

**OPERATING MANUAL**

***SOFTER***

**10,5 | 12,5 PRO**



**Edition : 6 | effective from : 1. 5. 2021**

Dear Customer,

The **SOFTER PRO** semi-mounted disc plough-harrows are quality products of Farmet a.s. Ceska Skalice.

You can fully utilise the advantages of your machine after thoroughly studying the operating manual.

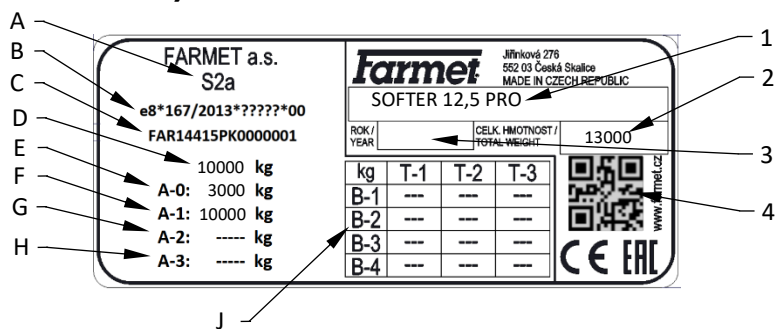
The serial number of the machine is punched on the production label and written in the operating manual (see Table 1). This machine serial number must be stated whenever ordering spare parts for possible repairs. The production label is located on the middle frame near the tow bar.

Use only spare parts for these machines according to the **Spare parts catalogue** officially issued by the manufacturer, Farmet a.s. Ceska Skalice.

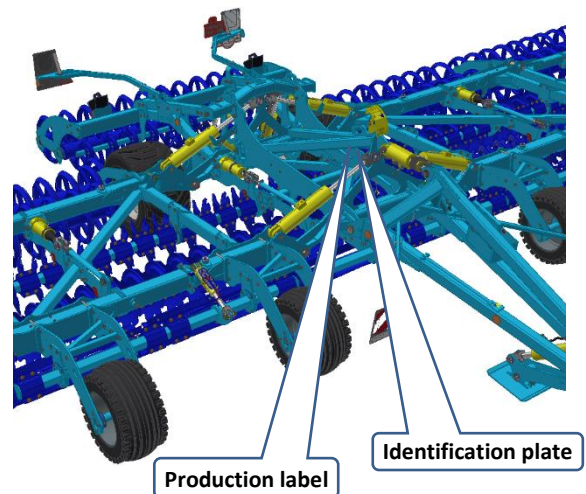
**Possibilities of Use of the Disc Plough-harrow**

The **SOFTER PRO** disc plough-harrow is intended for ploughing all types of soil up to the depth of 12cm (4.7 in).

Production label of the machine **SOFTER 12,5 PRO**



A	Vehicle category according to R167/2013
B	Approval number
C	Seventeen digit serial number (VIN)
D	Technically permissible maximum laden mass of the vehicle
E	Maximum vertical load on the coupling point
F	Permissible load – axle 1
G	
H	
J	Technically permissible towable mass for each chassis/braking configuration for R or S category vehicle
1	Commercial name, general description and purpose
2	Total weight
3	Year of production
4	QR code, specific machine designation



**Table 1 – Your Machine Characteristics**

<b>MACHINE TYPE</b>	
<b>MACHINE SERIAL NUMBER</b>	
<b>SPECIAL DESIGN OR ACCESSORIES</b>	
.....	
.....	
.....	

TABLE OF CONTENTS

MACHINE LIMIT PARAMETERS .....	5
Technical parameters .....	5
Safety statement .....	5
A. GENERAL INSTRUCTIONS FOR USE .....	6
Protective tools .....	6
B. MACHINE TRANSPORT USING TRANSPORT MEANS .....	7
C. MACHINE HANDLING USING LIFTING EQUIPMENT .....	8
D. WORK SAFETY LABELS .....	9
1. DESCRIPTION .....	13
1.1. Working parts of the machine .....	13
1.2. Hydraulic valve function .....	14
1.3. Hydraulic diagram of the machine .....	17
1.4. Brake distribution of the machine .....	18
1.5. Lighting equipment.....	21
1.6. Hydraulic frame lock.....	22
1.7. Transport rests on the axle.....	22
1.8. Device against unauthorized use.....	23
1.9. Tool set .....	23
2. MACHINE ASSEMBLY AT THE CUSTOMER .....	24
3. COMMISSIONING .....	24
3.1. Agregation to a tractor .....	25
3.2. Hydraulics connection .....	26
3.3. Machine folding and unfolding.....	28
4. MACHINE TRANSPORT ON ROADS .....	32
5. MACHINE ADJUSTMENT .....	33
5.1. Machine working depth adjustment .....	33
5.2. Washers on the drawbar .....	34
5.3. Setting the front equipment.....	35
5.3.1. Setting the cutting cylinder lock.....	36
5.4. Setting side deflectors .....	36
5.5. Setting edge discs .....	37
5.6. Setting shut-off valve.....	38
5.7. Setting the rear flexible leveller .....	39
5.8. Setting the cutting disc.....	40
5.9. Turning at headland.....	40
6. ELECTRONIC HYDRAULIC CIRCUIT SWITCH .....	41
6.1. Description of the equipment .....	41
6.2. System wiring diagram .....	41
6.2.1. Designation of system components .....	41
6.2.2. Wiring diagram .....	42
6.3. Main components.....	43
6.3.1. Controller.....	43
6.3.2. Hydraulic block .....	43
6.3.3. Power supply .....	44
6.4. Functions + pictograms.....	44
6.5. Connecting procedure .....	45
6.6. Emergency state .....	45
7. ADJUSTMENT AND MAINTENANCE PROCEDURES .....	46
7.1. Setting the hose mount .....	46
7.2. Depth connecting rods for the front row .....	46
7.3. Tracing wheel position.....	47
7.4. Roller positions.....	47
7.5. Air jet drainage .....	48
8. MACHINE MAINTENANCE AND REPAIRS .....	49
8.1. Maintenance plan.....	50
9. MACHINE STORAGE .....	53
10. MACHINE LUBRICATION SCHEDULE .....	53
11. ENVIRONMENTAL PROTECTION .....	54

---

12. MACHINE DISPOSAL AFTER SERVICE LIFE EXPIRY .....	54
13. SERVICING AND WARRANTY CONDITIONS .....	54
13.1. Servicing .....	54
13.2. WARRANTY .....	54
Ⓒ CE Certificate of Conformity .....	55

## MACHINE LIMIT PARAMETERS

- The machine is designed for soil ploughing up to a depth of 12cm (4.7 in) when agricultural soil cultivation. Another type of use exceeding the determined purpose is forbidden.
- The machine is only operated by one person – the tractor driver.
- Machine operator must not use the machine in a different way, especially:
  - <sup>(x)</sup> Transport of persons and animals on the machine structure,
  - <sup>(x)</sup> Transport of burdens on the machine structure,
  - <sup>(x)</sup> Aggregation of the machine with another towing equipment than stated in Chapter „3.1.“.

## TECHNICAL PARAMETERS




Table 2 – Technical Parameters

PARAMETERS		SOFTER 10,5 PRO		SOFTER 12,5 PRO	
Working width		10,6 m (34,8 ft)		12,2 m (40,2 ft)	
Transport width		3 m (9,84 ft)		3 m (9,84 ft)	
Transport height		3,85 m (12,6 ft)		4 m (13,12 ft)	
Machine total length		8,2 m (26,9 ft)		8,2 m (26,9 ft)	
Working depth		3,5–12 cm (1,38-4,72 in)		3,5–12 cm (1,38-4,72 in)	
Number of discs ∅ 510 mm (∅20in)	front	44		50	
	rear	45		51	
Working performance		10,5–16 ha/h (26-40 ac/h)		12–18 ha/h (30-44 ac/h)	
Towing means		265–400 kW (355–535 HP)*		305–465 kW (410–625 HP)*	
Working speed		10–15 km/h (6 - 9,5 mph)		10–15 km/h (6 - 9,5 mph)	
Maximum transport speed		30 km/h (18,6 mph)		30 km/h (18,6 mph)	
Maximum slope grade		6°		6°	
Tyre dimensions - transport	Tyre pressure	550/45-22,5	400 kPa	550/45-22,5	400 kPa
Tyre dimensions -tracing	Tyre pressure	31x15,50-15	300 kPa	31x15,50-15	300 kPa
Machine weight		12 300 kg (27 120 lb) **		13 000 kg (28 660 lb) **	

\* Recommended towing means, the real towing force may significantly vary according to the processing depth, soil conditions, land slope, working body wear and adjustment.

\*\* Weight with the LTX roller.

## SAFETY STATEMENT

	This warning sign warns about an immediate dangerous situation ending with death or severe injury.
	This warning sign warns about a dangerous situation ending with death or severe injury.
	This warning sign warns about a situation that may end with a smaller or slight injury. It also warns about dangerous actions related to the activity that could lead to an injury.

## A. GENERAL INSTRUCTIONS FOR USE

- The machine is made in accordance with the latest equipment state and approved safety regulations. However, dangers of user or third person injury or machine damage or creation of other material damage may arise during use.
- Use the machine only in a technically sound condition, in accordance with its purpose, aware of possible dangers, and while adhering to the safety instructions of this operating manual! The manufacturer is not liable for damages caused by the use of the machine that is in contradiction with the limit parameters of the machine (p. 4) and with the instructions for the use of the machine (Chapter A and 3). The user bears the risk.

Immediately remove especially the failures that may negatively affect safety!

- Machine operation may be performed by a person authorised by the operator under these conditions:
  - It must own a valid driver's licence of the corresponding category,
  - It must be demonstrably familiarised with the safety regulations for work with the machine and must practically master the machine operation,
  - The machine may not be operated by juveniles,
  - It must know the meaning of the safety signs located on the machine. Their respecting is important for safe and reliable machine operation.
- Maintenance and servicing repairs on the machine may only be performed by a person:
  - Authorised by the operator,
  - Educated in the machinery field with knowledge of repairs of similar machines,
  - Demonstrably familiarised with safety regulations for work with the machine,
  - During a repair of a machine connected to a tractor, it must own a driver's licence of the corresponding category.
- Machine operator must secure the safety of other persons when working with the machine or transporting the machine.
- During machine work in the field or during transport, the operator must control the machine from the tractor's cabin.
- The operator may enter the machine structure only with the machine at rest and blocked against movement, namely only for these reasons:



- Adjustment of the machine working parts,
- Repair and maintenance of the machine,
- Release and securing of spherical valves of the axle,
- Securing of spherical valves of the axle before folding the side frames,
- Adjustment of the working parts of the machine after unfolding the side frames.



- When climbing on the machine, do not step on the axle tyres, rollers, discs or other revolving parts. Those may turn and you can cause very serious injuries by the subsequent fall.



- Any changes or modifications of machine may be performed only with written consent of the manufacturer. For possible damage arisen due to ignoring this instruction, the producer bears no responsibility. The machine must be maintained equipped with prescribed accessories and equipment including safety marking. All warning and safety signs must be legible and in their places. In case of damage or loss, these signs must be immediately renewed.

- The operator must have the Operating Manual with the work safety requirements available at any time when working with the machine.



- The operator must not consume alcohol, medicines, narcotic and hallucinogenic substances that decrease his attention and coordination capabilities while using the machine. If the operator must use medicines prescribed by a physician or uses freely sold medicines, he must be informed by a physician, whether he is capable of responsible and safe operation of the machine under these circumstances.

### PROTECTIVE TOOLS

For the operation and maintenance use:

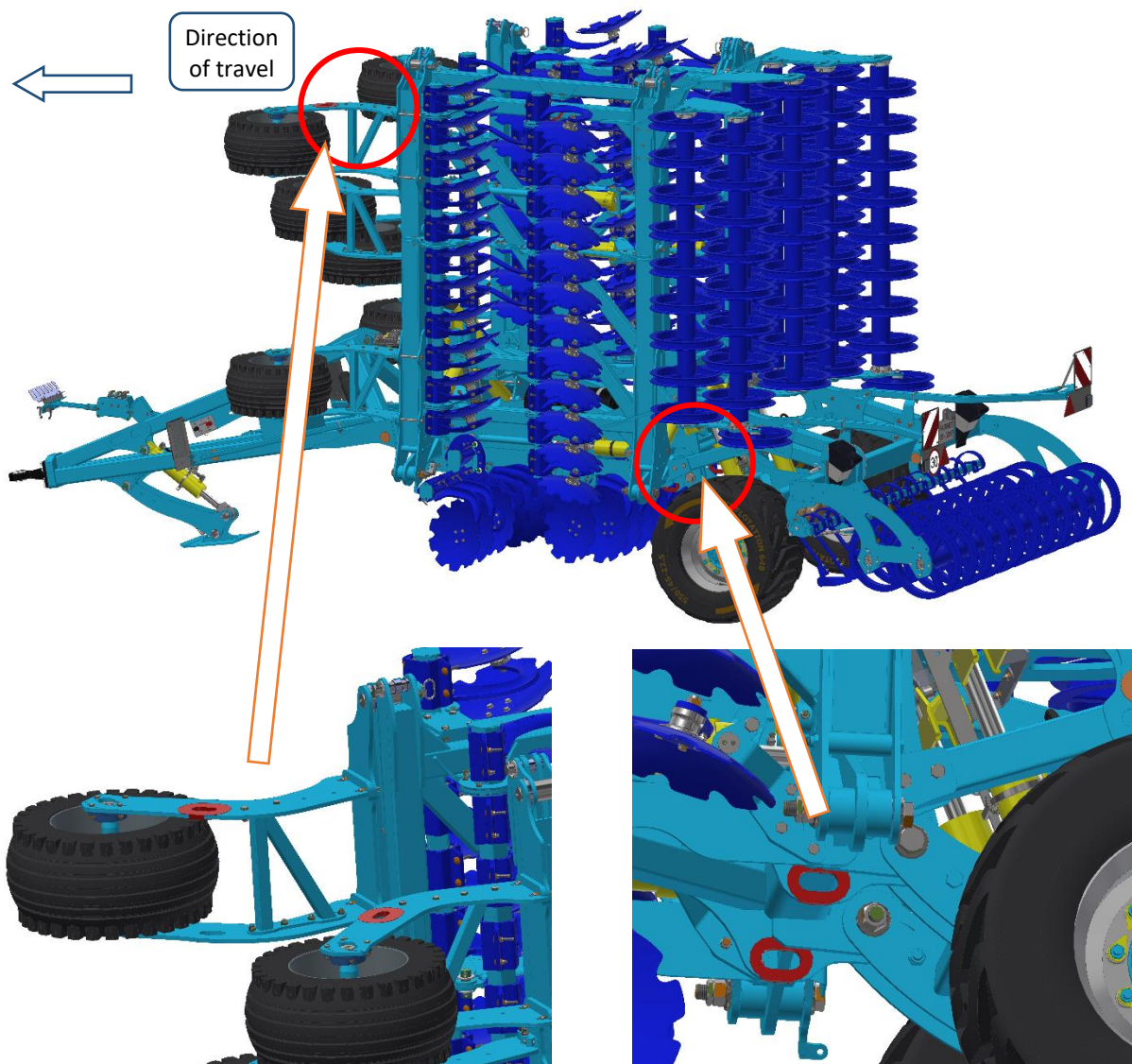
- Tight clothes
- Protective gloves and goggles for protection against dust and sharp parts of the machine






