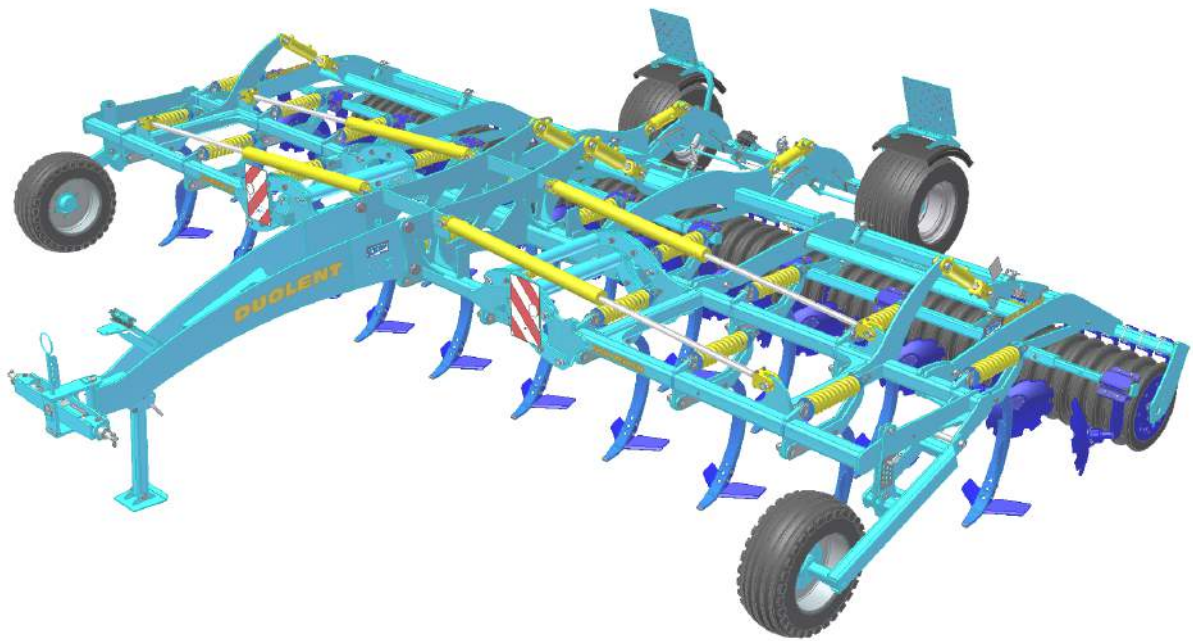


# OPERATING MANUAL

# **DUOLENT**

## **DX 600 PS | DX 800 PS**



Edition: 2 | effective from: 1. 9. 2012

Dear customer,

Semi-carried cultivators **DUOLENT** 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 Your Cultivator**

The **DUOLENT** cultivator is designed for cultivation of all types of soils up to a processing depth of 300mm.

Production label of the machine **DUOLENT DX600PS**



The production label for the DUOLENT DX 600 PS machine includes the Farmet logo, CE and OTK marks, and the following fields:

- TYP / VARIANTA: DUOLENT DX 600 PS
- ČÍSLO SCHVÁLENÍ: [Blank]
- ROK VÝROBY / VÝROBNÍ ČÍSLO: [Blank]
- MAX. PŘÍPUSTNÁ HMOTNOST: 5820 kg
- MAX. PŘÍPUSTNÁ HMOTNOST NA NÁPRAVĚ: 3740 kg

Production label of the machine **DUOLENT DX800PS**



The production label for the DUOLENT DX 800 PS machine includes the Farmet logo, CE and OTK marks, and the following fields:

- TYP / VARIANTA: DUOLENT DX 800 PS
- ČÍSLO SCHVÁLENÍ: [Blank]
- ROK VÝROBY / VÝROBNÍ ČÍSLO: [Blank]
- MAX. PŘÍPUSTNÁ HMOTNOST: 6540 kg
- MAX. PŘÍPUSTNÁ HMOTNOST NA NÁPRAVĚ: 4200 kg

Table 1 - Your Machine Characteristics

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

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## MACHINE LIMIT PARAMETERS

- <sup>(x)</sup> The machine is designed for soil cultivation up to a depth of 30cm when agricultural soil cultivation. Another type of use exceeding the determined purpose is considered as disallowed.
- <sup>(x)</sup> Machine operation is performed by the tractor operator.
- <sup>(x)</sup> Machine operator must not use the machine in a different way, especially:
  - <sup>(x)</sup> Transport of persons 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./p. 11".




## TECHNICAL PARAMETERS

Table 2 - Cultivator Technical Parameters





PARAMETERS	<b>DX600PS</b>	<b>DX800PS</b>
Working width (mm)	6 200	7 900
Transport width (mm)	3 000	3 000
Transport height (mm)	3 266	4 000
Machine total length (mm)	6 762	6 762
Working depth (mm)	60 - 300	60 - 300
Number of shares	15	19
Working performance (ha/h)	5,3 - 7,5	7 - 10
Towing means (kW)	220 - 330*	265 - 400*
Working speed (kph)	8 – 12	
Maximum transport speed (kph)	25	
Maximum slope grade (°)	6	
Tyre dimensions - transport   Tyre pressure (kPa)	19.0/45-17 14PR	400 kPa
Machine weight (kg)	5 820	6 540

