



# METAL-FACH



## REPAIR & MAINTENANCE MANUAL

### STUBBLE-CULTIVATOR UNIT

U786, U786/1, U786/2

FEBRUARY 2018



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## 1. Stubble-cultivator-unit identification

You will find the identification data of the unit on a plate located on the left-hand side wall of the frame, next to the bottom rods of the hitch system, which is illustrated below.

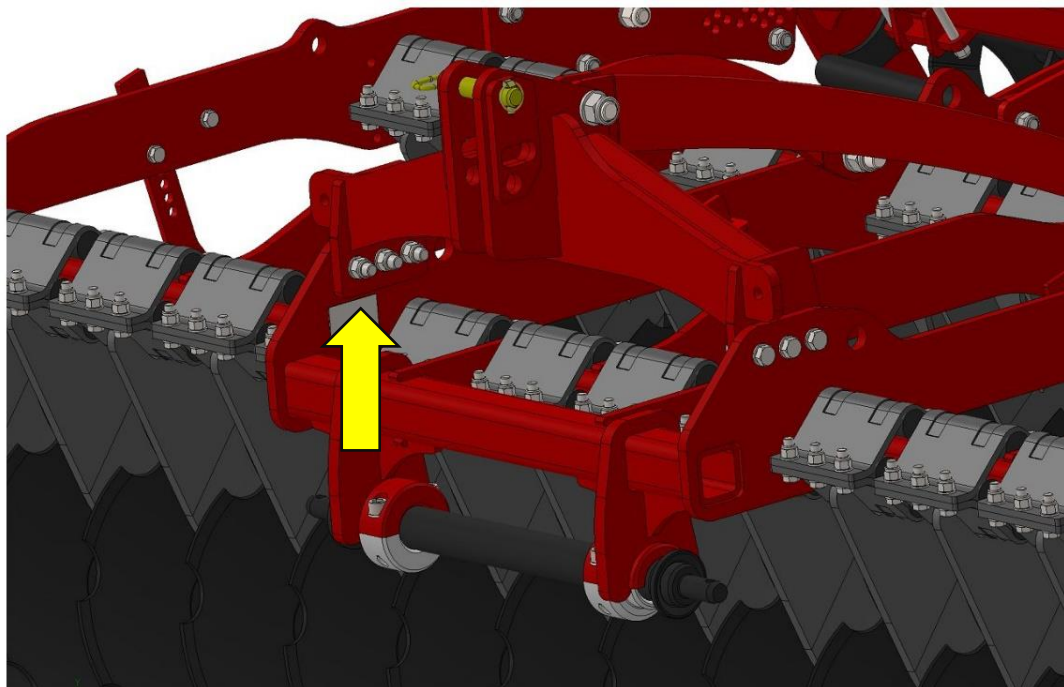


Figure 1 Location of the nameplate on the machine



Figure 2 Rating plate

## 2. Dismantling and Disposal

The stubble-cultivator unit is composed of materials which do not pose risks to the environment. After the period of use has terminated and further operation is not justified, the unit must be disassembled.

Due to the large number of parts, during the disassembly you must use lifting devices, like an overhead crane or fork lift.

Send the metal parts to a scrap-metal yard, and dispose of the rubber parts, or send them to sites which are licensed to store such waste. Gather all the used fluids from the hydraulic system in leak-tight containers and send them to the petrol stations which collect it.

## 3. Machine use and maintenance

### 3.1 Unit preparation

Check the technical condition of the unit, and particularly its working components, to prepare the machine for operation.

Additionally, perform the following.

- Check the condition of the bolted joints
- Check the unit for completeness
- Turn the discs and rollers manually to check whether the rotation is free and unhindered
- Lubricate the relevant components, as per the instructions given in item 3.3.

### 3.2 Coupling the unit to the tractor

To ensure the correct and safe coupling of the unit to the tractor, it should stand on a solid and level surface.

When connecting the unit to the tractor, take the following steps,

- Reverse the tractor to a distance which facilitates connecting the unit hitch to the tractor's lower rods
- Connect the upper 3-point tie-rod to the unit and remove its play
- Lift the unit and secure the lower rods of the tractor.