## B. MACHINE TRANSPORT USING TRANSPORT MEANS

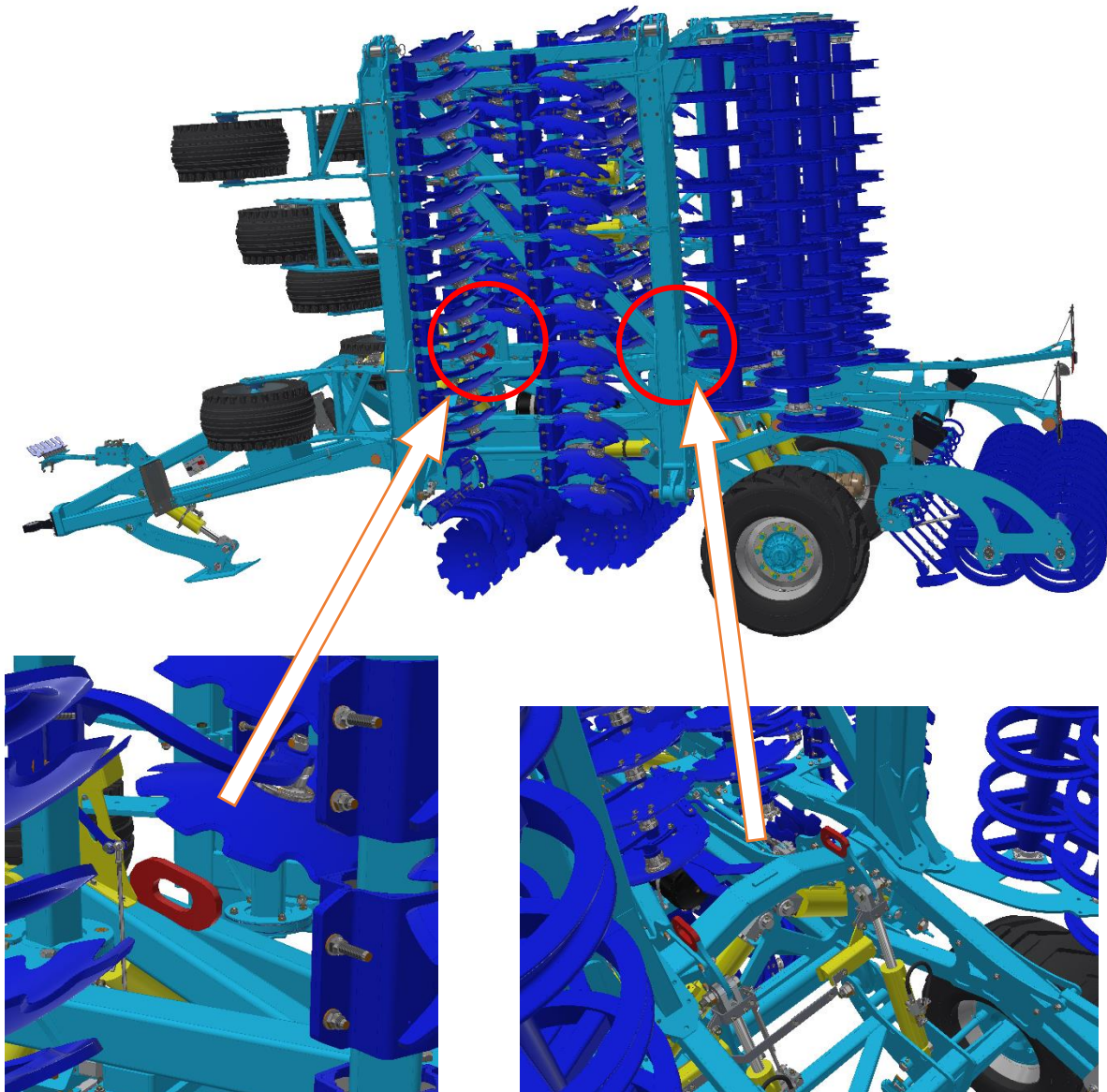
- B.1** The transport means designed for machine transport must have the load capacity minimally identical with the weight of the transported machine. The total weight of the machine is stated on the production label.
- B.2** <sup>(2)</sup> The dimensions of the transported machine including the transport means must comply with the valid regulations for road traffic (decrees, laws).
- B.3** <sup>(3)</sup> The transported machine must be always fastened to the transport means so that its spontaneous loosening could not happen.
- B.4** <sup>(4)</sup> The carrier is responsible for damage caused by the loosening of incorrectly or insufficiently fastened machine to the transport means.



## C. MACHINE HANDLING USING LIFTING EQUIPMENT



- C.1 The lifting equipment and tying means designed for handling of the machine must have their load capacity at least identical with the weight of the handled machine.
- C.2 Machine fastening for handling may only be performed in places designed for that and marked with self-adhesive labels showing the "chain" symbol .
- C.3 After fastening (suspending) at designated points, it is forbidden to move in the space of possible reach of the handled machine.





## D. WORK SAFETY LABELS

Warning safety labels serve for operator protection.

General:

- A) Strictly observe the warning safety labels.
- B) All safety instructions also apply to other users.
- C) Upon damage or destruction of the aforementioned "SAFETY LABEL" located on the machine, THE OPERATOR IS OBLIGED TO REPLACE IT WITH A NEW ONE!!!

The position, appearance, and precise meaning of work safety labels on the machine is determined in the following tables (Table 3) and in the picture (Picture 1).

**Table 3 – Self-adhesive warning safety labels located on the machine**

WARNING SAFETY LABEL	LABEL TEXT	MACHINE POSITION
	<p>Before handling the machine, carefully read the operating manual. Observe the instructions and safety regulations for machine operation during use.</p>	<b>P 1 H</b>
	<p>When connecting or disconnecting, do not step between the tractor and the machine, also do not enter this space, if the tractor and the machine are not at rest and the engine is not turned off.</p>	<b>P 2 H</b>
	<p>Stay outside the reach of the tractor - agricultural machine set, if the tractor engine is in operation.</p>	<b>P 6 H</b>
	<p>Before commencing the machine transport, secure the axle with spherical valves against unexpected drop.</p>	<b>P 13 H</b>
	<p>When folding the side frames, do not reach into the space of the machine folding joints. There is a danger of cutting when setting the depth of the machine.</p>	<b>P 20 H</b>
	<p>Travelling and transport on the machine structure is strictly forbidden.</p>	<b>P 37 H</b>
	<p>When working and transporting the machine, maintain safe distance from the electric appliances.</p>	<b>P 39 H</b>

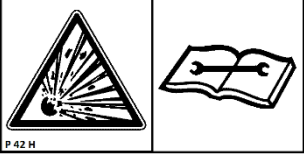
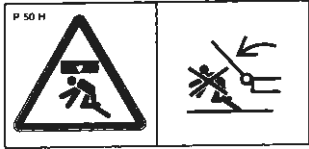
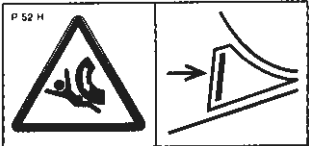
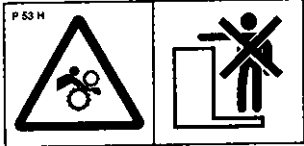
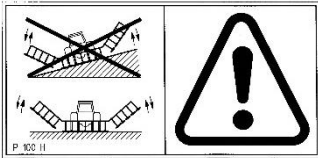
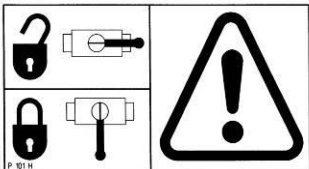
	<p>The pressure vessel is under gas and oil pressure. Execute disassembly and repairs only according to the instructions in the manual.</p>	<p><b>P 42 H</b></p>
	<p>When folding and unfolding the side frames, stay outside their reach.</p>	<p><b>P 50 H</b></p>
	<p>Secure the machine against unwanted movement.</p>	<p><b>P 52 H</b></p>
	<p>Do not approach the rotary parts of the machine, if these are not at rest, i.e. they do not turn.</p>	<p><b>P 53 H</b></p>
	<p>It is strictly folding and unfolding the side frames on slopes or inclined surfaces.</p>	<p><b>P 100 H</b></p>
	<p>The shown positions of the lever and the function of the hydraulic spherical valve located on the piston rod.</p>	<p><b>P 101 H</b></p>

Table 4 Information Labels

POSITION NUMBER	LABEL	TEXT
1		Designation of the hydraulic circuits and their functions
2		Folding and unfolding procedure, on the underside of the tool box lid
3		Valve control panel
4		Drawbar piston-rod valve
5		Setting the drawbar washers according to the tractor hitch height
6		Transport axle wheels/tracing wheels torque
7		Recommended tyre pressure for the transport axle/tracing wheels

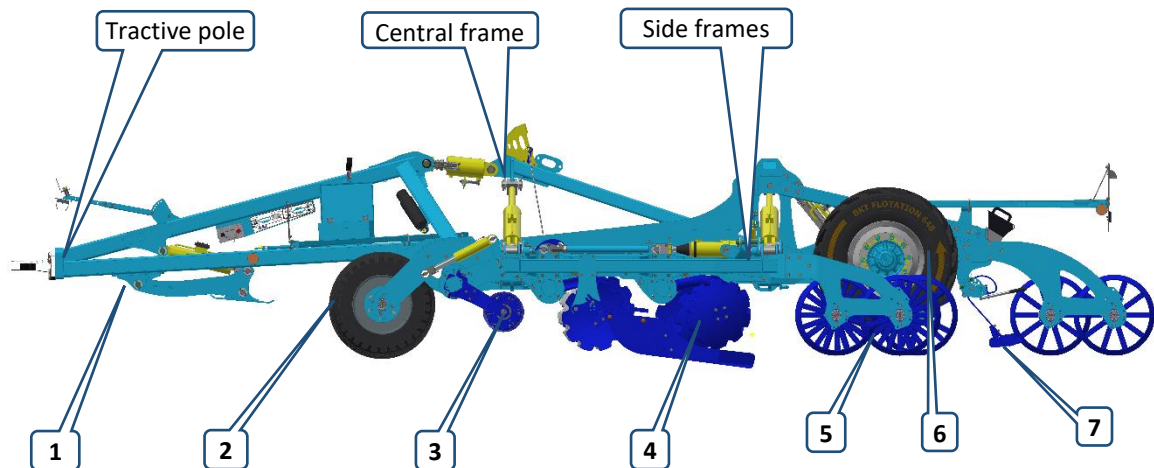


## 1. DESCRIPTION

The **SOFTER PRO** machine is constructed as semi-carried. The basic version consists of a drawbar equipped with a loop for the fixed suspension pin, a central frame with the transportation axle four side frames. There are working discs in two rows on the central and side frames. There are rollers in the rear that compact the loosened soil.

### 1.1. WORKING PARTS OF THE MACHINE

Picture 2 – Work Parts of the Machine



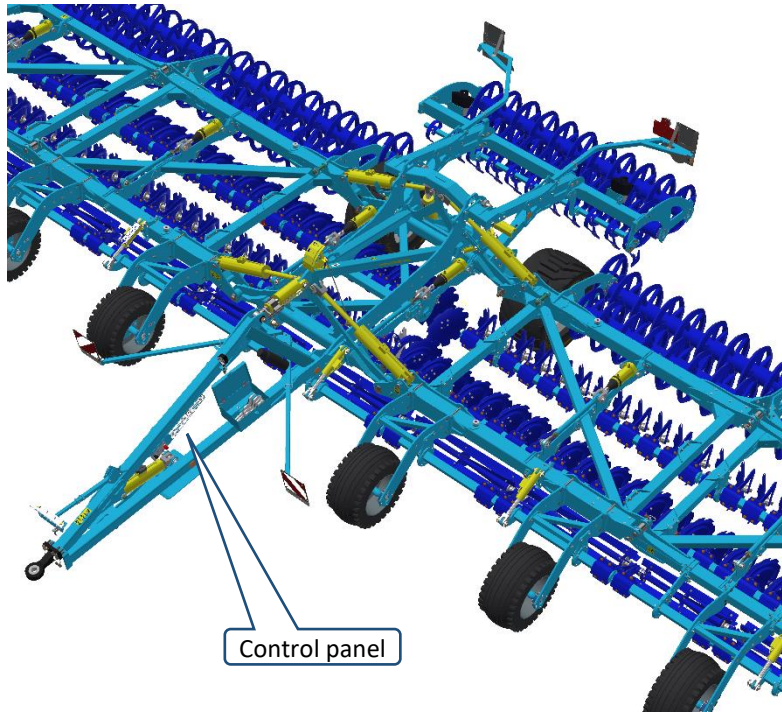
1	Tractive pole with a folding leg
2	Supporting wheel
3	Front equipment
4	2 rows of discs
5	Roller
6	Transportation axle
7	Rear flexible leveller



## 1.2. HYDRAULIC VALVE FUNCTION

- There are three levers that control the closing and three-way valves on the SOFTER PRO machine
- The panel is located on the left side of the drawbar (Picture 3 Drawbar hydraulics panel )

Picture 3 Drawbar hydraulics panel





**Attention!** The machine may move suddenly when some of the valves are changed over.

### Safety axle lock and folding

	<p><b>Locking for transport</b></p> <p>The red (folding) and yellow (axle) circuits are closed. The circuits cannot be moved. Lever position – on the left.</p> <p>Used for transport.</p>
	<p><b>Field work</b></p> <p>The red (folding) and yellow (axle) circuits are open. Lever position – on the right.</p> <p>Used for work.</p> <p><b>Attention!</b> The machine may move suddenly when changed over.</p>

## Turning at headland

- Used to restrict the lifting of the axle at a set value
- Used for accelerating the turn at headland and reduces the requirement for tractor circuit oil flow
- Setting the height of the lift is described in Chapter 5.6

	<p><b>Full lift</b></p> <p>Lifting the axle to the maximum height. The stop valve is not activated. Lever position – on the left.</p> <p>Used for transport and folding.</p>
	<p><b>Accelerated short lift</b></p> <p>The stop valve is activated. It restricts the height of the lift of the axle as set. Lever position – on the right.</p> <p>Used at work to accelerate the turn at headland.</p>

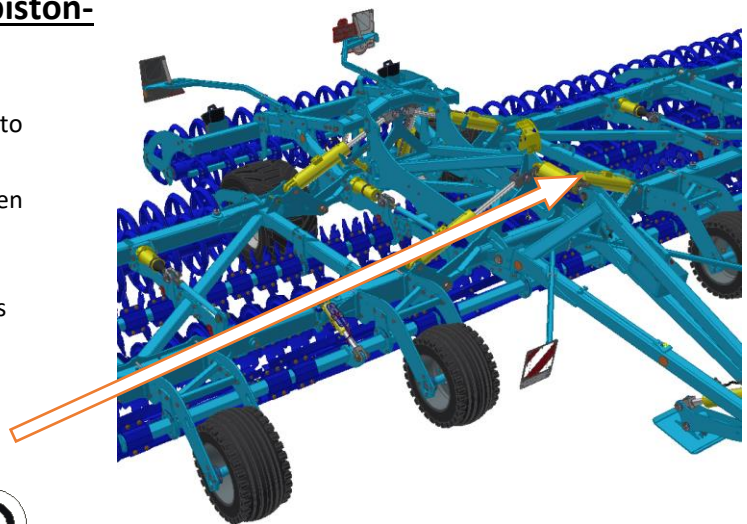
## Disc circuit closure

- Used to restrict unintentional movement of discs when the machine is folded (a risk of collision)
- The unintentional movement of discs may also be caused when the yellow axle circuit is used (linked function). The valve closure prevents that.

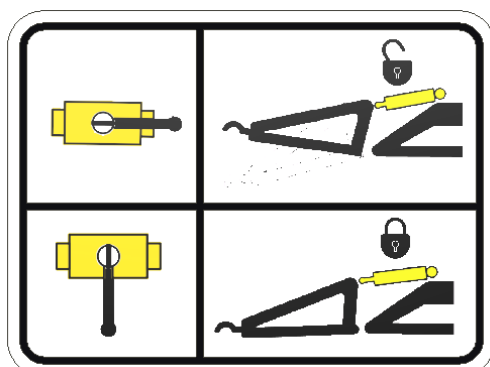
	<p><b>Locked discs</b></p> <p>The green circuit valve is closed. Discs cannot be moved.</p> <p><b>Discs must be maximally drawn in for folding. The valve must be closed.</b></p> <p>Used for transport and folding.</p>
	<p><b>Unlocked discs</b></p> <p>The green circuit valve is open. The working depth can be adjusted.</p> <p>Used for work.</p>

## Shut-off valve on the drawbar piston-rod

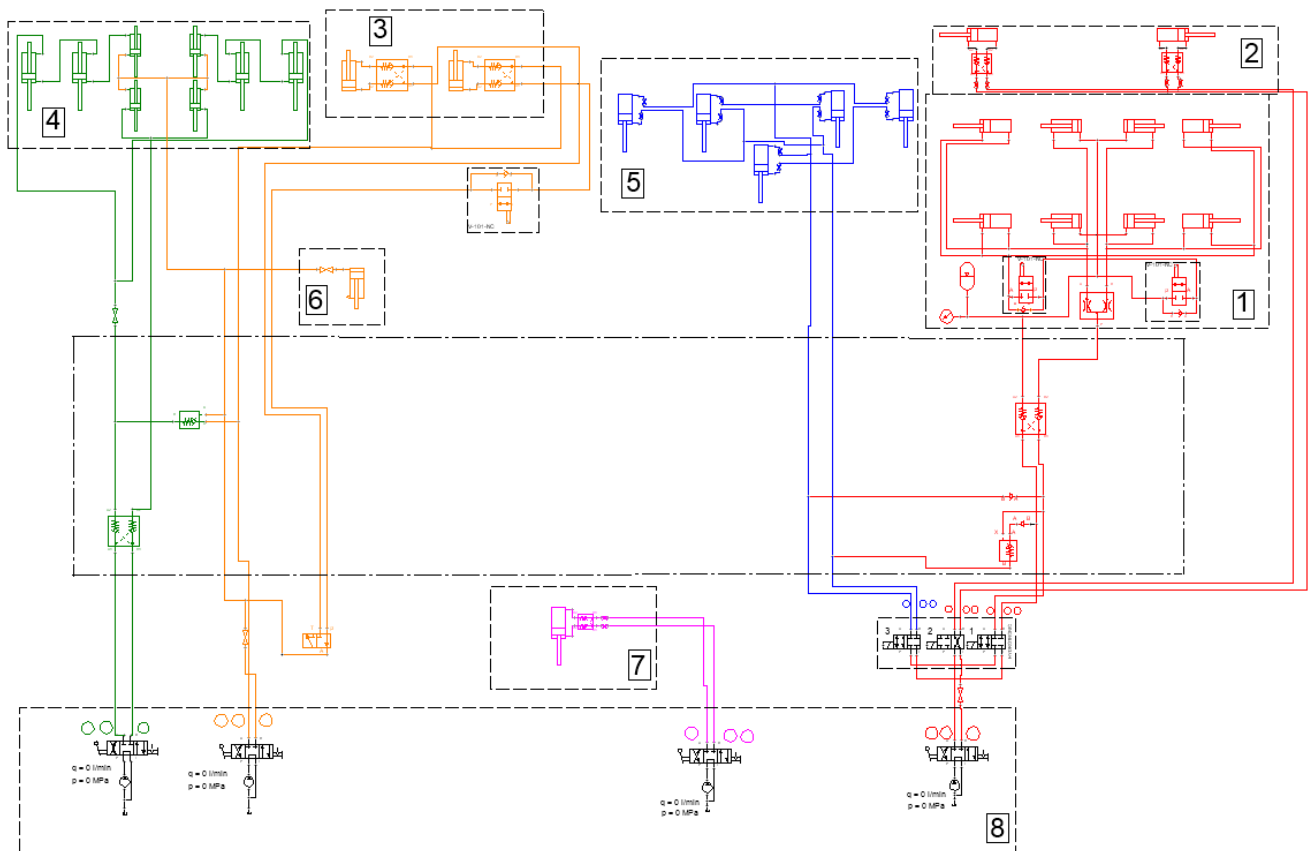
- Used for closing the supply of pressure oil to the drawbar piston-rod
- Prevents the machine from dropping when the hose breaks during transport
- It does not need to be closed when the machine is resting on the drawbar washers for transport