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

## 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

- A.1** <sup>(x)</sup> 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.
- A.2** <sup>(xx)</sup> 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! Immediately remove especially the failures that may negatively affect safety!
- A.3** <sup>(7)</sup> Machine operation may be performed by a person authorised by the operator under these conditions:
- <sup>(8)</sup> It must own a valid driver's licence of the corresponding category,
  - <sup>(9)</sup> It must be demonstrably familiarised with the safety regulations for work with the machine and must practically master the machine operation,
  - <sup>(10)</sup> The machine may not be operated by juveniles,
  - <sup>(11)</sup> It must know the meaning of the safety signs located on the machine. Their respecting is important for safe and reliable machine operation.
- A.4** <sup>(12)</sup> Maintenance and servicing repairs on the machine may only be performed by a person:
- <sup>(13)</sup> Authorised by the operator,
  - <sup>(14)</sup> Educated in the machinery field with knowledge of repairs of similar machines,
  - <sup>(15)</sup> Demonstrably familiarised with safety regulations for work with the machine,
  - <sup>(16)</sup> During a repair of a machine connected to a tractor, it must own a driver's licence of the corresponding category.
- A.5** <sup>(17)</sup> Machine operator must secure the safety of other persons when working with the machine or transporting the machine.
- A.6** <sup>(18)</sup> During machine work in the field or during transport, operator's presence on the machine structure is not required ⇒ the operator must control the machine from the tractor's cabin.
-  **A.7** <sup>(19)</sup> The operator may enter the machine structure only with the machine at rest and blocked against movement, namely only for these reasons:
- <sup>(20)</sup> Adjustment of the machine working parts,
  - <sup>(21)</sup> Repair and maintenance of the machine,
  - <sup>(29)</sup> Release and securing of spherical valves of the axle,
  - <sup>(27)</sup> Securing of spherical valves of the axle before folding the side frames,
  - <sup>(28)</sup> Adjustment of the working parts of the machine after unfolding the side frames.
-  **A.8** <sup>(xxx)</sup> When stepping on the machine, do not step on roller tyres or other rotary parts. Those may turn and you can cause very serious injuries by the subsequent fall.
-  **A.9** <sup>(22)</sup> 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.
- A.10** <sup>(23)</sup> The operator must have the Operating Manual with the work safety requirements available at any time when working with the machine.
-  **A.11** <sup>(24)</sup> 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, you need:



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



## B. MACHINE TRANSPORT USING TRANSPORT MEANS

- B.1** <sup>(1)</sup> 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** <sup>(1)</sup> 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** <sup>(2)</sup> 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** <sup>(3)</sup> 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:

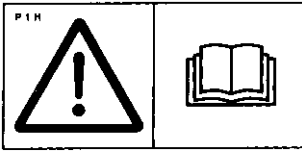
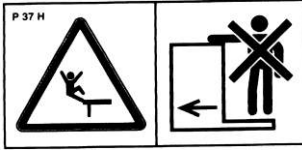
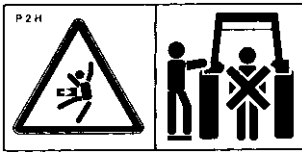
A) Strictly observe the warning safety labels.

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!!!

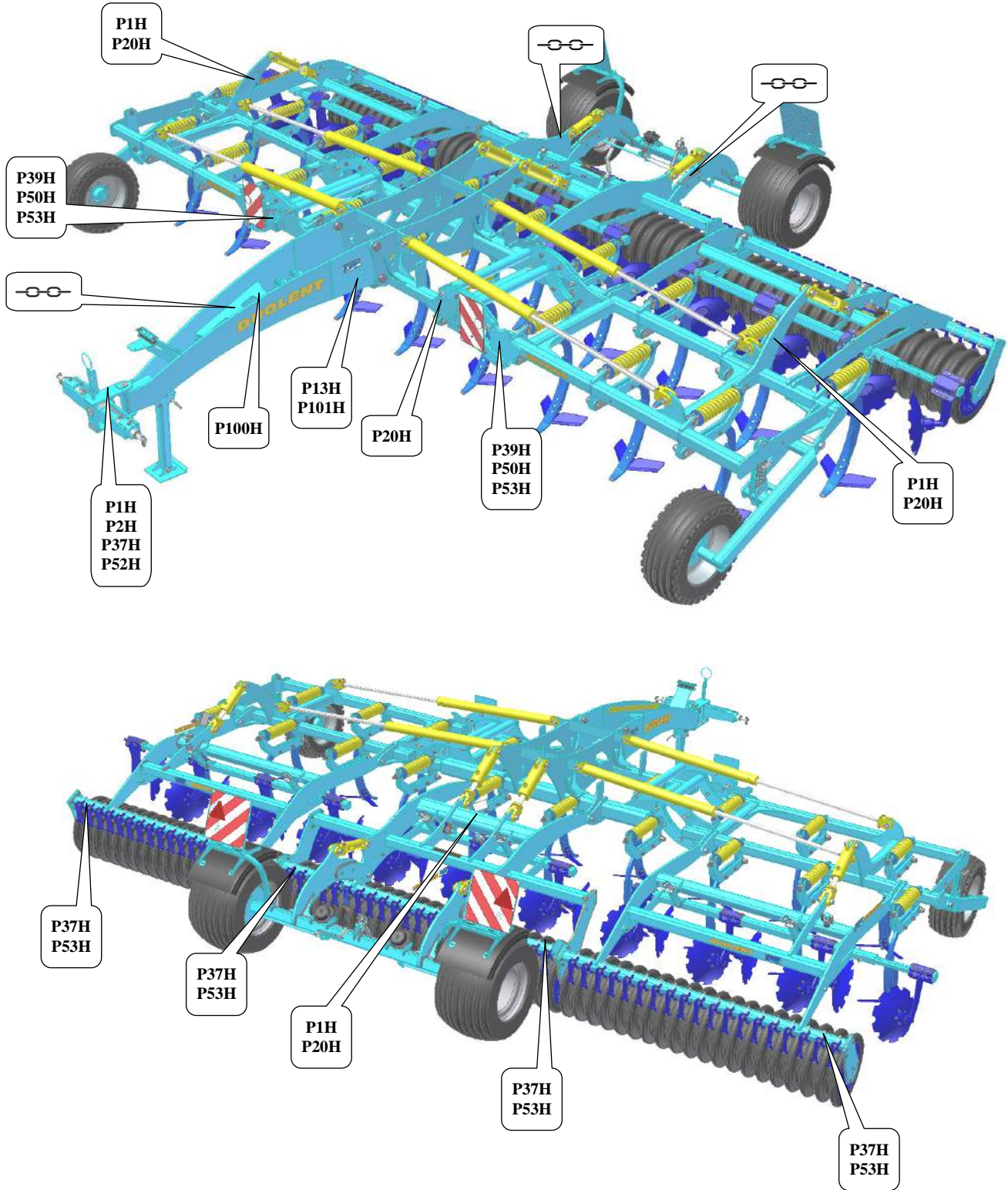
The position, appearance, and precise meaning of work safety labels on the machine is determined in the following tables (Tab. 3/p. 6-7) and in the figure (Fig. 1/p. 8).

