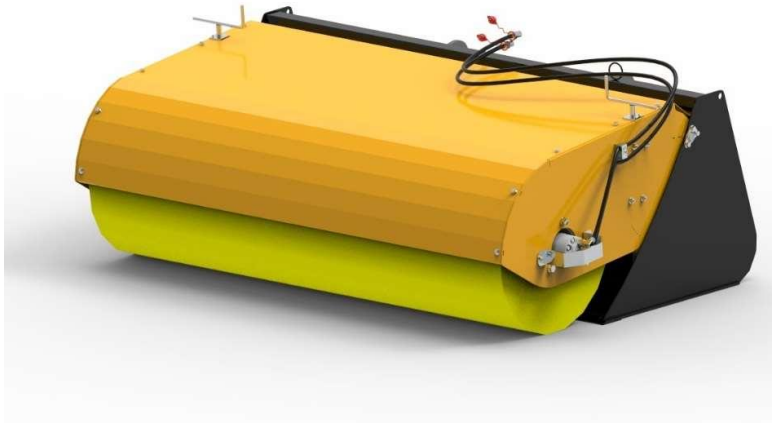




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**ORIGINAL USER MANUAL**  
**SPARE PARTS CATALOGUE**  
**WARANTY**



**BUCKET SWEEPER:**  
**TWISTER 1800**  
**TWISTER 2000**

Borzytuchoń 2023 – ISSUE 03

TRANSLATION OF THE ORIGINAL MANUAL





#### ATTENTION!

Before using the machine, please thoroughly read this User Manual and observe the safety instructions contained herein.

#### **The User Manual constitutes an inherent part of the machine!**

Keep the User Manual in a safe place, where it should be accessible to the machine operator during an entire lifespan of the machine.

In the event of its loss or damage, you must acquire a new copy from the machine dealer or manufacturer.

If you sell or hand over the machine to another user, please attach the User Manual together with the machine's operating instructions and its Declaration of Conformity.

The manufacturer reserves the copyrights to the User Manual.

Copying, processing of the User Manual and its parts without the manufacturer's permission is strictly prohibited.



TALEX guarantees machine functionality when used following the technical and operational guidelines described in the USER MANUAL.

Defects revealed during the warranty period will be repaired by the Warranty Service.

The repair deadline is specified in the WARRANTY BOOK.

The warranty does not cover the machine parts and elements that are subject to wear under normal operating conditions, regardless the warranty period e.g.: bearings, blades/flails, protective skirts/stone guards, hydraulic hoses etc.

Warranty claims cover mechanical damage not caused by the user's fault, parts factory defects etc.

In case when the damage was caused by:

- Mechanical damage caused by user's fault or road accident,
- improper exploitation, adjustment and maintenance, use of the machine contrary to its intended use,
- using a damaged machine,
- repairs carried out by unauthorized persons, incorrect performance of repairs,
- unauthorized changes to the machine construction,

The user may lose the warranty.

The user is obliged to immediately report all noticed defects in paint coatings or traces of corrosion, and have the defects repaired, regardless of whether the damage is covered by the warranty or not. Detailed terms of the warranty are given in the WARRANTY BOOK attached to the newly purchased machine.



**WARNING !**

Demand the seller to carefully fill out the WARRANTY BOOK. The lack of, for example, the date of sale or the stamp of the dealership exposes the user to risk of warranty complaints rejection.



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## 1. Introduction

Before the first use of the mower, you must thoroughly read and understand this User Manual, and follow all the instructions contained herein.



**ATTENTION!**  
**Before first use, read the User Manual**

This User Manual describes hazards, which may occur when you do not follow the safety precautions when operating and maintaining the mower. The User Manual lists the safety precautions which must be observed in order to minimize and to avoid the hazards.

The User Manual also contains the rules for proper use of the mower and explains the required maintenance procedures.

If you do not understand any information contained herein, please contact directly the manufacturer.

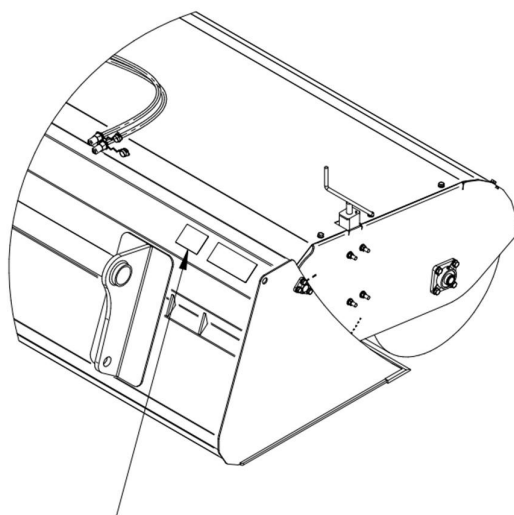


**ATTENTION!**  
This warning symbol alerts about a hazard.  
The warning symbol indicates an important hazard information provided in the User Manual. Please read the information carefully, follow the instructions and be exceptionally careful.



## 2. Sweeper identification

Every rotary sweeper it's provided with nameplate, which contains most important identification data. Nameplate is located in a readily accessible place. Data included on nameplate confirm sweeper compatibility with current health and safety regulations.



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Nazwa/Name:	<b>ŁYŻKO-ZAMIATARKA TWISTER</b>		
Typ/Type:	<b>180</b>	Nr seryjny/Serial No.:	<b>0001</b>
Masa/Weight:	<b>489 KG</b>	Rok produkcji/ Year of production:	<b>2023</b>

Drawing 1. Name plate

### Name plate contains:

- Full manufacturer name
- Serial number
- Machines symbol
- CE marking means, that sweeper is compatible with Directive 2006/42/WE
- weight
- quality control mark
- production date

### 3. Safety rules at work

Sweeper can only be operated by adults who are familiar with its operation and the contents of this manual and have the appropriate qualifications. Sweeper should be operated in compliance with all the precautions, in particular:

#### 3.1. Operator safety

- Obey this manual instructions as well as the general principles of health and safety.
- Obey the machine's warning symbols.
- Sweeper can be operated by a person with license to driving the vehicle to which it is mounted, according to the manufacturer's recommendations.
- Please note that there are many places on the machine that could cause injury (sharp edges, projecting parts, etc.). When working, keep extra precautions when moving around these critical places and absolutely use personal protective measures such as:
  - protective clothing,
    - protective gloves,
    - protective footwear,
    - protective glasses,
- Before working with the sweeper, please read the manual instruction, safety rules and recommendations for maintenance and adjustment.
- Sweeper must be equipped with all safety shields (specified by the manufacturer) before accessing to moving parts. Shields must be complete and fully functional.
- There is the risk of residual danger and therefore the safety rules and common sense should be the basic principle of the use of the machine.
- It is forbidden to operate the machine by persons under the influence of alcohol or other drugs.
- Never allow the vehicle operating the sweeper be driven by a person other than its operator, and in any case, do not let that while working, the others remained in the vehicle and near the machine.
- It is forbidden to use the machine contrary to its purpose. Using the machine for other purposes than is specified by the manufacturer is contrary to machine's purpose and may void your warranty. Manufacturer assumes no responsibility for any consequences arising from the improper use of the machine.
- If the information contained in this manual is unclear, please contact with your dealer or manufacturer.



Disobeying the rules may cause danger for the operator and bystanders and can cause damage to the machine. The user is responsible for any damage resulting from failure to comply with these rules.