Picture4 Drawbar piston-rod valve



### 1.3. HYDRAULIC DIAGRAM OF THE MACHINE

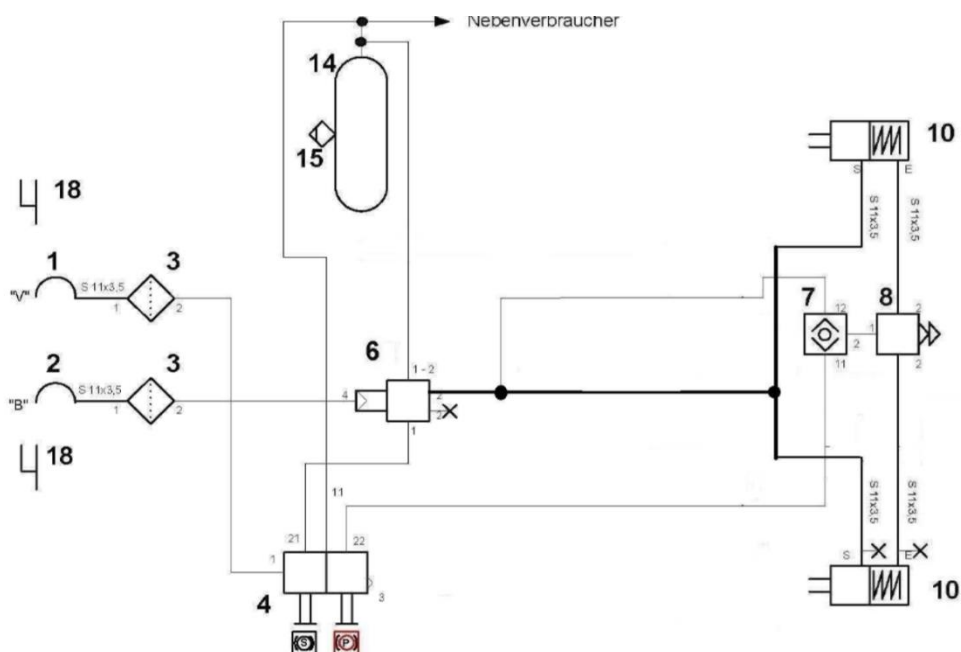


1	Side and edge frame folding	Red circuit
2	Hooks to secure frames for transport	Black circuit
3	Axle	Yellow circuit
4	Setting the disc depth	Green circuit
5	Front equipment	Blue circuit
6	Drawbar piston-rod	Yellow circuit
7	Support leg	White circuit
8	Tractor switchboards	

## 1.4. BRAKE DISTRIBUTION OF THE MACHINE

- The standard version of the machine includes a single-circuit two-line braking system by KNORR BREMSE
- Braking is provided by spring brake cylinders – the parking brake is implemented inside and it is automatic (controlled by a button, see below).
- To release the parking brake, a sufficient air pressure in the system is required. Always check that the parking brake is released before driving.
- If the machine is equipped with brakes, they must be connected to the tractor when driving.
- Always release the brakes of the machine when lifting the machine on the axle.
- ATTENTION !!! The parking brake is activated automatically when there is a leak of air from the system and physical brake release is only possible mechanically, see below.

### 1.4.1. Brake distribution diagram



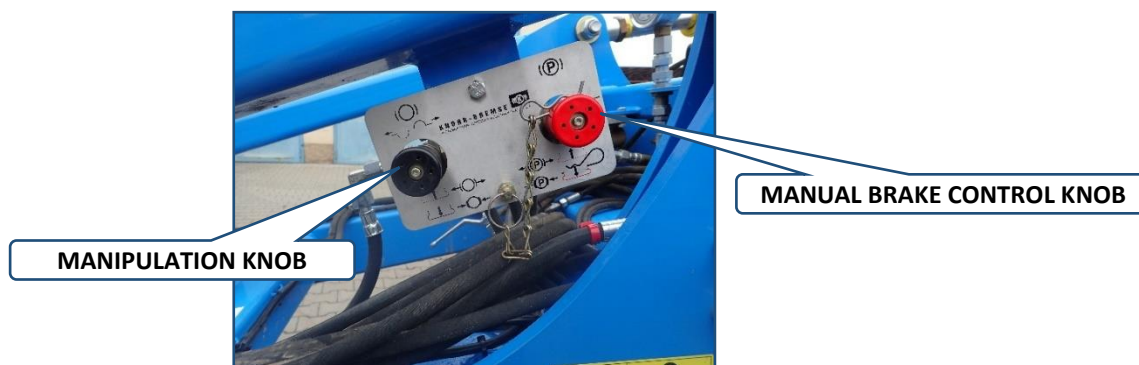
1	Quick-coupler – red line
2	Quick-coupler – yellow line
3	Air filter
4	Control valve of the manual brake
6	Brake valve
7	Two-way valve
8	Jettisoning valve
10	Combined membrane brake cylinder Type 24/30
14	Air tank 40 l
15	Bleeding valve
18	Quick-coupler – red line



### 1.4.2. Hand brake control valve

The rear axle brakes are equipped with an automatic manual brake, the function of which is described below.

The parking brake is automatically activated when the red quick coupling device is disconnected from the tractor.



### Description of the manual brake control when air ducting is disconnected

- When the air hoses are disconnected, the parking brake is automatically activated
- To release the brakes for manipulation, use the black knob
- The control is only functional when there is enough air in the air brake reservoir
- The system is automatically changed over to the travelling (drawn out) position when pressurized

#### Released black knob

- The parking brake is applied

#### Pressed black knob

- The parking brake is released
- The brake is only released when there is enough air in the air brake reservoir

## Description of the manual brake control when air ducting is connected

- The knob has to be pressed when travelling (there is no automatic change over).
- It does not need to be used when the machine is disconnected, the brake is automatically activated when the red quick coupling device of the tractor is disconnected.



**PRESSED RED KNOB**  
=  
**RELEASED BRAKES**



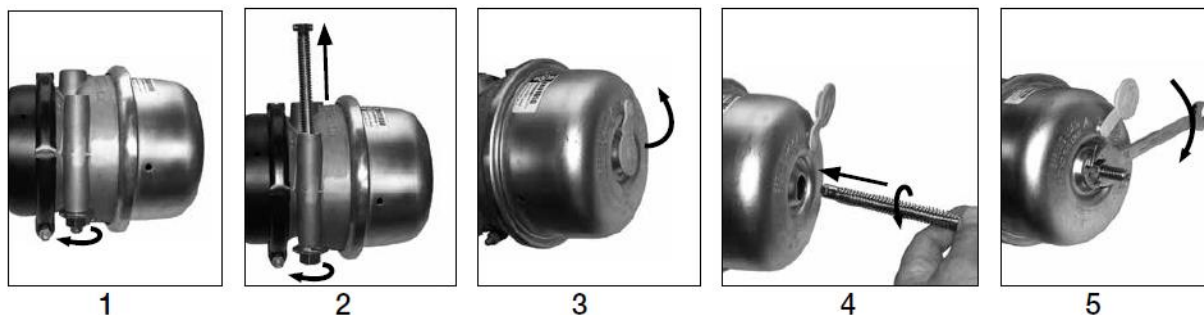
**RELEASED RED KNOB**  
=  
**APPLIED BRAKES**

### 1.4.3. Emergency brake release in case of air leak



- It is possible to release the brakes of the machine using special brake release bolts in case of a leak of air from the brake system.
- The bolts are included in the installation unit of the brake cylinder.

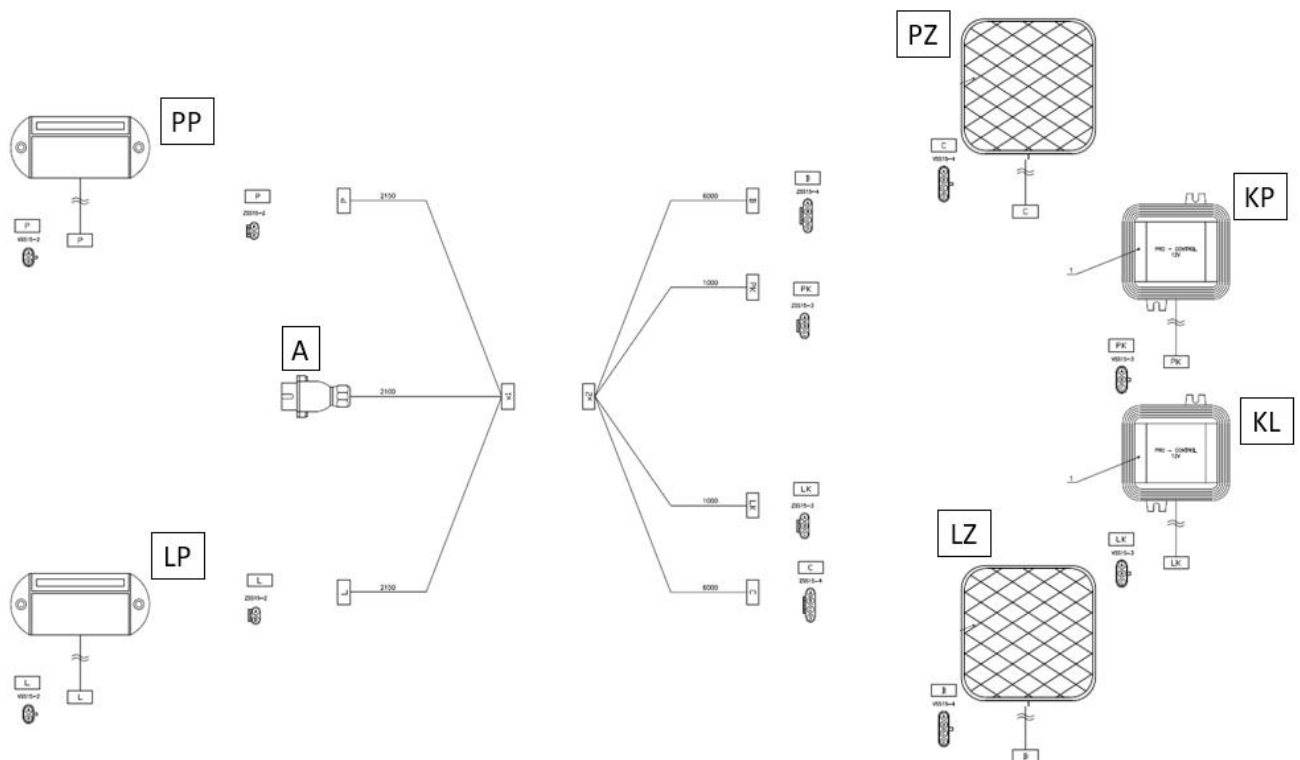
#### Emergency brake release procedure in case of air leak



- Remove the bolts from the holders of the brake cylinder (Picture 1 and 2).
- Release the cap on the back side of the brake cylinder (Picture 3).
- Insert the bolt by its flat end (T-shape) into the opening in the cylinder and turn the bolt by 90° at the end of the opening so that the screw is arrested and cannot be pulled out (Pic. 4).
- Turn the nut (19 mm spanner) clockwise (Pic. 5). **ATTENTION:** Maximum torque is limited to 68Nm.

## 1.5. LIGHTING EQUIPMENT


- The electric system is designed for direct-current power supply at 12V.
- The lighting equipment has to be activated when driving on roads .
- The trailer plug connection is shown in the table (Table 3 Connection of the 7-pin plug on the machine )
- The system is made of LED lights, it does not need any maintenance.
- The circuits of the indicators include connected resistances (KR, KL) for proper indication of the function in the tractor.



SYMBOL	DESCRIPTION
A	7-pin plug (ISO 1724)
LP	Left front headlight
PP	Right front headlight
KL	Left "controller"
KP	Right "controller"
LZ	Left taillight
PZ	Right taillight

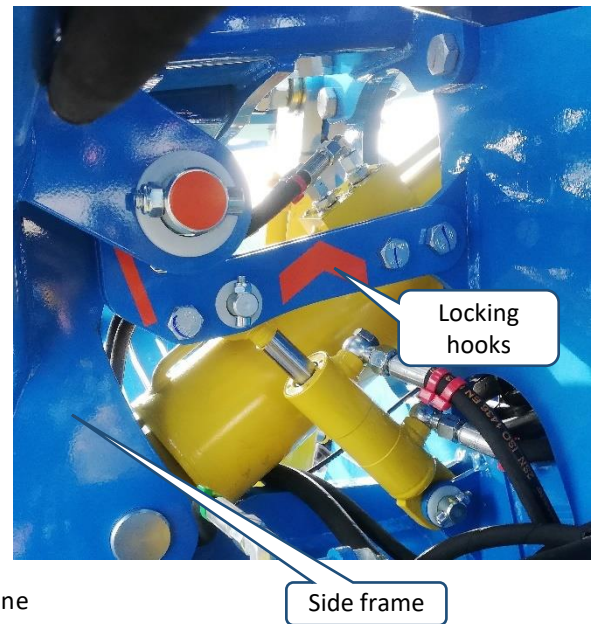
Table 3 Connection of the 7-pin plug on the machine i

No	SYMBOL	FUNCTION
1	L	Left indicator
2	54G	Rear fog light
3	31	Earthing
4	R	Right indicator
5	58R	Left taillight
6	54	Brake light
7	58L	Right taillight



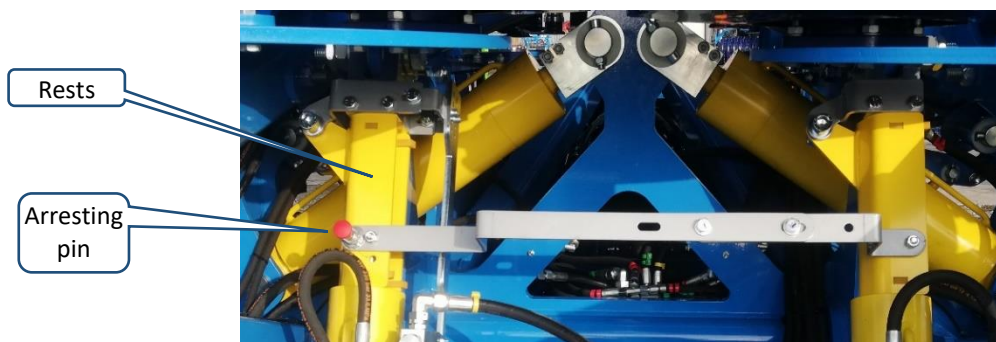
## 1.6. HYDRAULIC FRAME LOCK

- The machine is equipped with a hydraulic system for locking the side frames during transport
- The hooks prevent unintentional unfolding, or unfolding due to external forces, or due to a broken hose of side frame folding
- The control is functional after it is changed over by the red circuit from the tractor cabin
- Top position – locked
- Bottom position – unlocked
- Always check that the hooks are properly locked before driving on roads
- When driving on roads, the red circuit has to be closed with the valve
- Before unfolding, release the hooks by changing them to the bottom end position
- Before folding, check that the hooks are in the bottom position