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

WARNING SAFETY LABEL	LABEL TEXT	MACHINE POSITION
	Before handling the machine, carefully read the operating manual. Observe the instructions and safety regulations for machine operation during use.	<b>P 1 H</b>
	Travelling and transport on the machine structure is strictly forbidden.	<b>P 37 H</b>
	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.	<b>P 2 H</b>

	<p>When folding and unfolding the side frames, stay outside their reach.</p>	<p><b>P 50 H</b></p>
	<p>Stay outside the reach of the tractor - agricultural machine set, if the tractor engine is in operation.</p>	<p><b>P 6 H</b></p>
	<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>	<p><b>P 20 H</b></p>
	<p>Before commencing the machine transport, secure the axle with spherical valves against unexpected drop.</p>	<p><b>P 13 H</b></p>
	<p>When working and transporting the machine, maintain safe distance from the electric appliances.</p>	<p><b>P 39 H</b></p>
	<p>Secure the machine against unwanted movement by positioning on its working bodies (shares).</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>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>
	<p>It is strictly folding and unfolding the side frames on slopes or inclined surfaces.</p>	<p><b>P 100 H</b></p>

Fig. 1 - Location of safety labels on the **DUOLENT**



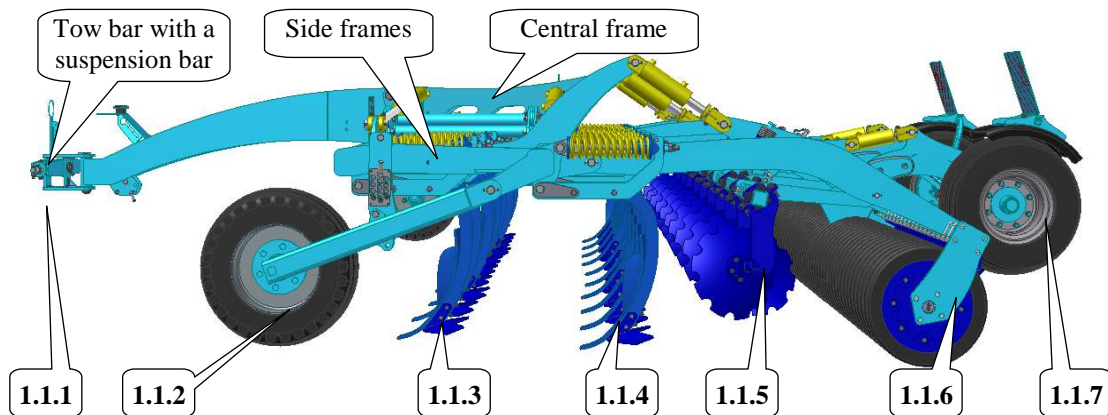


## 1. DESCRIPTION

The **DUOLENT DX600-800** machine is constructed as semi-carried. The basic version consists of a tow bar with a TPS suspension bar with  $\varnothing 36\text{mm}$  pivots for the TPS 3 category, a central frame with the transportation axle and two side frames. There are two rows of shares with automatic spring protection located on the central frame and on the side frames. There is a row of rectifying discs that level out the soil. There are rollers in the rear that compact the loosened soil.

### WORKING PARTS OF THE MACHINE

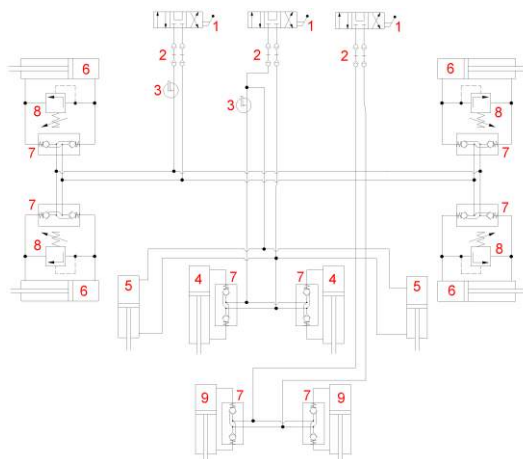
Fig. 2 – Work Parts of the Machine



- |  |   |
|--|---|
| <b>1.1.1</b> Tow bar with foldable support | <b>1.1.5</b> Levelling discs            |
| <b>1.1.2</b> Copy wheel                    | <b>1.1.6</b> Roller for soil compaction |
| <b>1.1.3</b> Front shares row              | <b>1.1.7</b> Transport axle             |
| <b>1.1.4</b> Rear shares row               |   |