### **3.2. Connection and disconnection of sweeper**

- It is forbidden to connect the device to the carrier vehicle, if used hydraulic oils are of different types
- It is forbidden to connect the sweeper when the fastening of the suspension system is not compatible with the vehicle's fastening
- The carrier to which the machine will be connected to must be in technically working condition and comply with the manufacturer's conditions
- It is forbidden to reside, operate between the vehicle and machine. Assistants on sweeper's aggregating must be outside the danger zone and be always visible to the vehicle's operator
- While connecting and disconnecting the machine take precautions
- Sweeper disconnected from the vehicle must be based on all three supporting wheels, and stored on a flat, balanced, paved surface in a place inaccessible to bystanders and animals
- To connect the machine, use only original bolts
- When adjusting, do not put your fingers and limbs between the structural elements of the machine.
- Protective covers (three-point hydraulic system) of sweeper's bolts should be made only by means of conventional protection in the form of pins. Working with other protections is prohibited.

### **3.3. Hydraulic system**

- The hydraulic system during operation is under high pressure.
- Check the condition of connectors and hydraulic hoses regularly, any leaks or damages are unacceptable.
- In case of emergency, immediately discontinue using the machine until the fault is rectified
- Use oil recommended by the manufacturer, it is forbidden to use sweeper when in the vehicle is different type of hydraulic oil than in the machine
- In case of injury by a stream of oil, you should immediately go to the doctor. Hydraulic oil can cause infection. If the oil gets into your eyes, rinse thoroughly with water and contact your doctor. In case of oil's contact with skin, wash the place of dirt with soap and water. Do not use solvents (gasoline, kerosene)
- Used oil must be stored in sealed containers and periodically provided to the points running its purchase (disposal).
- Rubber hydraulic hoses must be replaced every 3 years regardless of the technical condition
- Repair and replacement of the elements of the hydraulic system should only be done by qualified person





### 3.4. The sweeper's transport

- When driving the vehicle with a mounted, not working sweeper, make sure about the safe transport height ~ 0.3 m.
- Take special care when traveling on public roads, and adapt to the applicable provisions of the highway code.
- Adjust transport speed according to the condition of the road surface, it should not exceed 20km / h.
- Carrying persons or objects on the machine is forbidden.
- Do not leave the vehicle with the sweeper on the slopes or other inclines without securing the vehicle against self-rolling. Put a chock under the vehicle's wheels of the vehicle chocks and apply the parking brake. Leave the machine during stopover.
- Inspect the operating condition for safety, in particular, the elements of the suspension system and hydraulic system
- Reckless driving and excessive speed may cause an accident

### 3.5 Maintenance

- Upon sweeper's receipt and transport check that the machine has not been damaged by checking its technical condition.
- It is forbidden for persons to stay under the raised sweeper, you could be crushed by structural elements.
- Do not use unbuttoned, hanging working clothes during operation, assembly, disassembly, adjustment. Keep them away from the structural elements that can caught them.
- Due to the natural use you should monitor the condition of: bearings, bolted joints, hydraulic system components
- Before working on the hydraulic system, the residual pressure oil must be compensated for
- Any modifications to sweeper relieve "Talex" manufacturer from responsibility for damages or personal injury
- It is forbidden to do any work (maintenance, repair) under the raised and unsecured machine
- Obey the general safety and health at work
- Repair, maintenance and cleaning works should be done only when the ignition key is taken out, the vehicle's parking brake is applied and protected against access by third parties
- When replacing parts, use only original manufacturer's spare parts, Talex is not responsible for problems arising from the use of non-original parts
- In case of work requiring raising of sweeper use for this purpose approved mechanical or hydraulic jacks. After lifting the machine stable and strong supports should be additionally used. It is forbidden to work only under the carrier vehicle's suspension system and use supports from fragile elements (blocks, bricks, concrete blocks, etc.)
- After lubricating remove the excess of grease

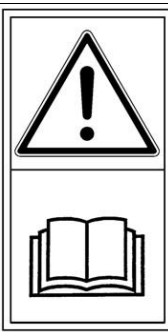











### 3.6 The description of residual risk

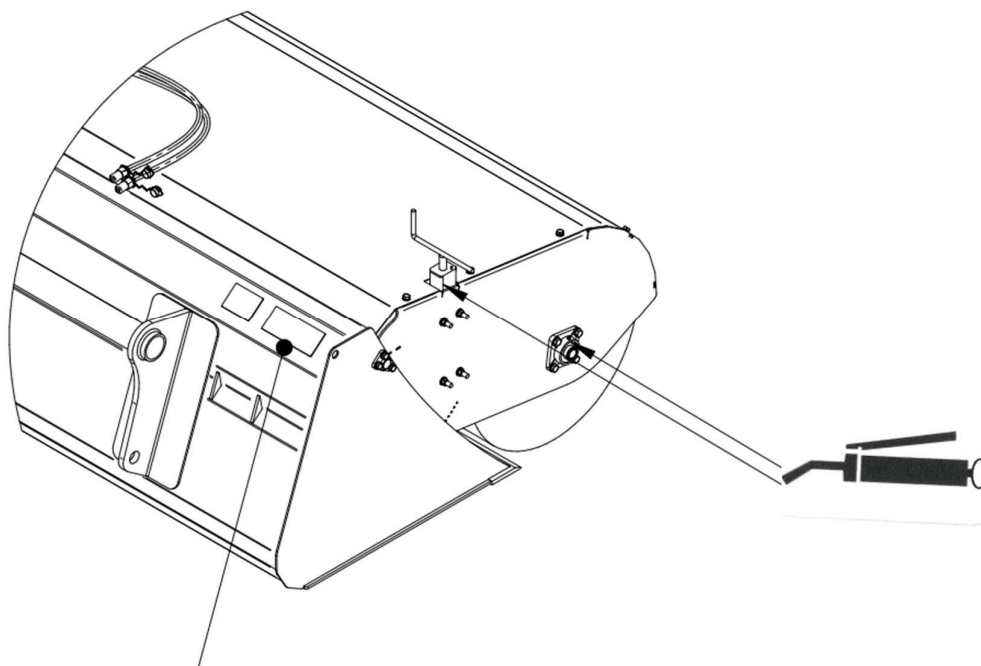
The company Talex put every effort to eliminate the risk of an accident. There is, however, some residual risk that could lead to an accident, and is connected mainly with the actions described below:

No.	Risk	Risk source (reason)	Measures to protect against risk
1	Overloading the musculoskeletal system (physical overloading)	Working in a standing position, stooped-forced, walking, moving	Getting acquainted with the manual, workplace training taking into account lifting standards while performing manual handling, proper techniques for lifting and lifting weights, using the help of another person, devices to facilitate movement such as a jack, winch
2	Fall on the same level (stumble, slip, etc.)	Uneven ground, mess – lying and standing objects, wires lying on the roads, slippery surfaces	Proper safety shoes, even ground, staying focused, keeping clean, reading the manual
3	Hitting fixed and sticking out parts of the machine	The machine and its surrounding	Proper setting of the machine, safe amount of space to move, proper organisation of work, staying focused, reading the manual
4	Being hit by moving objects	Objects, rocks, etc. thrown by the machine	Staying focused, marking the danger zone, prohibition of movement near the machine running, use of personal protective equipment – safety helmet, safety glasses, reading the manual
5	Dangerous sharp edges	Sticking out structural elements, using manual tools	Personal protective equipment – safety gloves, zipped overalls, exercising particular care
6	Hydraulic system	High pressure in the hydraulic system, bad condition of the hydraulic connectors and rubber hoses, leaks	Prohibition of movement near the machine running and its regulation, exercising particular care, use of protective equipment, use of protective glasses, regular checks of hydraulic system, reading the manual
7	The weight of the hung standing machine	Improper installation, improper setting of the machine, improper operation, leaving the machine hung on the carrier vehicle	Exercising particular care, use of personal protective equipment, safe installation of the machine, using help of other people, using jacks, cranes, reading the manual
8	Microclimate – changing weather conditions	Work done in various weather conditions	Proper overalls, drinks, sun creams, proper rest, reading the manual
9	Noise	Too high RPM of the machine, damaged, loose, vibrating parts	Working with fully-functional machine, ongoing inspections of the machine, setting proper RPM, reading the manual

### 3.7 Information and warning labels

All labels should always be clear and clean, visible to the user as well as for those who may find themselves near the machine. In the absence of any sign of safety or damage, it should be replaced with a new one. All elements that have safety labels exchanged during repairs to the new should be provided with these labels. Safety signs can be purchased from the manufacturer or retailer.