## 1.7. TRANSPORT RESTS ON THE AXLE

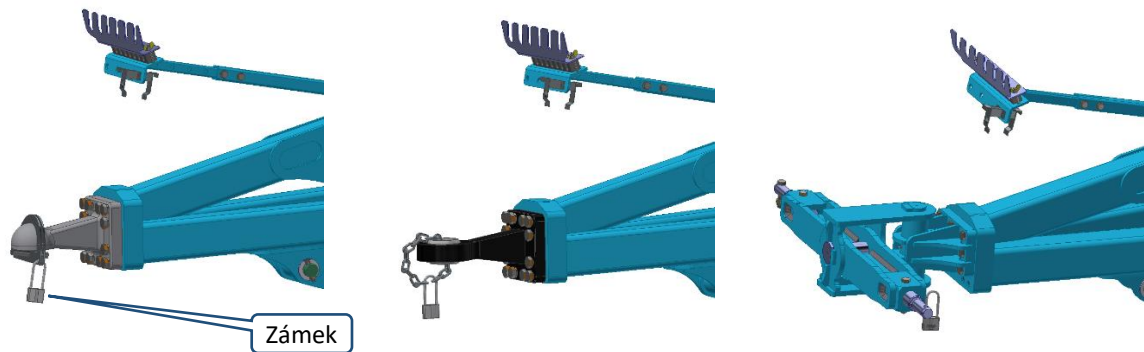
- The transport rests on the axle are used as a safety component when driving on roads
- When the machine is lowered down onto the rests, the transportation height of the machine is below 4 m
- The rests also prevent the lowering of the machine in the case of damage to the hoses and the hydraulic lock



## 1.8. DEVICE AGAINST UNAUTHORIZED USE

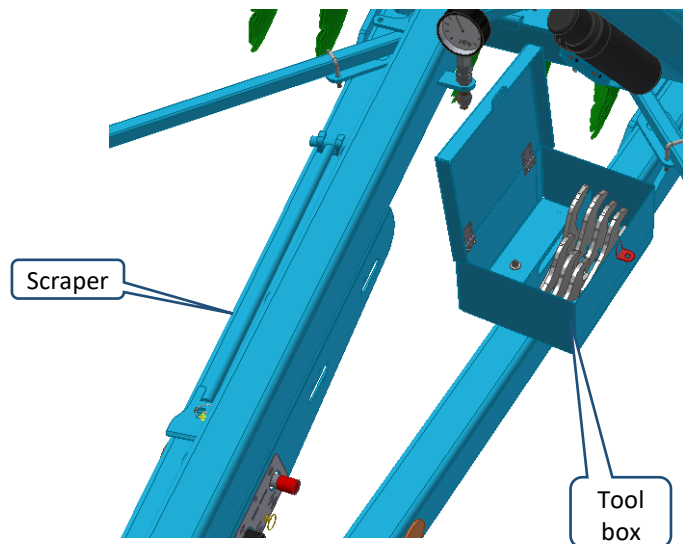
- Each machine is supplied with a device against unauthorized use
- The device is used according to the hitch type as shown in the picture
- The device must be used whenever an unauthorized use of the machine is possible

Picture 5 Device against unauthorized use



## 1.9. TOOL SET

- There is a box with a tool set and scraper placed on the drawbar
- The box contains wrenches from size 36 to 100 and a wrench adapter
- There are stickers on the box lid showing the folding and unfolding procedures
- The scraper is used for cleaning the machine before folding





## 2. MACHINE ASSEMBLY AT THE CUSTOMER



- The operator must perform the assembly according to the instructions of the producer, best in cooperation with the expert servicing technician determined by the producer.
- The operator must secure a functional test of all assembled parts after the completion of the machine assembly.
- The operator must secure that the handling of the machine using lifting equipment during its assembly is in accordance with chapter „C“.

## 3. COMMISSIONING



- Before taking over the machine, test and check, whether damage occurred during transport and whether all parts contained in the bill of delivery were supplied.
- Before commissioning the machine, carefully read this operating manual, especially Chapters **A-D** p. 6-12. Before the first use of the machine, familiarise yourselves with its controls and overall function.
- During work with the machine, observe not only the instructions of this operating manual but also generally valid regulations of work safety, health protection, fire and transport safety, and environmental protection.
- The operator must check the machine before every use (commissioning) from the standpoint of completeness, work safety, work hygiene, fire safety, transport safety, and environmental protection.
- A machine showing signs of damage must not be commissioned.
- Aggregation of the machine with the tractor is to be performed on a flat and hardened surface.
- When working on slopes, observe the lowest allowable slope grade of the set **TRACTOR - MACHINE**.
- Before starting the tractor motor, check whether no person or animal is in the working space of the set and push the warning sound signal.
- The operator is responsible for the safety and all damage caused by the operation of the tractor and the connected machine.
- The operator is obliged to adhere to the technical and safety regulations of the machine determined by the producer when working.
- When turning the machine at headland, the Operator must lift the machine, i.e. the working bodies are not in the ground.
- The operator is obliged to observe the prescribed working depths and speeds stated in the manual in Tabl. 2/p. 5 when.
- The operator is obliged to lower the machine to the ground and secure the set against movement before leaving the tractor cabin.

### 3.1 AGREGATION TO A TRACTOR

- The machine can be connected only to a tractor, whose curb weight is identical or higher than the overall weight of the connected machine.
- The machine operator must observe all generally valid regulations of work safety, health protection, fire safety, and environmental protection.
- The operator may connect the machine exclusively to a tractor that is equipped with a rear three-point suspension (or bottom fixed suspension) and a functional undamaged hydraulic system.

**Tabl.4 – The table of requirements for the towing means for work with the machine**

Requirement for the tractor engine power for disc plough-harrow		<b>SOFTER 12,5 PRO</b>	<b>305-465 kW (410-625 HP)</b>
		<b>SOFTER 10,5 PRO</b>	<b>265–400 kW (355–535 HP)</b>
Requirement for tractor aggregation	Beam TBZ	Hinge category	<b>3</b>
		Suspension joint spacing (measured in joint axes)	<b>1010±1,5 mm (39,76 in)</b>
		Diameter of the hole of the suspension joints for the suspension pins of the machine	<b>Ø37,5 mm (Ø1,48 in)</b>
	Fixed suspension	Height of the lower fixed hinge	<b>500 – 600 mm (19,7 - 23,6 in)</b>
		Mechanism of the aggregation of the bottom fixed suspension	<b>Pin Ø 50mm (1,96 in)</b>
			<b>Pin Ø 70mm (2,75 in)</b>
<b>Ball K80</b>			
Requirement for the tractor's hydraulic system		Side frame folding circuit	<b>Circuit pressure 200 bar (2900Psi), 2 pcs of quick-coupler sockets ISO 12,5</b>
		Axle lifting circuit	
		Disc lifting circuit	
		Frame locking circuit	
		Front equipment lifting circuit	
		Support leg circuit	

- Connect the machine to the fixed bottom hitch and secure it against disconnection.
- If the drawbar of the machine is equipped with a safety chain, attach it to the tractor.



**When connecting, no persons may stay in the space between the tractor and the machine.**

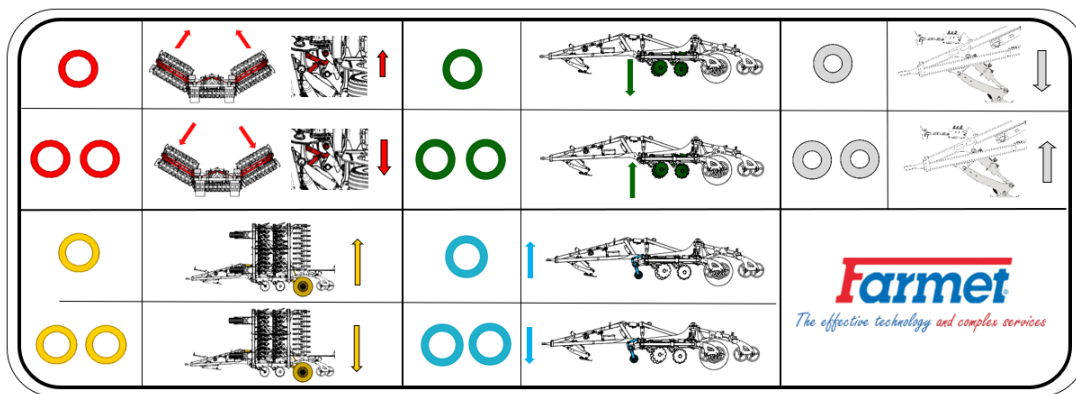
### 3.2 HYDRAULICS CONNECTION

- Connect the hydraulics only when the hydraulic circuits of the machine and the tractor (aggregate) are in a pressure-less condition.
- The hydraulic system is under high pressure. Regularly check for leaks and immediately remove obvious damage of all lines, hoses, and pipe unions.
- When seeking and removing leaks, use only the suitable tools.
- For connecting the hydraulic system of the machine to the tractor, use the plug (on the machine) and the socket (on the tractor) of the quick-couplers of the same type.
- Connect the quick-couplers of the machine to the tractor's hydraulic circuits so that one hydraulic circuit in the machine is connected to one circuit in the tractor (double-acting hydraulic circuits)



**In order to prevent accidental or foreign person (children, passengers) caused movement of the hydraulics, the control switchboards on the tractor must be secured or blocked in the transport position.**

Picture 6 – Hydraulic Circuits



**RED CIRCUIT** – control of side frames folding

- **1 TAPE** folding side frames into the transport position  
locking the folded side frames with hooks
- **2 TAPES** unfolding side frames into the work position  
unlocking the side frame hooks

**BLACK CIRCUIT** – control of the locking hooks of the side frames

- **1 TAPE** securing the folded side frames with hooks
- **2 TAPES** unlocking the hooks of the side frames

**YELLOW CIRCUIT** – lifting the machine into the transport position and when turning

- **1 TAPE** lifting the machine on the axle and drawbar
- **2 TAPES** lowering the machine on the axle and drawbar

**GREEN CIRCUIT** – control of the disc working depth

- **1 TAPE** lowering discs to the ground => increasing working depth
- **2 TAPES** lifting discs from the ground => decreasing working depth

**BLUE CIRCUIT** – control of the front equipment working depth

- **1 TAPE** lowering the front equipment to the ground => increasing working depth
- **2 TAPES** lifting the front equipment from the ground => decreasing working depth

**BLACK CIRCUIT** – hooks for frame locking

- **1 TAPE** lifting the locking hooks, securing for transport
- **2 TAPES** lowering the locking hooks, releasing frames

**WHITE CIRCUIT** – control of the support leg of the drawbar

- **1 TAPE** lowering the support leg to the ground, increasing the drawbar height above ground
  - **2 TAPES** lifting the support leg from the ground, decreasing the drawbar height above ground
- To reduce the number of circuits required in the tractor, it is possible to use an electronic hydraulic circuit switch. (Chapter 6)
  - The circuit breaker combines the red, black and blue circuits into one circuit, red.



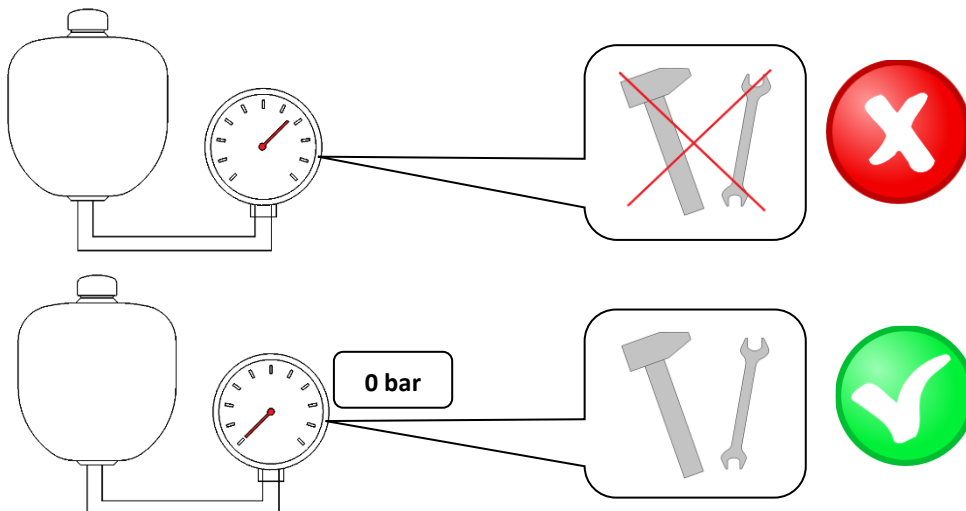
**PRESSURE VESSEL**

Never open or adjust (welding, drilling etc.) the pressure vessel (pressure accumulator). The pressure vessel is still under gas pressure even after it has been emptied.

Empty the pressure vessel in case of any work on the hydraulics of the machine. The manometer must not show any pressure, or the pressure on the manometer must decrease to 0 bars. Only then it is permitted to work on the hydraulic circuit.

It is prohibited to disassemble the parts of the machine hydraulic system that are pressurized. Hydraulic oil that penetrates skin under high pressure causes serious injuries. Immediately seek medical attention in case of injury.

Picture 7 – Work on the hydraulic circuit



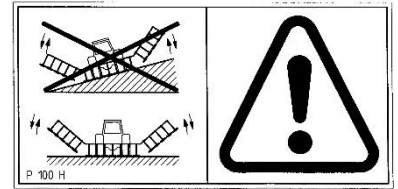
### 3.3 MACHINE FOLDING AND UNFOLDING



- The hydraulics for the folding and unfolding must be connected to the double-action control unit.
- The operator must ensure that during folding and unfolding of the side frames, no person or animal is within their reach (i.e. at the place of their impact) or vicinity.



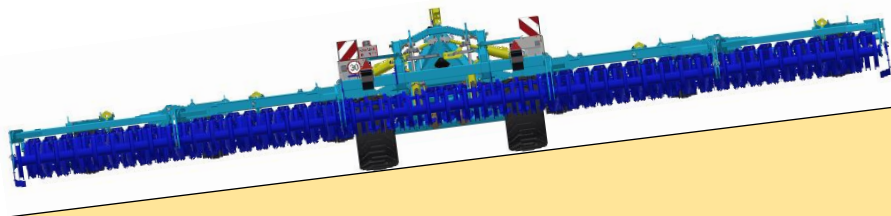
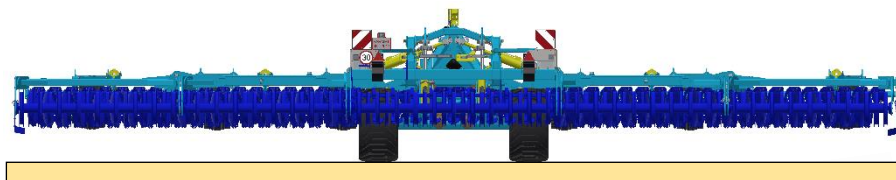
- Perform folding and unfolding on flat and solid surfaces or laterally to the slope with the fully open control unit.
- Execute the folding or unfolding only with a machine that is raised on the axle.
- Check free turning and sufficient lubrication of the folding mechanism of edge frames before folding.
- During folding or unfolding, check the side frames and have them continuously fold into the end position to the stoppers.
- Remove stuck soil from folding points, soil may impair function and cause damage to the mechanics. **Soil may also apply excessive load on the machine frames during folding and transport.**



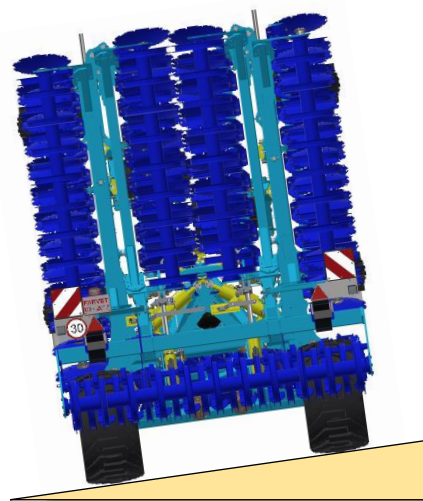
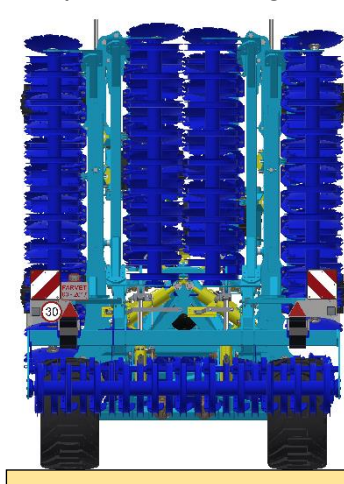
**CAUTION!!!** The machine must be lifted on the axle, when the machine is folded and unfolded.