## HYDRAULICS

Hydraulic diagram of the machine DUOLENT:



- |  |   |
|--|---|
| <b>1</b> . Control distributor (tractor)                               | <b>6</b> . Hydraulic cylinder (folding side frames) |
| <b>2</b> . Hydraulic coupling  | <b>7</b> . Hydraulic closing valve                  |
| <b>3</b> . Closing cock  | <b>8</b> . Safety valve                             |
| <b>4</b> . Hydraulic roller (lifting the central roller with the axle) | <b>9</b> . Hydraulic cylinder (control of axle)     |
| <b>5</b> . Hydraulic cylinder (side Rubber-tyred roller)               |   |



**Parts of the hydraulic system of the machine, which are under pressure, are forbidden to disassemble. Hydraulic oil that penetrates the skin under high pressure causes severe injuries. In case of injury, seek a physician immediately.**

## 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. 4-8. 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 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.
- The operator is obliged to retract the working bodies of the machine from the ground when turning at the headland.
- The operator is obliged to observe the prescribed working depths and speeds stated in the manual in Tabl. 2/p. 4 when.
- The operator is obliged to lower the machine to the ground and secure the set against movement before leaving the tractor cabin.



### **DECREASE OF SOIL PRESSURE TO A VALUE LOWER THAN 200kPa**

- To decrease the specific pressure on soil (below 200kPa) at the turns on the headland, raise the machine on the pole by using the hydraulic tractor shoulders and rear wheels. Turn around when the machine is unfolded and resting on all rear wheels.

### 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 and a functional undamaged hydraulic system.
- The table of requirements for the towing means for work with the machine:

<sup>(5)</sup> Requirement for the tractor engine power for cultivator <b>DUOLENT DX600</b>		220-330 kW
<sup>(5)</sup> Requirement for the tractor engine power for cultivator <b>DUOLENT DX800</b>		265-400 kW
<sup>(6)</sup> Requirement for the tractor's TPS	<sup>(7)</sup> Spacing of the lower suspension joints (measured at the joint axes)	1010±1,5 mm, (possible to set also 910±1,5 mm)
	<sup>(8)</sup> ∅ of the hole of the lower suspension joints for the machine suspension pivots	∅37,5 mm
<sup>(9)</sup> Requirement for the tractor's hydraulic system	<sup>(10)</sup> Side frame folding circuit	<sup>(14)</sup> Circuit pressure 200 bar, 2 pcs of quick-coupler sockets ISO 12,5
	<sup>(11)</sup> Circuit for lifting the machine on the rollers	<sup>(15)</sup> Circuit pressure 200 bar, 2 pcs of quick-coupler sockets ISO 12,5
	Axle lifting circuit	Circuit pressure 200 bar, 2 pcs of quick-coupler sockets ISO 12,5
<sup>(12)</sup> Requirement for the pneumatic tractor system	<sup>(13)</sup> Machine axle braking circuit	<sup>(16)</sup> Circuit pressure min. 6 bar – max. 8,5 bar, 2 pc coupling head of single-hose brakes

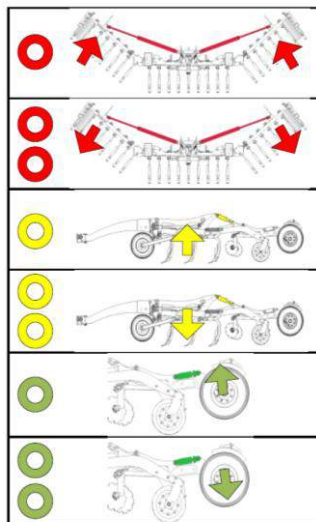
- Connect the machine using the TPS suspension bar to the lower arms of the rear TPS of the tractor, secure the TPS arms using pins against disconnecting.



**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. Perform the connection of the quick-couplers of the machine to the hydraulic circuits of the tractor so that the folding of the side frames (**RED CIRCUIT**) is on one control circuit, axle lifting (**YELLOW CIRCUIT**) on the other control circuit and the separate axle control (**GREEN CIRCUIT**) on the third control circuit.



**Red Circuit**

1 tape – for folding side frames into the transport position

2 tapes – for unfolding side frames into the working position

**Yellow Circuit**

1 tape – lifting the machine

2 tapes – recessing the machine

**Green Circuit**

1 tape – lowering the machine from the axle

2 tapes – lifting the machine on the axle



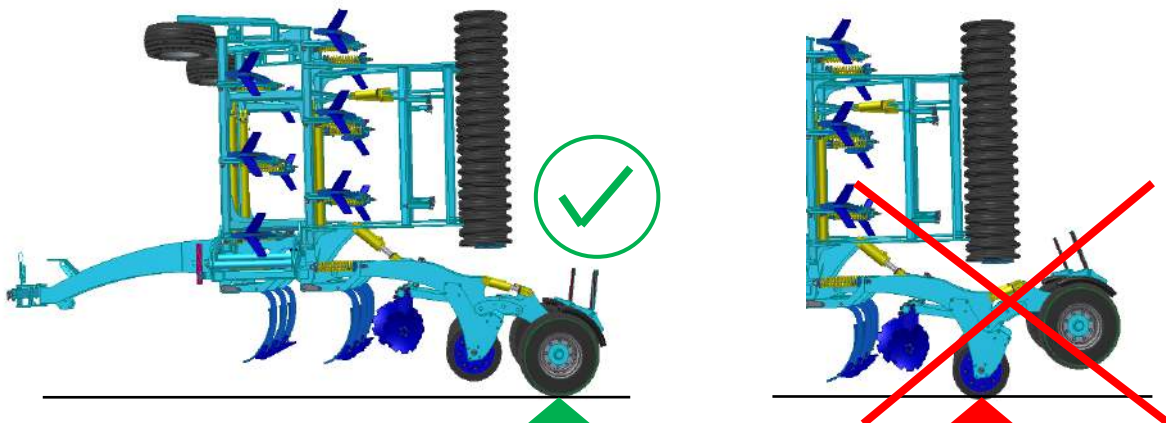
In order to prevent accidental or foreign person (children, passengers) caused movement of the hydraulics, the control switchboards on the tractor must be secured or blocked in the transport position.