 <p>1.1 - Before starting work, read the instruction manual</p>	 <p>1.2 - Turn off the engine and remove the key before starting maintenance or repair</p>	 <p>1.3 - The liquid under high pressure. Keep a safe distance from the working machine.</p>
 <p>1.4 Risk of injury due to ejected items. Keep a safe distance from the working machine.</p>	 <p>1.5 - Do not approach or touch the rotating brushes</p>	 <p>1.6- Use protection clothing.</p>
 <p>1.7 - Use protection gloves.</p>	 <p>1.8 - Use protection helmet.</p>	 <p>1.9 - Use ear protection.</p>
 <p>1.20 - Use eye protection</p>	 <p>1.21 - Lubrication point- use solid grease.</p>	 <p>1.22 - Warning: pressure occurring in the hydraulic system</p>



Drawing 1 Informational labels on the machine

## 4. Intended Use

TALEX sweeper is used for removing impurities formed on all paved surfaces. Ideal for sweeping squares, traffic routes and car parks, which are covered with paving stones, asphalt or concrete. The possibility of installing to a lift truck, tractor or loader allows to use it in agriculture, horticulture, as well as municipal companies and industrial plants. Using the machine in other conditions will be construed as improper. Strict compliance with the requirements for the use of the machine, maintenance and repair according to the manufacturer's recommendations is a condition for the intended use. The machine should be operated, serviced and repaired only by persons familiar with its specific characteristics and the rules of conduct in terms of safety. Accident prevention regulations and all basic rules of work safety and hygiene, as well as traffic rules should always be followed.



It is forbidden to use the bucket sweeper contrary to its intended use, or without reading the manual.

## 5. Equipment, construction and operation

### 5.1 Standard equipment

In addition to the complete machine, the basic equipment of the bucket sweeper contains:

- User manual,
- Spare parts catalogue,
- Warranty card.

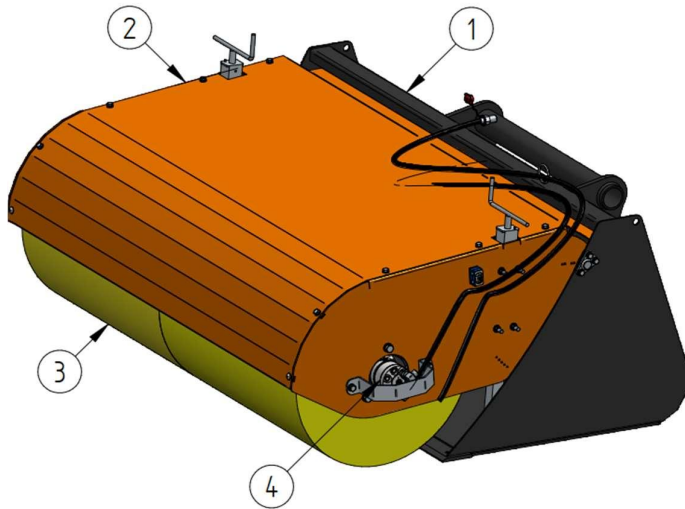
The main components of the bucket sweeper are: brush, bucket and body. They are connected by pins or bolted together.

### 5.2 Additional equipment

Additional equipment of the bucket sweeper includes:

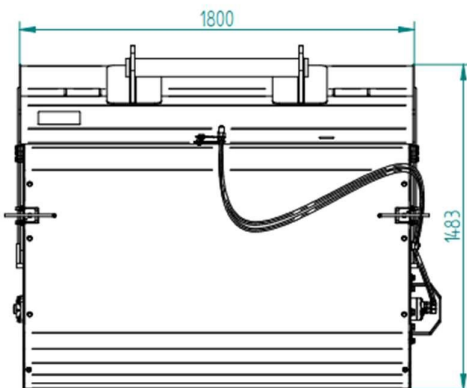
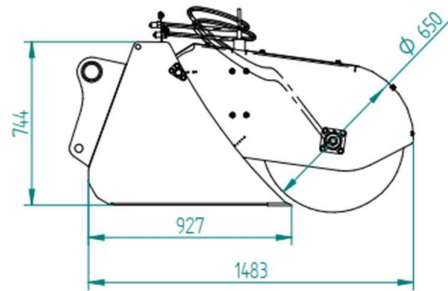
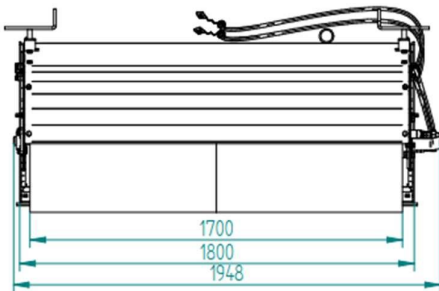
- Polyurethane skid– protects the main blade and the ground, index number and size to be ordered can be found in the spare parts catalogue.

### 5.3 General design of the sweeper



- |                      |
|----------------------|
| 1 – Bucket           |
| 2 – Body             |
| 3 – Work shaft       |
| 4 – Hydraulic system |

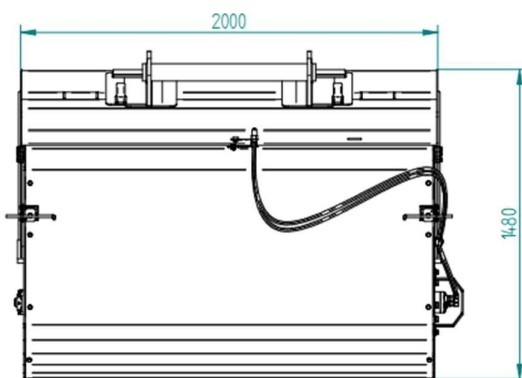
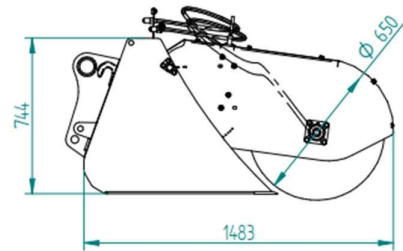
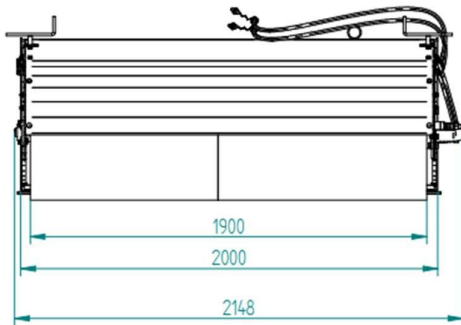
### TWISTER 1800 DIMENSIONS





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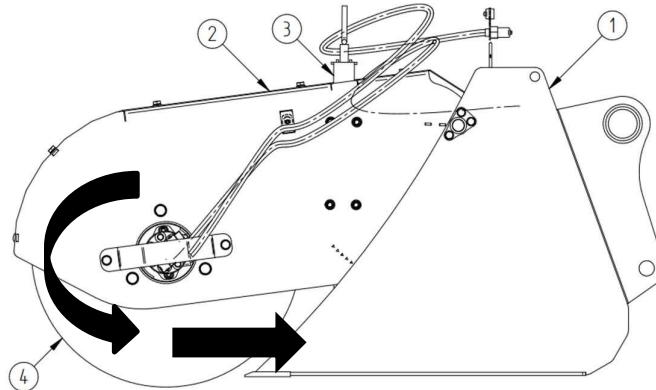
## TWISTER 2000 DIMENSIONS