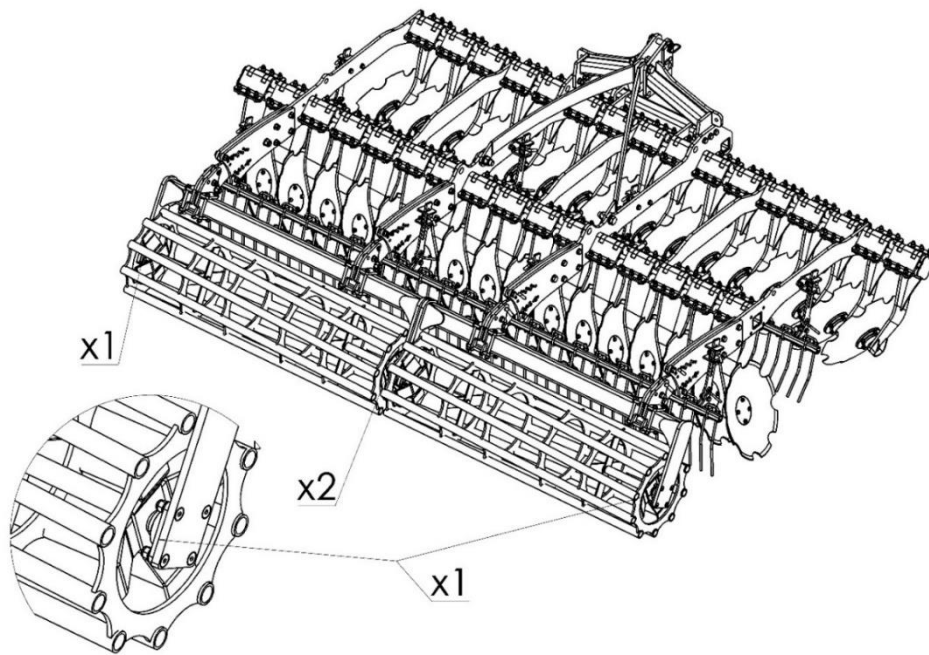
### 3.3 Lubrication

The durability & good working order of the unit depends mainly on systematic lubrication.

Use mineral greases for lubrication. Before applying the grease, clean the lubrication points. Carry out the lubrication as per Fig. 3.

**Use ŁT-4S-3 grease once per season.**

**Check that the disc-blade hubs do not need lubrication.**



**Figure 3** Roller -bearing assembly – 4 lubrication points (version 4m), 2 lubrication points (versions 3.5m, 3m)

### **3.4 Storage**

Before long-term storage, clean the unit and remove any faults found. Protect it from adverse weather conditions. Store the unit in the extended setting on level compact ground.

## 4. Unit adjustment

### 4.1 Working-depth adjustment of the disc blades

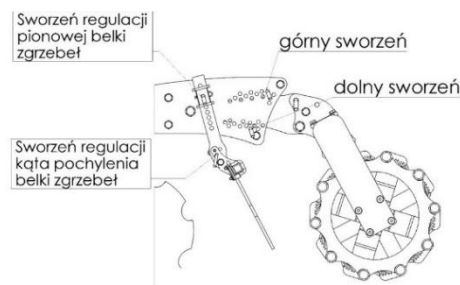
The working depth of the disc blades can be adjusted with the three-point-hitch system of the tractor and the mechanical adjustment of the rollers.

The mechanical adjustment is effected by adjusting the pin positions.

### 4.2 Scraper working depth and angle adjustment

Setting the working depth of the scrapers should be done by means of the cotter pins fixed in the appropriate holes in the plough frogs, secured with the locking pins

The angle, however, can be adjusted with the lower pins of the scraper fixing.



**Figure 4** Unit work adjustment

The working depth of the disc blades can be adjusted with the three-point-hitch system of the tractor and mechanical adjustment of the rollers. The roller adjustment should be performed with the use of the cotter pins fixed in the appropriate holes in the roller-fixing sheet, secured with the locking pins.

To set the maximum working depth, insert the pin into the upper hole in the sheets in the roller fixing. To set the proper position of the lower pin, lift the roller and insert the pin into the correct hole. The adjustment can be made after stopping at the edge of the space next to the elevated ground. Lower the unit roller onto the elevated ground, which will make the roller rise and allow the pin to be inserted into the appropriate lower hole. Secure the pins with the spring pins (the locking pins must be in the same holes on both sides of the unit). Make the adjustment after you have stopped the tractor's engine, and follow all the safety rules. Use special care when working with components which can crush your feet or hands.

