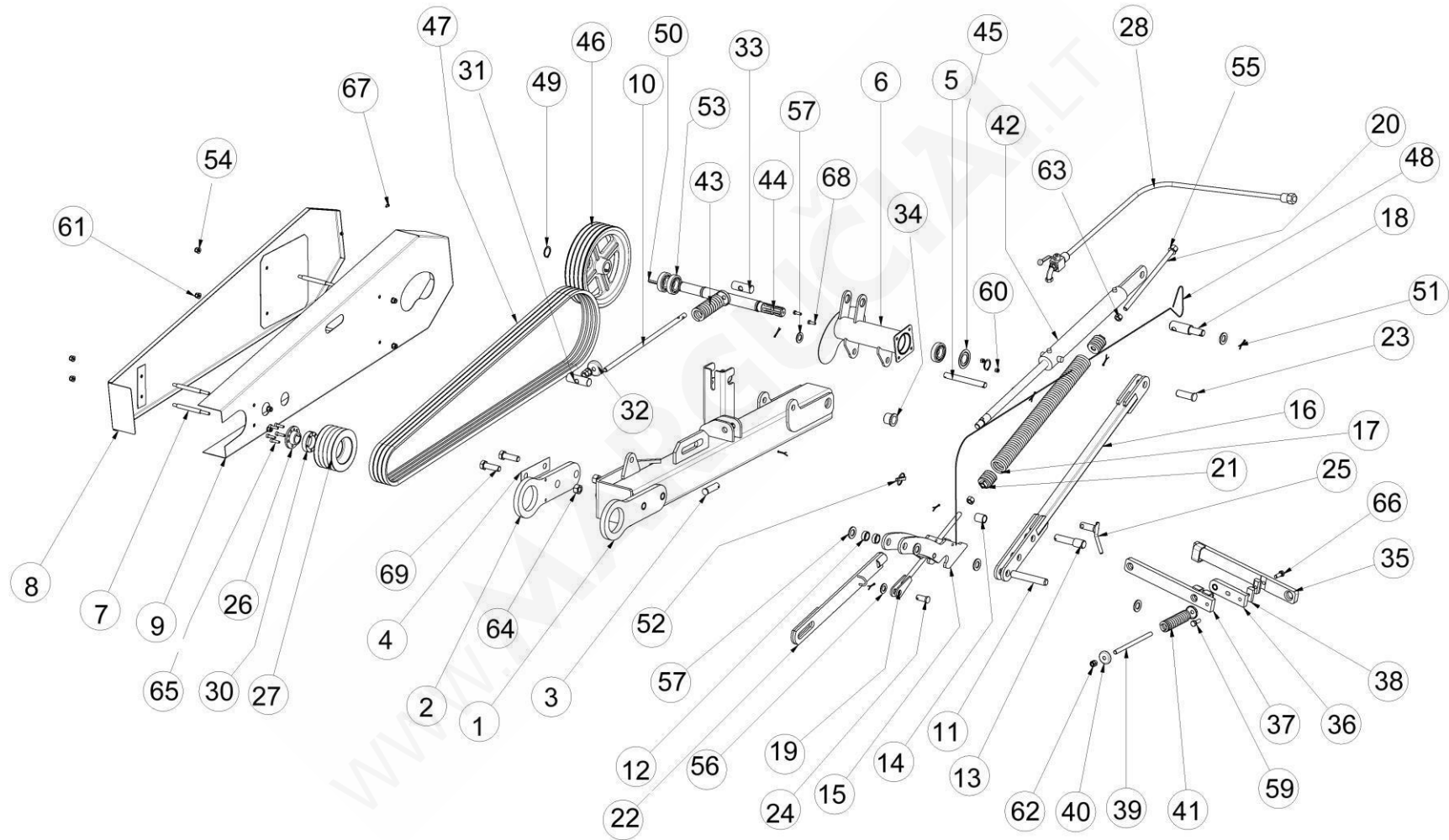
Disc Mover

HEAD

Position number	Number	Name	Quantity
1	KD25.02.01.000	Bottom head	1
2	KD25.02.02.000	Upper head	1
3	KD25.02.00.001	Foot	1
4	KD25.02.00.002	Head axis	1
5	KD25.02.00.003	Sleeve	2
6	KD25.02.00.100	Head pin	1
7	Spring pin	Pin	1
8	PN-78/M-82005 - 25	Round washers	1
9	PN-85/M-82175 - M24	Hexagon nuts with nylon inserts	1
10	KD25.02.00.004	Spacer	2
11	PN-78/M-82005 - 10,5	Round washers	1
12	PN-78/M-82005 - 8,4	Round washers	4
13	PN-85/M-82175 - M8	Hexagon nuts with nylon inserts	2
14	Screw M10x25-8.8-A PN-85/M-82105	Hexagon screw - A	1
15	Screw M8x95-8.8-A PN-85/M-82101	Hexagon screw - A	1
16	Screw M8x100-8.8-A PN-85/M-82101	Hexagon screw - A	1