Model	Bucket sweeper 1800	Bucket sweeper 2000
Sweeping width	1700 mm	1900 mm
Bucket width	1800 mm	2000 mm
Brush diameter	650 mm	650 mm
Recommended sweeping speed	5 km/h	
Type of operating elements	Roller brush	
Propulsion	External hydraulics of carrier vehicle	
RPM of the roller brush:		
-recommended	100 rev/min	
-max	150 rev/min	
Max. hydraulic pressure	160 bar (const.)	
Oil demand	30 - 60 l/min	
Mass	489 kg	551 kg

## 5.4 Operation

The roller brush (4) driven by a hydraulic motor directs the dirt to the bucket (1), which is emptied from the operator's position through the discharge. The working height of the brush is adjusted manually with the support stands. The ground pressure can be set individually depending on the amount of dirt.



(1) Bucket , (2) lid, (3) support stand, (4) brush,

## 5.5 Construction and operation of the hydraulic system



Drawing 6 Hydraulic system scheme

(1) – Roller brush hydraulic engine ; (2) – hydraulic sockets



The duties of the user associated with the hydraulic system operation include:

- leakage checking of cylinder and hydraulic connections;
- check the technical condition of hydraulic hoses and couplings;

The hydraulic system should be completely tight. Check seals locations, if you see a leak, stop using the machine until the fault has been rectified.



**Danger**

Do not attempt to repair the hydraulic system on your own, repairing any defects must be performed by trained personnel.



**Danger**

Before working, reduce the residual pressure  
During work, use personal protective equipment, ie. Protective clothing, footwear, gloves, goggles. Avoid oil contact with eyes and skin. In the event of injury or irritation, rinse with plenty of water and consult a doctor.



**ATTENTION**

Hydraulic oil in the form of oil mist is harmful to the respiratory tract



**ATTENTION**

In case of fire toxic compounds are released, the fire should be extinguished using carbon dioxide (CO<sub>2</sub>), foam or extinguishing steam, in any case, do not use water !!!



For work with the new sweeper, the manufacturer recommends the use of hydraulic oil HL32.

**Table 6 Characteristics of hydraulic oil HL32**

LP.	TITLE	VALUE
1	Viscosity classification acc. to ISO 3448VG	32
2	Kinematic viscosity at 40 ° C	28.8 - 35.2 mm <sup>2</sup> /s
3	Quality classification acc. to ISO 6743/99	HL
4	Quality classification acc. to DIN 51502	HL
5	Flash-point, ° C	Above 210
6	Maximum operating temperature, ° C	80

## 6. Machine use

The manufacturer ensures that the machine is fully operational and has been checked before being allowed to use. Nevertheless, the user is obligated to inspect the machine upon delivery and before its first use. Before starting any works related to aggregating the bucket-sweeper with a tractor, check the technical condition of the machine. To do this, you need to:

- a) read and understand all information related to safety, construction, operation, use, transportation, maintenance, etc. contained in the manual,
- b) check the completeness of the machine, whether the required protections, screws, etc. are not missing,
- c) check the condition of bolted connections, whether all bolts are tightened - Table 5. Values of tightening torques for bolts and nuts.
- d) check the condition of the paint coating,
- e) check the general condition of the machine under the sign of any damage caused during transport, loading or other circumstances (breaks, dents, cracks, punctures, etc.),
- f) check all the lubrication points for signs of lubrication (lubricate if necessary according to the recommendations in the chapter "Machine lubrication"),
- g) check tightness of the hydraulic system,

After performing all the activities and confirming that the actual condition of the machine does not raise any objections, proceed to aggregating the bucket-sweeper with the tractor.



Before each use of the machine, check its technical condition, and in particular, the condition of connections of individual units, the condition of the hydraulic system.

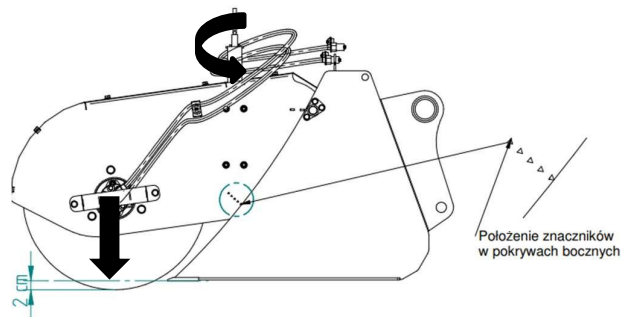
## 6.1 Proper installation of the sweeper

The working height of the brush is adjusted manually with the support stands. Depending on the amount of dirt, the pressure can be set individually. The pressure is set by rotating the cranks. Note the position of the side cover markers relative to the bucket so that both sides are in the same position (Drawing 7a. Brush Pressure Adjustment). The brush bristles should be about 2 cm pressed against the substrate, however, the pressure depends on the degree of surface contamination and is set individually.

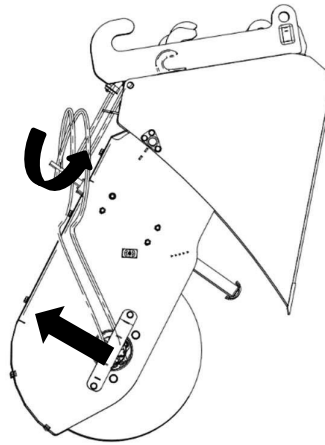
When lowering the brush, the device should be in the working position (Drawing 7a. Brush Pressure Adjustment). However, if you want to raise the brush up, lift the sweeper-bucket so that the support stand has no contact with the ground (spoon) (Drawing 7b. Adjusting the brush pressure), only in this position you should raise the brush.



Adjusting the brush upwards in the machine working position may damage the support stand.



**Drawing 7a. Brush pressure adjustment-** downward adjustment of the brush.



**Drawing 7b. Brush pressure regulation - brush upward regulation.**



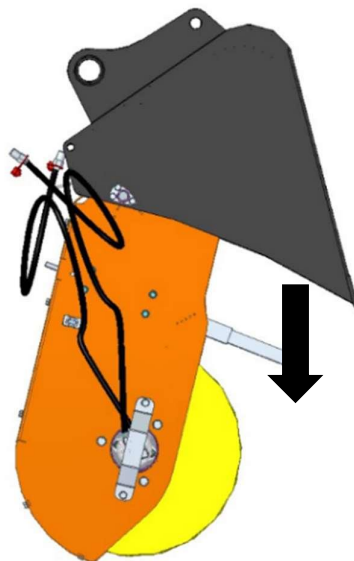
When adjusting the brush, make sure that there is equal pressure along the entire length of the roller.  
Uneven alignment causes the brush to wear faster.



**NOTE:** Excessive pressure of the brushes against the cleaned surface causes their excessive wear

## 6.2 Emptying the bucket sweeper

Opróżnianie łyżki odbywa się z pozycji operatora poprzez podniesienie łyżki do pozycji pionowej i wysyp nieczystości.