### 3.3 FOLDING AND UNFOLDING OF THE MACHINE



- 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.
- Only perform folding or unfolding with a machine that is lifted on the axle and the side rubber-tyres of the rollers are recessed, i.e. their piston-rods are retracted.
- Remove stuck soil from folding points, soil may impair function and cause damage to the mechanics.
- During folding or unfolding, check the side frames and have them continuously fold into the end position to the stoppers.

**CAUTION!!!** The machine always has to be lifted on the axle prior to the start of folding and when folded!



Procedure for folding the machine			
	Position of valves	Pressure in the hose	
1		green 	
2		red 	
3		yellow 	
4			

Procedure for unfolding the machine			
1			
2		<p>red</p>	
3		<p>yellow</p>	
4		<p>green</p>	

## 4. MACHINE TRANSPORT ON ROADS



### Transport Position of **DUOLENT DX600-800**

- Connect the machine by suspending on the tractor using the two-point suspension equipment (TPS 3).
- Connect the machine brakes to the tractor with the use of the brake head: release the brakes before raising the machine on the axle.
- Lift the machine on the axle, set the spherical valve of the axle into the closed position.
- Fold the side frames into the transportation position.
- 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.
- The maximum transport speed during travelling on roads is **25 kph**.

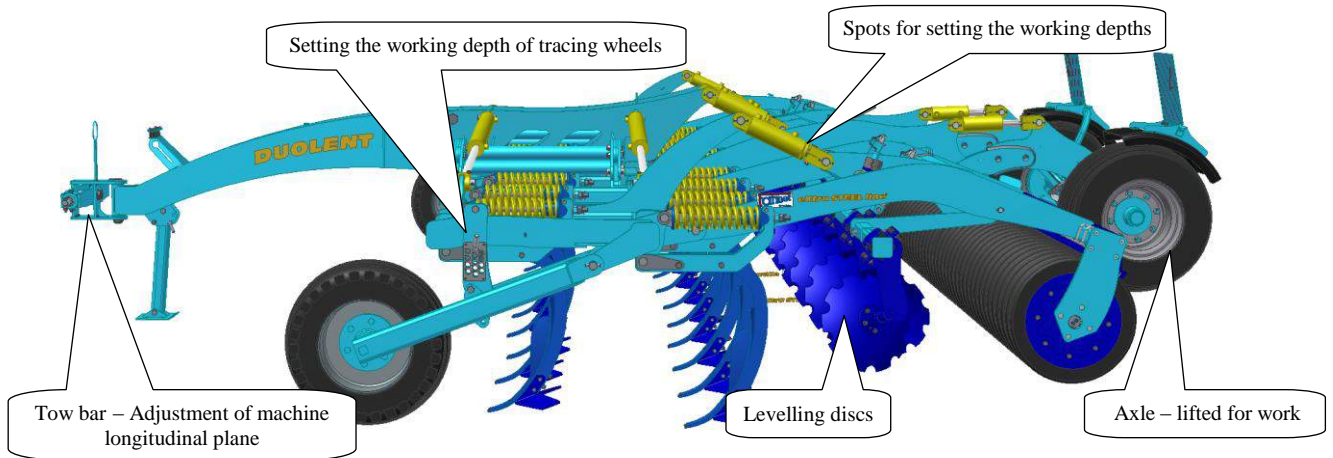


### Ban of transport with decreased visibility!

- Bring the machine into the transport position.
- 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.
- The operator is obliged to present the machine certificate of roadworthiness as needed, according to the valid regulations for road traffic (decree, law) (only in the Czech Republic).
- 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.
- The operator must secure the arms of the rear TPS of the tractor in the transport position during road transport, i.e. prevent unexpected arm drop using the hydraulic arm control lever. At the same time, the arms of the rear TPS of the tractor must be secured against side swinging.
- 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.