Disc Mover

DRIVE AND CENTRAL BAR



Disc Mover

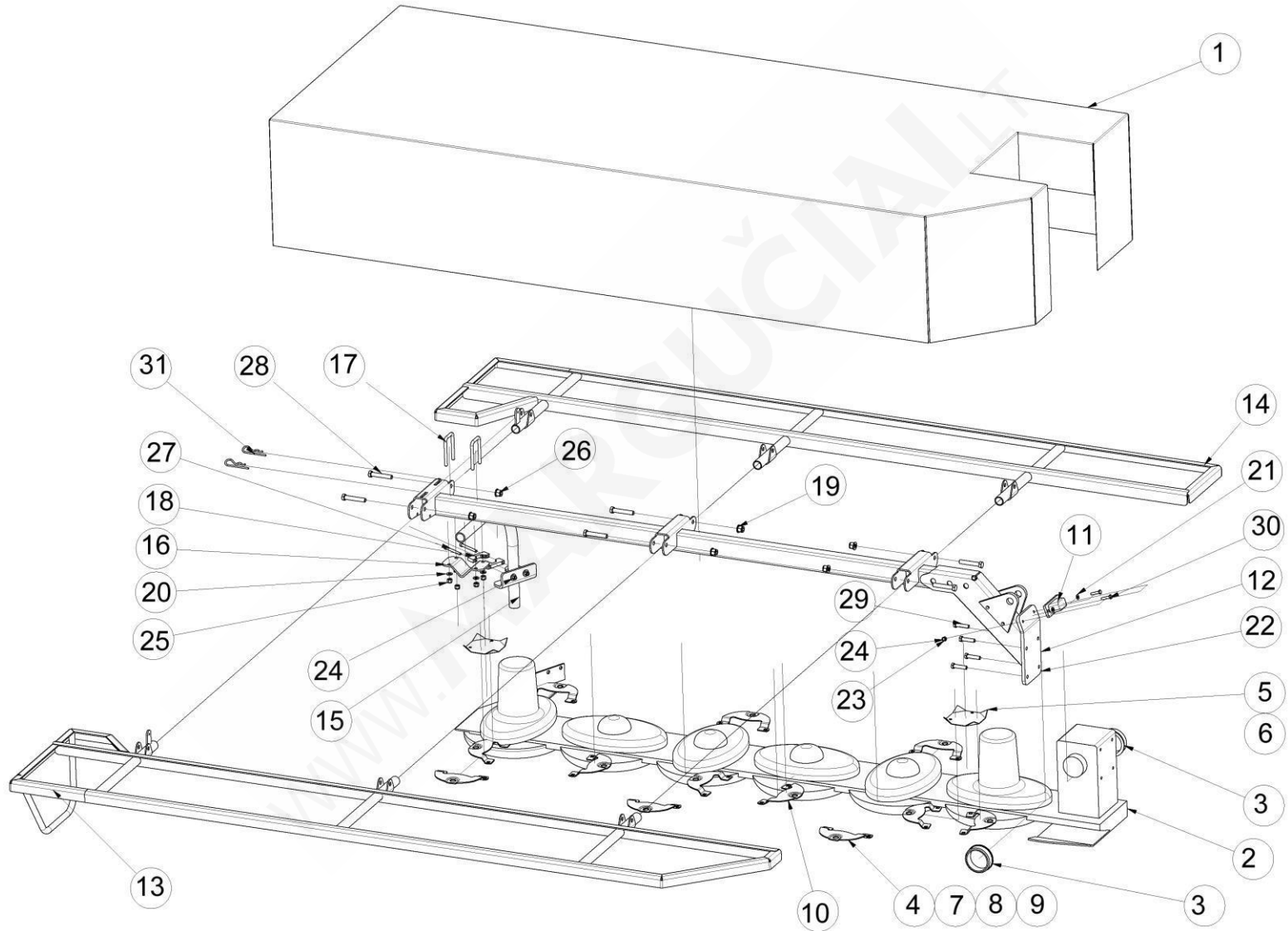
DRIVE AND CENTRAL BAR

Position number	Number	Name	Quantity
1	KD25.03.01.000	Central bar	1
2	KD25.03.01.003	Eyepiece	1
3	KD25.03.00.001	Breaker pin	1
4	KD25.03.00.002	Protection	1
5	KD25.04.00.001	Tensioner axis	1
6	KD25.04.01.000	Tensioner body	1
7	KD25.05.00.001	Pin	4
8	KD25.05.01.000	Front cover	1
9	KD25.05.02.000	Rear cover	1
10	KD25.08.00.001	Tensioner screw	1
11	KD25.09.00.006	Fastener upper pin	1
12	KD25.09.00.007	Distance sleeve	2
13	KD25.09.00.008	Fastener pin	1
14	KD25.09.00.009	Fastener sleeve	1
15	KD25.09.05.000	Transport fastener	1
16	KD25.09.01.100	Lift arm	1
17	KD25.09.00.001	Spring	1
18	KD25.09.00.002	Actuator pin	1
19	KD25.09.02.000	Spring bottom lift arm	1
20	KD25.09.03.000	Spring upper lift arm	1
21	KD25.09.00.003	Spring nut	2
22	KD25.09.04.000	Actuator lift arm	1
23	KD25.09.00.004	Lift arm upper pin	1
24	KD25.09.00.005	Lift arm bottom pin	1
25	KD25.09.00.010	Spring lock pin	1
26	KD25.10.00.003	Collet 1	1
27	KD25.10.00.002	Pulley	1
28	KD25.14.00.000	Mover hydraulic system	1
30	5017.06.00.02	Collet 2	1
31	K21.00.00.33	Tensioner pin 2	1
32	K21.00.00.41	Spring cover	2
33	K21.05.03.00.04	Tensioner pin 1	1
34	K21.00.00.25	Slide sleeve	2

35	K21.03.02.00	Breaker strip 2	1