**Drawing 8. Emptying the bucket.**

## 7. Inspections and parts replacement

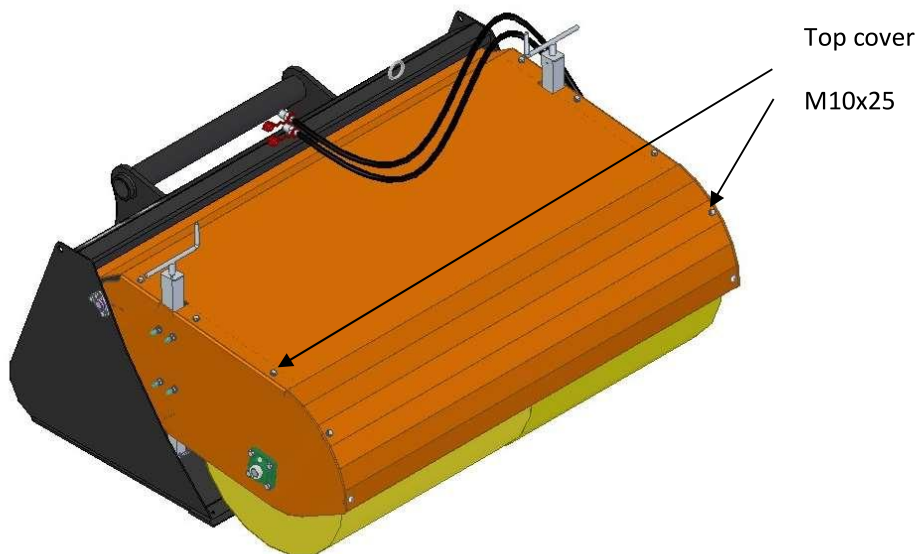
### 7.1 Installation and disassembly of the brush.



Before replacing, check that the bucket-sweeper is disconnected from the power supply and that the resulting pressure in the hydraulic system has been released, the machine should be placed stably on even, hardened ground.

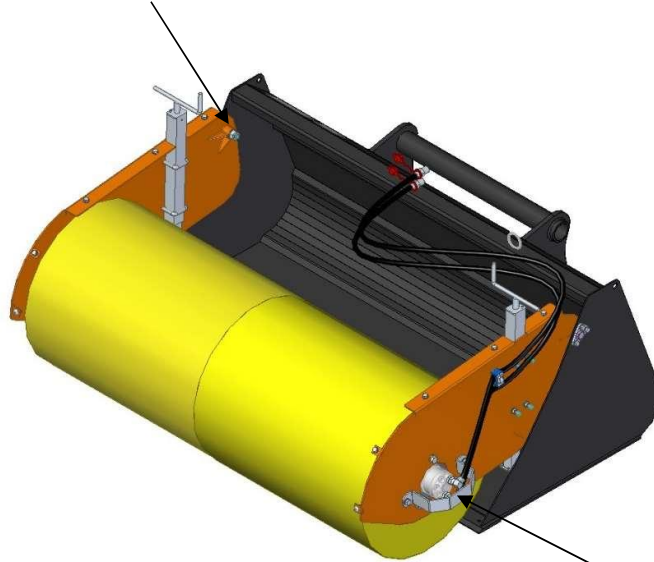
To replace the brushes, first remove the top cover by unscrewing all M10x25 screws (Fig. 9 Removing the cover). Then unscrew the M20 nut that locks the cover rotation pin, then remove the engine cover, engine flange and hydraulic lines, to do this, unscrew 2 M12x25 bolts securing the cover, unscrew the hoses and, finally, the M16x35 flange bolt (Fig. 10 Removing the flange). Next, remove the bearing by unscrewing 4 bolts M12x35, to remove the brush you need to remove the side of the bearing (Fig. 11 Removing the brush). Assembly is in reverse order.

Before installing new brushes, check the condition of the bearings marked in section **10.3. Working shaft**, items 6 and 11 in the parts table and replace them if their condition indicates this.



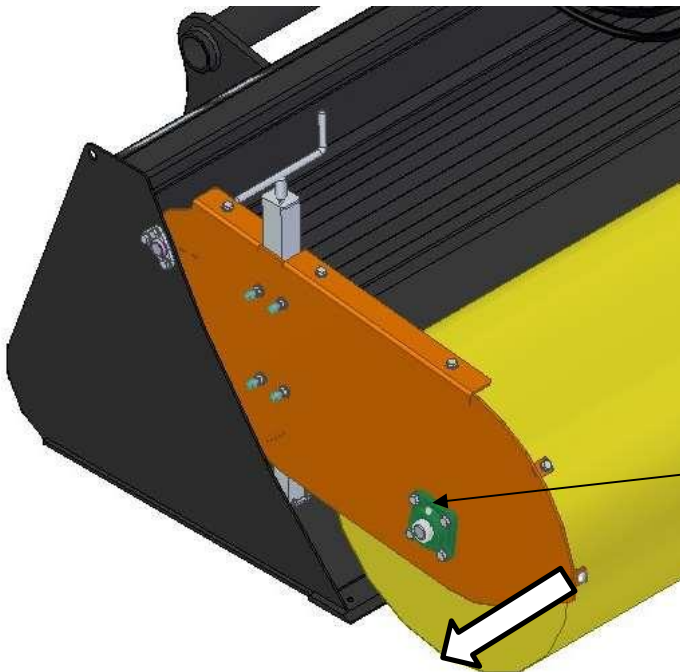
Drawing 9. Removing the cover.

Nut M20



Bolt M16x35  
Knee joint

**Drawing 10. Removing the flange.**



M12x35  
Bolt bearing

**Drawing 11. Removing the brush.**



Resilience	6.8	8.8	10.9	12.9
Metric thread	Tightening torque [Nm]			
M5	4,5	5,9	8,7	10
M6	7,6	10	15	18
M8	18	25	36	43
M10	37	49	72	84
M12	64	85	125	145
M14	100	135	200	235
M16	160	210	310	365
M18	220	300	430	500
M20	310	425	610	710
M22	425	580	820	960
M24	535	730	1050	1220

Table 5. Values of tightening torques for bolts and nuts.

## 8. Defects and methods of repair.

TYPE OF DEFECT	REASON	METHOD OF REPAIR
Sweeping roller does not rotate or rotates in the wrong direction	Not connected or incorrectly connected hydraulic system	Check connection
	Not operated or incorrectly operated circuit of vehicle's hydraulic system	Include correct hydraulic circuit in the vehicle
	Damaged hydraulic system	Report to the service centre
Sweeper does not collect the dirt correctly	Too low rotation speed of sweeping roller	Increase the engine speed
	Incorrectly set pressure of the sweeping roller	Adjust according to instruction
	Too high speed driving	Adapt the speed of driving
	Dirt tank is full	Empty the tank
	Excessively worn brushes	Change
Rapid wear of brushes	Incorrectly set pressure of the sweeping roller. Incorrectly set side brush	Adjust according to instruction
Throwing dirt from the sweeper	Too high rotation of brushes. Incorrectly set brushes. Incorrect setting on the vehicle	Check and adjust according to instruction

TABLE 6. Defects and methods of repair



## 9. Service and maintenance

### 9.1 After work service

After finishing work, the machine should be thoroughly cleaned and washed with a stream of running water. When using devices generating high pressure, be careful, do not direct the stream directly at all kinds of stickers placed on the machine and on elements such as bearings, etc. It is recommended that the cleaning and washing of the machine take place in a car wash equipped with a sewage treatment plant or a sedimentation tank to neutralize the resulting sewage.

After washing and drying, check the general technical condition of all components and, if necessary, remove the detected defect or replace the worn element with a new one.

In the event of damage to the varnish coat, remove the old paint residue mechanically, degrease it, then apply a layer of primer. After it is dry, apply the appropriate varnish coat. Damaged and worn parts should be replaced. Check all bolted connections, and tighten the loosened ones according to table 5.

Note:

The machine manufacturer, Talex, provides access to all parts.

Lubricate the bucket-sweeper in accordance with the instructions - **9.2 Lubrication points**.