**Attention!!!** The discs have to be in the drawn-in position, otherwise, there is a risk of collision during folding.

Picture 8 – Machine position for folding



Picture 9 – Machine position for unfolding



Tab.5 – Work position of the machine

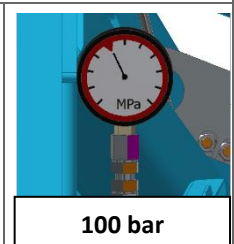
**Machine unfolding procedure – work position**

*Initial condition: The machine is lifted on the axle (transport height of up to 4 m), the side frames are secured with a hook, three shut-off valves on the drawbar and one on the piston-rod are closed*

<p><b>1</b></p>		<p>Use the lever to open the valves of the axle and folding circuits. Open the valve on the drawbar piston-rod.</p>
		<p>Lift the machine to the maximum height (yellow circuit).</p>
		<p>Set the required number of washers on the drawbar piston-rod (chapter 5.2). Tilt the end stops of the axle piston-rods.</p>
<p><b>2</b></p>		<p>Release the locking hooks downwards.</p>
		<p>Unfold the machine, set pressure in the circuit at 100 bar (red circuit). The machine is prepared for work. Change the control lever of the shut-off valve to the work position.</p>
<p><b>3</b></p>		<p>Change the control lever of the shut-off valve to the work position and open the valve for the green circuit. The machine is prepared for work.</p>

**SETTING THE DOWN PRESSURE OF SIDE FRAMES**

- When the machine has been unfolded, the down pressure of the side frames must be adjusted to ensure optimal terrain tracing.
- Set the value of 100 bar (1450 Psi) on the pressure gauge using the circuit for unfolding.





Tab.6 – Transport position of the machine

**Machine Folding Procedure – Transport Position**

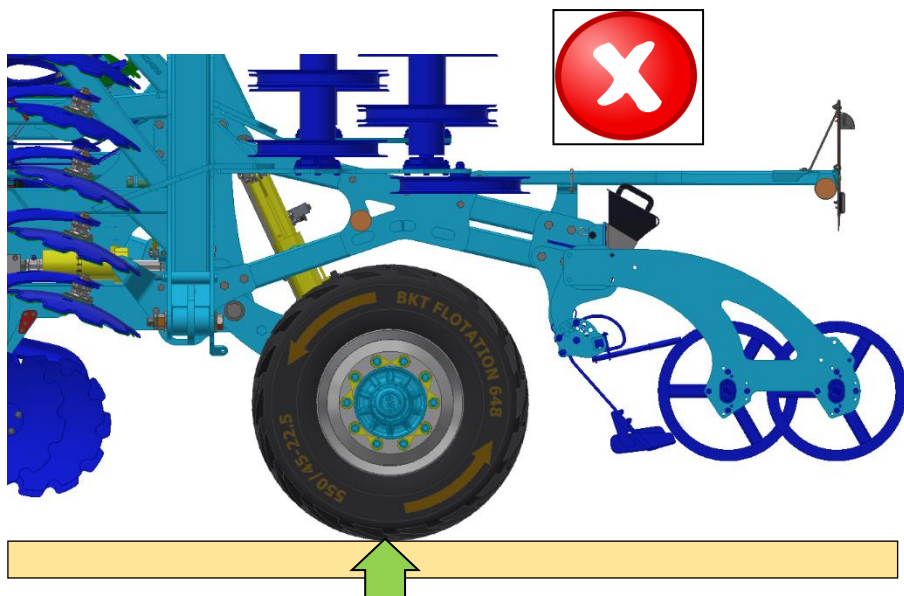
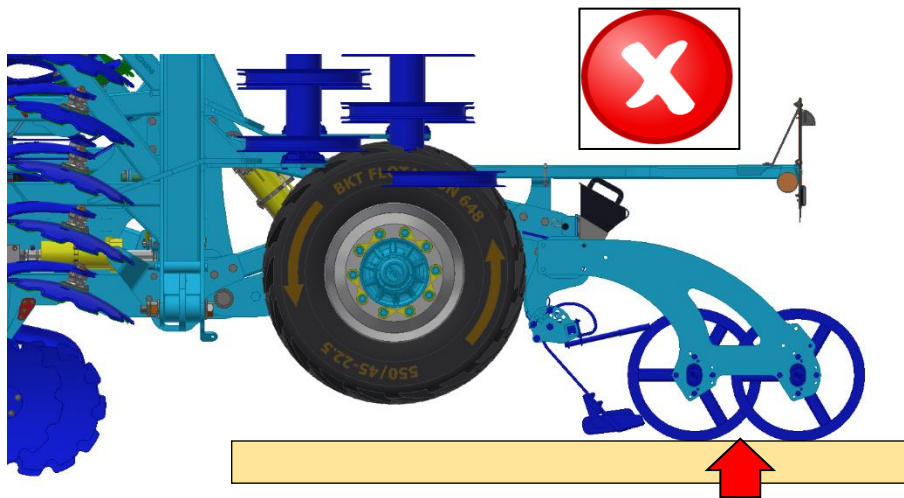
*Initial condition: The machine is lifted for turning at headland (discs are in the maximum depth - automatically), the locking hooks are in the bottom position.*

1		<p>Draw the discs in to the minimum depth (otherwise there is a risk of collision during folding)</p>
2		<p>Change the middle lever (of the shut-off valve) to the transport position. Close the green circuit of the discs.</p> <p>Lift the machine to the maximum height (yellow circuit).</p> <p>Fold the machine using the red circuit. The front equipment will automatically move to the minimum depth.</p> <p>Lift the locking hooks.</p>
3		<p>Add all the washers to the drawbar piston-rod. Insert the end stops of the axle piston-rods.</p>
4		<p>Change the right lever to the locked position (red and yellow circuits are closed), close the valve on the drawbar piston-rod.</p>



**CAUTION!!!** The machine must only be transported by the axle, not rollers.

Picture 10 Transport of the machine



## 4. MACHINE TRANSPORT ON ROADS



### Transport position of **SOFTER PRO**

- Connect the machine to the tractor by the fixed bottom hitch using a pin or a ball.
- Bring the machine into the transport position (Tab.6 – Transport position of the machine )
- The height must be lower than 4 metres. The machine is lowered on the washers of the drawbar piston-rod and on the end stops of the axle.
- The machine must be equipped with removable shields with marking of contours, functional lighting, and the board of the rear marking for slow vehicles (according to ECE No. 69).
- The lighting must be activated during travelling on roads.
- The tractor must be equipped with a special light device of an orange colour, which must be activated during travelling on roads.
- When the machine is equipped with a brake system, it has to be connected to the tractor when driving.
- The maximum transport speed during travelling on roads is **30 km/h (18.6 mph)**.



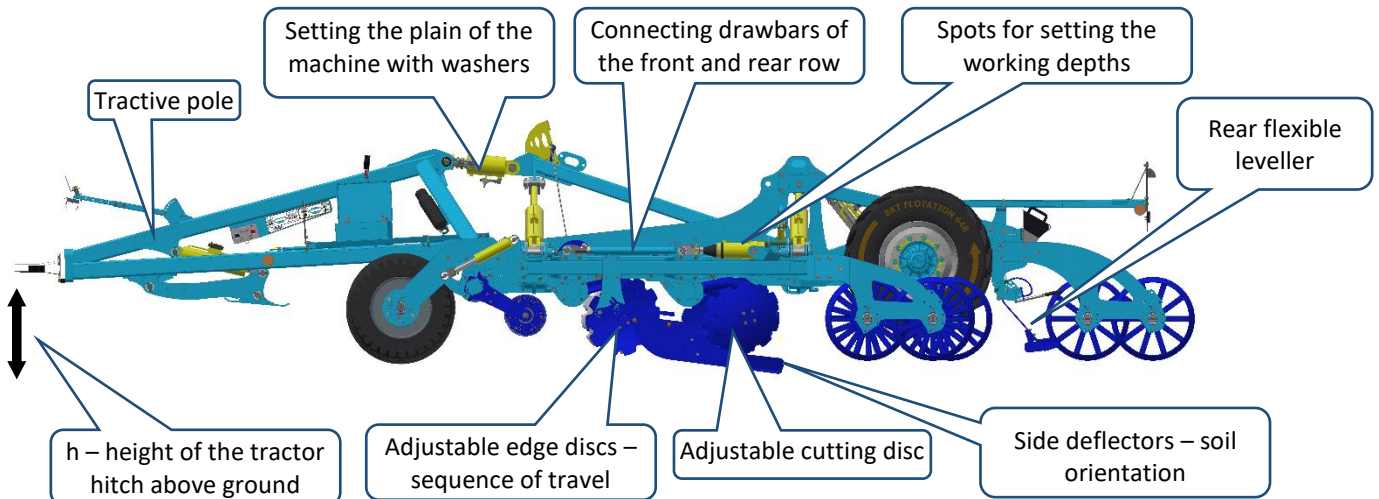
### Ban of transport with decreased visibility!

- The operator is obliged to pay increased attention during transport on roads, due to the transport dimensions of the machine.
- The operator must observe the valid regulations for transport on roads (laws, decrees) after connecting the machine to the tractor, for reason of a change of the axle load. The driving properties of the set also change depending on the terrain nature, adapt the manner of driving to these conditions.
- Only machines with a valid technical certificate issued in accordance with the valid regulation on the approval of technical qualification and operation on public communications as amended may be transported on public communications. Machines without a valid technical certificate may only be transported on public communications when carried by a towed trailer or other approved means of transport in accordance with the valid regulation.
- The operator is obliged to secure sufficient outlook during reversing from his position of the tractor driver. In case of insufficient outlook, the operator is obliged to call a competent and informed person.
- The operator must fold the side frames for transport and secure them against unwanted unfolding by disconnecting the hydraulic circuit of the machine and the tractor.
- During machine transport on roads, the operator must observe the valid laws and decrees that deal with this topic and which specify the relationships of the tractor axle load depending on transport speed.
- Clean the entire machine from any accumulated soil before the transportation on the road.

## 5. MACHINE ADJUSTMENT

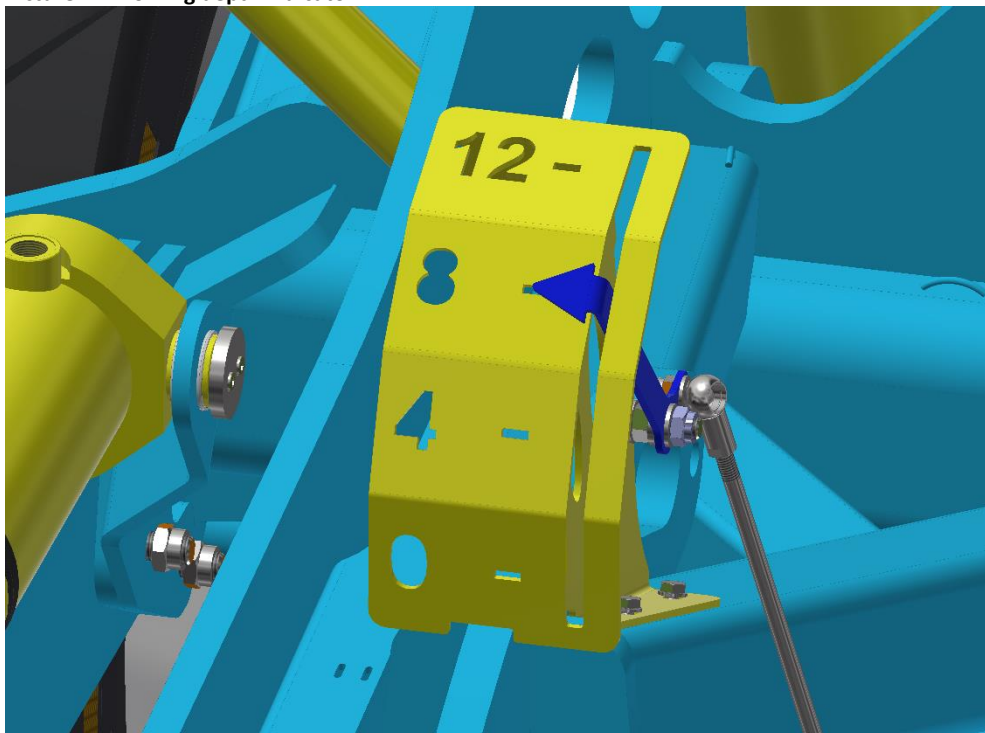
### 5.1 MACHINE WORKING DEPTH ADJUSTMENT

Picture 11 – Machine adjustment



- The soil cultivation depth is set hydraulically (green dusters) from the tractor cabin.
- The current working depth in centimetres can be read on the indicator (Picture 12 Working depth indicator).
- When turning at headland, it is restored in order to achieve evenness along the entire width of the machine.
- To restore the depth when turning, it is required to keep maximum pressure in the yellow circuit for about 2 seconds after the machine is lifted.
- The arrow position may be adjusted by changing the length of the drawbar.

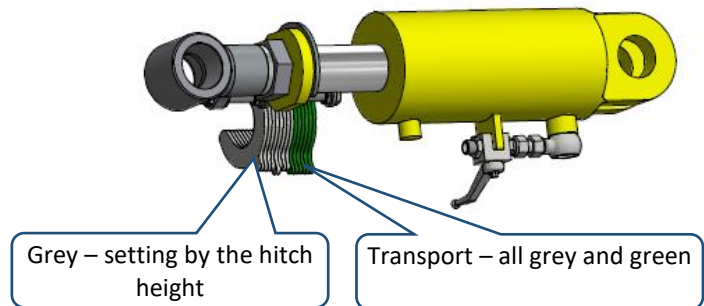
Picture 12 Working depth indicator



## 5.2 WASHERS ON THE DRAWBAR





- The number of washers is adjusted according to the height  $h$  of the tractor hitch above ground (Picture 11 – Machine adjustment)
- The machine frame must be parallel with the ground when working.
- The number of washers does not change when the working depth changes.
- The colours of washers (Picture 13 Washers on the drawbar piston-rod ) are indicative.
- All washers must be inserted for transport.
- The number of washers is stated on the sticker (Picture 14).

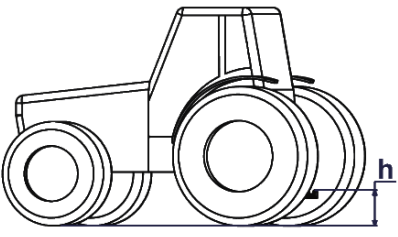
Picture 13 Washers on the drawbar piston-rod



When transporting the machine on roads, all the washers must be used and the machine must be lowered onto the washers to achieve a height below 4 metres.

Picture 14 Drawbar washer sticker

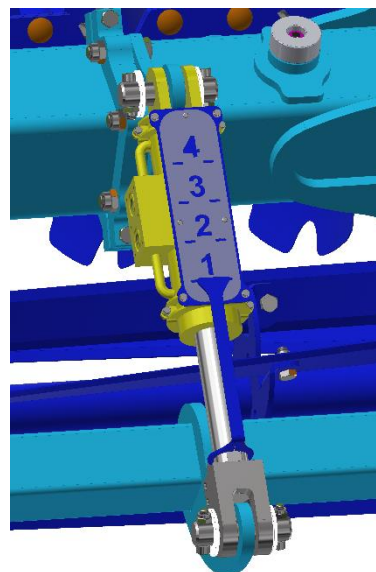
h [cm / in ]	
0	60 / 24
2 	58 / 23
4 	55 / 22
6 	53 / 21
8 	50 / 20
14	TRANSPORT



### 5.3 SETTING THE FRONT EQUIPMENT

- The front equipment is set from the cabin by the blue hydraulic circuit.
- The machine may be equipped with a cutting roller or a flexible leveller.
- The position is shown on the piston-rod indicator (Picture 15 Front equipment indicator)
- Position 4 – highest labour intensity.
- Position 1 – deactivated.
- The setting is independent of the disc working depth setting.
- There are flow limiters in the circuit.
- It may be deactivated when there is a large quantity of crop residue (marked position 1).
- An excessive down pressure on the front cutting roller may worsen recessing of the discs.

Picture 15 Front equipment indicator





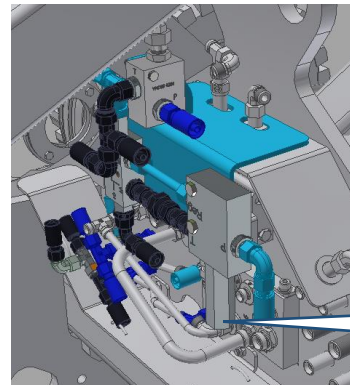
### 5.3.1 SETTING THE CUTTING CYLINDER LOCK

- The cutting roller is protected against overload (example running onto a stone, etc.) with a nitrogen battery
- The release force is set by the pressure in the system.
- The set pressure can be monitored on the manometer on the drawbar (picture 16)
- The recommended pressure is 70 bar, it is marked by an arrow on the manometer.
- The pressure can be reduced as required by setting the pressure reducing valve (picture 17)
- Never exceed a pressure of 70 bar (pressure limited by a safety valve).

Picture 16 Cutting cylinder safety pressure gauge



Picture 17 Pressure reducing valve setting



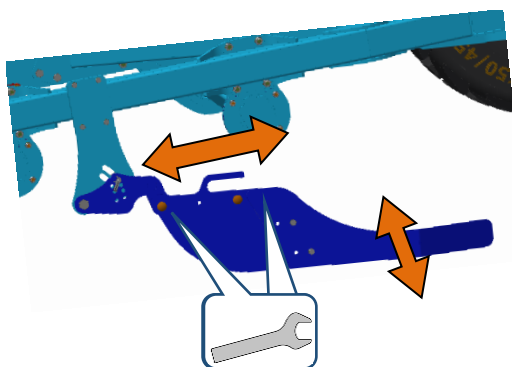
### 5.4 SETTING SIDE DEFLECTORS

- According to the type and quantity of plant residues, it is necessary to set the side deflectors.
- The height is set by changing the pin.
- The longitudinal setting is done by remounting to different openings.
- Proper setting is important for the sequence of travel without any unevenness.