### 4.3 Unit operation

Before you start the operation of the unit

- Check the condition of the bolted joints – if any play is found, tighten bolts and nuts
- Remove the warning marking
- Unfold the unit into the working position (edge discs in versions 3 m, 3.5 m),

- Set the unit working depth,
- Lower the tractor lift and leave it in the floating position.

If during the operation the unit is clogged with excessive amount of vegetative residue, lift it briefly on the tractor hydraulic lift and clean it.

The unit must be adjusted during the first passage. The unit frame is correctly levelled when it is parallel to the field surface.



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**ATTENTION!**

1. Avoid sudden jerks during the unit operation.
2. Turn gently at the headland and make sure you lift the unit into the transport position.
3. Do not reverse or u-turn with the unit in the working position, as it can lead to damage to the unit.



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**ATTENTION!**

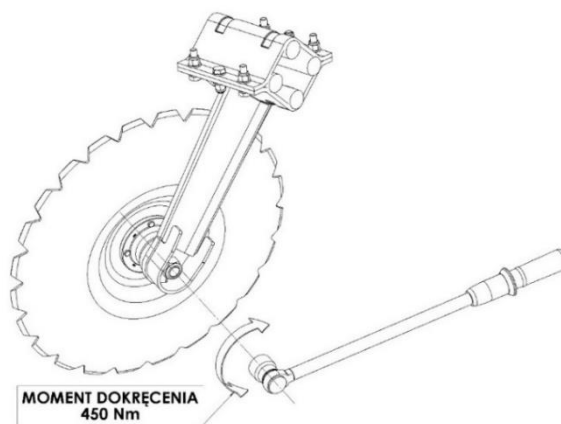
After you have worked with the unit for first 40 hrs, check the disc-hub tightening.



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**ATTENTION!**

If play is found, tighten the 3/4" UNF/16 bolt with a torque wrench according to the torque of 450Nm (wrench size 28) – Fig. 5. Verify the disc-hub tightening before the spring and autumn seasons. Tighten the other bolts according to the table No. 1.



**Figure 5** Tightening torque for the disc-blade hub



#### 4.4 Metrical bolt-tightening torques

Optimised tightening torque values for bolts or screws and nuts [Nm].

**Table 1.** Metrical bolt-tightening torques

<b>Bolt-tightening torques - metrical bolts in Nm</b>							
<b>Size Ø mm</b>	<b>Pitch mm</b>	<b>Bolt version - strength classes</b>					<b>Wheel nuts, wheel bolts</b>
		<b>4.8</b>	<b>5.8</b>	<b>8.8</b>	<b>10.9</b>	<b>12.9</b>	
3	0.50	0.9	1.1	1.8	2.6	3.0	
4	0.70	1.6	2.0	3.1	4.5	5.3	
5	0.80	3.2	4.0	6.1	8.9	10.4	
6	1.00	5.5	6.8	10.4	15.3	17.9	
7	1.00	9.3	11.5	17.2	25	30	
8	1.25	13.6	16.8	25	37	44	
8	1.00	14.5	18	27	40	47	
10	1.50	26.6	33	50	73	86	45
10	1.25	28	35	53	78	91	
12	1.75	46	56	86	127	148	
12	1.50						80
12	1.25	50	62	95	139	163	
14	2.00	73	90	137	201	235	
14	1.50	79	96	150	220	257	140
16	2.00	113	141	214	314	369	
16	1.50	121	150	229	336	393	220
18	2.50	157	194	306	435	509	
18	1.50	178	220	345	491	575	300
20	2.50	222	275	432	615	719	
20	1.50	248	307	482	687	804	400
22	2.50	305	376	502	843	987	
22	2.00						450
22	1.50	337	416	654	932	1,090	500
24	3.00	383	474	744	1,080	1,240	
24	2.00	420	519	814	1,160	1,360	
24	1.50						550
27	3.00	568	703	100	1,570	1,840	
27	2.00	615	760	1,200	1,700	1,990	
30	3.50	772	995	1,500	2,130	2,500	
30	2.00	850	1,060	1,670	2,370	2,380	







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