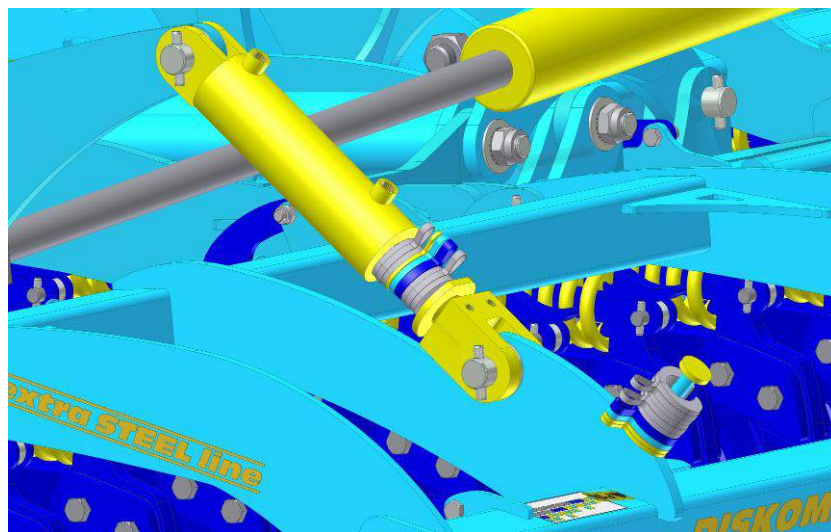
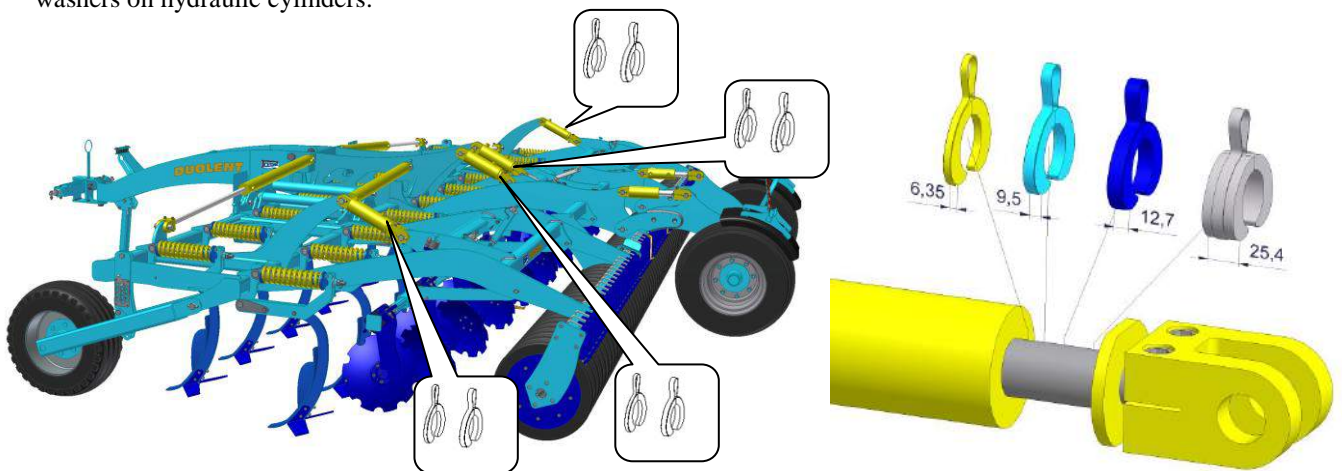
## 5. MACHINE ADJUSTMENT

Fig. 3 – Machine adjustment



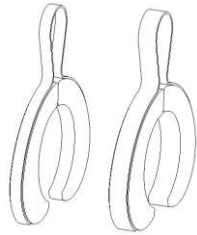
### 5.1 MACHINE WORKING DEPTH ADJUSTMENT

- Setting of soil processing depth is executed on lifted machine through adding or removing of distance washers on hydraulic cylinders.





- **The same combination of washers (number and force) must be set on all piston rods!!!**



- Transfer ratio between thickness of distance elements and working depth is approximately 1:3.

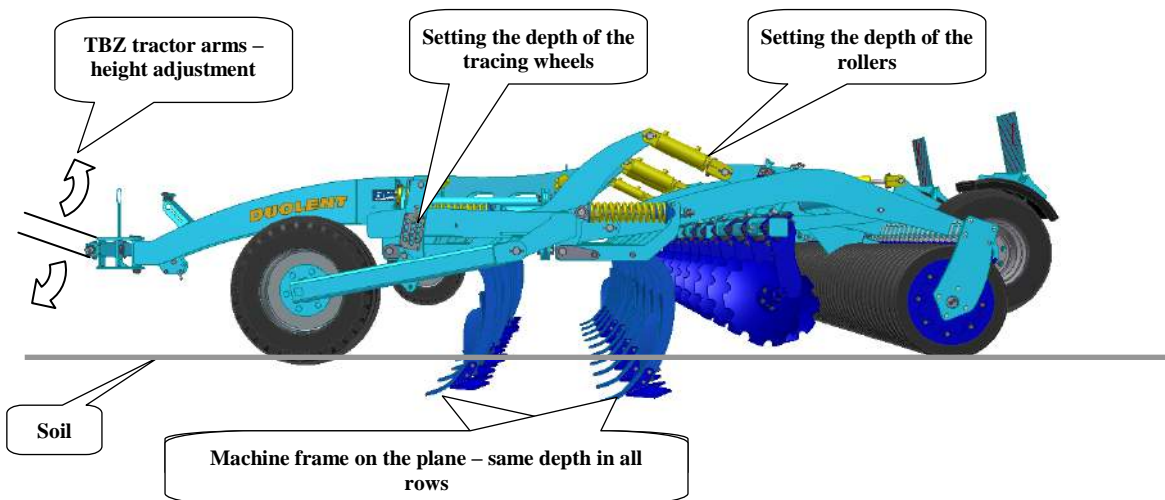
E.g.: Adding or removal of distance pieces of total thickness 1.3 cm (1x dark blue or 2x yellow) changes the working depth by 4 cm.

- The table shows individual working positions and colour combinations of distance washers.
- Specified working depths at individual positions are only for information. They may vary according to particular soil conditions. Required number of distance washers may be added/removed as needed.