**Attention!** Check for any collision when folding the machine in the case the deflector is set longitudinally.

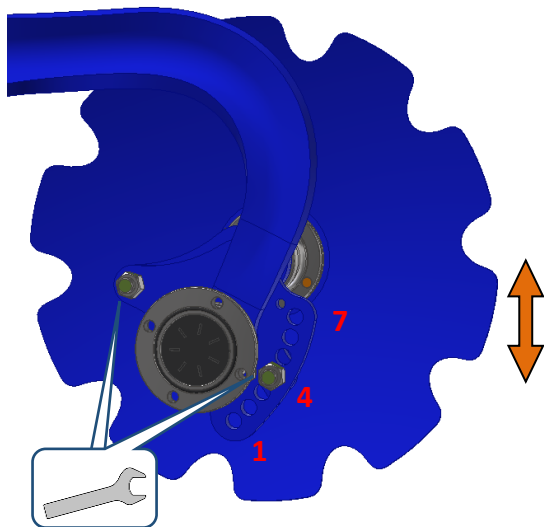
Picture 18 – Options for side deflector settings



## 5.5 SETTING EDGE DISCS

- The edge discs on both sides of the machine have an adjustable position and they can be recessed differently to the other discs.
- The adjustment is executed so that the working depth of the edge discs is lower (approx.  $\frac{1}{2}$  -  $\frac{1}{4}$  of the depth of the other discs).
- Proper setting is important for the sequence of travel without any unevenness.
- The setting may be changed when the working depth, soil conditions and so on are changed.
- The initial setting for depth is 8 cm, position 4 (see the picture 19)

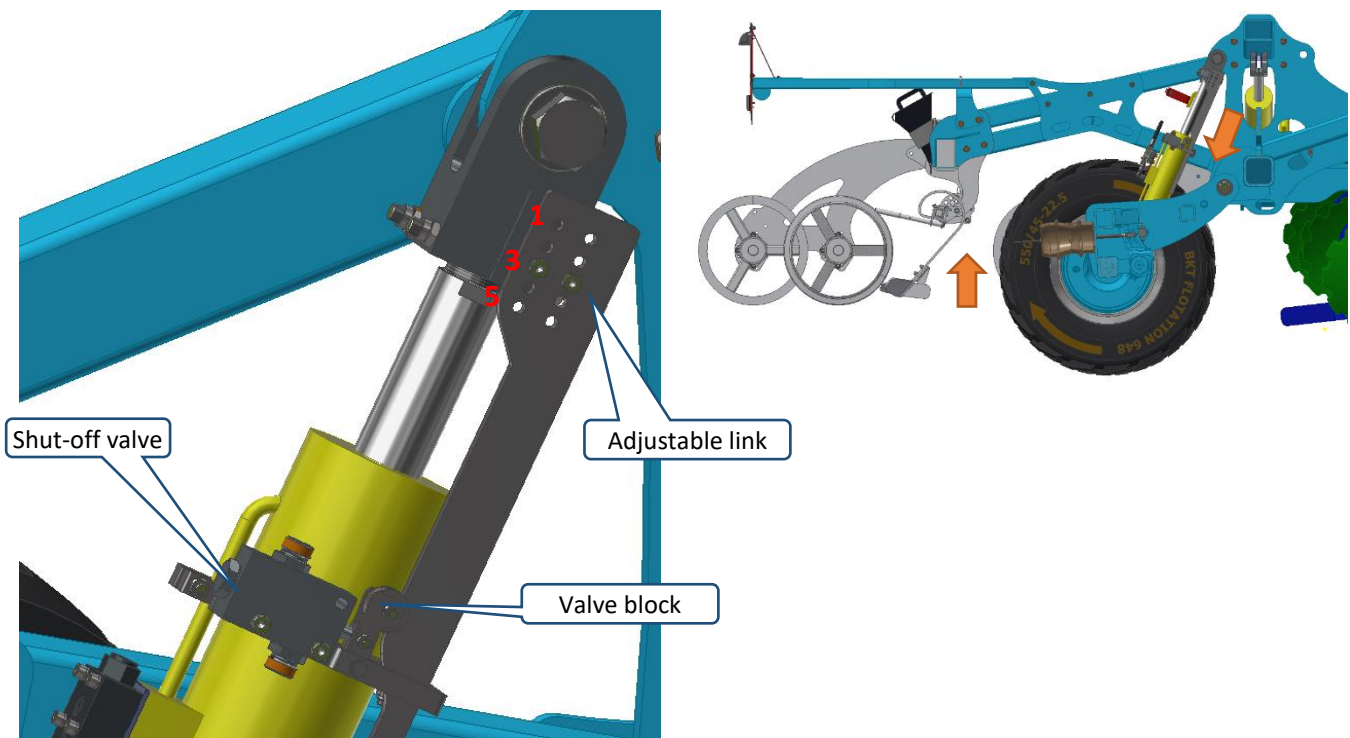
Picture 19 – Options for edge disc settings



## 5.6 SETTING SHUT-OFF VALVE

- The shut-off valve is used for restricting the lift of the transport axle.
- It is used for accelerating turning at headland and it reduces the requirement for the oil flow through the tractor circuit.
- The function is controlled by the left lever on the drawbar, see Chapter 1.2
- The lifting height of the machine at headland can be set by remounting the links of the other holes (Picture 20 Setting the shut-off valve height)
- The recommended setting is when the central roller is about 5 cm above ground during the turn.
- To lift the machine to the maximum height for transport, it is required to change the control lever on the drawbar to the transport position.
- Moving the adjustable links down increases the lifting height (using the holes in position 1 instead of position 3).
- **Attention! When the lifting height is too low, it applies excessive load on the central roller and its mounting onto the frame during the turn.**

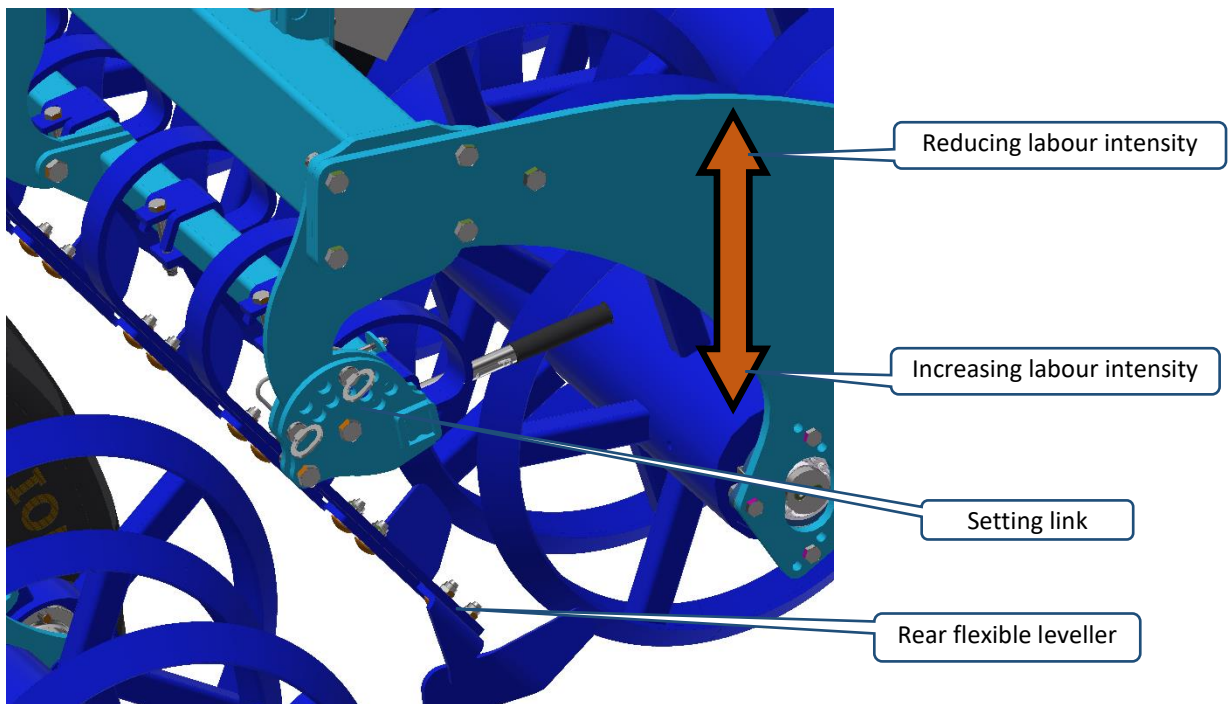
Picture 20 Setting the shut-off valve height



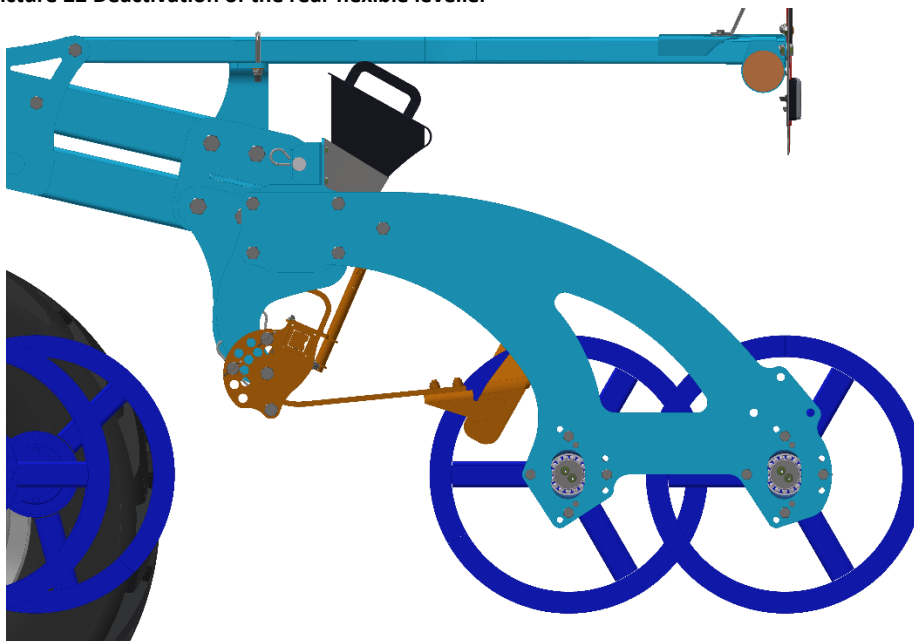
## 5.7 SETTING THE REAR FLEXIBLE LEVELLER

- The rear flexible leveller is used for levelling soil in the centre of the machine.
- Its setting may need to be changed according to the work conditions.
- It is changed by changing the position of the pins in the setting link.
- It may be deactivated when getting clogged (Picture 22 Deactivation of the rear flexible leveller)

Picture 21 Setting the rear flexible leveller



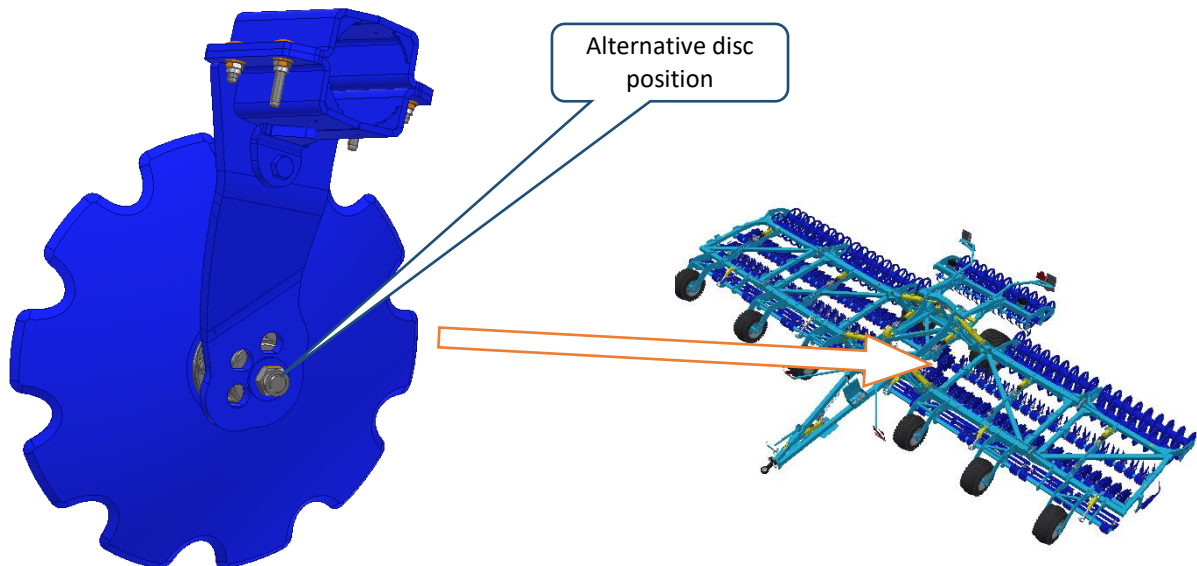
Picture 22 Deactivation of the rear flexible leveller



## 5.8 SETTING THE CUTTING DISC

- The disc is located in the middle of the rear row of symmetric discs.
- The disc may be changed to various positions according to the current soil conditions.
- The setting is used for cutting soil along the entire width of the machine and to create an even soil surface.
- The factory setting is shown in the picture (Picture 23 Setting the cutting disc)

Picture 23 Setting the cutting disc



## 5.9 TURNING AT HEADLAND

- Only turn the machine at headland when lifted (the working parts are not in the ground).
- Lift the machine using the yellow circuit (axle).
- When lifted to the maximum height, keep the pressure in the yellow circuit at maximum for about 2 seconds (piston-rod restart).
- It consolidates the positions of the piston-rods of all frames at maximum depth.
- Use the yellow circuit to put machine back into the working position, draw the piston-rods of the transport axle into the limit position.

### a) Turn with the shut-off valve

- Set the shut-off valve lever to the correct position according to Chapter 1.2
- The axle will lift to the set height, the drawbar will lift to the end stop.
- Lower demands on the tractor oil flow, shorter time for lifting the machine.
- The central roller does not have to be on the ground when turning, it may lead to excessive load.

### b) Turn with the machine at maximum height

- Set the shut-off valve lever to the correct position according to Chapter 1.2
- The machine lifts to the maximum height.
- More time is needed to restart the piston-rods of the disc depth.

## 6. ELECTRONIC HYDRAULIC CIRCUIT SWITCH

### 6.1 DESCRIPTION OF THE EQUIPMENT

The product is designed for electronic division and control of the hydraulic circuits. Primarily, the system has one input circuit and three output circuits, while the selection of the individual circuits is done via an electronic controller from the tractor cabin.

Thus, we are reducing the final number of connected hydraulic circuits between the tractor and the machine.