Keep all safety signs on the machine clean.

### 9.2 Lubrication points

Properly carried out periodic maintenance activities significantly reduce the wear of cooperating elements and additionally protect against corrosion.

Lubricate all the lubrication points listed below. These operations must be performed using a grease gun for solid lubricants. Before commencing lubrication, clean the lubrication point of contamination and the remains of previously used grease, and check the condition of the grease nipple for damage. In the event of damage, it should be replaced with a functional one. After lubricating, remove excess grease in order to reduce dust adhesion.



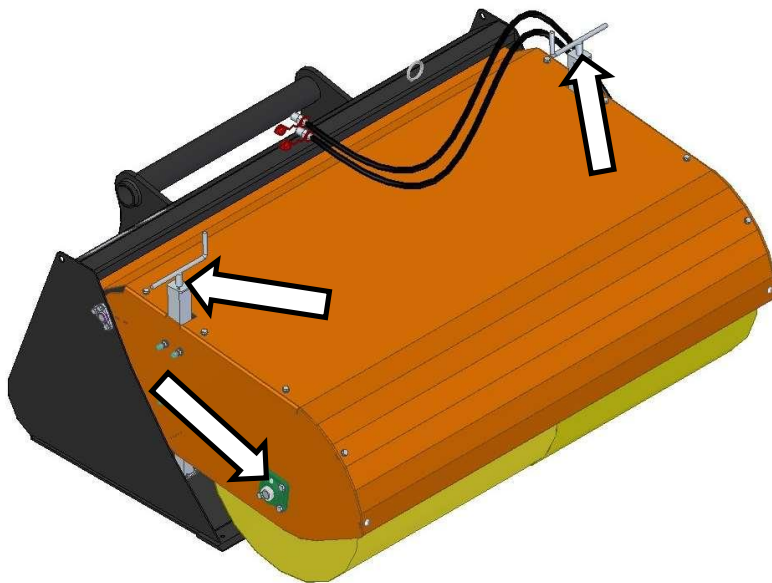


All maintenance and servicing works are performed with the vehicle's engine off, the pressure and revs lost, with the vehicle and machine secured.



Avoid contact with the oil!  
Use personal protective equipment such as: protective clothing, footwear, gloves and glasses.

The lubrication point on the shaft bearing (assuming continuous operation for 8 hours) should be lubricated with ŁT43 machine grease every day before work, while the lubrication points on the support feet should be lubricated at least once a month Fig. 12. Lubrication points.



**Drawing 12.**Lubrication points.

### 9.3 After season maintenance

It covers all the activities listed in point: service after work. In addition, the machine should be stored under a roof on a flat and firm surface. Pay attention to the tightness of the paintwork. In case of loss must be cleaned and fill by applying a fresh coat of protective paint. Additionally, it is recommended to:

- Lubricating all movable connections with fresh grease;
- Coating the surface of screws and bolts with commercially available silicone-based corrosion inhibitors to inhibit corrosion.



## 10. Spare parts catalogue

### Spare parts ordering:

While placing an order, provide the following:

- Ordering party's address,
- Exact shipping address (together with the machine location and collection method),
- Payment terms,
- Serial number and the year of construction of the sweeper (provided on the nameplate),
- Exact name of the spare part,
- Number of ordered parts.
- Quantity of ordered parts



Spare parts shall be ordered in authorized outlets or directly from the producer. Utilization of original parts is the only warranty of safe and reliable operation of the machine. The usage of unoriginal parts or fixing of damaged components shall result in the warranty being deemed null and void.

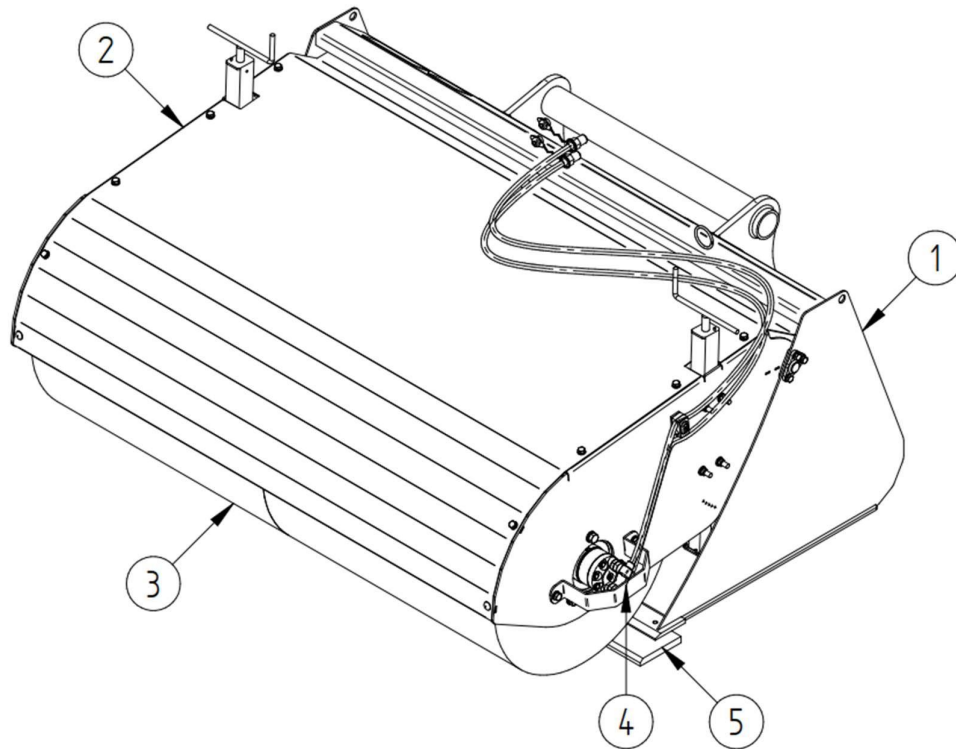
The manufacturer reserves the right to change the construction of parts included in the individual assembly drawings of the parts catalogue. These changes may not always be implemented in real time in the instruction manual and parts catalogue. Individual drawings of spare parts may differ from the actual state.



**When ordering parts, pay attention to the model of your spoon-sweeper, parts for TWISTER 1800 are marked L-180 and correspondingly to TWISTER 2000 - L-200. Parts without such description are the same for all models.**

TALEX Spółka z ograniczoną odpowiedzialnością  
ul. Dworcowa 9C  
77-141 Borzytuchoń  
Tel. (059) 821 13 40  
[www.Talex.pl](http://www.Talex.pl)  
e-mail. [biuro@Talex.pl](mailto:biuro@Talex.pl)

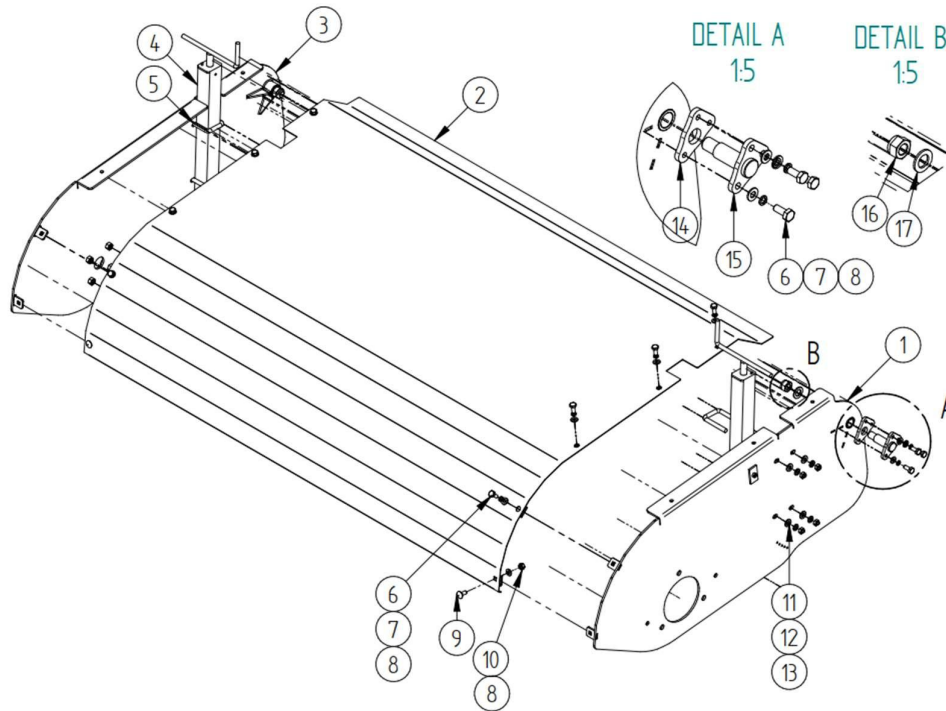
### 10.1. General structure .