36	K21.03.01.01	Breaker strip 1	1
37	K21.03.03.00	Breaker strip 3	1
38	K21.03.00.01	Cube	2
39	K21.03.00.02	Pin	1
40	K21.03.00.03	Spring plate	2
41	K21.03.00.05	Breaker spring	1
42	K21.00.14.00	Actuator stroke 380	1
43	K21.04.00.021	Spring	1
44	K21.05.03.00.01	Drive shaft	1
45	K21.05.03.00.03	Washer	1
46	K21.00.00.05	Pulley 307	1
47	Belt SPB 3000	V-belt	4
48	Steel cable	Cable	1
49	PN-81/M-85111 - Z 35	Spring retaining rings	2
50	PN-91/M-85002 - A 8 x 5 x 56	Thin prisms	1
51	PN-76/M-82001 - 4 x 32	Pin	7
52	Pin 45-35-10	Pin	1
53	PN-85/M-86100 - 6207 - 35 x 72 x 17	Ball roller bearings 6207	3
54	PN-78/M-82005 - 10,5	Round washers	8
55	PN-78/M-82005 - 17	Round washers	2
56	PN-78/M-82005 - 21	Round washers	2
57	PN-78/M-82005 - 23	Round washers	2
58	PN-78/M-82005 - 25	Round washers	6
59	PN-77/M-82008 - 12,2	Spring washers	2
60	PN-85/M-82175 - M8	Hexagon nuts with nylon inserts	2
61	PN-85/M-82175 - M10	Hexagon nuts with nylon inserts	8
62	DIN 934 - M12	Nut	2
63	PN-86/M-82144 - M16	Nut	4
64	PN-86/M-82144 - M20	Nut	2
65	ISO 4762 - M8 x 30	Round head screw with hexagon socket	5
66	DIN 933 - M12 x 35	Hexagon screw	2
67	Screw M6x10-8.8-A PN-85/M-82105	Hexagon screw - A	1
68	Screw M8x25-8.8-A PN-85/M-82105	Hexagon screw - A	2
69	Screw M20x65-8.8-A PN-85/M-82105	Hexagon screw - A	2