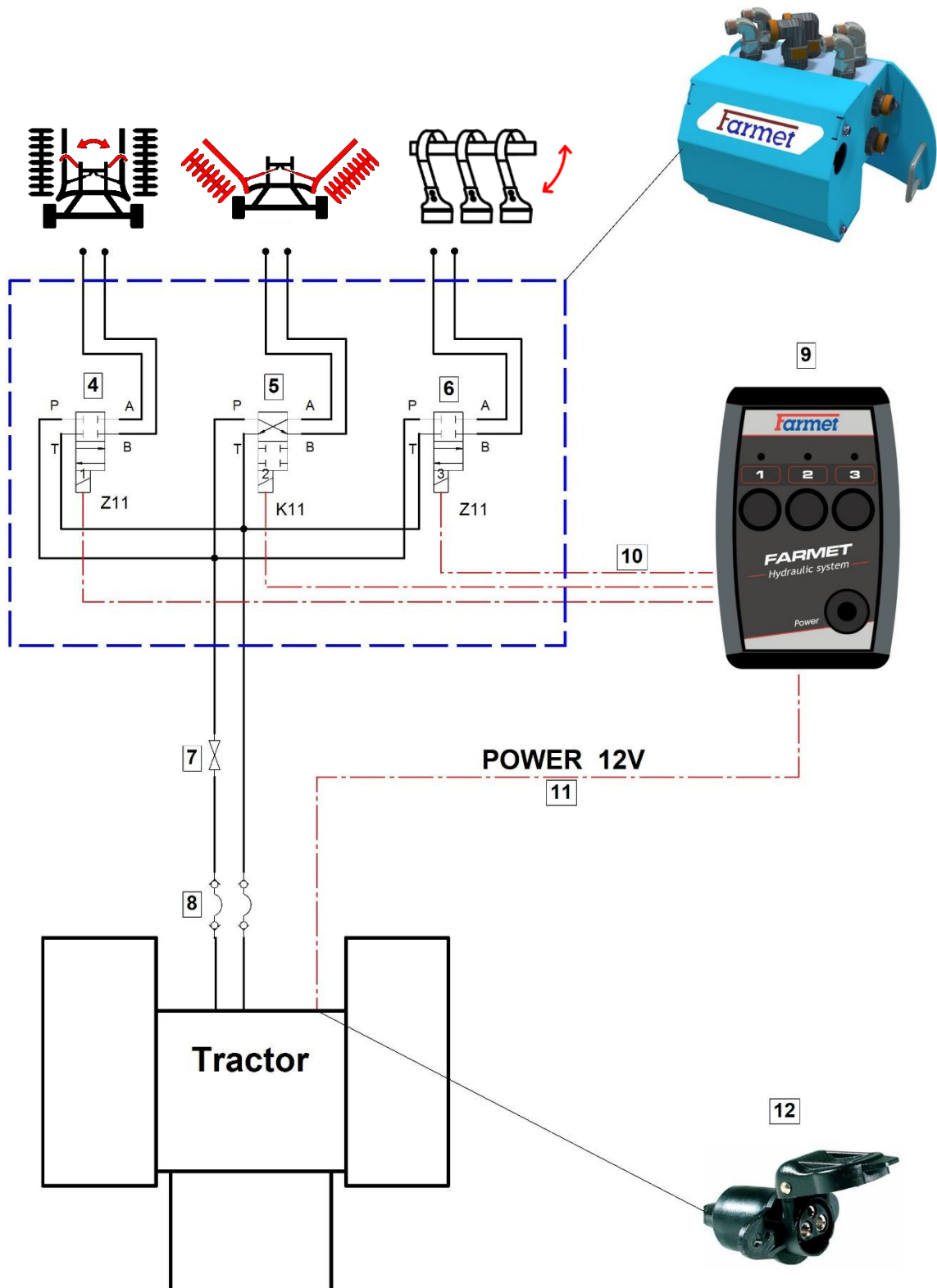
### 6.2 SYSTEM WIRING DIAGRAM

#### 6.2.1 Designation of system components

<b>1</b>	Output 1 – CIRCUIT 1 CONTROL
<b>2</b>	Output 2 – CIRCUIT 2 CONTROL
<b>3</b>	Output 3 – CIRCUIT 3 CONTROL
<b>4</b>	Electrohydraulic valve of CIRCUIT 1
<b>5</b>	Electrohydraulic valve of CIRCUIT 2
<b>6</b>	Electrohydraulic valve of CIRCUIT 3
<b>7</b>	Ball valve
<b>8</b>	Tractor quick-couplers
<b>9</b>	Controller
<b>10</b>	Electric line between the hydraulic block and controller, with a disconnecting connector
<b>11</b>	Supply cable of the system, equipped with a fuse
<b>12</b>	Tractor power socket

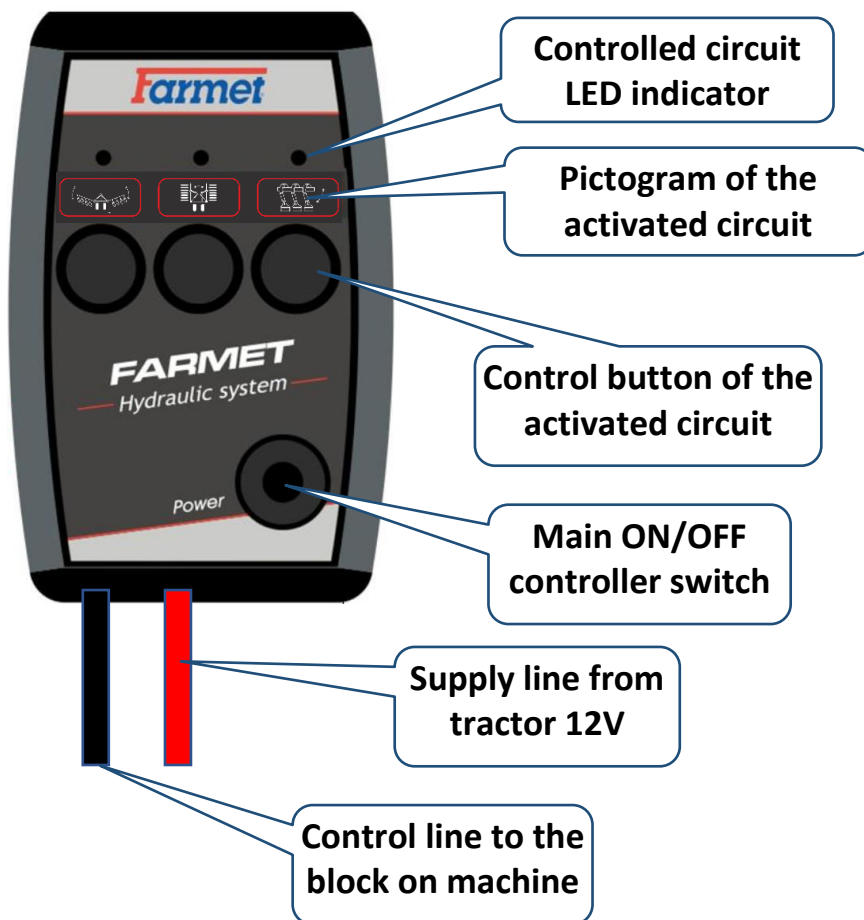


### 6.2.2 Wiring diagram

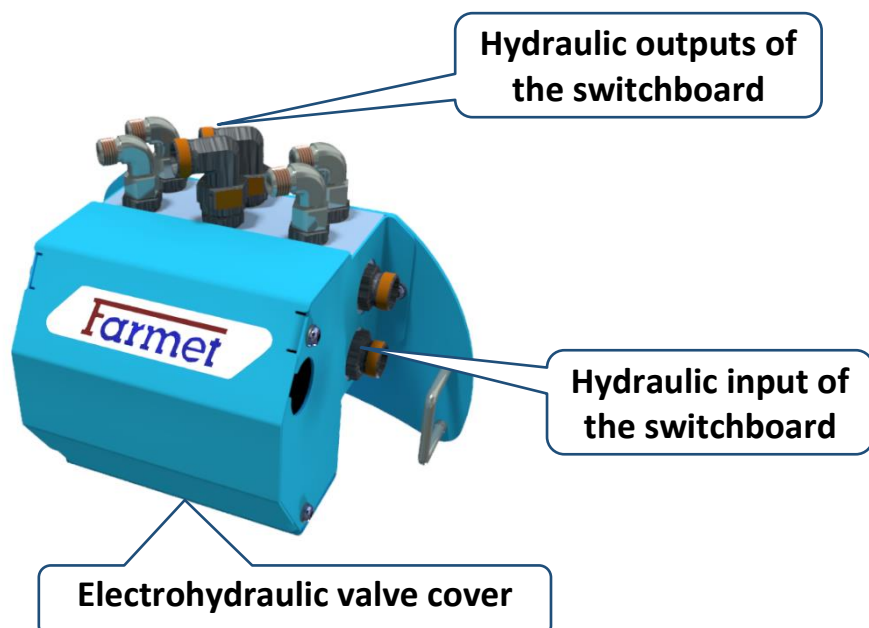


## 6.3 MAIN COMPONENTS

### 6.3.1 Controller



### 6.3.2 Hydraulic block



### 6.3.3 Power supply

- The system is powered from the tractor network.
- To ensure proper function of the system, the voltage in the accumulator must be within the range of 12 V – 14.4 V /10A.
- Power supply is provided via a three-pole tractor socket or ignitor socket.
- The supply line is equipped with a small knife-blade-contact fuse at 5A.
- Never replace the fuse with a different value.

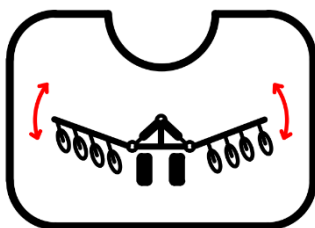


## 6.4 FUNCTIONS + PICTOGRAMS

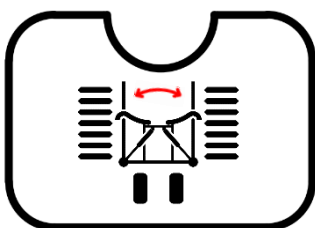
**POWER button** – Activates the power supply of the control device and launches the system. It is indicated by the red diode when activated.

**Circuit selection buttons** – The individual circuits are selected using the control buttons of the individual circuits. Each button has a pictogram assigned to identify the controlled circuit. Only one selected circuit is active and it is signalled by the green diode above the pictogram.

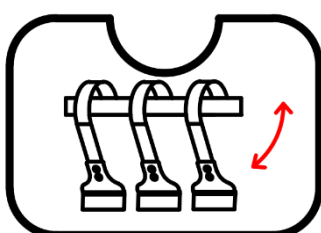
List of used pictograms:



Machine folding



Frame locking



Front equipment

## 6.5 CONNECTING PROCEDURE

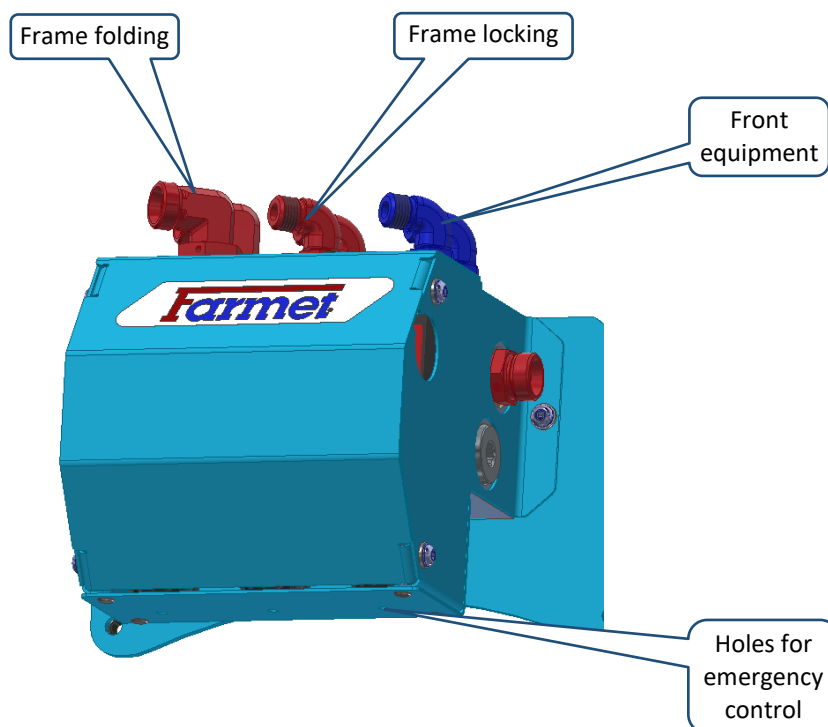
1. Installation of the controller in the tractor cabin
2. Connection with the machine
3. Connection with the electric source
4. System activation using the Power button
5. Circuit selection

## 6.6 EMERGENCY STATE

A defect in the electric installation or the tractor power supply is considered to be an emergency state. When completely disconnected, turned off or in the case of a failure, it is always possible to control the **Frame Folding** circuit (as an initial one, with a reversed switching function).

### Manual emergency control

- The switchboard may be controlled mechanically in emergency
- The control is performed by manually pressing the gate valve of the switchboard via the spring (e.g., using a suitable bar with a diameter of about 3 mm)
- The switchboard cover has holes on the bottom side for this case
- Example: "Frame Folding" circuit control
  - Close this circuit by pressing the gate valve of the "Frame Protection" (the gate valve has a reversed function, the circuit is open without voltage)
  - Open this circuit by pressing the "Frame Folding" gate valve
  - Control the selected circuit by the oil pressure from the tractor

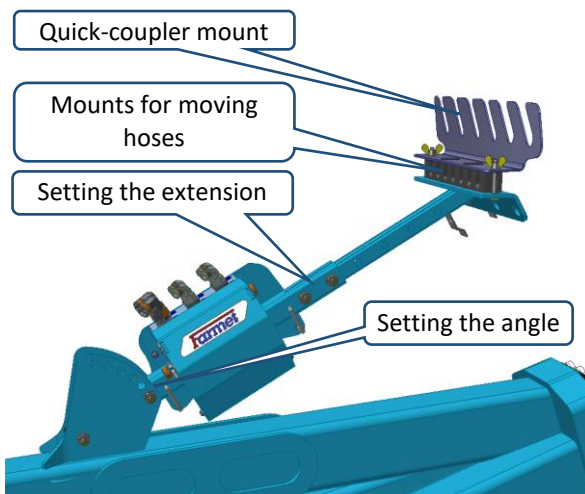


## 7. ADJUSTMENT AND MAINTENANCE PROCEDURES

### 7.1. SETTING THE HOSE MOUNT

- The hose mount and their length must be set so that they are not damaged when working in the field or being transported, as well as when taking turns.
- It is possible to set the angle of the mount and its extension.
- The hoses may be moved in the mount after loosening the wing nuts.
- Check in all positions that the hoses are not excessively stretched and that they cannot be caught by the tractor shoulders.

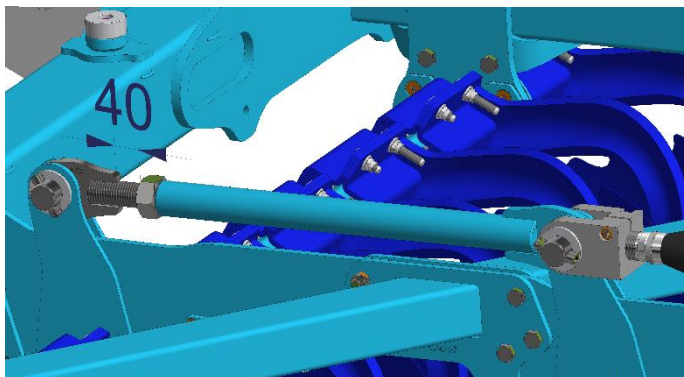
Picture 24 Hose mount



### 7.2. DEPTH CONNECTING RODS FOR THE FRONT ROW

- The working depth is set at the rear row of discs
- The front row is connected to its using an adjustable connecting rod
- The setting does not have to be adjusted in regular conditions
- With correct factory settings, the distance between the lug and the lock nut is 40 mm (Picture 25 Setting the connecting rod )
- With correct setting, the front and the rear row of discs works in the same working depth.

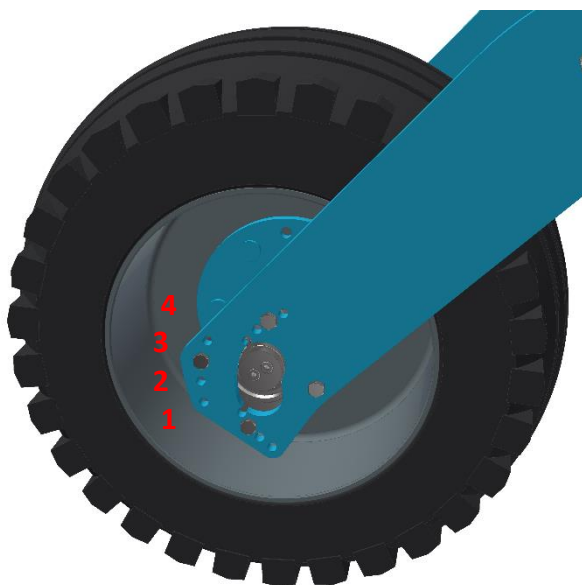
Picture 25 Setting the connecting rod



### 7.3. TRACING WHEEL POSITION

- The bearings of the tracing wheels may be mounted to different positions on the frame
- The factory setting is used according to the selected roller
- SDR, DVR rollers – position4
- DRR roller – position3
- The setting may have to be adjusted according to the conditions
- The setting must correspond to the number of washers on the drawbar and the tractor hitch height

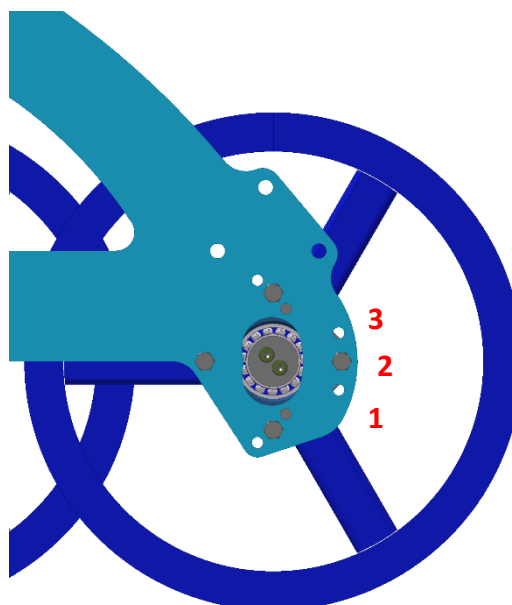
Picture 26 Setting the tracing wheels



### 7.4. ROLLER POSITIONS

- The roller bearings may be mounted in different positions on the side plates
- The factory setting is set at the central position (position 2)
- The setting does not usually need to be changed

Picture 27 Setting the roller positions





## 7.5. AIR JET DRAINAGE


- Drain the air jet regularly once a week, according to the maintenance plan.
- Drain water without any air pressure in the air jet
- Excessive water amount may corrode the brake system



## 8. MACHINE MAINTENANCE AND REPAIRS





**Observe the safety instructions for treatment and maintenance.**

- If it is necessary to weld during the repair and have the machine connected to the tractor, it must have disconnected supply cables from the alternator and the accumulator.
- Check the tightening of all screw and other assembly connections at the machine before every use of the machine, furthermore continuously as needed.
- Continuously check the wear of the working bodies of the machine, possibly replace these worn working bodies with new ones.
- Adjustment, cleaning, and lubrication of the machine may only be performed with the machine at rest (i.e. the machine is standing and not working).
- When working on a lifted machine, use suitable support equipment supported at marked points or at points suitable for that.
- During adjustment, cleaning, maintenance, and repair of the machine, you must secure those parts of the machine that could endanger the operator by falling or another movement.
- For catching the machine during handling using lifting equipment, use only the places marked with self-adhesive labels with the chain sign "——".
- Upon a failure or damage of the machine, immediately turn off the tractor's engine and secure against restarting, secure the machine against movement ⇒ only then you can remove the failure.
- During repairs of the machine, use exclusively the genuine spare parts, suitable tools and protective equipment.
- Regularly check the prescribed pressure in the machine tyres and the condition of the tyres. Perform possible repairs of the tyres in an expert workshop.
- Keep the machine clean.