Working Depth [cm]	Colour Combination - Amount				Distance thickness [mm]
	Yellow 6,35mm	Light Blue 9,5mm	Dark Blue 12,7mm	sSilver 25,4mm	
6	1		1	2	70
8	1	1		2	67
10	2			2	64
12		1		2	60
14	1			2	57
16	1	1	1	1	54
18	2		1	1	51
20		1	1	1	48
22	1		1	1	44
24	1	1		1	41
26	2			1	38
28		1		1	35
30	1			1	32

## 5.2 MACHINE ADJUSTMENT USING TRACTOR'S TPS ARMS

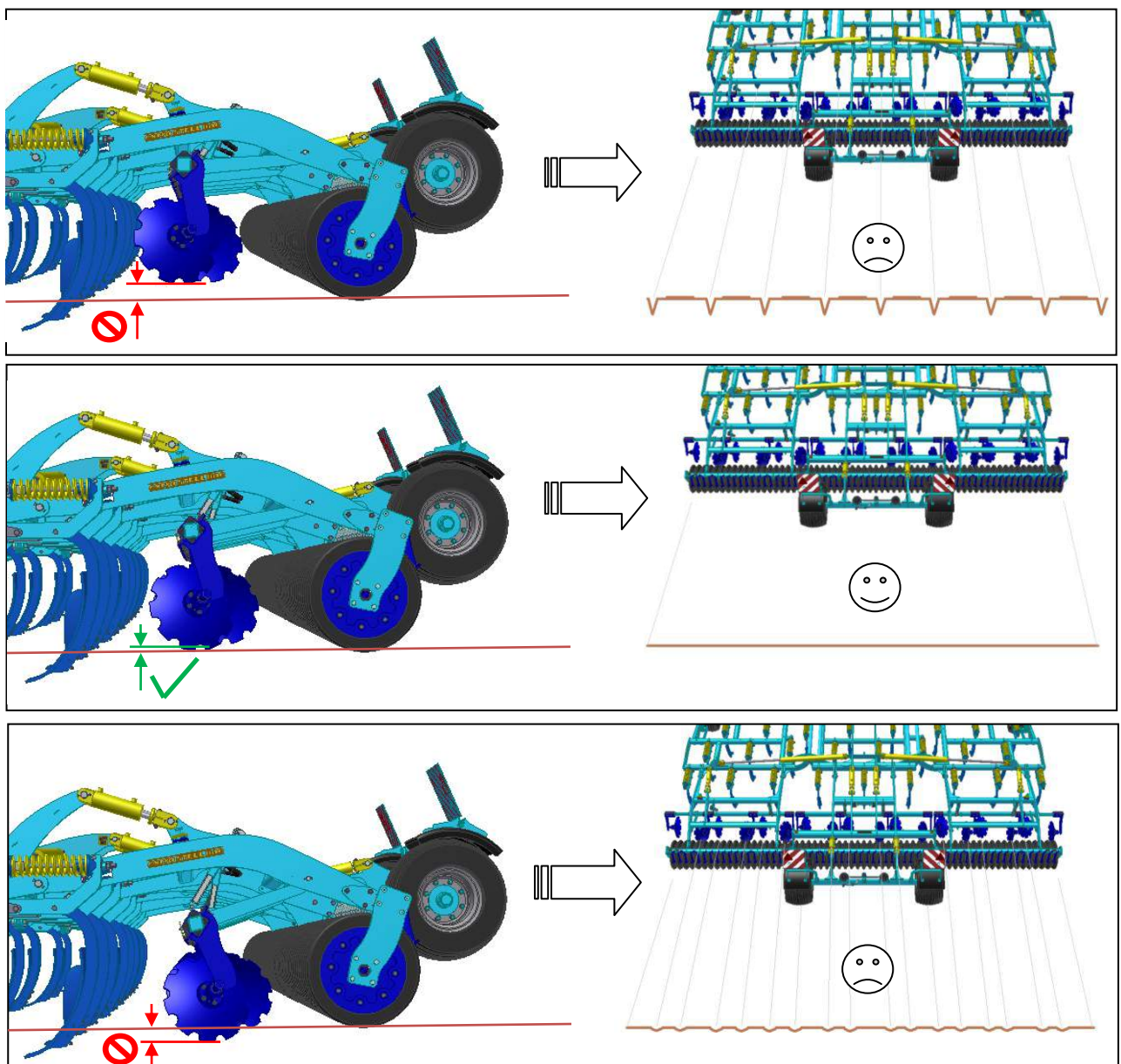
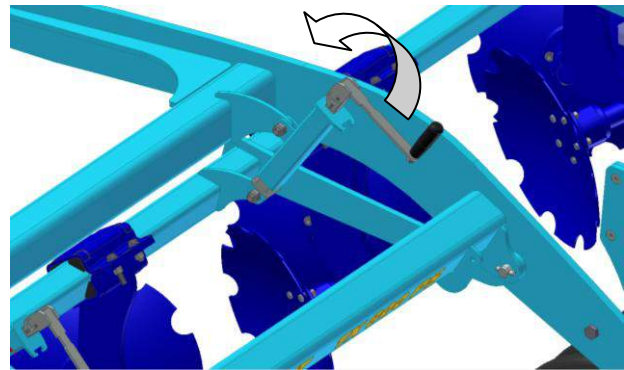
Use the TBZ arms of the tractor to set the machine so that the shares in all rows work in the same depth.



### 5.3 SETTING THE LEVELING DISCS

Set the working depth of the levelling discs by using the lever for setting discs. Be careful when executing the adjustment.


Correctly set discs will provide the perfect levelling and overlapping with soft soil along the entire width of the working coverage. Too shallow disc setting leaves lines after the rear ploughshares; too deep disc setting creates traces of accumulated soil after the machine. Check the correct disc setting during work – the setting may differ according to the soil conditions and disc wear and tear.



## 6. 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.**

## 7. 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 shall not be supported by chisels, otherwise there is a risk of their damage.
- Secure the machine against access of unauthorised persons.

## 8. MACHINE LUBRICATION SCHEDULE

➤ During machine maintenance and its lubrication, it is necessary to observe the safety regulations.