Drawing 13. General structure.

General structure				L-180	L-200
Pos.	Part name	Title	Pcs.	Part index no.	
1	Bucket A110.180	Bucket	1	<b>P001813</b>	
	Bucket A110.200	Bucket	1		<b>P001402</b>
2	Body 180	Body	1	<b>P001816/10.2.</b> Body set.	
	Body 200	Body	1		<b>P001382/10.2.</b> Body set.
3	Working shaft Zł 180 set.	Working shaft	1	<b>P001815/10. 3.</b> Working shaft set.	
	Working shaft Zł 200 set.	Working shaft	1		<b>P001398/10. 3.</b> Working shaft set.
4	Hydraulic system	Hydraulic system	1	<b>P001390/10.4</b> Hydraulic system	
5	Zł Skid 1,8 set. (Poly)	Skid	1	<b>P001831 –</b> Additional	
	Zł Skid 2,0 set. (Poly)	Skid	1		<b>P001832 -</b> Additional

## 10.2. Body.

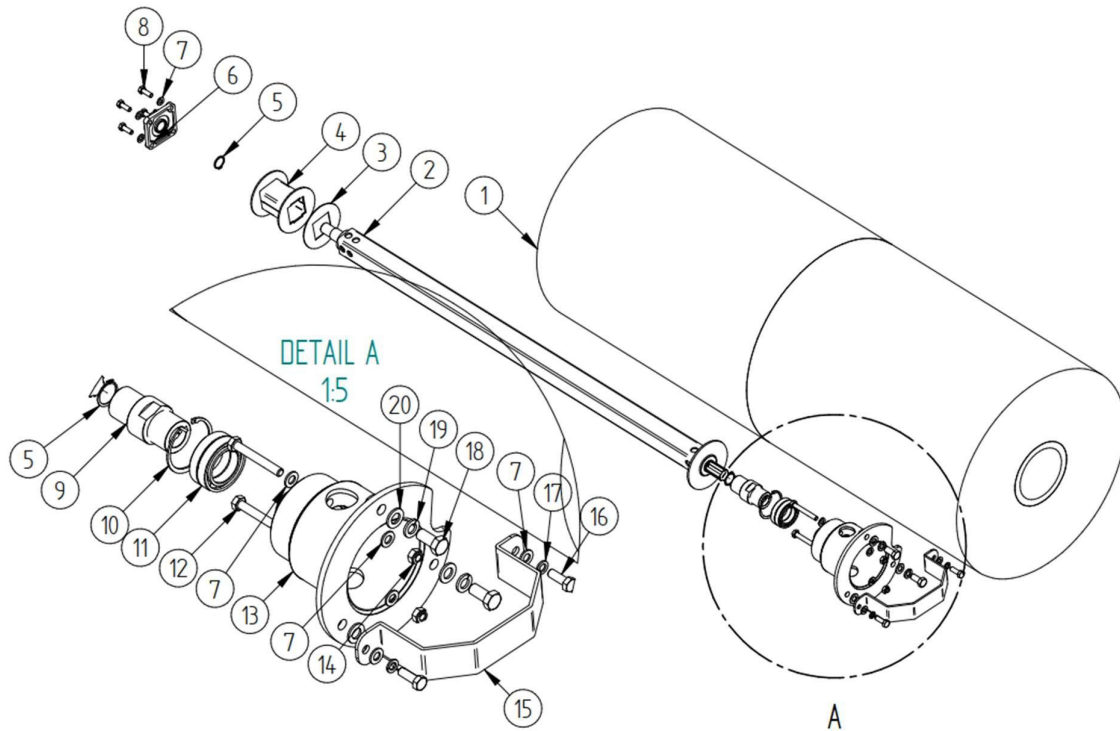


Drawing 14. Body.

Body				L-180	L-200
Pos.	Part name	Title	Pcs.	Part index no.	
1	Zł 03.01.00.00	Engine side cover	1	P001383	
2	Zł 05.01.00.02-180	Top cover Zł	1	P001525	P001527
	Zł 05.01.00.02-200				
3	Zł 03.02.00.00	Support stand side cover	1	P001388	
4	Zł 06.00.00.01	Support stand	2	P001381	
5	U-bolt	U-bolt 12x63x100	4	T000027	
6	Bolt M10x25	Bolt M10x25	8	T000740	
7	Spring washer M10	Spring washer M10	8	T000450	
8	Washer M10	Washer M10	8	T000456	
9	Lock bolt	Lock bolt M10x25	2	T000827	
10	Self-stop nut	Self-stop nut M10	2	T000292	
11	Washer M12	Washer M12	8	T000458	
12	Spring washer	Spring washer M12	8	T000451	
13	Self-stop nut	Self-stop nut M12	8	T000291	
14	Zł 04.00.00.01	Pivot pin mounting	2	P001373	
15	Zł 04.01.00.00	Pivot pin	2	P001376	
16	Self-stop nut	Self-stop nut M20	2	T000255	

17	Washer M20	Washer M20	2	T000462
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### 10.3. Working shaft.



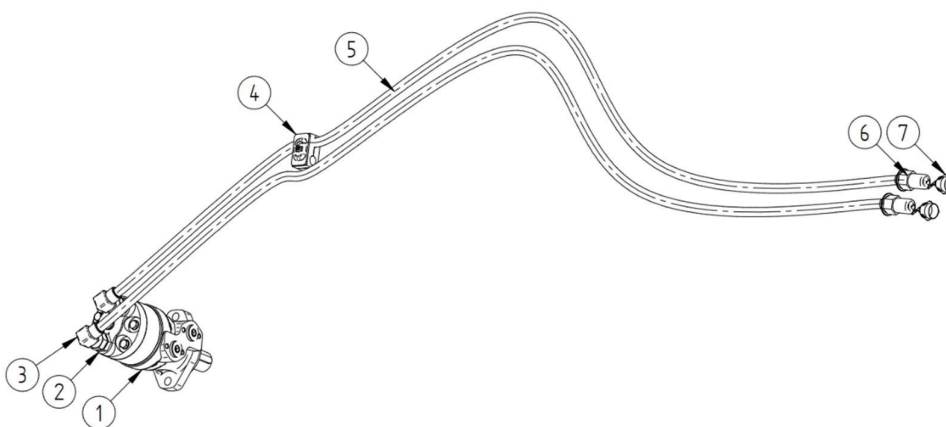
Drawing 15. Working shaft.