Disc Mover

COVER FRAME AND CUTTING STRIP



Disc Mover

COVER FRAME AND CUTTING STRIP

Position number	Number	Name	Quantity
1	KD21.12.00.000 KD25.12.00.000 KD28.12.00.000	Tarpaulin 2,1 Tarpaulin 2,5 Tarpaulin 2,8	1
2	KD21.12.00.000 KD25.12.00.000 KD28.12.00.000	Cutting strip 2,1 Cutting strip 2,5 Cutting strip 2,8	1
3	KD25.10.00.001	Slide sleeve	2
4	KD25.10.00.004	Blade pressure	10 - 12 - 14
5	KD25.10.00.006	Cover	2
6	Screw M8x20-8.8-A ISO 7380	Round head screw with hexagon socket	6
7	Screw M10x20-8.8-A PN-87/M-82406	Saucer-head screw	20 – 24 - 28
8	PN-85/M-82175 – M10	Hexagon nuts with nylon inserts	20 – 24 - 28
9	100x48x4 -21	Left blades	5 -6 - 7
10	100x48x4 -21	Right blades	5 -6 - 7
11	Bumper	Rubber bumper	1
12	KD21.07.01.000 KD25.07.01.000 KD28.07.01.000	Cover frame	1
13	KD21.07.02.000 KD25.07.02.000 KD28.07.02.000	Front frame	1
14	KD21.07.03.000 KD25.07.03.000 KD28.07.03.000	Rear frame	1
15	KD25.07.04.001	Arm	1
16	KD25.07.04.002	Handle	2
17	KD25.07.04.003	Shackle 1	1
18	KD25.07.04.007	Clamp	2

19	PN-78/M-82005 - 15	Round washers,	6
20	PN-78/M-82005 - 10,5	Round washers,	4
21	PN-78/M-82005 - 13	Round washers,	6
22	PN-78/M-82005 - 8,4	Round washers,	2
23	PN-77/M-82008 - 12,2	Spring washers	4
24	PN-85/M-82175 - M8	Hexagon nuts with nylon inserts	4
25	PN-85/M-82175 - M10	Hexagon nuts with nylon inserts	4
26	PN-85/M-82175 - M14	Hexagon nuts with nylon inserts	6
27	Screw M8x80-8.8-A PN-87/M-82302	Hexagon screw - A	2
28	Screw M14x80-8.8-A PN-85/M-82101	Hexagon screw - A	6
29	Screw M12x50-8.8-A PN-85/M-82105	Hexagon screw - A	4
30	Screw M8x35-8.8-A PN-85/M-82105	Hexagon screw - A	2
31	Spring pin 5 mm	Pin	2

WWW.MARGUCIAI.LT

INFO@MARGUCIAI.LT

Nauja technika: +370 685 54521

Naudota technika iš Danijos: +370 656 24532

Lenkiškos technikos atsarginės dalys: +370 615 68799

Skandinaviškos technikos atsarginės dalys: +370 682 51607

Farmtrac atsarginės dalys: +370 626 19138

Chemikalų purkštuvai, patikra: +370 616 55819

Fermų įranga: +370 626 19138

Servisas: +370 682 51607

Marketingas: +370 690 70226

Buhalterė: +370 616 55738

Direktorė: +370 699 73969

MARGUČIŲ G. 3, MARGUČIŲ K., MIEŽIŠKIŲ SEN., PANEVĖŽIO RAJ., LT-38100



Vieninteliai atstovai Lietuvoje

FARMTRAC
TRACTORS EUROPE



AKPIL®
FRANCE



MCMs
Warka Sp. z o.o.



POM
BRODNICA

SA
AWEX