Table 4 – Locations and Intervals of the Machine Lubrication

LUBRICATION POINT		INTERVAL	LUBRICANT
Tow bar joint	Fig.4	- Daily, always before the work with the machine.	Plastic grease
Rubber-tyred rollers bearings	Fig.6	- Always after the end of the season and before storing the machine.	
Disc bearings	Fig.5	- Always after the end of the season and before storing the machine.	

Fig. 4 - Tow bar joint

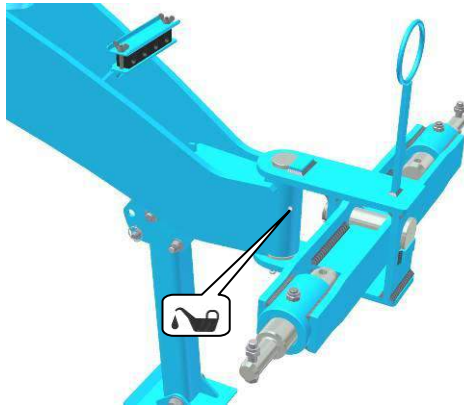


Fig. 5 - Disc bearings

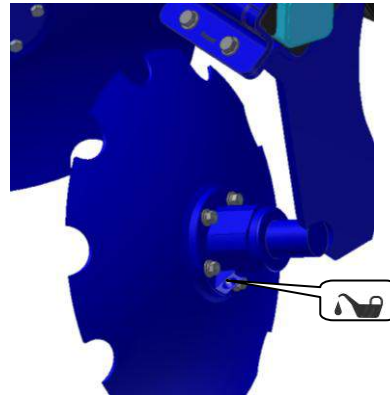
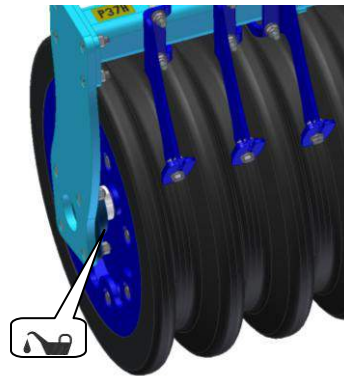


Fig. 6 - Rubber-tyred rollers bearings



### Lubricant handling:

Protect yourselves against direct contact with oils by using gloves or protective creams. Thoroughly wash oil spots on the skin using warm water and soap. Do not clean the skin with petrol, engine diesel fuel or other solvents.

Oil is poisonous. If you swallowed the oil, immediately seek a physician.

- Protect the lubricants against children.

## 9. 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.

## 10. MACHINE DISPOSAL AFTER SERVICE LIFE EXPIR

- 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.

## **11. SERVICING AND WARRANTY CONDITIONS**

### **11.1 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.

### **11.2 WARRANTY**

- 11.2.1** 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).
- 11.2.2** 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.
- 11.2.3** 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.).
- 11.2.4** The warranty does not apply to indirect consequences of possible damage, such as service life decrease etc.
- 11.2.5** The warranty is bound to the machine and is not void upon an owner change.
- 11.2.6** 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 Farnet.
- 11.2.7** 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 11.2.3).
- 11.2.8** The warranty is conditioned by using the genuine spare parts of the manufacturer.

Farmet a. s.  
Jiřinková 276  
ČESKÁ SKALICE 552 03



Tel.: +420 491 450 140  
Fax.: +420 491 450 136  
GSM.: +420 774 715 738

# LETTER OF GUARANTEE

MACHINE TYPE: .....

PRODUCTION YEAR/PRODUCTION NUMBER: \_\_\_\_\_

CHECK CONFIRMATION: \_\_\_\_\_

ADDRESS (BUYER): \_\_\_\_\_

ADDRESS (SELLER): \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**WARRANTY CONDITIONS:**

- I. 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).
- II. 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.
- III. The warranty does not apply to wearable spare parts, i.e. regular mechanical wear and tear of replaceable parts of the working sections (shares, etc.).
- IV. The warranty does not apply to indirect consequences of possible damage, such as service life decrease etc.
- V. The warranty is bound to the machine and is not void upon an owner change.
- VI. 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.
- VII. 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 III).
- VIII. The warranty is conditioned by using the genuine spare parts of the manufacturer.

\_\_\_\_\_  
PRODUCTION PLANT  
CONFIRMATION

\_\_\_\_\_  
SELLER CONFIRMATION

\_\_\_\_\_  
DATE

\_\_\_\_\_  
FIRST SALE DATE

**ⒸZ ES PROHLÁŠENÍ O SHODĚ**  
**ⒸGB CE CERTIFICATE OF CONFORMITY**  
**ⒸD EG-KONFORMITÄT SERKLÄRUNG**  
**Ⓒ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

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2. ⒸZ Strojní zařízení: - název : Dlátový kypřič  
ⒸGB Machine: - name : Chisel cultivator  
ⒸD Fabrikat: - Bezeichnung : Meißelgrubber  
ⒸF Machinerie: - dénomination : Cultivateur à siceaux  
ⒸRU Сельскохозяйственная машина: - наименование : Чизельный культиватор  
ⒸPL Urządzenie maszynowe: - nazwa : Spulchniarka dłutowa  
  
- typ, type : DUOLENT  
- model, modèle : DX 600 PS; DX 800 PS  
- Ⓒ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 Нормы, на основании которых производилась сертификация: ⒸPL Normy, według których została przeprowadzona ocena: ČSN EN ISO 12100, ČSN EN ISO 4254-1.

ⒸZ Schválil ⒸGB Approve by dne: 21.03.2012  
ⒸD Bewilligen ⒸF Approuvé  
ⒸRU Утвердил ⒸPL Uchwalil

V České Skalici dne: 21.03.2012

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