Working shaft				L-180	L-200
Pos.	Part name	Title	Pcs.	Part index no.	
1	850/650 MIX KW61	Sweeping roller. 850/650	2	T002496	
	900/650 MIX KW 61	Sweeping roller. 900/650	1		T000710
	1000/650 MIX KW 61	Sweeping roller 1000/650	1		T000708
2	Zł 02.01.00.00-180	Wał roboczy	1	P001416	P001399
	Zł 02.01.00.00-200				
3	Zł 02.00.00.01	Distance flange #2/#3	1	P001795/ P001393*	
4	Zł 02.02.00.00	Brush spacer	1	P001394	
5	Circlip 34z	Circlip 34z	2	T000411	
6	UCF 206 bearing	UCF 206 bearing	1	T000205	
7	Washer M12	Washer M12	9	T000458	
8	Bolt M12x35	Bolt M12x35	4	T000756	
9	ZP280-01000300	Shaft-motor connector	1	P607358	
10	Pierścień segera 80W	Circlip 80W	1	T000421	
11	łożysko 6010	Bearing 6010	2	T000201	
12	Śruba M12x90	Bolt M12x90	2	T000763	

13	ZP280-01000200	Flange	1	P607353
14	Nakrętka samoh. M12	Nakrętka samohamowna M12	2	T000291
15	Zł 05.00.00.01	Ostona silnika	1	P001392
16	Śruba M12x30	Śruba M12x30	2	T000755
17	Podkładka spr. M12	Podkładka spr. M12	2	T000451
18	Śruba M16x40	Śruba M16x40	3	T000685
19	Podkładka spr. M16	Podkładka spr. M16	3	T000453
20	Podkładka M16	Podkładka M16	3	T000460

\* As needed

#### 10.4. Hydraulic system.

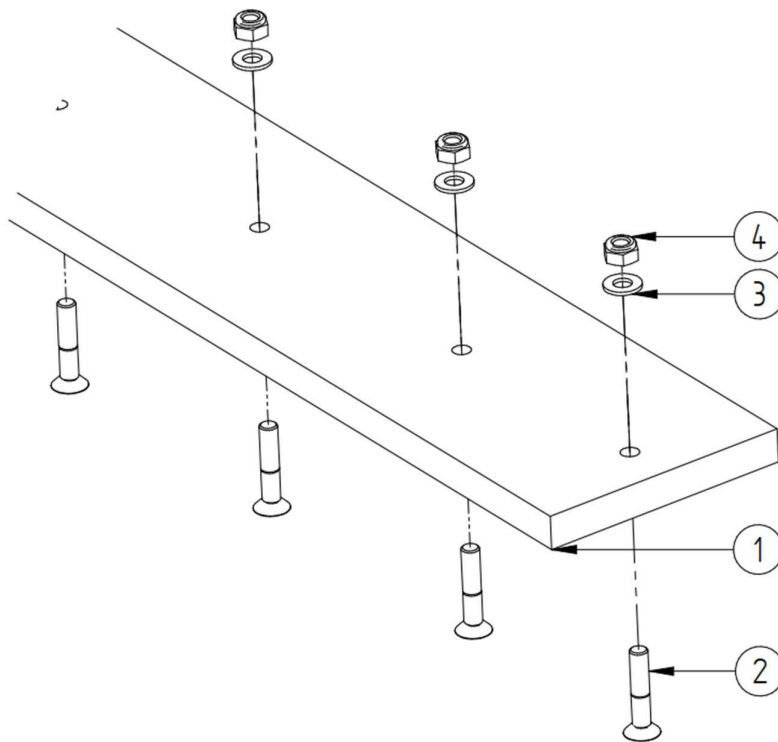


Drawing 16. Hydraulic system.

Hydraulic system				
Pos.	Part name	Title	Pcs.	Part index no.
1	Motor	Motor	1	T000628
2	Straight coupling G3/4 M22x1,5 ED/15L	Straight coupling G3/4 M22x1,5 ED/15L	2	T000581
3	Bent coupling AB M22x1,5 15L/15	Bent coupling AB M22x1,5 15L/15	2	T001033
4	Clamp 2x22mm	Clamp 2x22mm	1	T000320
5	Hose P51/P51 M22x1.5	Hose P51/P51 M22x1.5	2	T000515
6	Quick coupler 1/2"	Quick coupler 1/2"	2	T000716
7	Plug cover	Plug cover	2	T000488

## 10.5. Polyurethane skid.

The polyurethane blade is not included in the standard equipment and can be ordered as an additional equipment- it protects the main blade and the ground.



Drawing 17.Poly skid.

Poly skid				L-180	L-200
Pos.	Part name	Title	Pcs.	Part index no.	
1	Skid	Poly skid 1800x150x20	1	P001839	
	Skid	Poly skid 2000x150x20	1		P001840
2	Bolt M10x50	Countersunk bolt, hex socket M10x50 OC 10.9 DIN7991	11	T002879	
3	Washer M10	Simple washer M10	11	T000456	
4	Self-stop nut M10	Self- stop nut M10 galv.	11	T000292	



## 11. Warranty

### Warranty Card

Serial no.	.....	Type	.....
Production year	.....	KJ	.....

Under this warranty, the manufacturer undertakes to repair for free, the physical defects revealed during the warranty period, which is valid for 12 months from the date of sale.

The manufacturer is exempt from responsibility under the guarantee in case of:

- Mechanical damage to the machine after the transfer to the user;
- Improper operation, maintenance, machine storage, in particular, contrary to the instructions;
- Repairs by unauthorized persons without the consent of the manufacturer to carry them out;
- Design changes without consulting with the manufacturer;

The warranty card is valid if it has the seller's signature and the date of sale certified by company stamp of a traded unit. It must not contain erasures and corrections by unauthorized persons.

The duplicate of warranty card may be issued upon written request upon presentation of proof of purchase by the user.

In the case of unjustified request for warranty service, costs associated will be on the user's account. User reports complaints immediately after the occurrence of the damage, either directly to the seller or manufacturer.

The manufacturer provides warranty service within 14 days from the date of notification to the date of repair.

The warranty is extended by the period of repair, counting the date of notification to the time of the service if the defect has prevented the use of the machine.

The warranty does not cover natural wear of parts such as bearings, support wheels, roller brushes, side brushes, hydraulic installation components (hydraulic couplings, hydraulic engines, rubber hoses, valves and controls, etc.), sprinkler system components (water pump, water filter, spray nozzles, etc.), rubber cover, fasteners, etc.

Sale date: \_\_\_\_\_

*(day, month, year)*

\_\_\_\_\_

*(signature and stamp of store)*





## RECORD OF WARRANTY REPAIRS

Filled in by the manufacturer

*The date of claim:* \_\_\_\_\_

*The extent of claim and replaced parts:*

\_\_\_\_\_

\_\_\_\_\_

*Date of settling the claim:* \_\_\_\_\_

*Warranty extender until:* \_\_\_\_\_

\_\_\_\_\_

*(signature and stamp of service)*

*The date of claim:* \_\_\_\_\_

*The extent of claim and replaced parts:*

\_\_\_\_\_

\_\_\_\_\_

*Date of settling the claim:* \_\_\_\_\_

*Warranty extender until:* \_\_\_\_\_

\_\_\_\_\_

*(signature and stamp of service)*

*The date of claim:* \_\_\_\_\_

*The extent of claim and replaced parts:*

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\_\_\_\_\_

*Date of settling the claim:* \_\_\_\_\_

*Warranty extender until:* \_\_\_\_\_

\_\_\_\_\_

*(signature and stamp of service)*

*The date of claim:* \_\_\_\_\_

*The extent of claim and replaced parts:*

\_\_\_\_\_

\_\_\_\_\_

*Date of settling the claim:* \_\_\_\_\_

*Warranty extender until:* \_\_\_\_\_

\_\_\_\_\_

*(signature and stamp of service)*