**Do not clean hydraulic cylinders and bearings with a high-pressure cleaner or direct water stream. The seals and bearings are not watertight at high pressure.**

## 8.1. MAINTENANCE PLAN

<b>MAINTENANCE PLAN</b>					
<b>Perform the planned maintenance according to the instructions :</b>					
Maintenance Task	Daily (season) (10 hours)	Once a week (50 hours)	Before season	After season	Time interval
<b>Machine in general</b>					
<ul style="list-style-type: none"> <li>Visual inspection of the machine</li> <li>Checking for any undesirable sounds, vibrations and excessive wear</li> </ul>	X				
<ul style="list-style-type: none"> <li>Checking crucial nodes: pins, bearings, rollers, working parts</li> </ul>	X		X	X	
 <p>Do not use a high-pressure cleaner or direct stream of water to clean the hydraulic rollers, bearings, electric and electronic parts. The seals and bearings are not waterproof at high pressure.</p>					
<b>Hydraulic system</b>					
Checking the function, tightness, mounting and worn spots of all hydraulic parts and hoses		X	X		
<b>Hydraulic hoses – replacement:</b> <ul style="list-style-type: none"> <li>Damaged external casing of the hose (mechanically or blistered)</li> <li>Fluid seepage (especially the end piece)</li> <li>Bumps or blisters on the hose</li> <li>Deformed or corroded end piece</li> <li>Loose end piece – the hose spins</li> </ul>	X			X	
Hydraulic hoses - replacement: <ul style="list-style-type: none"> <li>Expired service life of the hose</li> </ul> 					6 years
<p><b>!!! PREVENTION means removing the problem according to the plan, outside the season, without stress and comfortably before a secondary problem, an accident or a health hazard arises.</b></p>					

## MAINTENANCE PLAN

Perform the planned maintenance according to the instructions:

Maintenance Task	Daily (season) (10 hour)	Once a week (50 hours)	Before season	After season	Time interval				
<b>Bolt connections</b>									
<b>Visual</b> inspection of bolt and hydraulic joints, tighten any loose joints using a corresponding torque (see the torque chart)	X			X					
<b>Wheels – tighten all wheel nuts.</b> <ul style="list-style-type: none"> <li>• <b>First time: after 10 hours of operation</b></li> <li>• <b>Wheel replacement: after 10 hours of operation</b></li> </ul> <table border="1" style="margin-left: 20px; width: 150px;"> <tr> <td style="padding: 2px;">M 22 x 1,5</td> <td style="padding: 2px;">440 Nm</td> </tr> </table>	M 22 x 1,5	440 Nm			X		100 h		
M 22 x 1,5	440 Nm								
<b>Towing lug</b> M20x80 – 10.9, 280 Nm			X		100 h				
<b>Tracing wheels – tighten all the nuts of the wheels.</b> <ul style="list-style-type: none"> <li>• <b>First time: after 10 hours of operation</b></li> <li>• <b>Wheel replacement: after 10 hours of operation</b></li> </ul> <table border="1" style="margin-left: 20px; width: 150px;"> <tr> <td style="padding: 2px;">M 22 x 1,5</td> <td style="padding: 2px;">440 Nm</td> </tr> <tr> <td style="padding: 2px;">M 20 x 1,5</td> <td style="padding: 2px;">340 Nm</td> </tr> </table>	M 22 x 1,5	440 Nm	M 20 x 1,5	340 Nm			X		100 h
M 22 x 1,5	440 Nm								
M 20 x 1,5	340 Nm								
<b>Brake system</b>									
<b>Brake line and hoses</b> – check the function, tightness, mounting and clamping, or breaking	X		X	X					
<b>Brake components</b> – check the function, tightness, mounting	X		X	X					
<b>Air nozzle</b> – drain using the draining valve		X		X					
<b>Draining valve</b> – check the function, clean and replace sealing			X	X					
<b>Pipe filter</b> – clean			X	X					
<b>Brake/parking brake</b> – check the function, escapement setting <b>25-45mm</b>	X								
<b>Brake levers</b> escapement setting <b>25-45 mm</b>			X		100 h				
<b>Brake lining</b> – check the condition of the brake lining, min. thickness of 3mm				X					

**!!! PREVENTION means removing the problem according to the plan, outside the season, without stress and comfortably before a secondary problem, an accident or a health hazard arises.**

## MAINTENANCE PLAN

Perform the planned maintenance according to the instructions:

Maintenance Task	Daily (season) (10 hour)	Once a week (50 hours)	Before season	After season	Time interval
<b>Wheels/axle</b>					
<b>Tyre pressure check</b> 550/45-22,5, 20 PR, pressure 400 kPa		X	X	X	
<b>Transport axle bearings</b> – check and potential clearance adjustment (in a workshop)				X	
<b>Tracing wheels</b>					
<b>Tyre pressure check</b> 31x15,5-15/ TR-07, pressure 300 kPa		X	X	X	
<b>Wheel shaft bearings</b> – check and potential replacement (in a workshop)				X	
<b>Safety measures</b>					
<b>Lighting and safety hatched boards</b> – check the condition, function and cleanliness	X		X		
<b>Hazard and safety labels</b> – check that they are installed and legible		X			
<b>Machine lubrication plan</b>					
<b>Points of lubrication</b> – lubricate according to the lubrication plan					Acc. to the plan
<b>After season</b>					
<b>Entire machine</b> <ul style="list-style-type: none"> <li>• Treat and clean the machine; do not spray oil or similar agents on the plastic parts.</li> <li>• Store the machine away with piston-rods draws in, if possible.</li> <li>• Spray the piston-rods of the hydraulic cylinders with suitable anti-corrosion agents.</li> <li>• Check the tightness of all bolt and plug-in connections (see the torque chart).</li> <li>• Check for any damage of the electric cables and replace if needed.</li> </ul>					
<b>Brake system</b> <ul style="list-style-type: none"> <li>• Preserve the anti-freeze fluid for air-brake systems (about 0.1l), ethanol-free, before the last ride, use fluid recommended by the tractor manufacturer.</li> <li>• Secure the machine against movement by Scotch blocks.</li> <li>• Release the parking brake, release air from the air nozzle and close the brake lines. The service brake must be released during winter so that it does not get stuck on the brake drum.</li> </ul>					
<b>Points of lubrication</b> <ul style="list-style-type: none"> <li>• Grease the points of lubrication according to the lubrication plan, use grease <b>NGLI 2</b></li> </ul>					
<p><b>!!! PREVENTION means removing the problem according to the plan, outside the season, without stress and comfortably before a secondary problem, an accident or a health hazard arises.</b></p>					

## 9. MACHINE STORAGE

Long-term machine shutdown:

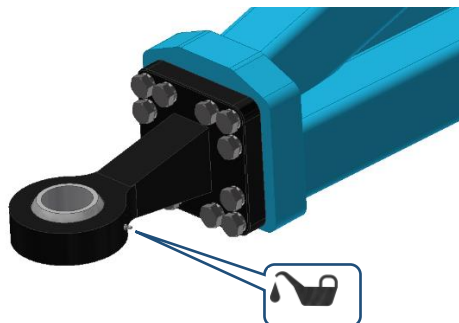
- Store the machine under a roof if possible.
- Store the machine on a flat and solid surface with sufficient load capacity.
- Clean the machine before storing and conserve so that it is not damaged in any way during storage. Pay special attention to all marked lubrication points and properly lubricate them according to the lubrication plan.
- Store the machine in the position with folded frames in the transport position. Store the machine on the axle and the storage leg, secure the machine against spontaneous movement using scotches or another suitable tool.
- When storing, lower the machine into the lower position using hydraulics.
- The machine must not lean on the discs as the working discs of the machine could be damaged.
- Secure the machine against access of unauthorised persons.

## 10. MACHINE LUBRICATION SCHEDULE

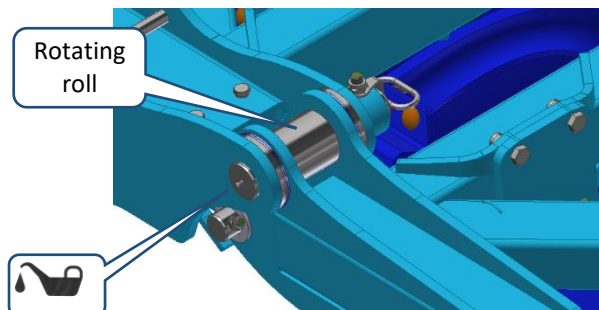
- All the lubrication points should also be lubricated at the beginning and end of the season.

LUBRICATION POINT		INTERVAL	LUBRICANT
Connecting rod lug C50, C70, K80	Picture 28	50 h	Grease Class NGLI 2
Edge frame folding roll	Picture 29	50 h	
Brake levers, brake shaft	Picture 30 Brake grease cap	250 h	

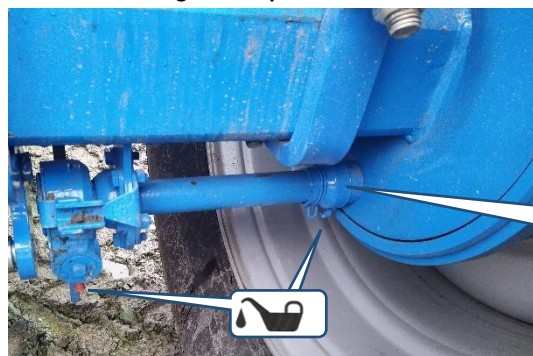
Picture 28 Lug C70



Picture 29 Folding roll



Picture 30 Brake grease cap



Do not lubricate excessively.  
Risk of grease penetrating the brake.



## **11. ENVIRONMENTAL PROTECTION**

- Regularly check the tightness of the hydraulic system.
- Preventively replace or repair hydraulic hoses, possibly further parts of the hydraulic system showing signs of damage, before oil leaks occur.
- Check the condition of hydraulic hoses and perform their timely replacement. The service life of hydraulic hoses includes the time, when they were stored.
- Handle oils and greases according to valid waste laws and regulations.

## **12. MACHINE DISPOSAL AFTER SERVICE LIFE EXPIRY**

- The operator must secure during machine disposal that steel parts and parts, in which hydraulic oil or lubricating grease moves are differentiated.
- Steel parts must be cut by the operator while observing safety regulations and handed over to the secondary raw material collection point. He must proceed with other parts according to valid laws about waste.

## **13. SERVICING AND WARRANTY CONDITIONS**

### **13.1. SERVICING**

Servicing is secured by the dealer after consulting with the manufacturer, possibly directly by the manufacturer. Spare parts then using the sales network by individual sellers in the entire country. Use only the spare parts according to the spare parts catalogue officially issued by the manufacturer.

### **13.2. WARRANTY**

- 13.2.1 The manufacturer provides a warranty of 24 months for these machine parts: main frame, axle, and machine tow bar. For other parts of the machine, the manufacturer provides a warranty of 12 months. The warranty is provided from the date of sale of the new machine to the end user (consumer).
- 13.2.2 The warranty applies to hidden defects that will show in the warranty period with proper use of the machine and while fulfilling the conditions stated in the operating manual.
- 13.2.3 The warranty does not apply to wearable spare parts, i.e. regular mechanical wear and tear of replaceable parts of the working sections (shares, edges, etc.).
- 13.2.4 The warranty does not apply to indirect consequences of possible damage, such as service life decrease etc.
- 13.2.5 The warranty is bound to the machine and is not void upon an owner change.
- 13.2.6 The warranty is limited to the disassembly and assembly, possibly replacement or repair of the defective part. The decision, whether to replace or repair the defective part, is up to the contractual workshop of Farmet.
- 13.2.7 During the warranty period, only the authorised servicing technician of the manufacturer may perform repairs or other interventions into the machine. In the opposite case, the warranty will not be acknowledged. This provision does not apply to the replacement of wearable spare parts (see point 13.2.3).
- 13.2.8 The warranty is conditioned by using the genuine spare parts of the manufacturer.

**ⒸZ ES PROHLÁŠENÍ O SHODĚ**  
**ⒸGB CE CERTIFICATE OF CONFORMITY**  
**ⒸD EG-KONFORMITÄTSEKTLÄRUNG**  
**ⒸF DÉCLARATION CE DE CONFORMITÉ**  
**ⒸRU СЕРТИФИКАТ СООТВЕТСТВИЯ ЕС**  
**ⒸPL DEKLARACJA ZGODNOŚCI WE**

1. ⒸZ My ⒸGB We ⒸD Wir ⒸF Nous ⒸRU Мы ⒸPL My: Farmet a.s.  
Jiřinková 276  
552 03 Česká Skalice  
Czech Republic  
DIČ: CZ46504931  
Tel/Fax: 00420 491 450136

ⒸZ Vydáváme na vlastní zodpovědnost toto prohlášení. ⒸGB Hereby issue, on our responsibility, this Certificate. ⒸD Geben in alleiniger Verantwortung folgende Erklärung ab. ⒸF Publiions sous notre propre responsabilité la déclaration suivante. ⒸRU Под свою ответственность выдаем настоящий сертификат. ⒸPL Wydajemy na własną odpowiedzialność niniejszą Deklarację Zgodności.

2. ⒸZ Strojní zařízení: - název : Diskový podmítač  
ⒸGB Machine: - name : Disk plough-harrow  
ⒸD Fabrikat: - Bezeichnung : Kurzscheibenegge  
ⒸF Machinerie: - dénomination : Déchaumeur à disques  
ⒸRU Сельскохозяйственная машина: - наименование : Дисковый лущильник  
ⒸPL Urządzenie maszynowe: - nazwa : Talerzowy pług podorywkowy  
  
- typ, type : **SOFTER PRO**  
- model, modèle : **SOFTER 10,5 | 12,5 PRO**  
- PIN/VIN :   
  
- ⒸZ výrobní číslo :   
- ⒸGB serial number  
- ⒸD Fabriknummer  
- ⒸF n° de production  
- ⒸRU заводской номер  
- ⒸPL numer produkcyjny

3. ⒸZ Příslušná nařízení vlády: č.176/2008 Sb. (směrnice 2006/42/ES). ⒸGB Applicable Governmental Decrees and Orders: No. 176/2008 Sb. (Directive 2006/42/ES). ⒸD Einschlägige Regierungsverordnungen (NV): Nr. 176/2008 Slg. (Richtlinie 2006/42/ES). ⒸF Décrets respectifs du gouvernement: n°.176/2008 du Code (directive 2006/42/CE). ⒸRU Соответствующие постановления правительства: № 176/2008 Сб. (инструкция 2006/42/ES). ⒸPL Odpowiednie rozporządzenia rządowe: nr 176/2008 Dz.U. (Dyrektywa 2006/42/WE).

4. ⒸZ Normy s nimiž byla posouzena shoda: ⒸGB Standards used for consideration of conformity: ⒸD Das Produkt wurde gefertigt in Übereinstimmung mit folgenden Normen: ⒸF Normes avec lesquelles la conformité a été évaluée: ⒸRU Normы, на основании которых производилась сертификация: ⒸPL Normy, według których została przeprowadzona ocena: ČSN EN ISO 12100, ČSN EN ISO 4254-1.

ⒸZ Schwälil ⒸGB Approve by date: 01.09.2021  
ⒸD Bewilligen ⒸF Approuvé  
ⒸRU утвердил ⒸPL Uchwalil

V České Skalici date: 01.09.2021

Ing. Petr Lukášek  
technický ředitel  
Technical director

Ing. Karel Žďárský  
generální ředitel společnosti  
General Manager

**Farmet a.s.**  
Jiřinková 276  
552 03 Česká Skalice  
DIČ CZ46504931

59